In Conversation with Professor Steve Keen

On money, private debt, and the future of the financial sector

I'm Professor Steve Keen. I'm a professor of economics. I was at Sydney and then the UK and the University. Now I'm crowdfunded on Patreon. And my specialty has been looking at the financial sector and how money affects the real economy, which bizarrely enough is something that is ignored by conventional economists.

How Money Is Created — and Why It's a Problem

Great. Please describe the problems of the current market economy system, how money is created and what's the problem there.

Again, partly you've got to explain what's wrong with conventional theory about the banking sector because one of the great mysteries to anybody who's not in economics is you think they think economists are experts on money and then if they actually go and check, they find that economists, mainstream economists, ignore money in their macroeconomic models. They ignore banks. and they ignore private debt, which most people think that's ridiculous and I agree with them. So what I've been doing is building ways in which we can model money in the economy rather than ignoring it as conventional economists have done for pretty much 150 years. And so I've built a range of software packages that enable us to model monetary dynamics. And what I see in the financial sector is that the financial sector fundamentally profits by creating debt.

it's very easy for them to persuade households in particular that it's worth borrowing money to buy a house because house prices always rise.

What actually happens is the increasing level of mortgage debt they're extending is what causes house prices to rise. So you get a runaway increase in household debt, a runaway increase in house prices as well, until you hit the wall where you can't persuade anybody to borrow any more money and the economy crashes. And that's what happened back in 2007 in America.

And the country that managed to avoid a crisis back then, a lot of them did it by continuing to borrow money. And unfortunately, one of those is Sweden, but also my home country of Australia.There's a couple of others, Canada, France, and so on. And so what I'm trying to say is we have to understand the role of debt in the economy, and we have to understand how the economy is driven fundamentally by new money created by banks lending.

to businesses, lending to households. And that's what gives us the most of the booms and bumps and busts in the economy. Part of that is creative. When you lend money to corporations, they're normally borrowing for investment, which is a positive thing to happen. But banks have gone well beyond the level of debt that anybody should have. And to get a healthy economy, I think we need to reduce the level of private debt by a factor of two or three compared to where we've got to, given the extent to which banks have created too much debt in the last 60 years.

And who can decide this? Who decides this?

The banks make the decision themselves. And this is one thing that people have a level of deference to banks, which comes, I think, out of history that you normally regard the bank manager used to be the responsible person. You had to go with your suit and tie and go and ask for a home loan and stuff like that. And we've still got that image of banks because banks can create money because we trust them. So trust is part of the whole equation. When you've got a huge amount of money you can create for yourself through creating debt, the banks have an incentive to abuse that trust and that's what they've done. So you can't be a bank without getting a banking licence. And a banking licence, in a sense, is a privilege that comes from the state and with a privilege should become responsibilities.

But because so much money can be made out of the financial sector, over time they've ignored their responsibilities. created too much debt and you've had a huge increase in the level of private debt. And because banks become so powerful in doing that.

Banks and bank managers, top executives, are the only ones politicians actually talk to. And you get what I call the political financial complex. That means that politicians are afraid of the financial sector getting smaller when in fact it's got too big and we needed to make it one third of the size that it is.

So making that decision about reducing the debt isn't something the banks themselves will not do.
Politicians often think they should try to create more credit. and they get more money running through the economy we need a decision to get less less debt reduce it and politically that involves convincing politicians not to be beholden to the banks anymore but that's almost like convincing politicians in america not to be holding to the military industrial complex anymore it's not easy

great how what's the problem according to through the real economy versus the financial sector can do?

Fundamentally, the real sector has to finance its operations by selling goods and services. And if you look at, I'll give you an example from my own family. One of my sisters wanted to establish a storage shed business in a small town in Australia and could never get a loan because she didn't have sufficient credit score. to get a loan on the basis of the value of her assets. But she had this great idea, she had the land to build, that they wouldn't give her the money. So I lent her the money. And it's successful. It's earning about $75,000 a year on an investment of $350,000 a year. So quite profitable. But the banks wouldn't give her the money.

If the banks had given her the money, lent her the money for the business, she might have established twice as big a business. So we'd have had a loan, say, of $700,000.

