A critique of Ray Dalio's 'How the economic machine works' video by the Bare Naked Economist!

Summary: Good looking backwards, work to be done looking forwards (with suggestions as to how we should fine tune the machine!)

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ultimately

Summary: Good looking backwards, work to be done looking forwards (with suggestions as to how we should fine tune the machine!)

I'll discuss:

What is it I disagree with in

Why young people need to g
conversation, or pay the co
time.

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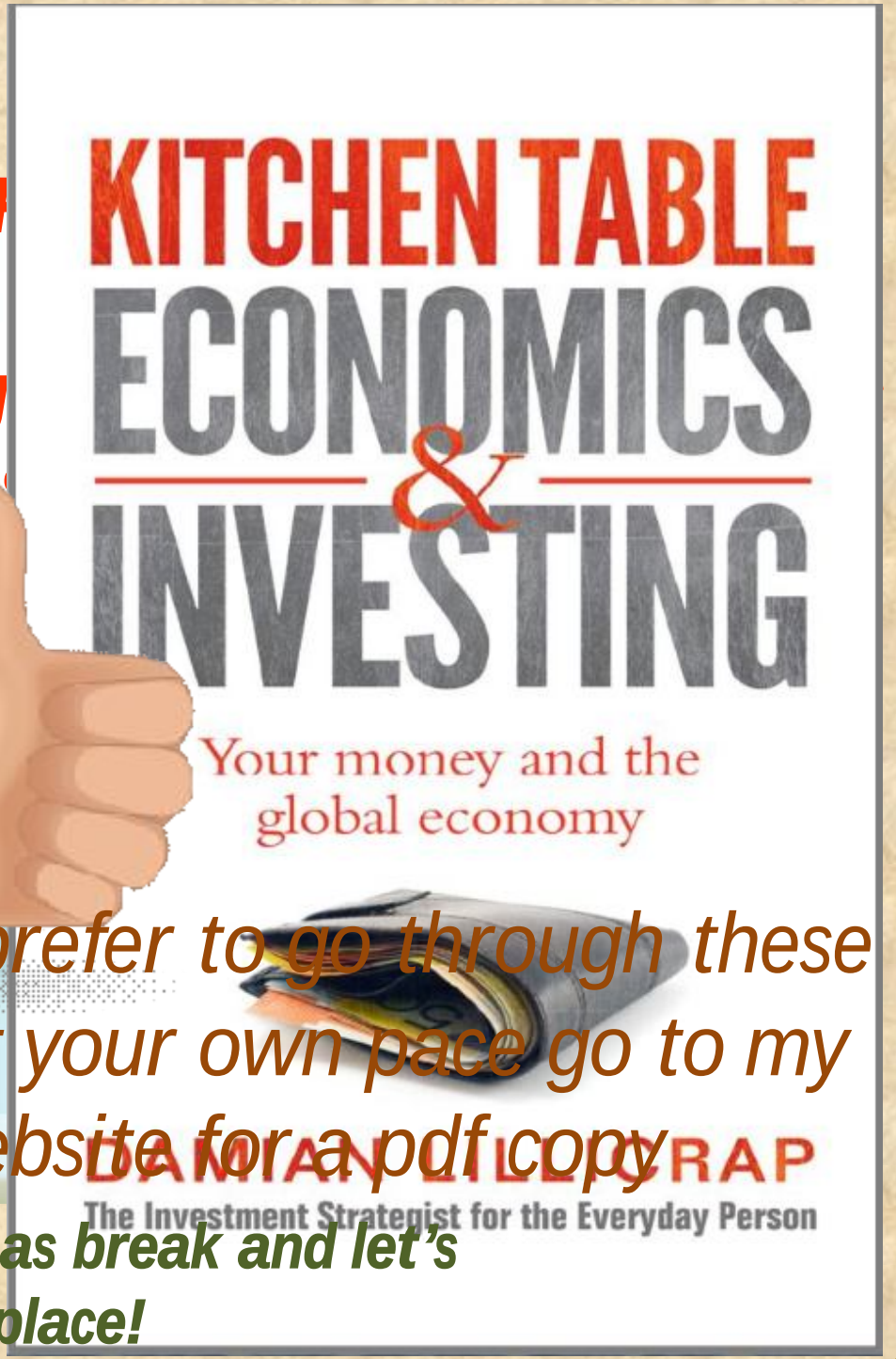


If you'd prefer to go through these slides at your own pace go to my website for a pdf copy

Download it, read it over the Christmas break and let's make the world a better place!

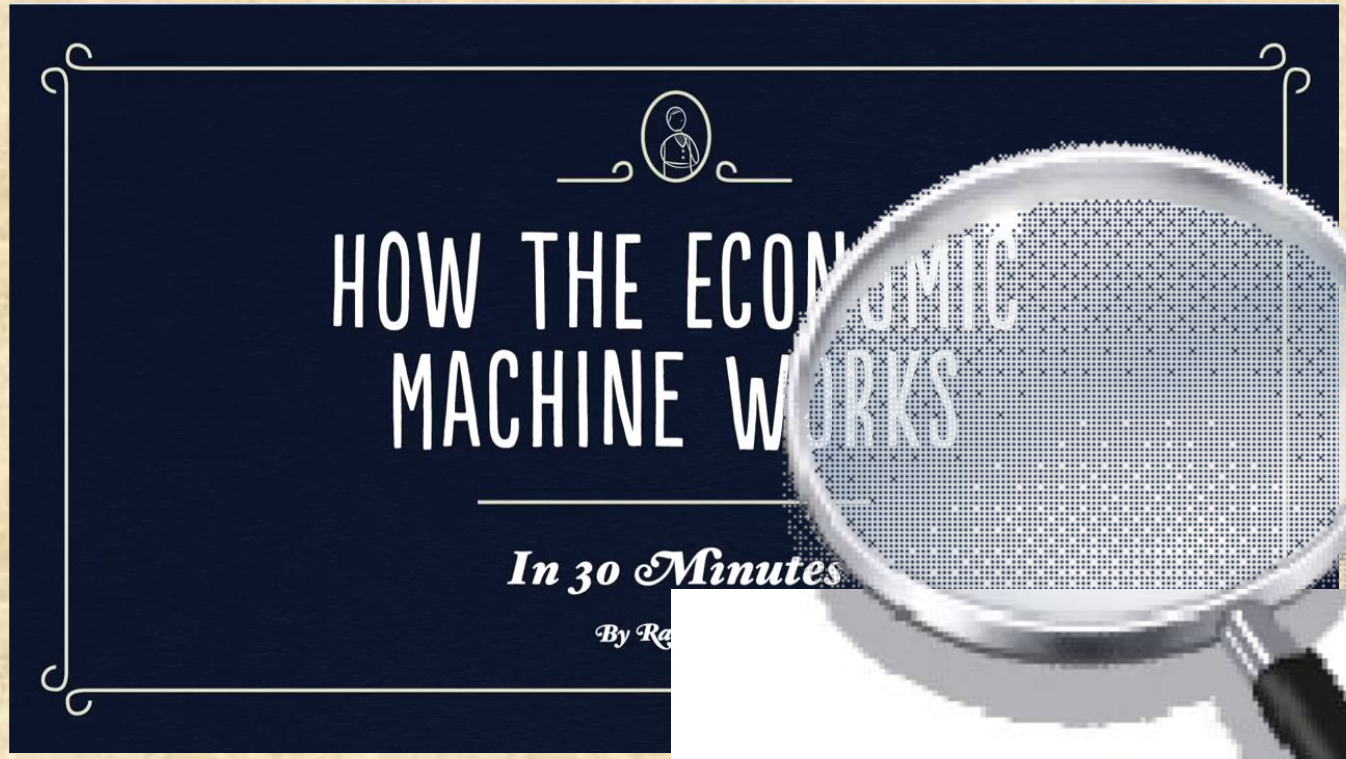
www.barenakedeconomist.com

I'm an Aussie, but I'll say 'we' a lot in this video. We have interlinked global systems, we have global challenges, and my country is exposed to the stability and sustainability of what is going on in the major economies around the world.

