

Hosted by the Department of Economics and Centre for Macroeconomics

## The Production of Money: how to break the power of bankers

**Ann Pettifor**

**Political economist and author, Director of PRIME (Policy Research in Macroeconomics), honorary research fellow at City University, a fellow of the New Economics Foundation.**

**London School of Economics and Political Science**

**Wednesday 08 February 2017**

**Check against delivery**

---

### Introduction

Ten years after the catastrophic failure of both the global banking system and the global economy, economic disorder is once again leading to political and social disorder.

Western democracy and its political parties, central banks, its judicial system and civil society – have collectively failed to protect society from the predatory behaviour of global financial markets – mostly rent-seekers; and from the ideology and impacts of market fundamentalism. In the absence of organised labour unions, and with political parties both hollowed out, compromised and even corrupted by financialisation, those who largely live by hand and brain, and not from rent, have taken measures to protect themselves.

And *those* measures are not always pretty.

High levels of unemployment or under-employment; falling incomes; housing crises and obscene levels of inequality have led, predictably, to the rise of counter-movements in all the leading economies, as foreseen by Karl Polanyi in the 1940s.

These counter-movements threaten to further undermine an already enfeebled western democracy.

At the same time, the inability of democracy and our financial system to respond to the threat of climate change – imperils the very future of the ecosystem and therefore of humanity.

Our world is dangerously disordered.

The word apocalypse is on the lips of many.

But, as the writer China Miéville argues [1], apocalypse and utopia are intertwined. At the end of one order, there is always “a horizon of hope’.

It is my view that current economic disorder is largely caused by the invisibility, the lack of transparency, the intangibility of the international financial system – the cause of recurring global economic failure. The fact that the system cannot be seen or understood, that it is opaque to society, means that it cannot be changed or transformed by society. Widespread ignorance of the workings of the great public good that is our monetary system has made society vulnerable. Ignorance enables those financial interests that have wrested control of the system away from democracies, to continue to undermine the security of society.

So I am on a mission: to use what I have learnt from other venerable economists, to explain money to women, environmentalists and the wider public - in what I hope is accessible language.

My confidence, my hope, is based on real-life experience: Jubilee 2000 – a small, under-resources social movement educated millions in the complexity and exploitative nature of credit and debt in the international financial system. The movement mobilised people from all over the world, to form chains of solidarity to demand of world leaders that debt worth about \$100 million (in nominal terms) was written off by the year 2000, for 35 of the world’s poorest countries. The main thing that mobilised these millions was greater understanding of the system.

Before going further, I want to say this.

Nothing that I share with you tonight is original. Economists have understood the nature of money since the days of Florentine and Dutch bankers. But in particular since 1705, when that great Scottish genius John Law published his book, Money and Trade – and then went on to heroically and almost single-handedly try and construct a sound monetary and financial architecture for both France and Britain. Professor Antoine Murphy of the University of Dublin has, with his biography of Law, done a great deal to revive his well-deserved reputation for what Schumpeter [2] in his History of Economic Analysis, called Law’s

“brilliance and, yes, profundity, which places him in the front ranks of monetary theorists of all time.”

John Law was followed by Henry Thornton (1760-1815) Henry Dunning MacLeod (1821-1902), John Maynard Keynes, another who is in “the front ranks of monetary theorists of all time” and whose monetary theory and policies are disgracefully neglected (1883–1946) Joseph Schumpeter (1883-1950) JK Galbraith (1908–2006) Hyman Minsky (1919-1996), Wynne Godley (1926-2010) Victoria Chick (1936 - ), Geoff Tily - and many more.

I am confident that drawing on their knowledge and wisdom will help us find that ‘horizon of hope’. That with greater public understanding, transformation of the global economy IS possible.

That is the ambition of my modest book, The Production of Money.

\* \* \* \* \*

Today the ‘strong men’ and women and women that ride the populist wave, promise us nationalism and protectionism. Their promises are based on the tired old Ricardian economic model of liberal, self-regulating markets in money, trade and labour. In other words, markets that were once embedded in social relations, but that are now virtually detached from all forms of regulatory democracy.

