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The Dead Parrot of Mainstream Economics

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The legendary English comedy show Monty Python had a famous sketch about the disgruntled customer of a pet shop, who realised he had been sold a dead Parrot. The shopkeeper steadfastly refused to admit that the Parrot was dead:

> CUSTOMER: I wish to complain about this parrot what I purchased not half an hour ago from this very boutique.
>
> SHOPKEEPER: Oh yes, the, uh, the Norwegian Blue … What's, uh … What's wrong with it?
>
> CUSTOMER: I'll tell you what's wrong with it, my lad. 'E's dead, that's what's wrong with it!
>
> SHOPKEEPER: No, no, 'e's uh, … he's resting.
>
> CUSTOMER: Look, my lad, I know a dead parrot when I see one, and I'm looking at one right now.
>
> SHOPKEEPER: No no, he's not dead, he's, he's restin'! …

This sketch came to mind for me when I was alerted to a blog post by Gregory Mankiw, the author of one of the world's most popular economics textbooks. Mankiw's post showed that Monty Python's fictional shopkeeper is an amateur, compared to economists, when it comes to pretending that something which is dead is actually alive and well.

The Dead Parrot in question is the "Money Multiplier": the theory that banks create money by lending out reserves. It's also called "Fractional Reserve Banking". *And it's also a myth*: worse than merely being dead, it has in fact never existed, except as a fairy story that one generation of economists passes down to another.

The Money Multiplier Fairy Story

The 6th edition of Mankiw's Macroeconomics textbook (there's now a 9th edition, but I'm not about to waste money buying a dead parrot) passes on the Money Multiplier Fairy Story by telling students to consider "an imaginary economy" in which the money supply is initially $100 in cash. Then, the population deposits all that cash in "First National Bank". The money supply now consists of $100 in bank deposits, while all the cash is in the vault of First National Bank. Next First National Bank decides to make loans, so it lends out $90 in cash. The money supply now consists of $100 in demand deposits and $90 in cash. Mankiw declares that:

> The depositors still have demand deposits totaling $100, but now the borrowers hold $90 in currency. The money supply (which equals currency plus demand deposits) equals $190. Thus, *when banks hold only a fraction of deposits in reserve, banks create money*. (Mankiw 2012, p. 333)

The process then repeats, with the loan recipients depositing their $90 in cash in another bank, which also hangs on to 10% of the cash ($9) and lends out the rest ($81), also in cash. Mankiw explains that: The process goes on and on. Each time that money is deposited and a bank loan is made, more money is created… The amount of money the banking system generates with each dollar of reserves is called the **money multiplier**…

> *The money multiplier is the reciprocal of the reserve ratio.* If *R* is the reserve ratio for all banks in the economy, then each dollar of reserves generates 1/*R* dollars of money. In our example, *R* = 1/10, so the money multiplier is 10. (Mankiw 2012, p. 334)

There are numerous problems with this as a model of bank money creation, not the least of which is that *it only works if all loans are in cash* (a point that Mankiw at least notes). Though that may have been the case in the 19th century Wild West, today, banks make loans by increasing a customer's deposit account, and recording precisely the same sum as a debt of the customer to the bank. We pay businesses electronically, we swipe credit cards when shopping. No cash is involved, and nor are bank reserves "lent out", at any stage of this process, to anything other than other banks.

Non-mainstream economists like me and my contemporaries and predecessors in Post-Keynesian and Ecological economics have been trying to kill this false theory for decades—see these references for a sample of the anti-Money-Multiplier literature over the last century (Moore 1979, 1983; Dymski 1988; Graziani 1989; Minsky, Nell, and Semmler 1991; Minsky 1993; Keen 1995; Dow 1997; Werner 1997; Rochon 1999; Palley 2002; Fontana and Realfonzo 2005; Carney 2012; Fullwiler 2013; Werner 2014; Schumpeter 1934; Holmes 1969; Moore 1988; Fisher 1933; Keen 2014, 2015, 2021; Soddy 1934, 1922; Godley 1999, 2004a, 2004b).

But we're used to being ignored. Mainstream economists reject our papers when we submit them to their journals, and they never read our journals or books. We were resigned to being correct, but not taken seriously at the same time.

A Fairy Godmother Appears!