We'd have been making $150,000. If she's paying 5% interest on that, she would have been paying $35,000 a year as interest, earning $150,000. The bank's making a healthy profit. She's making a healthy profit. It would have been a healthy system. And that's the type of banking which, when you look at historical. analysts of banking like Joseph Schumpeter. That's what he saw banks as doing, giving you working capital which you can then turn over and make into a business. You can finance the debt. You can also make a profit. You can pay your workers and so on. That's the world I'd like to see us return to, but it's not the world we're in. Because instead, banks realise, well, they can create much more money if they can persuade households that house prices always rise. Households borrow money from banks to buy the houses. That's what actually drives the house prices up. You get a huge increase in the fees they charge, huge amount of money they're making out of it. And then you have a crash. And that's the world we've got ourselves into. I want to get back to the world where banks finance business and are servants of capitalism rather than masters.

Great answer.

What Would It Take to Change the System?

There's a huge amount of problems, a fundamental problem. What would need to happen in order to change the system?
We've got a, I'll take America as an example because that's the one I know best. But America back in the 50s and 60s had a very low level of private debt, about 40% to 60% of GDP. And that's what we call the golden age of capitalism. If you look at what happened back then, partially you had all this new technology coming out of the Second World War, which would now be made for consumer purposes rather than military, so televisions and refrigerators and so on, and people buying them. They could buy them on credit or on lay-by because people were very conservative about debt back then. And there's a huge turnover of money because low levels of debt, nobody's worried about paying off the debt they've got. You can take out a bit of credit, mainly that's corporations borrowing to invest, so that boost demand and so on.

We've now moved on from the order of 40% to 60% of GDP as the debt level to 170%, the peak of the financial crisis, fallen to 150 afterwards.In that situation, everybody's carrying large amounts of debt. Nobody wants to spend because they're worried about being able to service their debt, so they try to save money. When you save money, you don't actually increase the amount of money available, you slow down how fast it turns over. You get lower income coming out of that and you get trapped in this, what I call, credit stagnation. And that's the world we're in. The way to get out of it is to use the powers the central banks have to create money, which they've used for what they call quantitative easing. Use that instead for what I call quantitative easing for the people, where rather than giving money to the financial sector in return for bonds, which is what quantitative easing was, give money to the public in return for cancelling their debt.

And with that cancellation of debt, you give it on a per capita basis. So everybody gets the same amount of money, regardless of how wealthy you are. That money has to be used to pay down debt if you have debt. If you don't have debt, you could either say, well, you can spend that money, which would stimulate the economy. Or if you had the situation we have in America right now, where the economy is going fairly well,you could say instead, you can only use that money to buy shares. which have been issued by the corporate sector with the specific purpose of paying down their debt. And what you could do is therefore reduce corporate debt as well and democratise share ownership. Because one thing which has happened through quantitative easing is you've massively boosted the value of shares. That's benefited people who own shares, who are the 0.1%. It hasn't benefited the rest. This could reverse that mistake, democratise capitalism. to some degree and reduce the debt levels as well. And then we get back to the point we say we don't let debt get that high. You do not let banks lend to households to finance speculation on house prices anymore. You limit that to saying when you're buying a house using borrowed money, you're buying it to live in, not buying it to gamble on its house price rising. And get banks back to financing corporations again, because they used to do that. They used to provide what's called working capital and lines of credit for corporations. They don't do it anymore because it was more profitable to lend to the housing sector.Well, I want to get back to say you can't make that profit anymore. If you want to make a profit, lend to corporations for working capital, lend to entrepreneurs and get back to, again, finance being a servant of capitalism rather than a master.

Brilliant.

Why haven't we done these reforms?

The power of the finance sector. My father was a banker in the Australian banking system. He was in what's called the Commonwealth Bank. And back when he was in the bank, it was both the central bank and a commercial bank. And it split. My father went with the commercial wing rather than the central bank wing. But Dad used to say that back in the 50s and 60s, or 50s in particular, if the central bank governor told the governors of the private banks to jump out the window, they'd ask which floor. He said 10 years later, the managers of the commercial banks were telling the governor which floor to jump out of. So in a sense, the power's been completely inverted, and the power's been inverted because of the level of debt. The old joke about if you owe the bank $1,000, you're in trouble. If you owe the bank $1 million, the bank's in trouble. If you get to the stage where we owe the banking sector 200% of GDP, twice our annual income, the economy's in trouble, and the bankers are in control. And the only way to get out of this problem is to invert their power. And now, of course, that's an incredible struggle because with wealth goes power. And the rise of the financial sector means the wealthiest people on the planet are the people who own the financial sector. And they're not going to give up that power without a fight.