The ‘sunny uplands’ promised us are a delusion.

Mrs Theresa May pretends to offer to ‘take back control’ from those ‘citizens of nowhere’ that govern the global economy – and to do so by prioritising the domestic economy. But at the same time she stresses that Britain will remain a ‘global Britain’.

The reality of life under a model that elevates the global over the domestic economy was starkly exposed recently by the fate of a small tea room based in Highcliffe Castle, Dorset [3]. The tea-room had been owned and run by a local, Sean Kearney, for 17 years. It was put out to tender by the council. The company that won the tender was a global behemoth - the \$14bn Aramark corporation, that owns prisons and canteens worldwide and is headquartered in Philadelphia.

This 'storm in a tearoom' as the Times dubbed it, was a classic example of how today's economic model fails the people of Britain. It pits the minnow of a locally-owned tea room against a globally powerful and financially mobile shark.

This is not free market competition. This is grossly unfair, economic slaughter of a small, viable business.

As a result, Sean Kearney may well now become one of those 'left behind' by British government policies.

Depressingly, our politicians – on both sides of the House - learn nothing from this. Despite all the nationalist rhetoric, we know that the dominant economic model that led to the populist uprising for Brexit has not been seriously challenged by the Conservative party, or any of our politicians. The government will continue to stand aside as footloose, mobile capital uses its absolute advantage to swallow up the enterprising minnows of the economy, and to wreak havoc on society's social, economic and political goals.

As opposition parties continue to endorse 'globalisation' – or financial liberalisation – the government will not be challenged.

Their support for the wildly unbalanced global system of rentier capitalism helps explain the demise of social democratic parties in both Europe and the US.

## **ONGOING ECONOMIC FAILURE A CAUSE OF COUNTER-MOVEMENT**

It should come as no surprise that societies are angry and in revolt. After all the world has suffered ongoing economic failure since the financial crisis of 2007-9.

Despite the determined effort of central banks to pump something like \$500bn every quarter into the private financial system - as a form of 'life support' for banks and shadow banks - despite this massive disbursement of taxpayer-backed liquidity, commercial banks are still essentially insolvent, and reluctant to lend. The failure to restructure global banks and reform the banking system, means that the crisis has rolled around from its epicentre - the Anglo-American economies- into Europe, especially southern Europe.

It has now moved, and is hurting emerging markets. They face rapid outflows of capital, exchange rate volatility, high levels of corporate debt, rising borrowing costs, a strong US dollar and now, protectionism. Brexit, Donald Trump, Rodrigo Duterte, General Sisi in Egypt and Julius Malema in South Africa – are all manifestations of public revulsion at our freewheeling, corrupt and often fraudulent global financial system. A system that leaves many millions unemployed, impoverished and in despair, while at the same time the system fantastically and almost effortlessly enriches the 1% of the global rentier economy.

## **THE ROLE OF THE ECONOMICS PROFESSION**

All the while, the mainstream economics profession remains detached, aloof even, from events and developments. As a profession, economists take no responsibility for the crisis. They shrugged off the Queen's question about why the crisis was not foreseen.

In this respect economists are very different from real scientists, like the physicists and aeronautical engineers that take responsibility for keeping millions of airline passengers safe in the air – and who take every precaution to prevent crashes.

Economists just shrug their shoulders: as if these ongoing crises have nothing to do with them – but are the responsibility of politicians, sub-prime borrowers or Britain's low productivity workforce.

Worse, they offer no alternative to the current, dominant economic model that has led to political upheaval: financial liberalisation, monetary policy dominance and fiscal austerity. All we are offered in the way of hope is something called: "secular stagnation".

Now this may come as a surprise to the average woman in the street, but until the Great Financial Crisis economists and economic textbooks made light of money, banks and debt. Money was treated as a mere veil over the real activity of the economy: the trade in goods and services.