Then a miracle occurred: maybe Fairy Stories weren't all myths after all! 'The Old Lady of Threadneedle Street' as *The Bank of England* is known, turned into the Fairy Godmother of Economic Realists when she published a paper that supported our analysis, and rubbished the mainstream myths. Entitled "Money creation in the modern economy", the paper opened with the declaration that:

> Money creation in practice differs from some popular misconceptions — banks do not act simply as intermediaries, lending out deposits that savers place with them, and nor do they 'multiply up' central bank money to create new loans and deposits. (McLeay, Radia, and Thomas 2014, p. 14. Emphasis added)

It took direct aim at textbook writers like Mankiw, with the statement that:

> **The reality of how money is created today differs from the description found in some economics textbooks:**
>
> - Rather than banks receiving deposits when households save and then lending them out, bank lending creates deposits.
>
> - In normal times, the central bank does not fix the amount of money in circulation, nor is central bank money 'multiplied up' into more loans and deposits." (McLeay, Radia, and Thomas 2014, p. 14. Emphasis added)

I remember how much this paper excited me when it first came out: surely the textbook writers couldn't ignore the Bank of England? I felt a similar thrill in 2017, when the Bundesbank came out with a very compatible paper, in which it declared that:

> It suffices to look at the creation of (book) money as a set of straightforward accounting entries to grasp that money and credit are created as the result of complex interactions between banks, non-banks and the central bank. And ***a bank's ability to grant loans and create money has nothing to do with whether it already has excess reserves or deposits at its disposal***. (Deutsche Bundesbank 2017, p. 13. Emphasis added)

We monetary rebels now had two central banks supporting us, and opposing the textbook writers, and over time, many more Central Banks joined the fray on our side. Surely now, textbook writers would be forced to change their tune?

Well bollocks to that, as Mankiw's post on April 5th of this year showed. Entitled "The Importance of Teaching Fractional Reserve Banking", it was written as if these Central Bank refutations of the Money Multiplier model hadn't been written. I certainly doubt that Mankiw has read them.

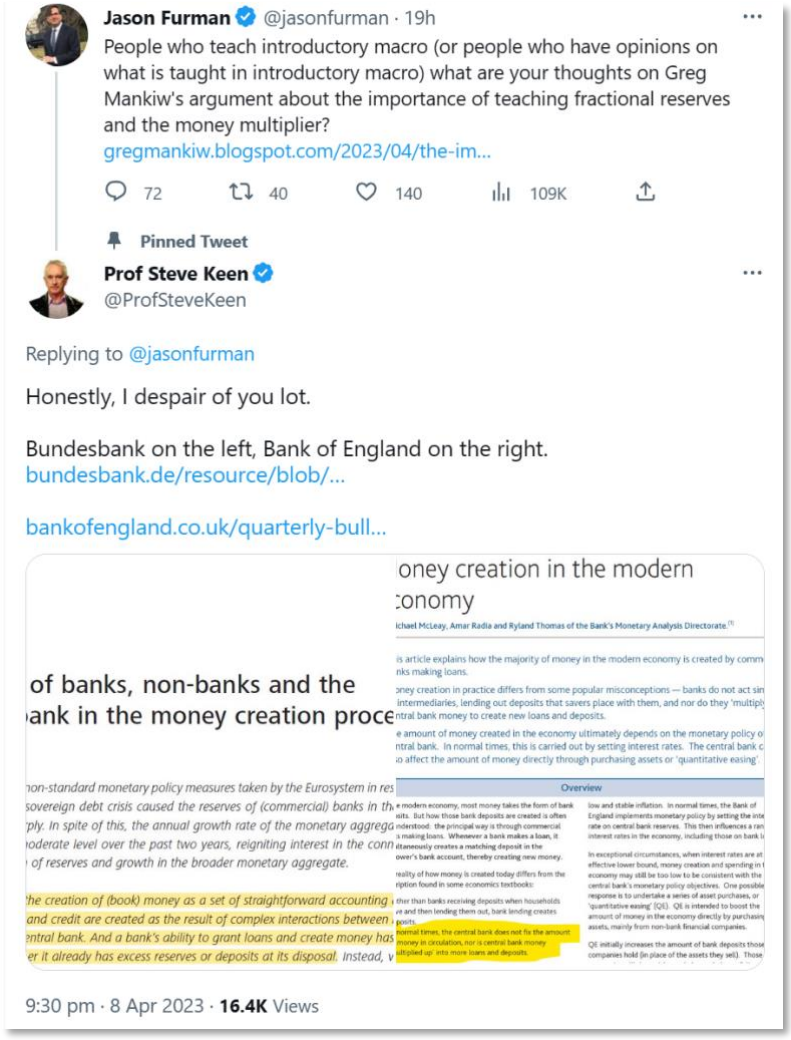
In his post, Mankiw recounted a conversation with a fellow mainstream economist who "does not teach the students about money creation under fractional reserve banking"—not because it's a fallacy, but