Can Central Banks Fix This?

Great. Doesn't central banks have any power in this issue?

Central banks are run by economists.

That's a really big problem because conventional economists are trained to believe that the economy is always in equilibrium or near equilibrium, that it's all about people's preferences on one side and firms' innovation on the other, that equilibrium rules and that you can ignore the financial sector. This is why people like Bernanke didn't see the financial crisis coming, even though the data of rising levels of private debt were there, because according to him, debt is just a new debt is a distribution of income from one group to another that doesn't change demand. So he completely ignored it.

Bang along comes the crisis.

They throw the money they can create at the financial sector to rescue it.They rescue the parasite rather than rescuing the host. So you've got people who are in charge of the financial sector who fundamentally don't understand money. Now after the crisis, some of those banks have woken up. So the Bank of England now admits that banks create money. It was before 2014, they went along with the textbooks to say that banks don't actually create money, which is nonsense. It's just sheer nonsense. But that was what they were taught in their economics degrees.

By 2014, after the financial crisis, when they'd been bashed over the head by British politicians for not only not warning them about the crisis, but saying what a great year 2008 was going to be, that woke them up to some extent. And they now came out and said, well, banks do create money. and we have to think about how banks operate to understand the economy. The Bundesbank has said the same thing. The Bank of Norway said the same thing. Finally, the Reserve Bank of Australia said the same thing. But they're still dominated by economists who don't think credit plays any role in the economy.

Money versus Credit

What's the difference between money and credit?
Money, well, There's two forms of money. You can have money which is created by the state. So if you have kronas in your pocket,only the state is allowed to produce those physical pieces of paper.
But you can go to a bank and ask for a bank loan, and the bank will give you that loan by crediting your bank account, putting a positive entry in your bank account. to show you've got the money to spend, which is credit money, and putting a positive entry on the asset side, you are asking exactly that same amount of money. So money is the sum of what's created by the state and what the banks create. And when you look at the proportions now, it used to be back 50 years ago that half the money was created by the government and half was created by the banks. Now it's about 95%

created by the banks and 5% created by the state. So when you get money, fundamentally you're getting credit.
And you still can't pay your taxes with this?
Sorry?
You still can't pay taxes with this loan money?
It's a complicated story because I think about the financial sector in terms of double-entry bookkeeping tables. Everybody has assets, liabilities and equity. And banks, the assets of banks are fundamentally the loans they've made, the liabilities, the deposits they've got. The gap between the two is the equity that banks have. When you want to pay the government, then the government's got its own set of books held at the central bank. And to pay your taxes, money has to come out of your bank account, has to go to the government. That means the liabilities of the banking sector falls. That means their reserves have to fall at the same time. The reserves are part of the liabilities of the central bank. For the reserves to fall, the money that's being transferred is government money. So you cannot pay taxes with anything other than government money. But the money we're working with is fundamentally private money and it's the conflict between the two that leads to the crises we're in now.
Great.

Keen's Reforms: A Modern Debt Jubilee

What kind of reforms do you promote?
I've got a range of reforms that first of all I call a modern debt jubilee. to get us back to the level of private debt we had back in the 50s and 60s,which would be something like about one third of the level of debt we're carrying right now, private debt. So reduced private debt, say, like in Sweden's case, from 240% of GDP to about 60% to 80% of GDP. In America's case, from 150% to about 50% of GDP. Then I'd also say that from that point on, banks can only lend for housing.

