Modern money – what it is, how it emerged, and its desirable and undesirable features

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Measuring Genuine Progress

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What is meant by ‘modern’?

- **‘Modern’ is an arbitrary term used to describe something that has existed in a functional form much as it does today**
- **Something that once existed in a functional form not like it does today is ‘pre-modern’**
- **For some things, ‘modern’ may mean within one year, meaning that if the thing we are talking about is two years old, it is ‘pre-modern’**
- **For other things, ‘modern’ may mean within the last ten years or within the last fifty tears**
- **In the case of modern money, it is approximately 5,000 years (see Graeber, *Debt: The First 5,000 Years*)**
- **How can something that is 5,000 years old be modern? – see definition above**

What is modern money?

- To describe modern money, it is necessary to tell the story about the advent of modern money
- But before we can do this, we need to know the mainstream 'mythical' story about money – the story you find in a mainstream economics textbook
- Mainstream view
    - Agriculture emerged (Mesopotamia and later spread) – it increased the food-producing capacity of humans and therefore freed the hands of many humans; assisted in the advancement of knowledge and cities/empires emerged (this bit is true)
    - As advancing societies produced more and a great variety of physical goods, exchange of goods began – but it was based on barter
    - To be successful, barter requires the 'double convenience of wants' – person A has too much X and not enough Y and needs to exchange with another person (person B) with not enough X and too much Y – barter is very inconvenient
    - Money subsequently emerged as a medium of exchange to overcome the inconvenience of barter
- This is nonsense! – there is no archaeological or anthropological evidence to support the latter part of this story – it simply never happened anywhere in the world

What is modern money?

- What we do know is that money first emerged in a very primitive form as nothing more than a ‘unit of account’ and long before markets existed – it had no other function
- Pre-modern money was a way of recording debts – one vertical line in a clay tablet meant you owed me a pig; one horizontal line meant you owed me a cow; one circle meant you owed me one of your daughters
- Civilisations/empires usually consisted of an emperor, other privileged individuals, a small bureaucracy, a large army, and a very large number of enslaved people
- The army was required to protect the emperor’s territory and private riches/monuments and manage the enslaved population
- Slaves were used to produce riches for the emperor and other privileged individuals and build monuments in honour of the emperor
- This was very inefficient – a large army consisting of the empire’s most abled people were not being used to produce riches/wealth
- Someone came up with the idea of having the emperor issue his/her own currency by spending it into existence to purchase the useful stuff that the plebs were capable of producing or to hire most of them to produce/build useful stuff instead of enslaving them

What is modern money?

- You might ask, “why would the plebs want to sell useful stuff or work for the emperor to possess this ‘currency’ that had no use value?”
- What emerged hand-in-hand with modern money was taxation – the emperor imposed a tax liability on the plebs that was only extinguishable in the emperor’s currency
- The plebs needed to acquire the currency to pay their taxes – no currency, no payment of taxes, off with your head!
- Taxes created a demand for the emperor’s currency
- An army was still required for defence purposes, but many abled people were no longer needed to manage a large enslaved slice of the population – a small bureaucracy was all that was needed to collect taxes and punish those who failed to pay their taxes
- The productive capacity of the empire increased dramatically
- Modern money was born – it, along with taxation, became a very effective way of transferring real resources from what we would today call the ‘private sector’ to the ‘public sector’
- Previously, the transference of real resources was only possible through tyranny

What is modern money?

- **Things haven't changed – the difference is that the central authority now uses the resources it acquires to build schools, hospitals, etc. instead of personal riches and monuments (plus the penalty today is a large fine or imprisonment, not the loss of your head)**
- **If we could travel back in time and ask the emperor's 'finance minister' whether he imposes taxes on behalf of the emperor to enable the emperor to acquire real resources and wealth, the finance minister would have laughed at you and said, "Of course not! In order to spend, we don't need the currency we collect as taxes from the plebs. We impose a tax liability to create a demand for the currency"**
- **Evidence? Many centuries later, tally sticks were used as currency. The tally sticks were burnt when they returned as payment of taxes**
- **In saying the above, the finance minister of yesteryear would have revealed that he knew more about the public finances of a currency-issuing central authority than our present Prime Minister, the Federal Treasurer, the Secretary of the Federal Treasury Dept, 99.9% of economists, and probably all the economists who have won a so-called Nobel Prize in Economics (no such thing! – another myth!)**
- **Modern money is, and always has been, a creature of the State. It has always been accompanied by taxation**

What is modern money?