We are all in this together!

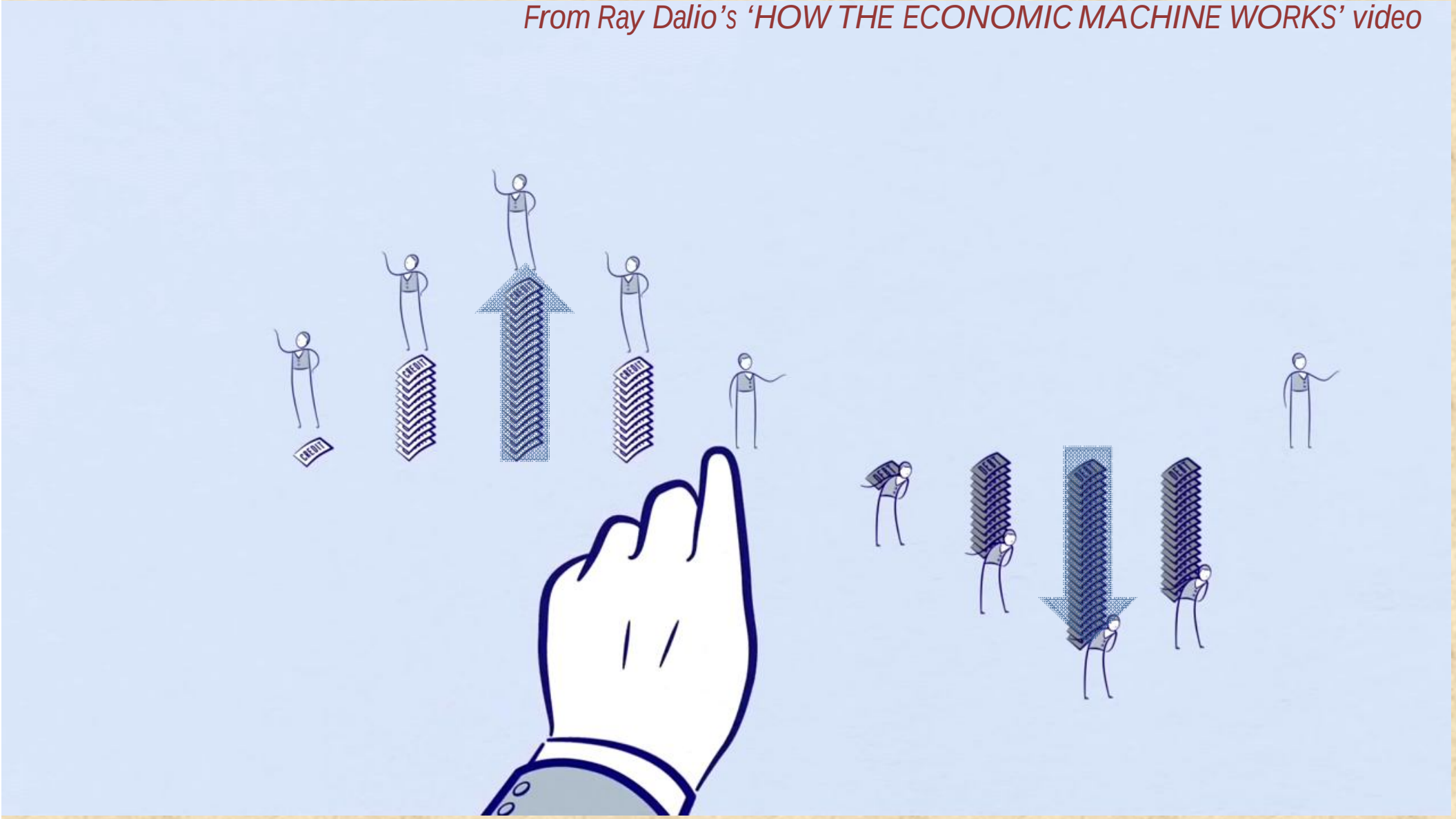
From http://www.ritholtz.com/blog/2011/11/web-of-cross-border-investments/

Ray's video is very good!



With some great images!

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video



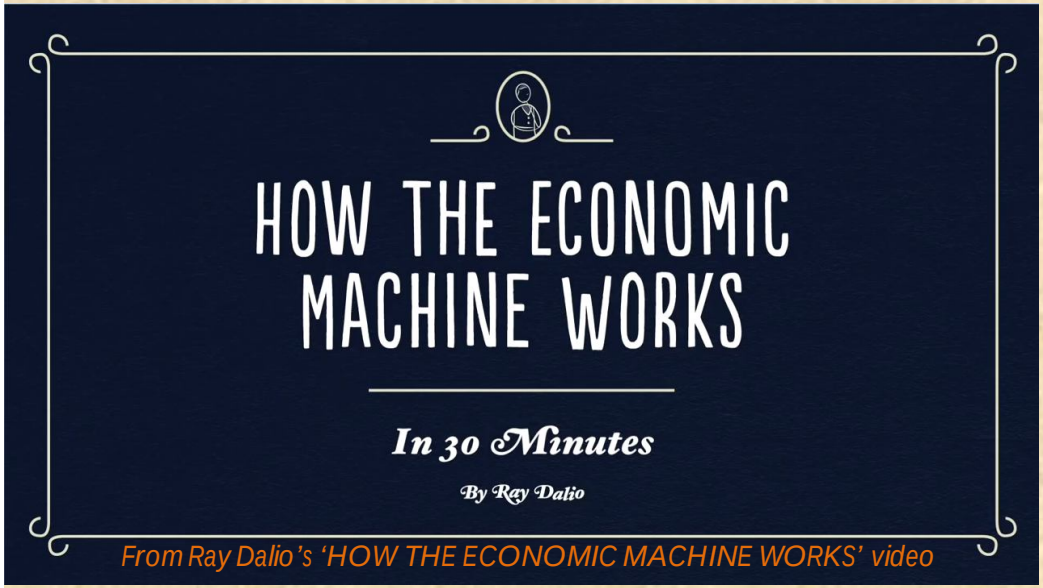
Ray's great example of how debt is borrowing from your own future