Even while economics students have begun to revolt, and object to the absence of money, banks and debt in their university curricula, today's economists, through no fault of their own, are not equipped to study or teach monetary theory, policy and practice. They were never taught themselves.

Since the financial crisis some have tried to insert money into their Dynamic Stochastic General Equilibrium models...but that has not changed their world view, their dominant economic model. As a collective – and of course with honourable exceptions – economists continue to fail to grasp the seismic nature of changes wrought by the private finance sector to the global economy since the 1960s.

## **IDEOLOGY**

It was Adam Smith that first asserted that Money is “a neutral medium that facilitated exchange on the ‘great wheel of circulation”.

Paul Samuelson – he of the endless editions of Economics 101 – editions which have sold all over the world, argued that:

“Even in the most advanced industrial economies, if we strip exchange down to its barest essentials and peel off the obscuring layer of money, we find that trade between individuals or nations largely boils down to barter.”

It is ideology, not science that asserts that the market in money is like the market in widgets, and must be left to the forces of supply and demand, and not regulated by governments.

It is ideology and not economic theory that asserts that bankers are simply intermediaries between savers and borrowers – and do not create credit out of thin air.

That the central bank is responsible for the nation’s money supply, when in fact its private, commercial banks that are responsible in Britain, for 95% of the money supply.

It is ideology that asserts that money, like trade and labour, must not be managed, but must be mobile and free to dodge taxation and to go wherever capital gains can effortlessly be made – most often by rent-gouging.

It is ideology that permits governments and central banks to stand idly by, as mobile and unaccountable capital markets periodically wreak havoc on exchange rate markets, bond markets and commodity markets.

Central banks are reluctant to extend the use of macro-prudential tools to erect 'bumps' in the road to manage, or even block flows. Not because they can't do so; but because economists – in the IMF, World Bank the OECD, and the world's Treasuries - have actively promoted unfettered, unregulated capital mobility – even as they now begin to backtrack on that advice.

Until quite recently to argue against capital mobility was like arguing for a return to the Soviet Gulag.

It is ideological to argue that the reasoning that informs the micro-economy can be extrapolated to reach conclusions about the macro-economy. In other words, the fallacy that the budgets of households (the micro-economy) can be aggregated and compared to the budgets of governments (the macro-economy) – arguments used for slashing government expenditure.

It is ideological to argue that public debt 'crowds out' private debt, when in a slump public debt helps revive a weakened private sector.

And it is ideology that asserts that the public sector is 'rent-seeking' while a blind eye is turned to the rapacious rent-seeking of the private sector.

Unsurprisingly, these flawed, ideological theories and models are a great comfort to financial elites, as Satyajit Das argued in his book "Traders, Guns and Money" (2010):

"Modern finance is generally incomprehensible to ordinary men and women ... The level of comprehension of many bankers and regulators is not significantly higher...It was probably designed that way. Like the wolf in the fairy tale: 'All the better to fleece you with.'"

Das expresses well why so many in the finance sector are content for the economics profession to have a blind spot for 'modern finance':

*All the better to fleece you with.*

Both our recurring financial crises, and the inability of the economics profession to protect us from failure, boils down in my view, to a deeply flawed understanding of the very foundation of the global financial system: money.

**SO WHAT EXACTLY IS MONEY?**

The first thing to understand about money is that it is not just the coins and notes in your purse. Nor is it even just the bank money and digital transfers that you make each day with your debit and credit card, or that flies around the globe in a billionth of a second.

No, money is above all else, a system.

A socially constructed, and man-made system.

Money is only in plentiful supply when it is backed up by public authority, sound, publicly funded or publicly-backed institutions: institutions that uphold trust.

That is why Bitcoin – that is mined in the dark web on the basis of distrust (according to its founders) - is not money...but that discussion is for another day.