because he believes it's "an unnecessary technicality". Mankiw then defended the false theory on the basis that it explains how "a lower interest rate on reserves increases bank lending and expands the money supply by increasing the money multiplier", and that it's necessary to teach "the traditional pedagogy about how banks influence the money supply … if students are to understand the economics of inflation".

"The traditional pedagogy", as Mankiw puts it, is no more necessary for students of economics to learn than it is necessary for students of astronomy to learn Ptolemy's Earth-centric view of the cosmos before they can understand the Copernican system. It's a fallacy, it belongs in the garbage bin of science, and its continued presence in mainstream economics textbooks is a major reason why mainstream economists don't understand money, or inflation, or the causes of financial crises.

I'd long ago given up on persuading the mainstream to see reason on this any many other issues, but this ludicrous blog post by Mankiw, and the Twitter conversation initiation by Jason Furman that alerted me to it, was the "aha moment" for me: *why even bother trying to reason with these people?* They get hit in the face by a wet fish dose of reality, the wet fish—or Dead Parrot—is wielded by someone they normally listen to, and yet regardless, they cling to their fantasy.

Figure 1: The tweet that alerted me to Mankiw's blog post, and *my acerbic reply*



There's just no point talking with them: they won't listen to anything that disturbs their paradigm in any way. But they obviously dominate the training of economists: it's as if the academic astronomy departments were still teaching students to believe in crystalline spheres, equants and epicycles, while Elon Musk and his rivals are using Newton's and Einstein's math to shoot for the stars.

So, what to do? In part, my response has been to accept that critique alone won't change economics—though the 3rd and final edition of *Debunking Economics* (Keen 2011) will continue blasting these recalcitrant shopkeepers for selling dead parrots. My time is better spent developing an alternative paradigm instead (Keen 2021)—and we can use part of that work to give this Dead Parrot a decent burial.

The monetary approach to economics with *Minsky*

I have developed an Open Source system dynamics program called *Minsky* (freely downloadable from https://sourceforge.net/projects/minsky/), which uses the rules of double-entry bookkeeping to build models of monetary dynamics that are provably correct. This is why double-entry was invented by accountants in the first place—to establish that financial transactions were properly recorded.[1] *Minsky* brings that certitude to economics.

Minsky's "Godley Tables"[2] do this by ensuring that every transaction is recorded twice, according to the rule that $Assets - Liabilities - Equity = 0$. Putting "the Money Multiplier" into a Godley Table easily shows that it only works if all loans are in cash (or other negotiable instruments, like bank cheques). Firstly however, I'll model real-world banking, because it's real, it's easy, and it obeys the rules of double-entry bookkeeping: a bank lends to a borrower by adding Credit dollars to the borrower's deposit account, and simultaneously recording that the borrower's debt to the bank has increased by Credit dollars—see Figure 2.

Figure 2: Real world lending – Loan and Deposit increase by precisely the same amount

Private Bank A

	Asset		Liability	Equity	A-L-E
Flows ↓ / Stock Vars →	Reserves	Loans	Deposits	$Bank_A{}^{Equity}$	0
Initial Conditions	100	200	250	50	0
Standard lending procedure		Credit	Credit		0

In contrast, the "Money Multiplier" model of money creation is complicated, and conditional on all loans being in cash. If you try to show Reserves going down—which must happen if you are "lending from Reserves"—then you can't show Deposits going up without violating the rule that $Assets - Liabilities - Equity = 0$. *Minsky* informs you that you're broken this rule in its $A - L - E$ column (see Figure 3.)

[1] This isn't to say that accounting fraud doesn't exist—clearly it does—but to commit it, you have to keep two sets of books, one where the fraud is recorded and the other where genuine transactions are maintained.

[2] Named in honour of Wynne Godley: see (Godley 1999, 2004a, 2004b).