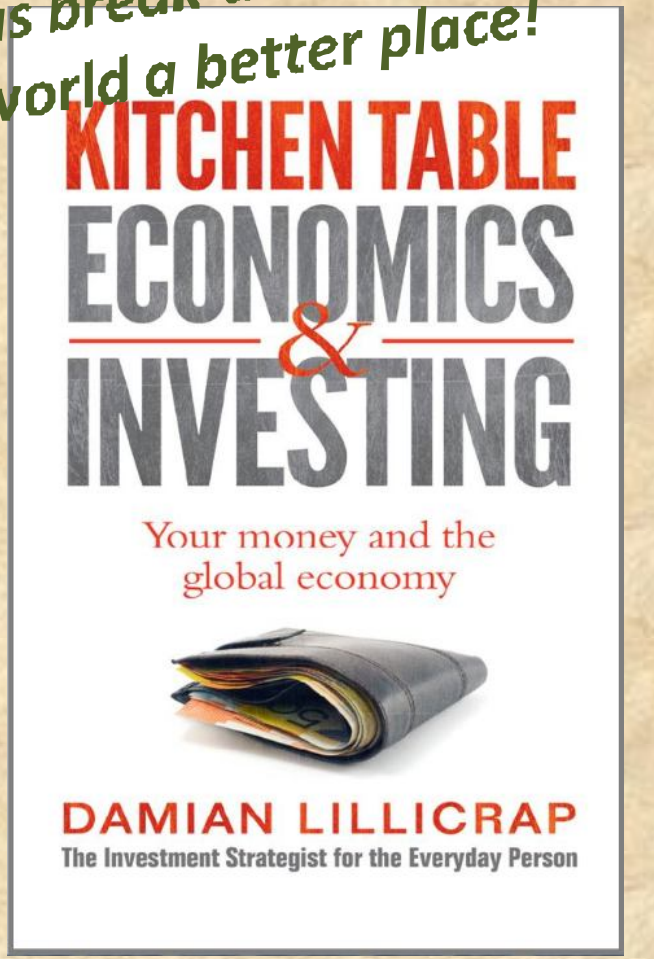
From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video

I also love Ray's simple (to the point of genius) "man walks into a bar" explanation of credit creation

Should be part of students curriculum

Download it, read it over the Christmas break and let's make the world a better place!



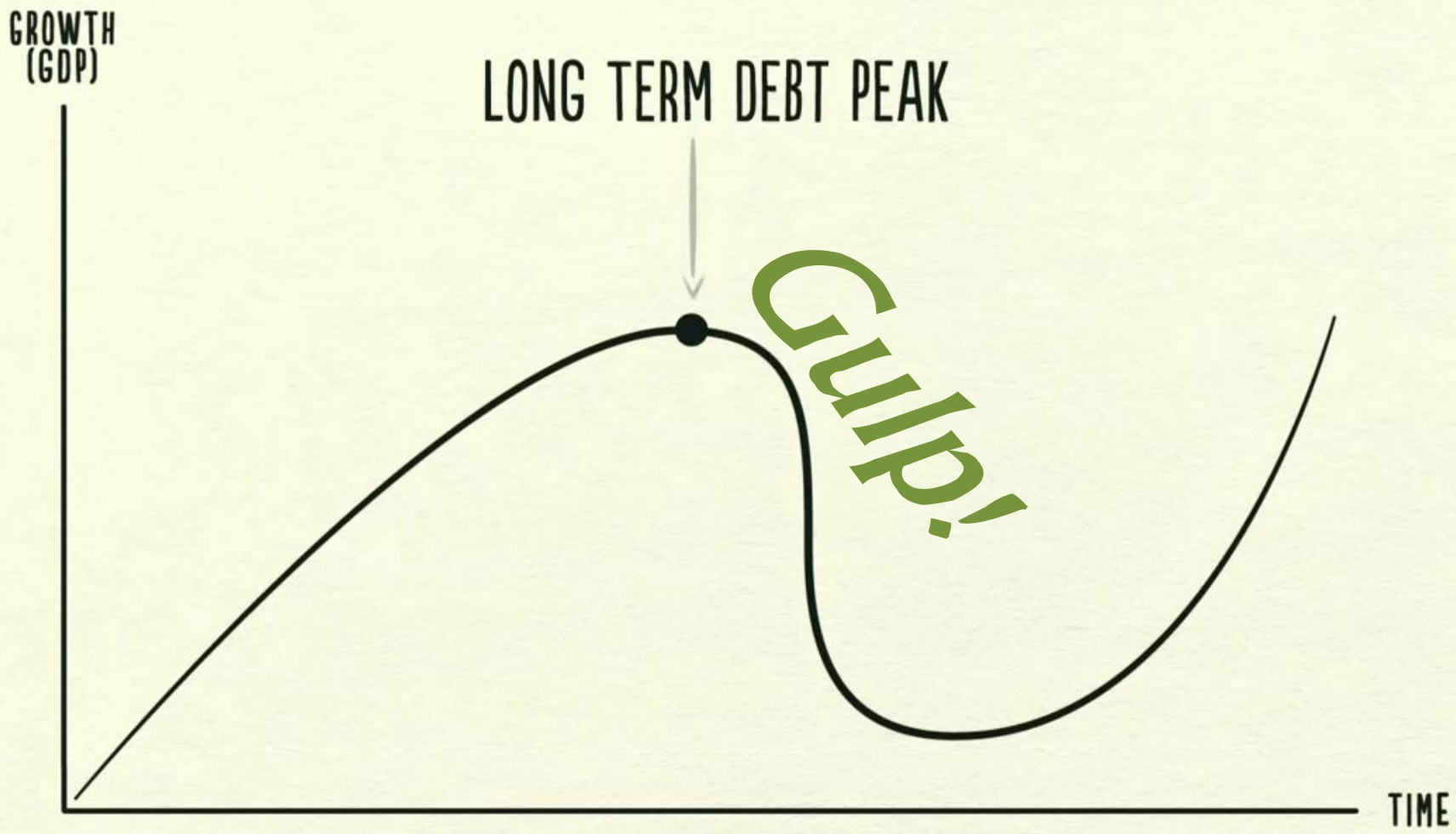


In part because they disagree, students should learn to understand that economics isn't black & white, and that they need to form a view

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video

One of the best, most successful investors in the world is pointing out that debt levels now are twice what they were before the great depression