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or any asset purchase based on the income earning potential of the asset. So at the moment, if you go to a bank and say you want to, let's say you and I are fighting over buying a house in Stockholm. If we both earn the same income, then the one who will win is the one who gets a high level of leverage from a bank. So if I get a loan which gives me I put a 10% deposit down and borrow 90% and you put down five and borrow 95%. If we both put the same deposit down, you've got twice as much money. You outbid me. So you and I have an interest in having higher leverage, which is a very negative thing. So what I want to do is say, okay, it doesn't matter how much you guys earn. the maximum you can borrow, each of you, is 10 times the rental income of the property you're trying to buy. So the place rents for, let's say, I have no idea here, but let's say a million kroner a year, the maximum anybody can borrow is 10 million kroner. And therefore, the one who will win is not the one who gets more leverage, it's the one who saves more of their money. and therefore you'd break the link between rising leverage and rising house prices and turn back to houses being a place you buy for the consumption side of housing rather than expecting its price to rise. So that's one reform I'd make. I'd also make it easier to write debt off because banks, when they make loans, some of them are going to go bad. And at the moment, if they go bad, the bank can go bankrupt and you have a collapse. I want to make it easier for them to write off bad debts because to some extent you want banks to

take risk in lending not to households for speculation, but lending to businesses for innovation and working capital. And I want to make it easier for them to do that. So I'd like to, to some extent, blend venture capital right now with banking. And for example, let banks on some cases take an equity stake in a business rather than a debt stake. So we have to really, we have to realise the financial sector is not something which is God-given. It's something which is a structure we've created and we've let it take over itself. We've let Frankenstein run Frankenstein's monster and we have to get back in charge of Frankenstein's monster and that means setting rules that constrain what the financial sector does and then make those rules ones which benefit the real economy so we get money to the real economy for innovation and for working capital.
Does the central bank's digital currency reform the idea of digital currency?

I like the idea of digital currency mainly because it gives you an avenue for the central bank to effectively communicate with the bank accounts of individuals right now because at the moment the only people who can have an account at the central bank are either government entities or private banks. They're the ones who've got accounts there. So when it comes to the central bank wanting to affect the economy, it has to work through the bank accounts it can access, and those are the bank accounts of the financial sector. That's why quantitative easing was so easy for the Fed and all the central banks to fall into, because all they have to do is say, we're going to put a billion dollars in your bank account, and we want to buy a billion dollars' worth of shares off you. So they create a billion dollars of money for the banks and get a billion dollars' worth of bonds at the same time for themselves.

That's easy for them to do. What I want to do instead is get the money to the public and say use that to cancel your bank debt. You have to have accounts that they can do that to. At the moment, they can't access your private bank account because that's owned by the private banks themselves. But if you had an eCorona account, then the central bank could just as easily put money into individual accounts as it can into the financial sector.

Interest, Lending and Regulating the Banks

Great. Is there a, what would happen with interest in debt or money if we reformed the system?
Interest is not a problem. It's too much debt that's a problem. So people, there's often a myth, and this is one area the public does get things wrong, where they think if you borrow $100 from the bank and you've got to pay 5% interest, you borrowed $100, they've given you $105, you haven't got enough money to pay the debt back, therefore the debt's going to compound. That's a very common fallacy that a lot of people in the public believe. What actually goes on, if you borrow $100 from the bank and you borrow it for a business, that $100 might turn over twice a year, so that $100 of debt of debt generates $200 per year of income. You then spend, say, $160 of that on your workers. You hang on to $30 of that for yourself. You've got to pay $10 of it to the bank. So the turnover, the interest is a charge, is a flow in dollars per year.

If the money you take turns over more often than once a year, you can finance that debt easily. But it has to be money that's borrowed for productive purposes, actually selling goods and services, not for speculating on rising asset prices.
How can we make banks to loan to the businesses and really?
We have to take away the opportunity of them financing asset bubbles, because that's really been the trouble of the last 30 years. Banks have made more money by giving money to households, charging fees in the money, charging high interest rates, setting up a housing bubble which then bursts. And we've seen it all over the world. It's creating money to finance asset bubbles, which is an unproductive side of capitalism, rather than creating money to finance business, which is the creative side of capitalism. So I would rather say we're going to rule out the possibility of you making money out of asset bubbles. And that would be things like that idea I had about limiting banks to lending, say, 10 times the income earning potential of a house rather than lending on the income of the buyer. I call that property income limited leverage. It used to be a better joke in the old days when people actually still used the pill. But the idea is to limit how much they can lend on the basis of asset speculation. And once that's done, the only thing I've got left is lending to business.
There's like the... The shocking numbers I've read somewhere is like 40% almost goes to the financial sector only and 40% in housing and only 14% goes to the real economy.
That's right.