- **At some point, modern money became a medium of exchange. Why? How?**
- **Why? Exchange probably became more prominent as private wealth increased, even though, initially, this would have only applied to a small percentage of the population**
- **Exchange also increased because you didn’t necessarily have to sell to the central authority something useful or work for the central authority to obtain the currency to pay your taxes – you could obtain the currency by working for someone or selling something to someone who was paid more of the currency than he/she needed to pay his/her taxes**
- **How? On occasions, the central authority spent more money into existence than it destroyed through taxation (what we now wrongly call the central authority’s ‘budget deficit’). People were left in possession of money (what we now rightly call ‘savings’ and also call the private sector’s ‘surplus’). This enabled people to use the currency as a medium of exchange. People accepted the currency as payment knowing that there was always a demand for the currency**
- **Note: The central authority’s deficit is the private sector’s surplus**

What is modern money?

- **A caricature of modern money you might say? – sure, I'm stretching the truth a bit, but what I'm stretching is the 'truth', and for expositional purposes**
- **There is not a skerrick of truth about the mainstream story of the emergence of money**

Features of modern money

- **As a medium of exchange, modern money quickly acquired another function – it became a store of nominal exchange value**
  - **One could now ‘save’**
  - **One could now delay spending**
  - **One could now spend less than they earnt in order to one day spend more than they earnt**
- **Later still, and with the express permission of the central authority, banking emerged**
  - **People needed somewhere safe to store their money**
  - **Banks were allowed to create the central authority’s money and ‘advance’ it into existence (what we call ‘loans’). The money did not belong to the banks – it remained the central authority’s money and had to be converted to the authority’s base money on demand – but banks could charge interest on outstanding advances**
  - **One could now bring spending forward – one could now spend more than they earnt and spend less than they earnt in later years as they paid off their debt – this enabled people to purchase high-priced items (e.g., property) without having to save for years to accumulate the required funds**
- **This completed the extraordinary feature of modern money – society now had a spending time machine to delay spending and to bring spending forward**

Features of modern money

- **There are a number of other firsts associated with modern money**
- **1) Financial injections into, and financial leakages out of, the economy**
  - **Examples of financial injections include:**
    - **Spending by a currency-issuer financed by the currency-issuer's creation of base money – sometimes referred to as the injection of vertical money, since it is injected from the top of the money pyramid (denoted as 'G')**
      - **Generates the 'hard' (permanent) savings of the private sector**
      - **Note: unless the currency is made from, or convertible into, something especially scarce, the central authority has no fiscal constraint**
    - **Spending by currency-users financed by the creation (and advancement) of credit money – sometimes referred to as the injection of horizontal money, since it is injected from a lower tier of the money pyramid (denoted as 'I')**
      - **Generates 'soft' (temporary) savings, since these savings are destroyed when borrowers repay the principal on their outstanding advances**
      - **Note: the advancement of credit money does not involve the 'lending' of depositors' money (another mainstream myth) – the creation of credit money is constrained by the number of credit-worthy borrowers**
    - **With the emergence of international trade, spending by foreigners on domestically-produced goods and services (exports) – a financial injection into the domestic economy and a leakage from a foreign economy (denoted as 'X')**

Features of modern money

- There are a number of other firsts associated with modern money
- 1) Financial injections into, and financial leakages out of, the economy
  - Examples of financial leakages include:
    - Saving by currency-users (unspent income) (denoted as 'S')
      - A temporary leakage
      - Savings ('spending in waiting') can be re-injected into the economy at a later time if and when they are spent
    - Taxation by a currency-issuer (denoted as 'T')
      - Taxation destroys the central authority's base money
      - A permanent leakage
    - With the emergence of international trade, domestic spending on foreign-produced goods and services (imports) – a financial leakage from the domestic economy and an injection into a foreign economy (denoted as 'M')
  - Financial injections must equal financial leakages
  - Hence: I + G + X (injections) = S + T + M (leakages)
  - Rearranged: (G – T) = (S – I) – (X – M)
  - That is: 'currency-issuer's balance' = 'currency-user's balance' minus 'external balance'