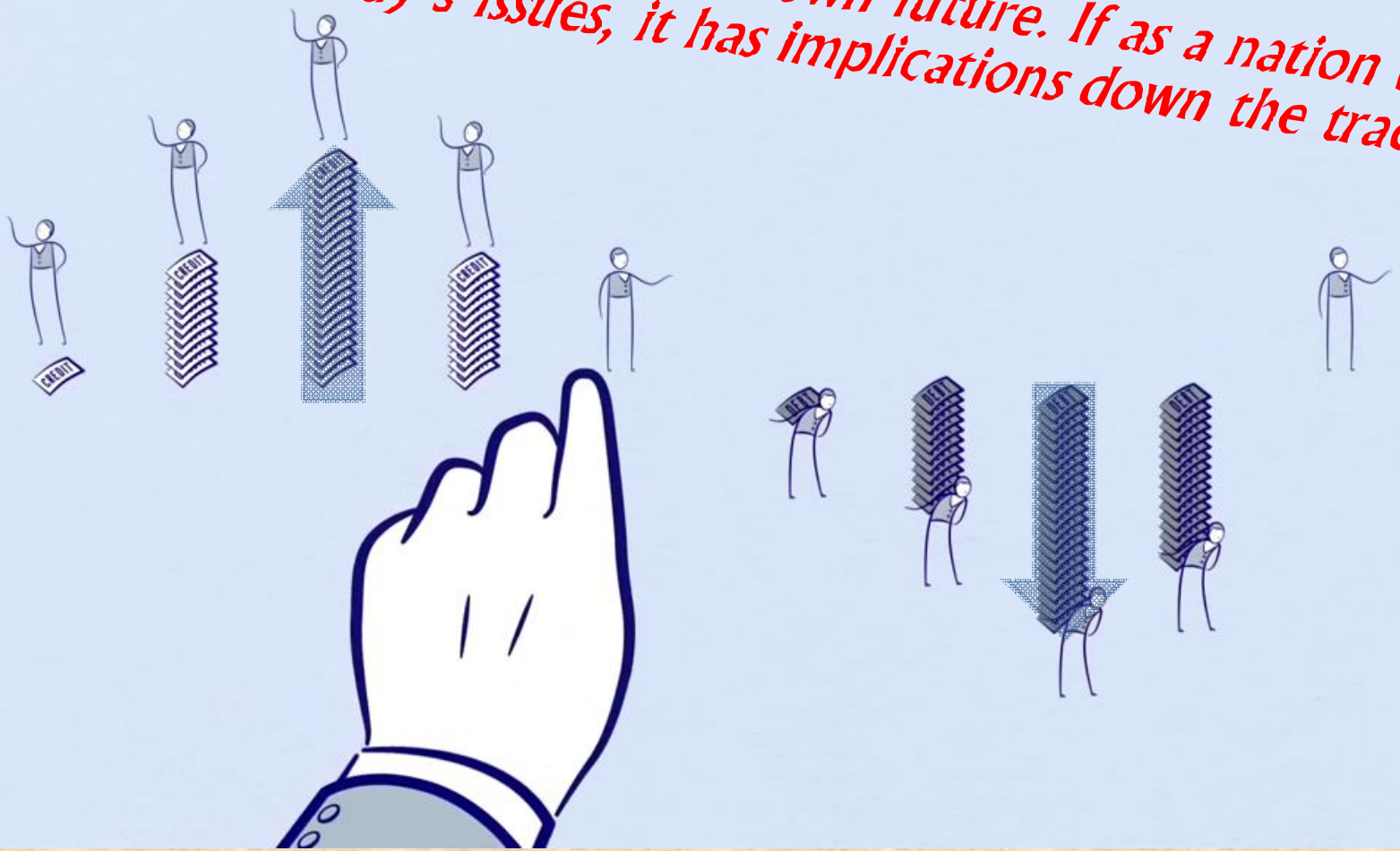
From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video



Ray also explains that his considered view is that things typically get ugly from such a point

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video

Remember: Debt is borrowing from your own future. If as a nation we borrow to smooth today's issues, it has implications down the track.



(my book explains why borrowing from the future is generally a better concept to think about than creditor countries and debtor countries)

What is the most clear and present intergenerational issue of our time?

A. Global warming?

At least young people get this and there is action!

B. Economic Debt loads?

Many talk as if the financial crisis was a shock not a symptom of a bigger problem.

This is more certain than global warming.

The youth of today are not crying out about this enough.

If they don't speak up people will keep shoving the load onto them.

I think the thing that will cause more pain suffering and lower quality of life over the next 20 years is B.

Intergenerational Issues

A short term improvement in things

versus

Adding to long term issues

If Ray is right about money printing then there is a free lunch – all will be ok, she'll be right mate!

But if he is not right, young people had better know and understand the hole that the older generation is digging them into.

If they don't like it they had better speak up, because at the moment silence is acquiescence.

Too dramatic for you??

Here's some themes I hear regularly from professional investors on some of the biggest economies in the world.

On US money printing:
The US is engaged in the biggest economic science experiment of all time

On the Eurozone:
It can't work in its current form but it is hard to see how it makes the changes it needs to make.

On the Japan:
They have twice as much debt to GDP as the US, growth problems and demographic problems

And on China
From the locals

The Chinese economy is like the movie Speed.

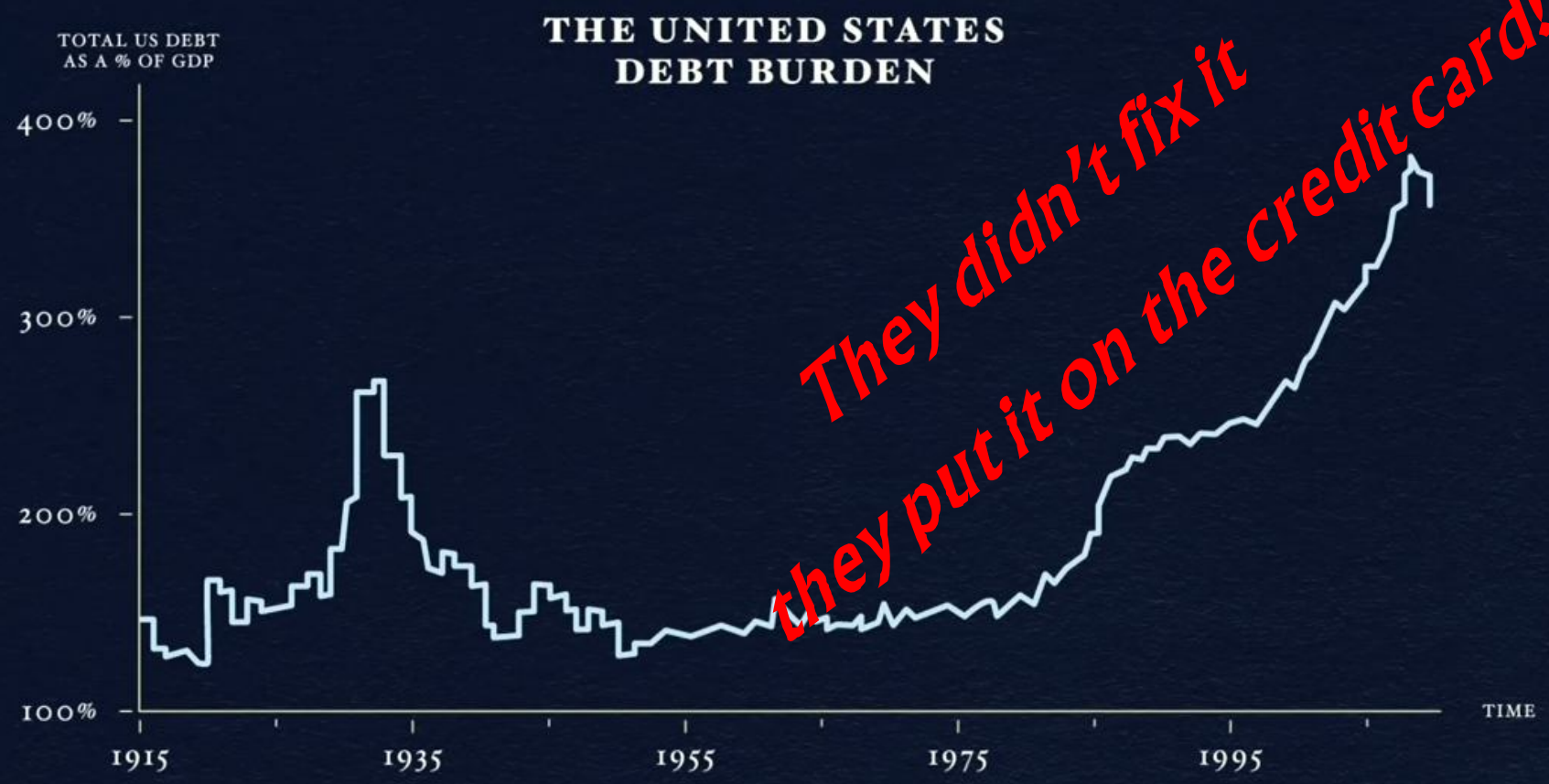
You know about the bus that couldn't slow down without blowing up.