The institutions that are central to a money system, include:

- the central bank, the only institution authorised to issue a nation's currency, and to print and mint notes and coins. The central bank helps maintain the value of a nation's currency (or unit of account), by demanding that taxes are paid in that currency or unit of account. The central bank also influences the bank rate – which applies only to the banking sector.
- the soundness of taxation and the tax collection system itself – which serves as a means of valuing the nation's currency... the more taxpayers, the better the tax collection system, the 'harder' the currency.
- the private banking system which creates (or 'prints') 95% of the money supply (by creating credit and depositing money in bank accounts);
- the judicial and criminal justice systems (for the enforcement of contracts);
- the accounting system, and especially double-entry bookkeeping (for keeping accounts of assets and liabilities).

If these institutions are missing, if building these institutions is discouraged as in many of the countries in Africa that I have worked in - by the ideology that has long permeated the IMF and World Bank; or if these institutions are corrupted – then the consequence is straightforward:

There simply is no money.



So money is first and foremost a man-made system.

Money and the 'price of money' - the rate of interest are, in turn, social constructs : social relationships and social arrangements based primarily and ultimately on trust.

Money, as Joseph Schumpeter argued, is nothing more than "a promise to repay".

And promises can be made, or affirmed, or created 'out of thin air'.

The promises we make in monetary terms are known as 'credit'.

The thing we call money has its original basis in belief. Credit or the Latin verb credo means: I believe.

'I believe, I trust you will pay, or repay me now or at some point in the future.'

Credit is money – a claim to fulfil a promise. The counterparty to that credit has an obligation –to make good on that promise.

Obligations and claims become credit and debts.

Back in the day, and in due course, tokens were issued to represent those credits, those promises. They became tangible representatives of the claims and the obligations – which quickly became numerous. They facilitated the exchange of promises, the thousands and then millions of transactions that supported economic activity.

They became the means whereby goods and services were valued and exchanged.

Of course some promises were more risky than others. Some debtors less trustworthy than others – so a "price" was attached to the promise, a price that varied depending on the riskiness of the promise.

Trustworthy promises had a low price. Less trustworthy promises, had a higher "price". Harvard graduates in the US pay lower rates of interest, than pole-dancers in Florida or hairdressers on \$7 an hour in Michigan.

The price of those promises, and therefore of credit or money, was and is decided on a one-to-one basis, just as it is today. The 'price' of a loan or the rate of interest was never the outcome of the supply and demand for money. Instead it was, and is always determined on a basis of risk (by clerks in banks or other financial institutions). Bankers call the process of pricing a loan or credit: "risk assessment".

We now know for example, that the most important interest rate in the world, the London Inter Bank Offer rate, or LIBOR, critical to determining rates of interest on \$800 trillion of student loan contracts, on home mortgages, on business loans, and on the loans given to bailout the private banking system, was not a "natural" rate of interest – the product of the supply and demand for money.

No, it was the result of very human activity; the fixing or manipulation by young, mostly male, risk-taking traders or 'submitters' based in the back offices of banks.

Josephine Bloggs is prudent, hardworking, and has great skills. She has a degree from Oxford, and is on a career path. She is bound to repay. There is little risk of her promise not being honoured.

Joe Bloggs on the other hand, is young, tends to drink too much, works part-time and like millions of traders in financial markets, is a risk-taker. As an unreliable maker and keeper of promises, he will be charged a much higher rate for his promise - the use of money – if he is lent money at all.

So money is not a commodity. Nor is money about barter.

David Graeber challenged the orthodox view of money as barter, when he argued in his book, Debt the first 5,000 years, that man-made credit and credit systems have existed since forever. [4]

Credit and debt, not barter, has been a feature of community life since the dawn of time. Credit systems existed in communities where there was familiarity and trust – and where trusted figures – the priest, the chief, a trusted elder - upheld that trust.

Only when the village had to bargain and exchange with strangers – where trust had not been established – was barter resorted to.

In villages or small communities where promises were made, where transactions became obligations to fulfil, and claims to honour, the obligations and claims were invariably monitored, overseen and enforced by someone with authority; someone that ensured that both obligations and claims were honoured.

Money and its 'price' – the rate of interest is today the measure of that trust or promise.