Figure 3: Money Multiplier Fallacy 1

Private Bank A

	Asset		Liability	Equity	A-L-E
Flows ↓ / Stock Vars →	*Reserves*	*Loans*	*Deposits*	$Bank_{A\,Equity}$	*0*
Initial Conditions	100	200	250	50	*0*
Money multiplier Loan	*-Lend from Reserves*		*Lend from Reserves*		*-2Lend from Reserves*

You can "Lend from Reserves" and obey the laws of accounting if Reserves go down and Loans go up at the same time—but then, how does the borrower get the money? The only method that works is that the loan has to be in cash, in which case you need to use two tables—one for the bank, the other for the borrower—to record the loan adequately (see Figure 4).

Figure 4: Money Multiplier Fallacy 02

Private Bank A

	Asset		Liability	Equity	A-L-E
Flows ↓ / Stock Vars →	*Reserves*	*Loans*	*Deposits*	$Bank_{A\,Equity}$	*0*
Initial Conditions	100	200	250	50	*0*
Money multiplier Loan	*-Lend from Reserves*	*Lend from Reserves*			*0*

Non-Bank Sectors

	Asset		Liability	Equity	A-L-E
Flows ↓ / Stock Vars →	*Deposits*	*Cash*	*Loans*	$Private_{Equity}$	*0*
Initial Conditions	250	50	200	100	*0*
Money multiplier Loan		*Lend from Reserves*	*Lend from Reserves*		*0*

To simulate the "Money Multiplier", you have to start with the non-bank public having cash, which it then deposits over time into the banking system, and the banking system responds by lending a fraction of this cash out again—the fraction being one minus the "Required Reserve Ratio". Then, hey presto, you get money creation via the "Money Multiplier".

I hesitate to show this, because, knowing how bad Neoclassical pedagogy is, I fully expect to see my model turning up in some Neoclassical textbook one day, as an explanation of the "Money Multiplier", when in fact I'm rubbishing the concept. This has happened before, with Paul Sweezy's invention of the "kinked" demand curve leading to it being used as an explanation for "sticky" prices, despite the fact that Sweezy finished his paper with the acerbic quip that:

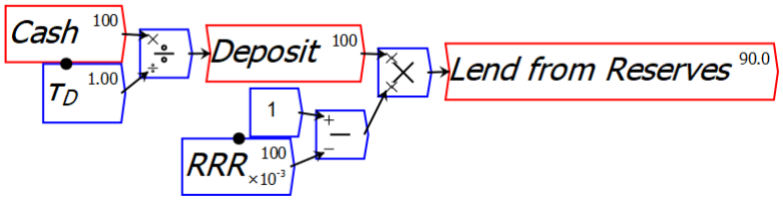
> Looking at the problem in this way the theorist should attempt to develop an analysis which will enable him to understand the processes of change which characterize the real world rather than waste his time in chasing the will-o'-the-wisp of equilibrium. (Sweezy 1939, p. 573)

But nonetheless, here goes—if only for my amusement, and even if it does come back to bite me with a textbook writer one day citing "the Keen model of the Money Multiplier".

The Keen model of the Money Multiplier

Figure 5 shows the basic "logic"—for want of a better word—behind this model: the private sector attempts to deposit its cash, and the banking sector then lends a fraction of these deposits back, also in the form of cash. The model has two parameters: the "Required Reserve Ratio" (*RRR*), which specifies how much of a deposit the banking system retains versus how much it lends out; and the time lag t_D between the non-bank public receiving a loan in the form of cash, and putting that cash back into the banking system again.