It can't go on forever like this but can't slow down.

Our experience counts for little

Don't think they have fixed it before

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video



They didn't fix it
they put it on the credit card!

Hopefully now I have you engaged!

- *I apologise, if I have made some intentions sounds worse then they were.*
- *The challenges the authorities have had to deal with have been significant – however things did end up on the credit card.*
- *I don't think people intended to dud the next generation, I believe that they honestly thought, or at least hoped things would work out better than they have.*

Authorities (central banks and governments) typically tend towards short term measures, such as ever lower rates and deficits as:

- ***Tends to help now (a relatively certain positive)***
- ***May not be a problem down the track (uncertain future)***

So while their intentions may not have been bad, unless you speak up the incentive is for them to do more of the same!

Incentives are what economics are about!

Understanding the incentives is like understanding a landscape, from there you know water tends to flow downhill!

If you want things to change, you have to provide the incentive, you have to demand change of the authorities!

Ray's three rules

- First, ***don't have debt rise faster than income*** because your debt burdens will eventually crush you.
- Second, ***don't have income rise faster than productivity*** because you'll eventually become uncompetitive.
- Third, ***do all that you can to raise your productivity*** because in the long run, that's what matters most.

1. **Great for not getting us into trouble.**
2. **Theoretical – doesn't change incentives**
3. **Doesn't get us down from our high ledge**

Ray's mechanism for his 'beautiful deleveraging'

Deflationary:

To get us down from the ledge

1. Cut Spending - sometimes referred to as Austerity
2. Reduce debt - for example writing off debt
3. Redistribute wealth - from the haves to the have nots

Inflationary

4. Print Money – from thin air

First point: Reducing debt and inflation are also forms of redistributing wealth.

On redistributing wealth via inflation:

If you are in a democracy you already have means of redistributing wealth.

Taxes and Government spending.

Yeah, politics! Yeah compromise looks broken. Yeah Churchill 'democracy is the worst form of government, except for all the others'

But if you try to combine a second process with one that is broken what are you likely to get?

Inflation, if it comes is less obvious a tax than other taxes

That may make it easier to implement.

Does that make it fairer than other taxes.

Is such an approach consistent with democracy.

If people understand the implications of inflation caused by money printing and still want it –

Great that is democracy at work.

Psssst U.S.A!!!

Seems like the current approach is galvanising party polarity. Come on dudes, bring in compulsory voting, get the middle ground involved.

In this age of mobile internet devices – make it easy to vote, and a $10 fine on your phone bill if you don't - might help the budget too (no phone, no fine: to keep it simple).

I think compulsory voting better respects those that fought and died for democracy as well.

I haven't spoken to Ray directly.

My belief is that he wouldn't see his proposed solution as necessarily the fairest or most democratic.

My sense is that Ray sees his solution as the most likely (although not certain) to give a pretty good result,

in a landscape where a lot of very bad results are possible, given:

- *the challenging economic starting point,*
- *the engagement of the populous, and*
- *the current state of politics.*

What Ray is suggesting is potentially practical.

I'm not suggesting that what Ray is suggesting is crazy.

However I don't think it is well understood.

I'm not convinced that it is the most democratic (and I know be careful what you wish for).

But of equal importance I'm not convinced that it would work as well as he hopes.

My sense is that even if it works the outcomes are not as fair as simple theory might suggest.

The real concern is that it is venturing further into uncharted waters and isn't guaranteed of working!

And I believe we can put in place a framework with that guarantee.

That guarantee will come at a cost,
a little more sharing,
but when did you ever get insurance for free.

Currency depreciation and money printing are different

Ray seems to suggest they are the same (in the paper that accompanies the video).

I'd argue that at an aggregate level they look similar, the value of total dollars in the economy is diminished for both.

But at a lower level the redistribution of the impact is different. Currency depreciation impacts all more equally, but money printing rewards the haves rather than the have nots more in the first instance.