Features of modern money

- There are a number of other firsts associated with modern money
- 2) Although all debts are liabilities, we now have a situation where not all liabilities were debts (Note: a debt exists when, in order to extinguish a liability, one must give up something that is tangible and has intrinsic/use value)
  - A currency-issuer's liabilities are not debts
    - A currency-issuer has 100% seigniorage (seigniorage is the difference between the monetary value of the real resources acquired when money is spent and the monetary value of the real resources given up to acquire the spent money)
    - A currency-issuer can create base money to acquire real resources without having to give up real resources to create the base money ($X of real resources acquired; $0 of real resources surrendered)
  - A currency-user's liabilities are debts
    - Currency-users have 0% seigniorage (the exception is banks – they can create credit money from nothing and earn interest (claim on real resources))
    - A currency-user must give up something real to obtain money (sell their labour or sell something they have produced) to acquire real resources ($X of real resources acquired; $X of real resources surrendered)
  - In the pre-modern money era, all liabilities were debts
    - To recall, pre-modern money existed as means of recording debts

Features of modern money

- **Some interesting things then began to emerge, many of them undesirable**
- **3) Unemployment arose. How?**
  - **People supplied their labour to obtain the currency (earn income) in order to finance their spending and savings desires and to extinguish anticipated tax liabilities**
  - **The supply of labour (indeed, the supply of all factors of production) is based on *anticipated/expected* spending within the economy – one would not supply their labour unless they expected spending to be sufficient to be hired**
  - **The demand for labour (indeed, the demand for all factors of production) is based on *actual* spending within the economy**
  - **Because people want to save and have tax liabilities to extinguish (financial leakages), *actual* spending within the economy is often less than *expected* spending within the economy**
  - **Consequently, the demand for labour (and all factors of production) is invariably less than the supply of labour (and all factors of production) – unemployment ensues unless the investment spending by businesses and the spending by the currency-issuing central government (financial injections) is sufficient to bridge the gap between expected spending and otherwise actual spending**
  - **It took Keynes in the 1930s to finally work this out – until then, the belief was that supply created its own demand (Say's Law) and that unemployment only arose if factor payment rates (e.g., wages for labour) exceeded market clearing rates**

Features of modern money

- **Some interesting things then began to emerge, many of them undesirable**
- **4) Inflation arose. How?**
  - **I mentioned before that the currency-issuer would sometimes spend into existence more money than it would destroy through taxation, which enabled people to use the money as a medium of exchange (spend now) and to save (delay spending)**
  - **It is more than likely that, at some point, the currency-issuer's spending plus the spending of currency-users would have exceeded the productive capacity of the economy and led to hyperinflation**
  - **If the currency-issuer was determined to spend at a particular level to provide certain things, the currency-issuer had to do something to reduce the spending of currency-users if it was going to prevent hyperinflation**
  - **It is more than likely that the currency-issuer would have recognised that taxation had to do more than just create a demand for the currency – it also had to be sufficiently levied to regulate the spending of currency-users to quell inflation**
  - **If this was recognised, it seems that the inflation-subduing impact of taxation has largely been lost or is nowadays overlooked – taxation is falsely seen as a means for the central government to finance its spending**

Features of modern money

- **Some interesting things then began to emerge, many of them undesirable**
- **5) Economic rents from the sale of resources and goods and services within the real economy (money spent within bathtub – see last slide)**
  - **'Economic rent' is the difference between the market price of something and the minimum price that the seller requires before she/he is willing to supply that something (i.e., economic rent = market price – min. supply price)**
  - **The minimum supply price is the opportunity cost of supplying something (i.e., the price the supplier must obtain to at least offset the monetary value of what the supplier/seller is willing to surrender)**
  - **When a seller receives the minimum supply price, say $100, they receive a financial claim on something else (i.e., they can now purchase something else worth $100) equal to the financial claim they have just surrendered ($100) – they haven't gained anything other than they have surrendered something they don't want to obtain something they do want, which is the basis of 'gains from exchange'**
  - **When a seller enjoys an economic rent, they gain more than this – they enjoy an unearned financial claim on real wealth which can only be the result of someone else/others (buyers) suffering a reduced financial claim on real wealth**
  - **When economic rents are rife, growing inequality often occurs, beside it being inequitable (unfair – someone is getting something for nothing; others are losing something for nothing)**