If trust is absent, the price of money (or the rate of interest) becomes the measure of a lack of trust.

Money in this view, as John Law first explained in 1705, "is the measure **by** which goods are valued... the value **by** which goods are exchanged... and in which contracts are made payable." (my emphasis)

It is not, as in barter, the thing for which we exchange goods and services.

As Mitchell Innes put it in The Banking Law Journal, May 1913:

"credit and credit alone is money. Credit and not gold or silver is the one property which all men seek, the acquisition of which is the aim and object of all commerce. There is no question but that credit is far older than cash."

Cash – gold, silver, coins, notes – was always only representative of promises, of trust. It was never the promise or credit itself.

To understand this, think of your credit card.

There is no money in most credit card accounts before a user begins to spend.

All that exists is a social contract with a banker: a promise or obligation made to the banker to repay the debt incurred as a result of spending on the card, and to repay at a certain time in the future and at an agreed rate of interest.

And when 'money' is spent on your credit card, you do not exchange the card for the products you purchase. This is because money is not like barter. It's the measure by which goods are valued and exchanged.

No, the card goes back into your purse. It is the credit card, and the trust on which it is based, that gives you the power to purchase a product or service.

If you're trustworthy – or so we are led to believe – the bank will issue a platinum card. If you are not deemed trustworthy, you will not be granted a credit card.

The credit card, once authorized, is the means by which you, the user acquire purchasing power.

The spending on a card is expenditure created 'out of thin air'. The intangible 'credit' is nothing more than the bank's and the retailer's belief that the owner of the card and her bank will honour an agreement to repay. A belief that in the case of credit cards, is not backed by collateral.

As such, all credit and money is a social relationship of trust between those undertaking a transaction: between a banker and its customers; between buyers and sellers; between debtors and creditors.

While all money is credit, and all credit is money, it is also the case that all money is debt. Just as all obligations are simultaneously claims.

## **THE SOVEREIGN MONEY MOVEMENT**

Now many of my friends in the monetary reform movement – especially those in the 'Sovereign Money' movement - believe that debt and the power of the private banking system to create credit is a very bad thing. And indeed so it can be.

If credit and debts are allowed to expand beyond the capacity of debtors – or indeed of the economy as a whole - to repay, debt can become a millstone around the necks of borrowers, dragging them down into the depths of despair, as we know from the experience of e.g. Indian farmers.

*But*, while banks have power over borrowers, and use inducements to flog loans, it is important to remember that it takes two to tango in this relationship.

Credit or debt cannot be created until a borrower applies for a loan.

It takes 'two to tango' in the money creation process.

There was and always is a counterparty when a bank or shadow bank creates money, credit or debt.

Private commercial banks cannot create money 'out of thin air' unless there are borrowers.

Private commercial banks cannot expand the money supply unless borrowers apply for loans.

In this sense it is the world's borrowers – students, homebuyers, speculators, entrepreneurs, shopkeepers or governments - who determine 'the creation of money' and whose borrowing expands or contracts the money supply.

It is not, as orthodox economists argue, Central Banks that create the money supply.

While they are responsible for both the issue of the currency, for actually printing and minting notes and coins, and for managing the value of the currency, using the bank rate as a tool –

Central bankers do not 'print' the nation's money supply.

No, commercial banks working with their borrowers 'print' the bulk of the nation's money supply. In Britain, private commercial bankers are responsible for 95% of the money supply. In the US they are responsible for 99% of the money supply.

That fact alone explains why monetarists in the 1980s, in trying to control the money supply focused only on the public sector – and ignored the massive expansion of credit generated by newly deregulated, private, commercial bankers. Under their watch inflation rocketed – as too much money or credit chased too few goods and services.

But to get back to the money supply itself: the creation of money is a bottom-up process.

If borrowers are fearful, timid and lack confidence, if times are hard or unstable, demand will be weak as it is now. Entrepreneurs etc. will not borrow from the banks. As a result deposits will not be created and the money supply will contract.