Money Printing & it's challenges

Quantitative Easing

= one form of Money Printing

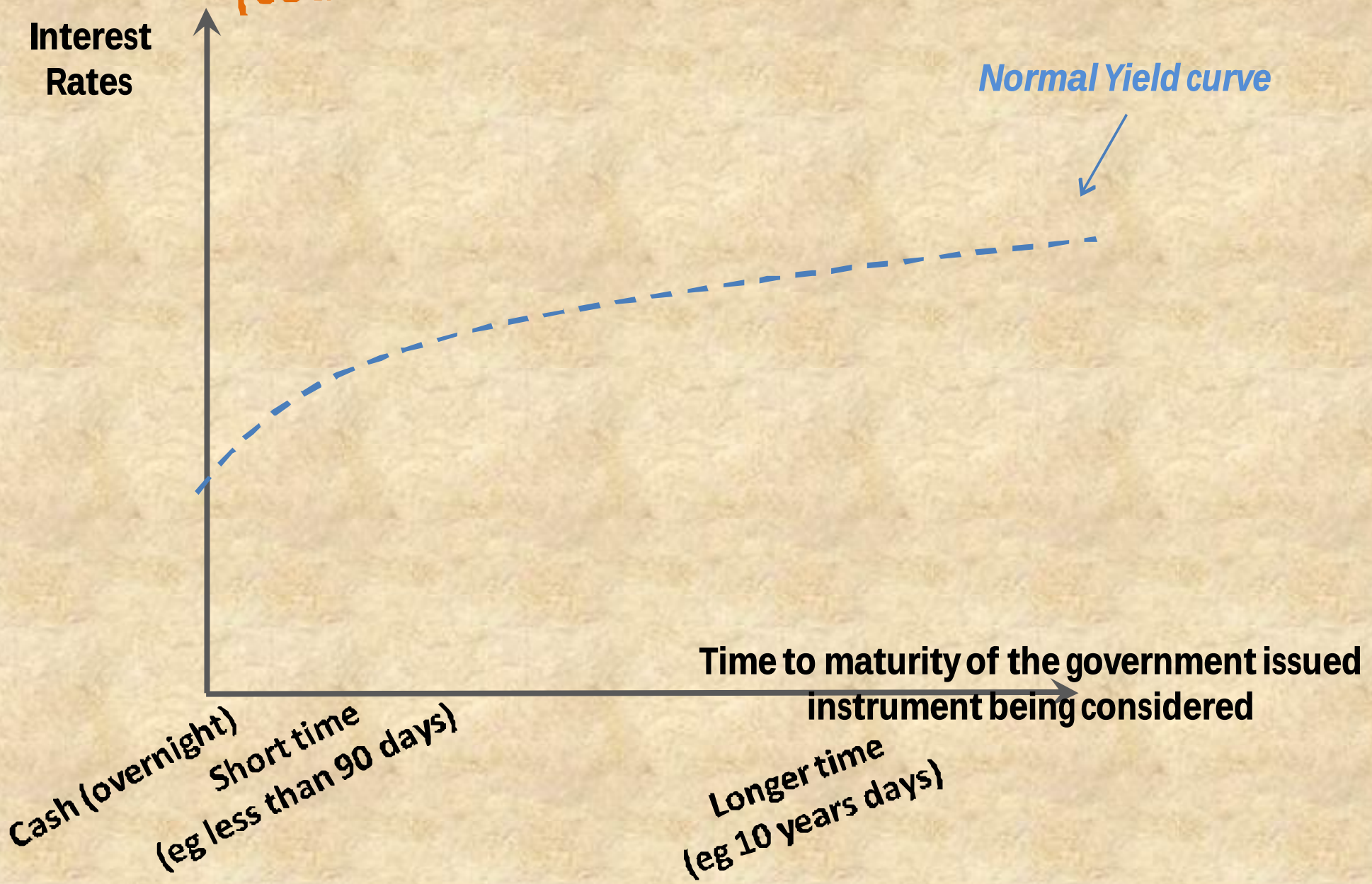
= a form of monetary policy

Monetary policy

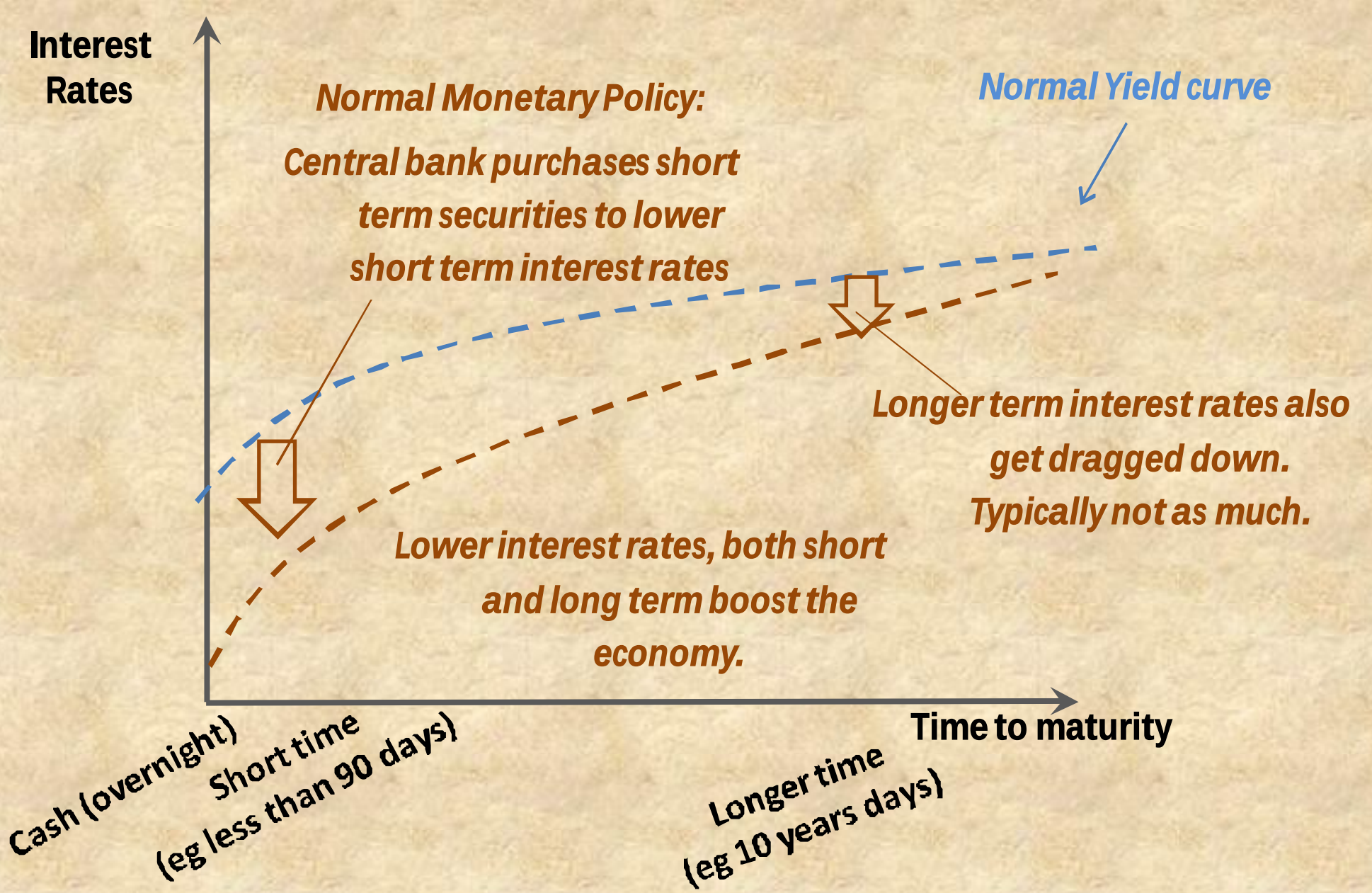
= Interest rate policy (moving rates, typically cash rates, higher and lower), achieved by the central bank buying or selling government securities (normally short term securities) which injects or pulls money out of the economy.

Monetary policy: Quick tutorial

(could really be called interest rate policy)



Monetary policy: Quick tutorial



Monetary Policy

So for standard monetary policy, the central bank is buying short term securities.

This is giving money to the people it purchases them from.

This is injecting money into the economy – hence the term 'monetary policy'.

To be clear there are two mechanisms via which monetary policy operates:

1) Direct monetary impacts – from the specific money used by the central bank to buy securities, and

2) Interest rate impacts – as cash rates move lower, this encourages activity throughout the economy.

Monetary Policy

As Ray indicated, credit and money are pretty much the same (you can buy things with both).

The direct impact of monetary policy (the direct impact of the money injected in to the economy by the central bank) is pretty small.

The primary impact of monetary policy is the impact of lower rates.

This encourages borrowing (debt creation) across the economy.

This broad credit creation (essentially money creation) dwarfs that injected by the central bank.