Features of modern money

- **Some interesting things then began to emerge, many of them undesirable**
- **5) Economic rents from the sale of resources and goods and services within the real economy (money spent within bathtub – see last slide)**
  - **Instances of economic rents will always occur – the problem is when the magnitude of economic rents is large**
  - **Economic rents arise when something for sale is very scarce, particularly when its supply is absolutely limited (e.g., non-renewable resources, land, number of Adelaide Crows footballer contracts)**
  - **The richest people in Australia are no longer industrialists, who at least earnt fortunes in the past producing something very useful – they are miners, land-owners, owners of retail space, sportspeople**
  - **Economic rents (and therefore billionaires) cannot exist in a pre-modern money world – they can only exist in a world of modern money and modern markets**
  - **Absurd ownership of wealth was only possible in a pre-modern money world through tyranny – it can now be enjoyed obeying the law in a suit and tie**

Features of modern money

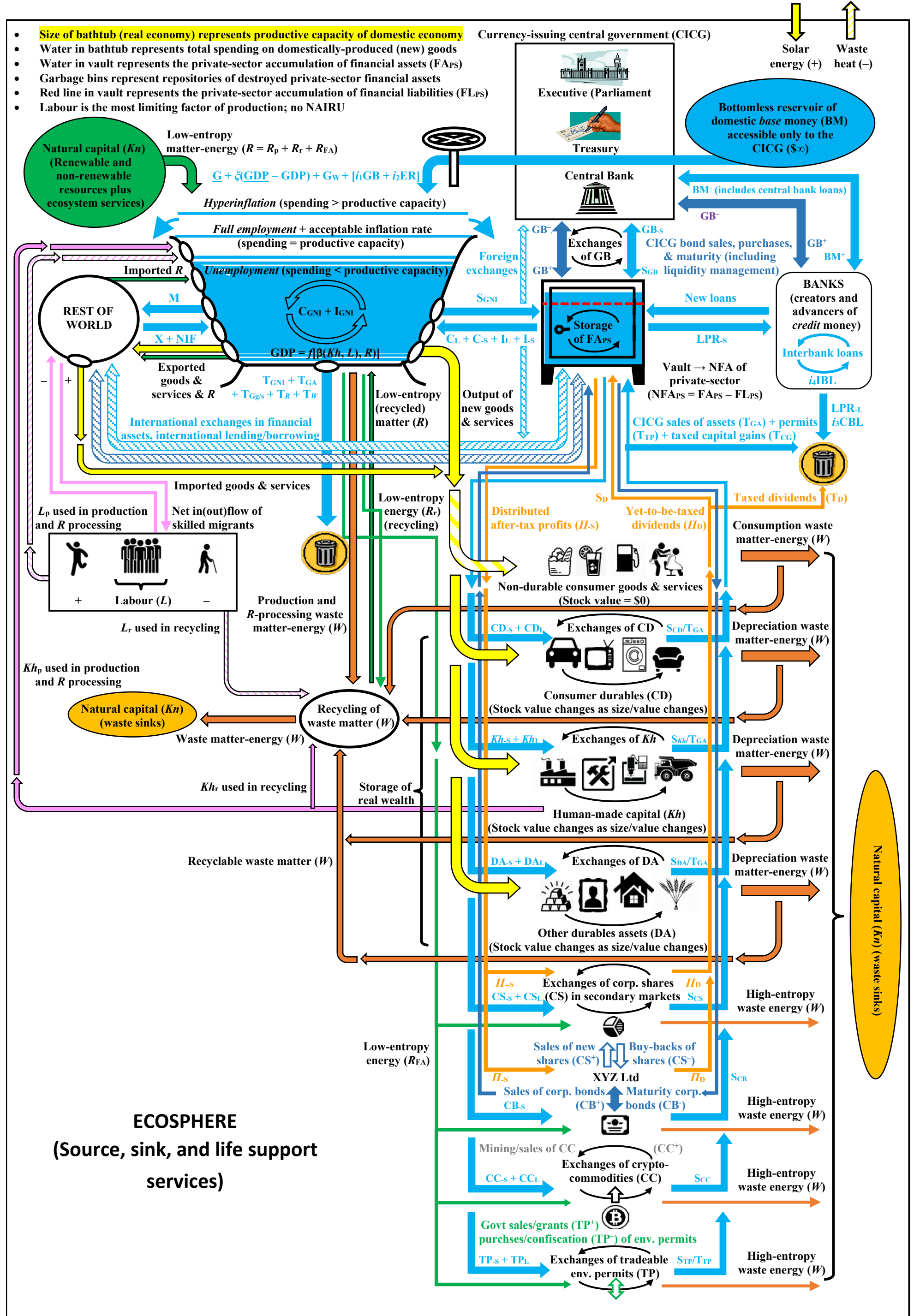
- **Some interesting things then began to emerge, many of them undesirable**
- **6) Economic rents from the sale of designer financial assets and durable assets (money spent within the private sector's vault filled with private sector savings – see last slide)**
  - **I mentioned that modern money allows people to delay their spending (save)**
  - **One of the problems with saving is that inflation erodes the spending power of one's savings**
  - **To maintain the spending power (real value) of your savings, you can exchange your 'cash' for an asset that is traded in a market – it may be a financial asset (shares) or a rare durable asset (a Picasso painting)**
  - **The spending power of your savings is maintained if the asset value rises at the rate of price inflation (i.e., you sell the asset at a time when you want cash to make a purchase of real wealth)**
  - **Sometimes the asset rises in value much faster than the inflation rate – if so, you will enjoy an economic rent of sorts in the sense that your financial claim on real wealth has increased without you having contributed to the production and maintenance of real wealth**
  - **An entire industry has emerged to create designer financial assets and lobby for tax breaks for the purchase and sale of durable assets to enjoy economic rents – it has further increased income and wealth inequalities; it has also rendered financial systems more fragile**