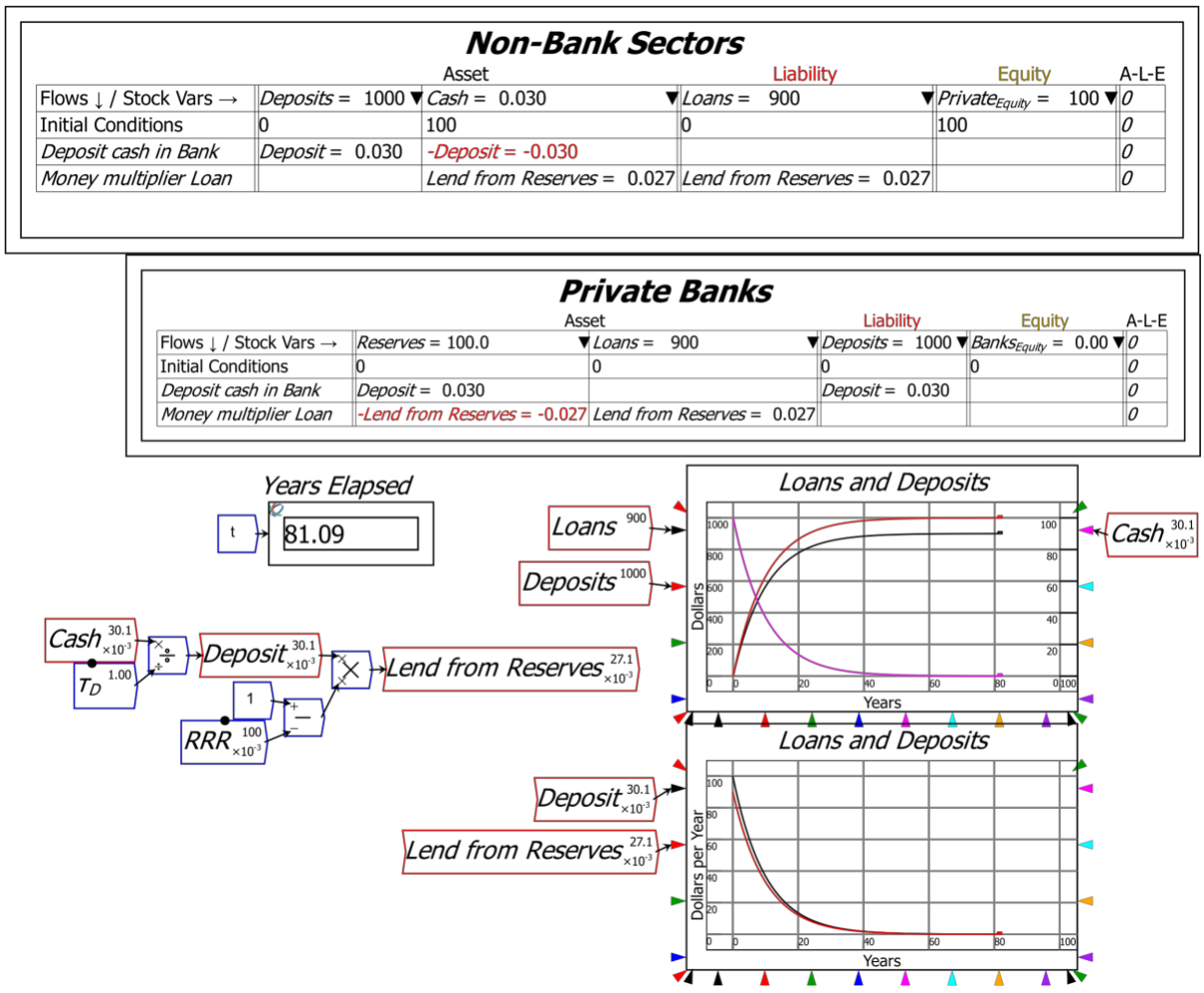
Figure 5: The dynamics of "Money Multiplier" lending



I set *RRR* to 0.1, so that banks hang onto 10% of the deposited cash and lend out 90%, and the time lag on redepositing t_D to one year, so that in the first year, the public will attempt to deposit $100 of cash into the banking system (90% of which the banking sector lends out again). These parameters result in the "Money Multiplier" creating $900 worth of loans in response to $100 of cash deposits over 80 years—see Figure 6.

This model fulfils the Neoclassical fantasy that they're actually saying something interesting about banking—"Look Ma, we've shown that banks can create money!"—while also relegating it to the "not really interesting" category as well. It takes almost forever, and the amount of money created is controlled by government policy—in terms of both the amount of cash the government creates, and the rules it sets for money creation via the Required Reserve Ratio. So, if anything goes wrong with the monetary system, it's the government's fault, as usual.

Figure 6: The "Money Multiplier" process



Crashing into Crises by ignoring Credit

Lest it be thought that this nonsense model misleads students but has no impact on the real world, there is ample evidence that belief in it has affected monetary and fiscal policy, to the detriment of the real world. For example, Bernanke, who prides himself on being an expert on the Great Depression, blamed that crisis primarily on the Federal Reserve, for letting the "money multiplier" decline at the end of the 1920s:

> Perhaps not too surprisingly, in light of the work of Friedman and Schwartz (1963) … our analysis provides the clearest indictment of the Federal Reserve and U.S. monetary policy. Between mid-1928 and the financial crises that began in the spring of 1931, the Fed not only refused to monetize the substantial gold inflows to the United States but actually managed to convert positive reserve inflows into negative growth in the M1 money stock. Thus Fed policy was actively destabilizing in the pre-1931 period… *our methods attribute a substantial portion of the worldwide deflation prior to 1931 to these policy decisions by the Federal Reserve*. (Bernanke 2000, p. 111. Emphasis added)

Bernanke set himself up for one of the greatest own-goals of all time, when he used this analysis to make the following cringeworthy statement at the 90th birthday party for Milton Friedman:

> Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again.(Bernanke 2002)

Just five years later, as Chairman of the Federal Reserve, Bernanke oversaw the worst economic crisis since the Great Depression, caused by factors that Neoclassical economics ignores: specifically, the role of credit in aggregate demand and income. Their ignorance here arises from another of their favoured and false models, the Loanable Funds model of banks as intermediaries between creditors and debtors. Bernanke used this model to dismiss Irving Fisher's "Debt-Deflation Theory of Great Depressions" (Fisher 1933):

> because of the counterargument that debt-deflation represented no more than a redistribution from one group (debtors) to another (creditors). Absent implausibly large differences in marginal spending propensities among the groups, it was suggested, *pure redistributions should have no significant macroeconomic effects*. (Bernanke 2000, p. 24. Emphasis added)

In a Loanable Funds world, lending is indeed a "pure redistribution", which transfers funds from creditors to debtors when debt is rising, and from debtors to creditors when it is falling, as Bernanke said. It would have only a minimal impact upon the macroeconomy, because a fall in the spending power of one group is offset by a rise in the spending power of the other.

But, as emphasized by those Central Bank papers that Neoclassicals love to ignore, Loanable Funds is a fallacious model of the real-world. Real-world lending is properly portrayed in the Post-Keynesian model of "endogenous money" (Moore 1979, 1988), in which, to cite the then Senior Vice President of the *Federal Reserve Bank of New York*, Alan Holmes:

> In the real world, banks extend credit, creating deposits in the process, and look for the reserves later. (Holmes 1969, p. 73)

It is a relatively simple matter to prove that credit doesn't matter in Loanable Funds, but that it is a critical component of aggregate demand and income in the real-world of "Endogenous Money", using a device I call a *Moore Table* (in honour of Basil Moore).

A *Moore Table* shows expenditure in an economy horizontally, and net income vertically. Since each row records the expenditure as a negative, and the receipt of that expenditure as a positive, the sum of each row must be zero. The sum of each column can be non-zero—an individual sector can spend more or less than its income—but the sum of all columns is likewise zero. Finally, the negative of the sum of the diagonal is Aggregate Demand, the sum of the off-diagonal elements are Aggregate Income, and they are necessarily equal.[3]

[3] This framework ignores intra-sectoral exchange, but in the limit, when every entity in the economy was separately identified, it would capture all of aggregate demand and income.

Table 1 illustrates this for an imaginary economy in which lending does not occur. Sectors in this economy therefore spend existing money on each other, with the flows *A* to *F* being in terms of dollars per year.

Table 1: Moore Table for a no-credit world

	Households	Services	Manufacturing	Sum
Households	-A-B	A	B	0
Services	C	-C-D	D	0
Manufacturing	E	F	-E-F	0

For this model we can derive that:

$$AggregateExpenditure = -\left(-A-B-C-D-E-F\right)$$
$$AggregateExpenditure = A+B+C+D+E+F \qquad (0.1)$$

Loanable Funds involves a transfer of Credit dollars per year between sectors along the diagonal, since only expenditures occur horizontally. In Table 2, for simplicity, I show the Services sector lending Credit dollars per year to Households, which Households use to buy goods from the Manufacturing sector, while Services spends Credit less on Manufacturing itself.

Table 2: Moore Table for a Loanable Funds world

	Households	Services	Manufacturing	Sum
Households	-(A+Interest)-(B+Credit)	A+Interest	B+Credit	0
Services	C	-C-(D-Credit)	D-Credit	0
Manufacturing	E	F	-E-F	0

For this model, we can derive that:

$$AggregateExpenditure = -\left(-A-Interest-B-C-D-E-F\right)$$
$$AggregateExpenditure = A+Interest+B+C+D+E+F \qquad (0.2)$$

In other words, in a Loanable Funds model, *Credit cancels out*: the decrease in the spending power of the lender (Services, in Table 2) is offset by the increase in spending power of the borrower (Households). Notice that there are 2 entries for Credit on both the diagonal and the off-diagonal, and that they have the opposite signs: they therefore cancel each other out. Interest payments, on the other hand, do not cancel out: notice that there is just one entry for Interest on the diagonal, and one on the off-diagonal.