Monetary Policy

This concept of

monetary policy having two mechanisms:

1. Direct via central bank injections of money

(typically small impact)

2. Impact of interest rates on the broader economy

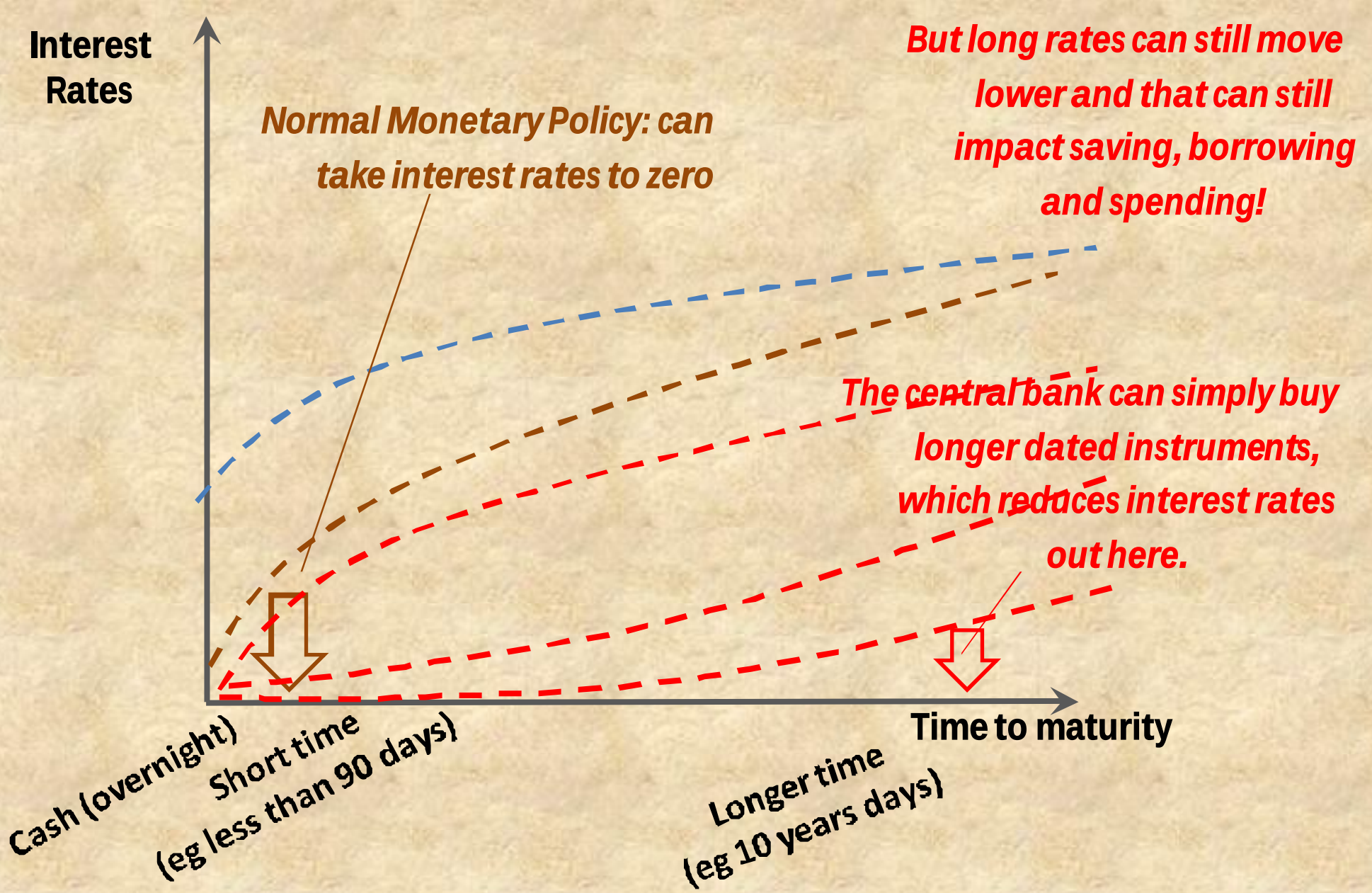
(typically larger impact)

Is important when we consider

Quantitative Easing - QE

(also referred to as money printing)

Monetary policy: Quantitative Easing



Monetary Policy: Quantitative easing

Quick Lesson on Interest Rates:

Lots of people get confused by the impact of buying on interest rate securities. Think of it like buying a property, as the price goes up, the % return from rent goes down. Lower interest rates mean % lower returns because of a higher bond prices.

So QE is increasing the 'quantity of money' in circulation via buying longer term securities, pushing up their price, and lowering their return, their interest rate.

So QE isn't very different to normal monetary policy.

Monetary Policy: Quantitative easing

They call quantitative easing 'money printing' as the central bank is creating credit (creating money) to buy longer dated securities.

But we know that the rest of the economy also creates credit.

And we know that the credit created by the rest of the economy typically dominates that injected into the economy by the central bank.

(see my book if you want to better understand credit creation and why lenders and borrowers don't net out).

Monetary Printing and inflation

A lot of people get excited about money printing causing inflation.

The pressures of buying and selling is what makes the price of things go up, this is what causes inflation.

Because there is heaps more credit created by the general economy than by the central bank, we don't have to be too worried about the central bank causing inflation.

In fact because total debt levels are falling (the last part of the debt chart), there is less total money in the system.

Essentially the central bank is creating more money (credit), to boost things because the broader economy is creating less.

Monetary Printing and inflation

Long story short, the amount of money central banks inject into the economy is small versus total credit.

It is possible to cause inflation by excess money printing, as has been done in say Zimbabwe recently, but you have to go crazy. Print lots of money, spend it via the government and push up prices.

In those situations the government swamps the rest of the economy. In the US government spending would need to increase multiples for the actual injection of money from the government to be a problem. Not happening & won't!

However the impact of very low interest rates is a worry!

Monetary Printing and inflation

Again as Ray points out, credit (debt levels in the US) are coming down. Less credit means less pressure on prices.

Ray is concerned about this causing deflation and wants to do more QE to fill the hole.