Summary

- **Given the many undesirable features of modern money, should we abandon it? No. Modern money is one of humankind's greatest inventions – a modern, complex, sophisticated economy could not function without it**
- **Features of modern money**
  - **Unit of account (sole feature of pre-modern money)**
  - **Medium of exchange**
  - **Store of nominal exchange value**
  - **Spending time machine - delay spending (save); bring spending forward (borrow)**
  - **Together with taxation, modern money is a means of transferring real resources from the private sector to the public sector in an effective and non-inflationary manner – vital because some highly desired goods and services have peculiar features (public goods) which, if left to the private sector, would result in their insufficient provision (note: the provision of public goods is unprofitable – profit isn't required for a currency-issuing central government to supply something)**

Summary

- **Nonetheless, we do need to deal with the many undesirable features of modern money**
  - **Currency-issuing central governments need to almost always deficit spend to achieve and maintain full employment (Job Guarantee) and to supply much needed and desired public goods – CICGs face no fiscal constraint preventing them from doing this**
  - **Progressive taxation is required to overcome gross income and wealth inequalities made possible by modern money and modern markets**
  - **Taxation should be used to confiscate economic rents**
  - **Governments need to better regulate finance, perhaps even banning some designer financial assets, but certainly confiscating unearned financial gains from their creation and circulation**
    - **Unearned financial gains are inequitable**
    - **This type of activity also distorts investment and increases the fragility of the financial system**
  - **Fiscal measures should be used, not interest rates, to control inflation – if well designed, a Job Guarantee is not only an ideal institution to achieve and maintain full employment, it can also quell demand-pull inflationary pressures since government spending ceases to rise the very moment full employment (the economy's productive capacity) is reached (i.e., when unemployed people stop walking into JG offices)**