And that's quite shocking. But there is no like, is it done by regulation how banks can then?
We let banks do what they wanted to do. And if you think about.
like a normal company. There's a tendency in analysis of capitalism to say, leave business alone, let business do what business wants to do, laissez-faire, that'll work better. And that's moderately valid when you put it to the business sector. Let people innovate, come up with new products, don't put too many regulations in place and so on. But we've applied that to banks as well. Banks only exist because the government's given them a licence to be a bank. And that then means that they can create money by double entry bookkeeping. So they if you have your bank Business has to make goods and services by combining other commodities and energy to make output Okay, that's hard work and there's physical limits to how much you can do with a bank all they've got to do is expand their asset side of their balance sheet which they can do by persuading us to take on debt for buy mortgages, and they create money, which they then charge interest on, and they also charge fees on. So the more debt they create, the more money they've made for themselves to make a profit out of. So if you let them decide how much money to create, that's why you walk into a bank these days and they ask, would you like a credit card with that? Would you like us to increase your limit, et cetera, et cetera? That's irresponsible. So you They have to be constrained in how they behave. And we've let them, we've treated them in the same unconstrained way you should treat physical business. We've treated the financial sector that way and they've turned into parasites.
I understand.
Really good. I was just thinking.
Yeah.

I tried to ask that question earlier.

Maybe you can give it up.
I'm kind of new to this area. Just this ordinary working middle 30s.
Yeah.

Why Should Ordinary People Care?

And why should I care? I whenever you can use it, I get the feeling that in Scandinavia, our banks are ranked like in the top.
Because ultimately what you get into is a situation like America, like Japan was after its bubble economy. Japan's your best example because Japan was the first economy to fall into this trap back in 1990. And what they had, there was a period they called the bubble economy from 1980 to 1990 where there's a massive increase in debt which was used to finance speculation on real estate and speculation on the stock market. And that took private debt in Japan. from about 220% of GDP. Now it's fallen down from that to 160% over the last 25 years. And over that period of time, demand has been lower in the economy than it would have been without this period of negative credit. And so you had what they call the lost decade for Japan, which really went on for not 10 years, but 20 years of stagnant economy, all because we let banks create too much money during the bubble economy phase. So there are unintended consequences of letting these things rip. And the unintended consequence is a lower rate of growth, more money wasted on the finance sector, not enough innovation taking place, and we're in a much less innovative economy than we would have expected back in the 50s and 60s. If you go back to the 50s and 60s, the 60s finished with the moon landing. People were talking about how long before we're going to have bases on the moon, how long before we've got space stations, etc. What happened from that point on? The finance sector took over. And we've been doing financial speculation rather than innovation, which we should be doing. And we're now approaching an ecological crisis with far too many financial engineers and not enough real engineers. So that's why you should worry. It's jeopardised your future.
Great.

The Gold Standard

Weird question.
Yeah?
Gold standard.
The gold standard people people have this vision that money should be hard You know that they're one of the real problems is that money declines in value over time That's really really bad and Warren Buffett had this put to him about about two or three years ago in one of his meetings, he said, well, over my lifetime, the value of money has fallen from $1 would buy back and then would buy, say, 10 Mars bars. Now it buys half a Mars bar. So its value has declined. He said, over the same time, the productivity of the American economy has gone in the other direction. So maybe flexible money matters more than hard money. And if you go back to the gold standard period, which didn't last as long as people think it did, but it was during the 19th century, you had a financial crisis every 10 to 15 years. And what you had was

credit constraints would be struck all the time because credit wasn't as freely available as it is now. It's been dangerous because it's been freely available in financed asset speculation rather than real production. But we had more instability under the gold standard than we have now.more regular crises and so on. If you look at the history of the 19th century, it's history of low inflation and massive financial crises. We've had less financial crises and inflation in the period of flexible money. So the gold standard wasn't as gold as people thought it was.