The real world—otherwise known as the model of "Endogenous Money"—has banks creating money when they lend, as is shown above in Figure 2. Ignoring cash for the sake of simplicity, money is the sum of the Liabilities and (short term) Equity of the banking sector, while GDP is the turnover of that

money, as represented by Table 3. The table is now 4-sectoral, to include the Banking sector's income (*Interest*) and expenditure (*G+H+I*).

Table 3: Moore Table for the real world

	Assets	Liabilities			Equity	
	Debt	Households	Services	Manufacturing	Banks	Sum
Households	Credit	-(A+Interest)-(B+Credit)	A	B+Credit	Interest	0
Services		C	-C-D	D		0
Manufacturing		E	F	-E-F		0
Banks		G	H	I	-G-H-I	0

For this model, we can derive that:

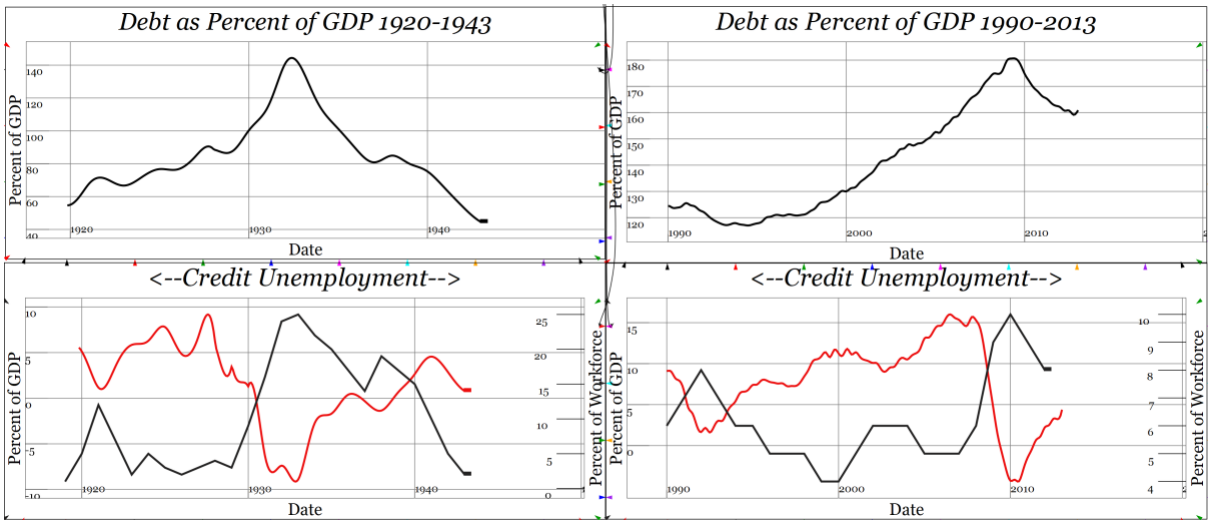
$$\begin{aligned} AggregateExpenditure &= -\left(-A - Interest - B - Credit - C - D - E - F - G - H - I\right) \\ AggregateExpenditure &= A + B + Credit + Interest + C + D + E + F + G + H + I \end{aligned} \quad (0.3)$$

Therefore, in this model and in the real world, Credit does not cancel out: the increase in the spending capacity of the borrower is enabled by an increase in the money supply, rather than by a reallocation of existing money. This shows logically that Credit is part of aggregate demand and income.[4]

The empirical evidence strongly supports the Endogenous Money model. The real causes of both the Great Depression were precisely the factors that Fisher identified—an initial disequilibrium situation, with "over-indebtedness to start with and deflation following soon after" (Fisher 1933, p. 341). Figure 7 illustrates the high levels of private debt that characterized both the Great Depression and the Great Recession—they are respectively the second-highest and highest levels of private debt in America's history—and that Credit is strongly and negatively correlated with unemployment in both cases.

[4] And asset speculation, which has to be included in monetary analysis, since so much of bank lending finances speculation, rather than investment or consumption.