As a consequence of a fall in the money supply, incomes, prices and savings will fall – and the spectre of deflation afflicts the economy.

Alternatively if borrowers, entrepreneurs, speculators are brimming with confidence, if they become recklessly euphoric about the possibility of speculative capital gains – on for example the London property market – they expand the money supply by applying for more loans.

As a result, incomes, prices, and savings will rise.

It's not rocket science.

## **DEBT-FREE MONEY**

Some in the Sovereign money movement propose that we should abolish debt, strip bankers of their powers “to create new public currency” (in the words of Mary Mellor the sociologist) and return to a debt-free, gift-based economy. [5]

These activists seek to effectively nationalize the money supply, which would be expanded or contracted by a committee at the top of the central bank, so that “new public money could be issued by public monetary authorities, free of debt... to meet public needs.” Interest rates would be left to the whim of the market.

I worry at the authoritarian implications of transferring such economic power to unaccountable officials at the central bank.

But for the purposes of this discussion, debt-free money is an oxymoron. There is no such thing as debt-free money, or if there is, it is very likely something quite different – a grant or a gift.

Now there is no real reason why society should not aspire to building a gift-based economy – one in which all the individuals in that economy rely on others for what Mary Mellor calls ‘provisioning’ – for clean air and a safe environment, for the gifts of food, health, housing, for works of art, or for a smartphone. But to date, while we still enjoy the remnants of a gift-bearing culture, we have failed to develop an entirely gift-based economy. The closest we have come are economies in which we collectively gift joint resources to each other via, for example, free education, a free Health Service, subsidized housing and so on. But even in a socialist or social democratic society, socialized ‘gifts’ are ultimately a claim on us all – claims settled via the taxation system.

In a developed monetary system, all money is based on a system of claims: assets and liabilities backed up by collateral.

All money is a claim on another – an obligation to be reciprocated – or a debt.

The Italian economist Andrea Terzi has it right: in a monetary economy saving is different from the business of building up a surplus of corn, and then lending it on. The corn can be saved without it ever affecting others. Only if you decide to lend it will you establish a relationship with others.

However, saving in an economy based on money always ‘affects others’ because it is always an act that sets up a financial relationship with others: a claim. Terzi again:

“In a monetary economy, saving is not a real quantity that anyone can independently own, like corn or gold or a collection of rare stamps. In a monetary economy, as opposed to a non-monetary economy, saving is an act that [establishes a relationship with others] ... in the form of a financial claim.”

Given this, it is the case that if savings in an economy are to expand, then it will be necessary for debt to expand too.

That is what orthodox economists find so difficult to grasp as they battle to cut government debt, in the vain hope of accumulating savings.

That is the very reverse of what they should do: for savings to expand, then it will be necessary for debt (either private or public) to expand too.

Savings need to be funded, and if the money supply has shrunk, because the private sector has lost confidence, then the best way to fund savings would be for governments or private banks to issue new debt.

Don’t hold your breath. These are difficult concepts for our politicians to grasp, and so dear friends, austerity is with us for a little longer.

At a time of economic failure or slump, when unemployment rises, incomes and tax revenues fall – that is the time for the government to increase both private economic activity and savings in the economy, by issuing debt.

So debt is vital to the monetary system, and to the health of the economy.

It is when debt is created at high, real rates of interest that it becomes un-repayable. And when credit or debt is used for speculation, and not for sound, income-generating activity, it is then that crises occur.

These are the relationships – of credit and debt, between the owners of liabilities on the one hand, and claims or assets on the other – these are the social relationships fundamental to a monetary economy. Relationships that generate the credit, and then the income and finally, the savings needed for investment, employment and all manner of useful and important activities.

Orthodox economists have it the other way around. They look at the monetary system through the wrong end of their theoretical telescopes.

## **HOW TO SUBORDINATE THE BANKERS TO THE ROLE OF SERVANTS, NOT MASTERS**

Today the international monetary system is run by the equivalent of Goethe's Sorcerer's Apprentice. In the absence of the equivalent of the Sorcerer – regulatory democracy – financial risk-takers and fraudsters have, since 1971, periodically crashed the global economy and trashed the lives of millions of people.