Size of bathtub (real economy) represents productive capacity of domestic economy
Water in bathtub represents total spending on domestically-produced (new) goods
Water in vault represents the private-sector accumulation of financial assets (FA_{PS})
Garbage bins represent repositories of destroyed private-sector financial assets
Red line in vault represents the private-sector accumulation of financial liabilities (FL_{PS})
Labour is the most limiting factor of production; no NAIRU
Currency-issuing central government (CICG)
Executive (Parliament
Treasury
Central Bank
Solar energy (+)
Waste heat (–)
Bottomless reservoir of domestic *base* money (BM) accessible only to the CICG ($∞)
Natural capital (*Kn*) (Renewable and non-renewable resources plus ecosystem services)
Low-entropy matter-energy ($R = R_p + R_r + R_{FA}$)
$G + \xi(GDP - GDP) + G_W + [i_1GB + i_2ER]$
Hyperinflation (spending > productive capacity)
Full employment + acceptable inflation rate (spending = productive capacity)
Unemployment (spending < productive capacity)
$C_{GNI} + I_{GNI}$
$GDP = f(\beta(Kh, L), R)$
Imported *R*
REST OF WORLD
M
X + NIF
Exported goods & services & *R*
$T_{GNI} + T_{GA} + T_{Gg/s} + T_R + T_W$
International exchanges in financial assets, international lending/borrowing
Foreign exchanges
GB^-
GB^+
Exchanges of GB
GB_{-S}
S_{GB}
CICG bond sales, purchases, & maturity (including liquidity management)
BM^- (includes central bank loans)
BM^+
BANKS (creators and advancers of *credit* money)
Interbank loans
i_4IBL
S_{GNI}
$C_L + C_{-S} + I_L + I_S$
New loans
LPR_{-S}
Storage of FA_{PS}
Vault → NFA of private-sector ($NFA_{PS} = FA_{PS} – FL_{PS}$)
LPR_{-L}
i_3CBL
CICG sales of assets (T_{GA}) + permits (T_{TP}) + taxed capital gains (T_{CG})
Low-entropy (recycled) matter (*R*)
Output of new goods & services
Imported goods & services
L_p used in production and *R* processing
Net in(out)flow of skilled migrants
Labour (*L*)
Low-entropy energy (R_r) (recycling)
Distributed after-tax profits (Π_{-S})
S_D
Yet-to-be-taxed dividends (Π_D)
Taxed dividends (T_D)
Consumption waste matter-energy (*W*)
Non-durable consumer goods & services (Stock value = $0)
Production and *R*-processing waste matter-energy (*W*)
L_r used in recycling
$CD_{-S} + CD_L$
Exchanges of CD
S_{CD}/T_{GA}
Depreciation waste matter-energy (*W*)
Consumer durables (CD) (Stock value changes as size/value changes)
Kh_p used in production and *R* processing
Natural capital (*Kn*) (waste sinks)
Recycling of waste matter (*W*)
Waste matter-energy (*W*)
$Kh_{-S} + Kh_L$
Exchanges of *Kh*
S_{Kh}/T_{GA}
Kh_r used in recycling
Storage of real wealth
Human-made capital (*Kh*) (Stock value changes as size/value changes)
Recyclable waste matter (*W*)
$DA_{-S} + DA_L$
Exchanges of DA
S_{DA}/T_{GA}
Other durables assets (DA) (Stock value changes as size/value changes)
Π_{-S}
$CS_{-S} + CS_L$
Exchanges of corp. shares (CS) in secondary markets
Π_D
S_{CS}
High-entropy waste energy (*W*)
Low-entropy energy (R_{FA})
Sales of new shares (CS^+)
Buy-backs of shares (CS^-)
XYZ Ltd
Sales of corp. bonds (CB^+)
CB_{-S}
Maturity corp. bonds (CB^-)
S_{CB}
Mining/sales of CC
(CC^+)
Exchanges of crypto-commodities (CC)
$CC_{-S} + CC_L$
S_{CC}
Govt sales/grants (TP^+) purchses/confiscation (TP^-) of env. permits
$TP_{-S} + TP_L$
Exchanges of tradeable env. permits (TP)
S_{TP}/T_{TP}
Natural capital (*Kn*) (waste sinks)
ECOSPHERE (Source, sink, and life support services)