Good. I just wanted to get that out of the way because of some people's things.
Yeah.
I feel that way.

Economic Journalism

Do you have thoughts about journalistic in the field of economics?
Journalistic?
Like economic journalists that work today.
Yeah.
How is it done today?
Journalists working on economics. The trouble is journalists accept that they're talking to experts when they talk to professional economists.And in most professions that's true.
But in economics it's a bit like talking to tolmec astronomers. You're talking to people who've got a wonderful intricate model of how the solar system works that's completely wrong.
And it's the rebels who are like the Copernicus's today saying it doesn't work that way. A, you've got money system completely wrong. B, it's not capitalism isn't great because it reaches equilibrium. It's great because it innovates. You're focusing on entirely the wrong thing as a strength of capitalism. And C, you've got no idea of the role of energy. in production, so you have no idea of your contribution to ecological damage and you're leading us towards an ecological crisis. So I would ask journalists not to trust the economists. But of course it's very difficult to do it because journalists think, well I'm talking to the expert, they must know what they're talking about. They know how a particular model of the economy works and it's just as good a model of the economy as Tolmo's model of the solar system was. In other words, it can fit the data occasionally but it's completely wrong.

Debt That Cannot Be Paid

Great. Do you guys have any other questions? I know you like to quote Michael Hudson.
Oh, yeah. That cannot be paid, will not be paid.
In Sweden, you usually hear journalists saying that debts must be paid, period.
Yeah. Do you have any comments on that? Yeah. Yeah, okay. What we've got, in terms of how people think about debt. Particularly Germany, the word for debt is similar to the word for guilt. And we think you must pay your debt back and it's really bad of somebody to borrow money and not repay it. And what we're doing there is

we're transferring what happens between individuals to putting it in a bank. I've been in a situation, I've lent money to somebody who can't pay me back. And that means you really can't spend, you really are constrained by it. But banks create money by double entry bookkeeping. The money doesn't actually exist when you ask for a loan. When they approve a loan, they say, here's the money and here's the matching amount of debt we've created for you. And banks can create an irresponsible amount of debt in that situation because it's not their money and it's not money that actually exists in the first place. So they can create too much of it and that's what they've done. We need to reduce that debt. So we need to think about debt between individuals differently the way we think about debt with the financial sector and with banks. And with banks, Banks have got a responsibility not to create too much debt and they've completely abused that responsibility. And we need now to reverse it and say, this is what you should have done. We should have one third the level of private debt we actually have. And we're going to get back to that level, whether you like it or not. And in that case, it's the debtors we need to worry about, not the creditors. And if you look at the history of human society. back in the pre-capitalist days, starting in Samaria, then in Judea and Rome and so on, the regular debt jubilees to abolish the debt because the debt would accumulate faster than it could be repaid. And they didn't apply to business debt, it only applied to debt between households, effectively debt. And we need to realise that we are no better. We don't know the world better than the ancients, we know it less well. and they had a jubilee and we need to introduce them as well.
Great. What happens to the money when I pay back my loan?

Pardon?
What happens to the money when I pay back my mortgage?

When you pay back a loan to an individual, and this is again where we make a mistake, if I borrow money from you and then repay you later,when you've lent the money to me, you've got less spending power. When I repay, your spending power is restored. So the money still exists. If you repay money to a bank, you take money out of your deposit account and your deposit account is part of the money supply. So the amount of money goes down and the amount of debt goes down. So effectively money is destroyed by being repaid.

Great.
Great answer.

Modern Monetary Theory

Any other questions here about the Babylonian money magic?
So about the commentary yesterday from Dirk when he said that 99% of all economists don't take RMT seriously.
Would you like to comment on that? On MMT? Okay.