Figure 7: Debt, Credit and Unemployment in the Great Depression and Great Recession



Reality, therefore, supports the contrarian case that money matters to macroeconomics, and that credit is the primary source of the instability of a capitalist economy. But reality will never win out in academic economics, for the reasons I outlined in Chapter 5 of *The New Economics: A Manifesto* (Keen 2021), "The Neoclassical Disease": economics lacks the definitive and permanent anomalies that force a real science to abandon a failed paradigm.

Economics does not advance one funeral at a time

Max Planck, the physicist who, by solving the "Black Body Radiation Problem", ushered in quantum mechanics, is also the source of the aphorism that "science advances one funeral at a time". What he actually said was:

> A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it. (Planck 1949, pp. 23-24)

What Planck identified is the similarity between scientists and believers in a religion, in that once a paradigm—like Maxwellian Physics or Marshallian Economics—is formed, its adherents are devoted to it. In both science and religion, devotion means expanding the range of phenomena the belief explains. But in science, that expansion means developing experiments with the intention of proving the paradigm right that instead, unintentionally end up challenging it.

As Planck and Kuhn (Kuhn 1970) document, the initial reaction to such anomalies is to try to modify the paradigm to incorporate it. This can consume the old believers, who continue to lecture the dominant paradigm to their students—all of whom know of the anomaly, and see their chance for fame in bringing about a new paradigm to resolve the anomaly and usher in a new science.

Time is on the side of the young—and therefore on the side of the new paradigm. Ultimately, the old believers retire or die, and their replacements come from the young who reject the old paradigm.

This process fails in economics because paradigm-threatening anomalies are transitory. In science, an anomaly, once identified, can be reproduced: it never goes away. But in economics, the Great Depression gives way to Post-War Reconstruction, which gives way to the Golden Age of Capitalism, which gives way to the Great Inflation… Each of these anomalies will cause breakaways from the dominant paradigm, but over time, they will be forgotten.

The farce of Bernanke being awarded the "Nobel Prize in Economics" (Offer and Söderberg 2016) shows that even when an old crisis (the Great Depression) recurs in a new form (the Great Recession), the same old theory can be rolled out again—perhaps with a new set of tyres—and believed by a new generation. Generational change fails in economics, and fallacy and fairy tale outlive reality.

The Never-Ending Story?

As an ageing critic of mainstream economics, the second greatest frustration I feel is the realisation that, despite being provably wrong, Neoclassical economics will outlive me. It will do so not because it is correct, but because its adherents prefer their fantasy to reality.[5]

But what to do? The one glimmer of hope is the success that Modern Monetary Theory has had in entering the general economic debate. No other non-mainstream method has had that success since Keynes.

But even so, MMT tends to be taught outside the University sector. Within Universities, MMT is disparaged at the "top Universities", because these are the Universities that Neoclassical economists dominate. A full curriculum for an alternative paradigm will never be developed in the conventional departments of economics. So what can be done to keep the flame of change alive?

The Revenge of the Private Sector

Curiously, myself and another Australian rebel economist, Stephen Hail, have independently decided to branch out into the private sector to teach non-mainstream economics.

Stephen has teamed up with a private, for-profit institution, Torrens University Australia, to establish Graduate Studies in the Economics of Sustainability, with qualifications ranging from a Graduate Certificate to a Masters Degree. This sort of initiative just isn't possible in standard universities, because enormous pressure to conform with the existing paradigm is applied via research and teaching "excellence" rules.

At much the same time, I have started teaching my alternative approach to economics via an online course. The impetus to establish it came from a conventional marketing firm that takes the majority of the revenue (60%) from the signup fee. It is thus motivated by the money to reach a far larger audience than I could ever hope to reach. Their early marketing methods were annoying—and I apologise for that—but they're learning about my audience, and improving their messaging over time.

[5] The greatest frustration comes from another research area of mine, climate change. In my pessimistic moments, I expect that capitalism will be destroyed as a result of the appallingly bad work that Neoclassical economists have done on climate change (Keen 2020). Humanity will thus have the ignominy of the fantasy that destroyed capitalism outliving capitalism itself.

I give thirteen lectures and three workshops over sixteen weeks, and though at a price, it is far better value for pocket (and your brain!) than paying for a degree in economics which will teach you the fantasies that Mankiw and other mainstreamers peddle. If you'd like to experience these lectures (with a money-back guarantee if you ask for a refund within the first 30 days), click on this link:

https://chat.profstevekeen.me/products/email-am-rebel-economist

So come on over. Tell them Greg (Mankiw) sent you.

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