And let's be clear: there is no such thing as effective global regulation. Ask the Bitcoiners – that is why they operate in the 'dark web'.

The question is this: who should control our socially constructed, publicly-backed financial institutions and relationships? Private, unaccountable, rent-seeking authority? Or public, democratic, regulatory authority?

Policy and regulation requires boundaries. Pensions policy, Criminal justice policies, taxation policies, policies for the protection of intellectual property – all require boundaries.



Finance capital abhors boundaries. Like the Sorcerer's Apprentice global financiers want to be free to use the magic of money creation to flood the global economy with 'easy' if dear money' and just as frequently to starve economies of any, affordable finance. And they want to have 'the freedom' to do that in the absence of the Sorcerer, regulatory democracy.

If we want to strengthen democracy, then we must subordinate bankers to the role as servants of the economy. Capital; control over both inflows and outflows, is, and will always be a vital tool for doing so. In other words, if we really want to 'take back control' we will have to bring offshore capital back onshore.

That is the only way to restore order to the domestic economy, but also to the global economy.

Second, it goes without saying that in a domestic economy, given that the private banking system is backed by publicly financed institutions, monetary relationships must be carefully managed by public, democratically accountable authority, not private authority. By the equivalent of local, trusted chieftains, known today as 'regulators'.

Their mandates must include: ensuring that loans/credit or debt must be deployed for productive employment-creating activity, that generates income – for the repayment of debts and taxes. Speculation leads to capital gains that can rise exponentially. But while speculation can lead to exponential capital gains, it can also lead to catastrophic losses. Money, loans, credit for rent-seeking and speculation, gambling or betting, must be made inadmissible.

Money lent must not be burdened by high, unpayable real rates of interest. Rates of interest for loans across the spectrum of lending – short and long-term, in real terms, safe and risky - must again, be managed by public authority, not private authority – if loans are to be sustainable and repayable, and if debt is not going to lead to systemic failure.

Keynes explained how that could be done with his Liquidity Preference Theory – still profoundly relevant for policy-makers, & largely ignored by the profession because it involves public rather than private authority over money.

We must never forget that the domestic and international financial systems are socially constructed, man-made systems: and so just as they were built by society, so they can be transformed by society – as happened during the 'golden age' of economics from 1945 -71.

The good news is that if well managed, these claims, the promises, the social relationships that make up our monetary system are potentially infinite. A publicly-backed monetary system can provide for all of society's needs, including the very costly requirement to transform the economy away from fossil fuels. Under a sound monetary system there need never be a shortage of finance.

By contrast, human wit, intelligence and muscle are finite. Commodities like gold, soybeans and even oil, are finite. Resources like clean water and a safe atmosphere are also finite.

These are the real limits we face. Our capacity for social relationships do not face the same limitations.

And limitations to the use of the monetary system for the fulfilment of society's needs are constrained or expanded by those who control the system Should it be private, unaccountable, rent-seeking authority? Or public, democratic, regulatory authority?

To 'take back control' from the bankers requires, I assert, control by public authority - our regulatory democracy operating within national boundaries.

A sound monetary system, can provide all the finance that society needs. If well managed, there need never be a shortage of money for society's most urgent projects.

Within a sound monetary system there need never be a shortage of money.

The very real possibility of using public awareness, and political will to restore such a system is why I see a 'horizon of hope' that could help us move away from apocalypse and towards utopia.

Thank you.

**END**

*Footnotes:*

[1] China Miéville, p. 20 Introduction to Utopia by Thomas More

[2] Schumpeter in A History of Economic Analysis, 1954, p 294-5.

[3] The Times 2 February, 2017 "Storm in a tearoom as big business takes over"

[4] David Graeber, Debt the first 5,000 years <https://www.mhpbooks.com/books/debt/>

[5] See Mary Mellor, "Debt or Democracy" , 2015, University of Chicago Press