99% of economists don't understand money to begin with. So it's not amazing they don't understand modern monetary theory, which is an attempt to bring great base error analysis of capitalism and a sound understanding of how money is created. And part of that is what's called sectoral balance analysis, where you say, if you have one part of the economy trying to save money, that causes dis-saving in the other part. And modern monetary theory has a very simple little message, which they say is the government sector deficit is the private sector surplus. And what that's saying is that the government's going to run a surplus. it has to tax you more than it spends on you. So the difference between its taxation and spending comes directly out of your bank accounts. So the government running a surplus means you run a deficit. And it's exactly the same. And this applies to any way you divide up the economy. If one place is running a surplus, the remainder is running a deficit. So the question becomes, who can sustain a permanent deficit? Can the household sector permanently sustain a deficit? Answer, no. Can the business sector? Answer, no. Can the foreign sector? Maybe. You can get away with the trade surplus for a long time. Can the government? Yes, because it owns its own bank. And so if you want to have parts of the economy saving money, meaning they're accumulating more money over time, another part must be dis-saving. And the only part that can sustain indefinite dis-saving is the government, because the government with its central bank creates the money that lets it dis-save. And that's the essence of modern monetary theory. And it's based on sound accounting. It's correct. I won't say the whole analysis is correct. There are parts that I disagree with. Other parts of what's called MMT. It's not just one monolithic bit. There are other parts that I'm not happy about. But that fundamental accounting vision is correct. And once you look at it that way, it means that if the private sector wants to be saving money, so increasing its bank accounts over time, the only way that is feasible if the government is dissaving, which it can do because it creates its own currency.

Correct. Is there a question that I haven't answered?
A pretty good range. I'll leave it at that. You've got too much material to work with anyway.

Closing Thoughts: The Coming Ecological Crisis

Let's have it just like a closure of really tight.
couple of sentences about the problem-solution chain to be happened.
I must say, my position about the state our economy is in right now, my main focus is actually on the ecological issue rather than the monetary side of things. And I don't think we're going to resolve the monetary system before the ecological one has to be taken seriously. And when that happens, nobody's going to worry about can we help them afford to pay for this? It's going to be like, how can we afford to fight Germany in the Second World War? You just do it. You mobilise as much resources as you can. So that's really my closure. I think we've left solving the financial crisis too long. The next one is going to be ecological. And when that happens, nobody's going to worry about the level of government deficit. Nobody's going to say we can't afford to install that solar panel. Because if we don't install that solar panel, then we're going to. we're going to fry on the planet. And ultimately, I think we'll learn about how to resolve the financial sector the same way we did during the Second World War, which is we had an existential threat. We forgot about all the financial constraints we thought we had during the Great Depression. And by fighting that existential threat successfully, we came out on the other side with a healthy financial sector by accident. And I think that's what's going to happen this time if we're lucky.
But does this current monetary system, is it bad for the environment and ecological?

I think it's bad for the environment in many ways. One of the simple ways is far too many people are working in the financial sector and there are far too many engineers. And what we need to solve the ecological crisis is lots of engineers building lots of new non-carbon based energy systems. developing new technologies and energy and so on. And we simply aren't training them anymore. We're training people to do financial engineering instead, which financial engineering is a travesty of the word engineering. So it's contributed to that. It's directed money towards the fossil fuel sector. It hasn't done anything like what we needed to do to prepare ourselves for the ecological threats we face.

Do you have a profit or resource-based?

Pardon?

Profit or resource-based economy.

Capitalism is profit-based. And one of the obvious dangers of capitalism, not to say that socialism was better on this front, but one of the favourite phrases of capitalist friends of mine is it's a good idea to socialise your losses and privatise your profits. And in that sense, capitalism has this desire to not worry about the waste that it generates. Socialism was just as bad as I've forgotten the name of the lake in the Soviet Union, but they were environmentally disastrous as well. We've ignored the environment in everything we've done in capitalism. And we can't ignore the environment because we live in it. And so I'm critical of capitalism in that front, but I think socialism is just as bad. We didn't realise the extent to which we're mining the planet to maintain our lifestyles on it. And we're now getting to the point where we've mined it so much that the planet's capacity to absorb the waste we generate is degrading, and therefore the environment starts to fall apart. And when it does, whether you've got a capitalist economy or a socialist one, you're going to find you can't use as much energy, you can't generate as much waste, and the economy will have to go down. So that's my main worry is we've walked blindly into an ecological crisis after walking blindly through a financial one. And the financial crisis and the bubble we went to in beforehand set us up to make the ecological crisis worse.

Great. Absolutely brilliant.