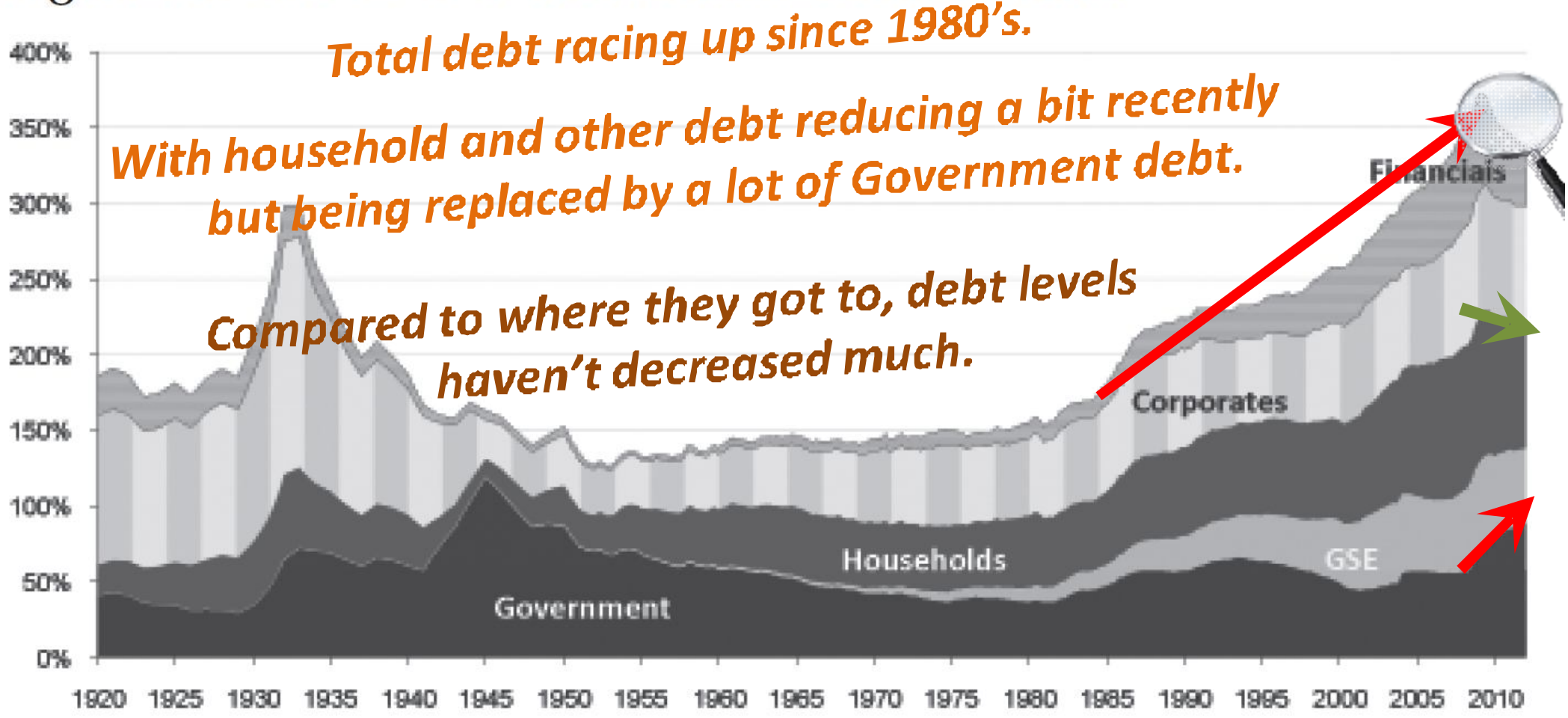
Problem is QE primarily acts via interest rates, lower rates encouraging less saving, more borrowing and spending. This isn't fixing the problem it is supporting it.

Support is ok provided a fix is on the way, but central banks can't provide the fix.

The fix either needs to comes from productivity (the hope), or from governments restructuring things.

A quick recap of US debt levels

Figure 3: Debt to GDP ratio in the United States



Source: US Federal Reserve, BEA, 'The Statistical History of the United States, From Colonial Times to the Present', Ben Wattenberg, Morgan Stanley Research

From my book: Kitchen Table Economics & Investing

So debt levels have raced up since the 1980's
What have interest rates done?

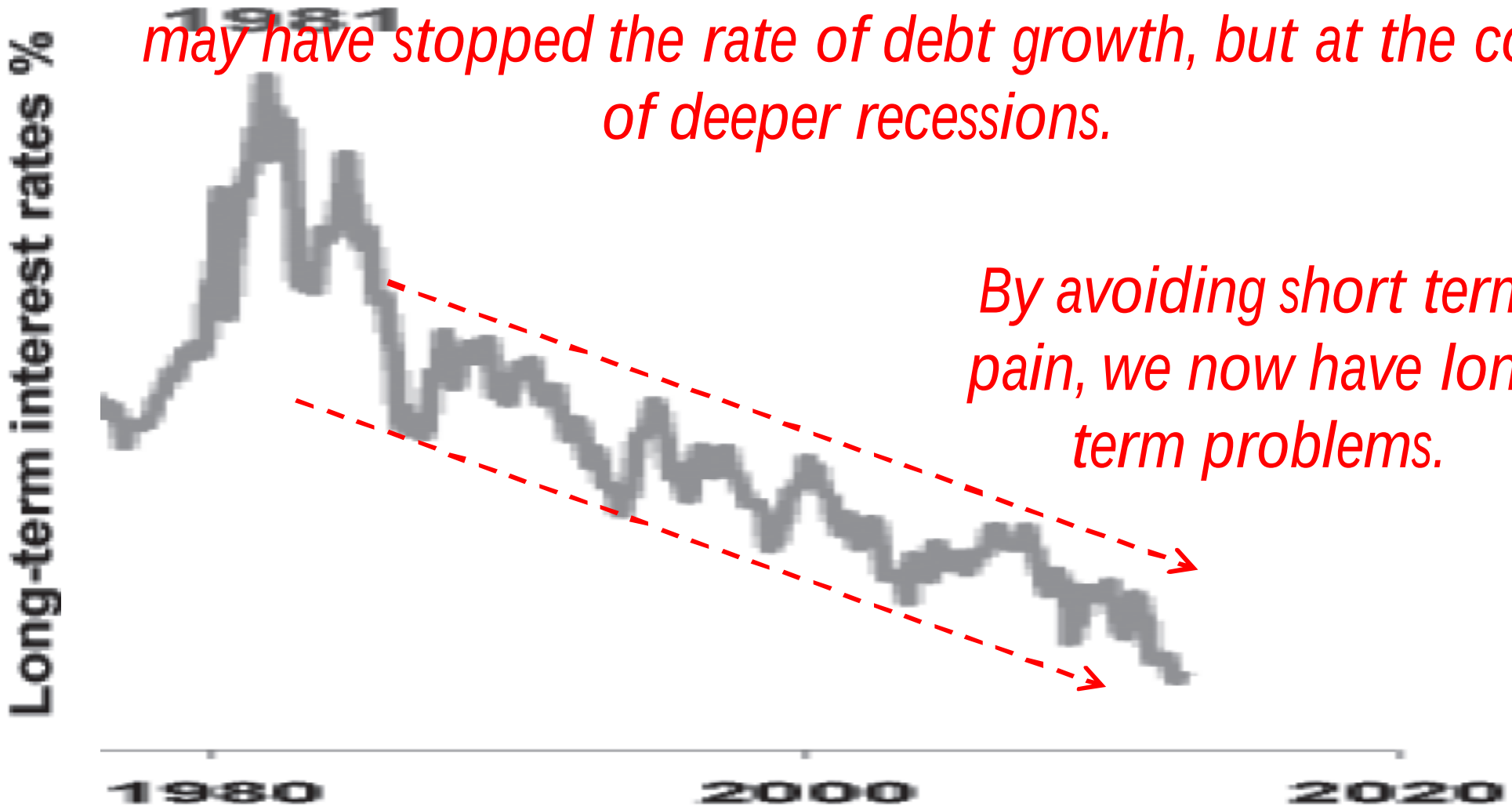
Figure 13: Plotting of long-term interest rates

From my book: Kitchen Table Economics & Investing

Source: Data from Robert Shiller's website www.econ.yale.edu/~shiller/data.htm

Zooming in!

Interest rates were moved lower and lower each business cycle encouraging higher and higher debt levels.
If the central bank had chosen to holding rate steady, this may have stopped the rate of debt growth, but at the cost of deeper recessions.



By avoiding short term pain, we now have long term problems.

From my book: Kitchen Table Economics & Investing

Hope is not a strategy!

We appear to be on an unsustainable path.

Interest rates can't go much lower, so we can't juice more growth from lower rates.

We could try other things like extreme money printing, or negative interest rates -

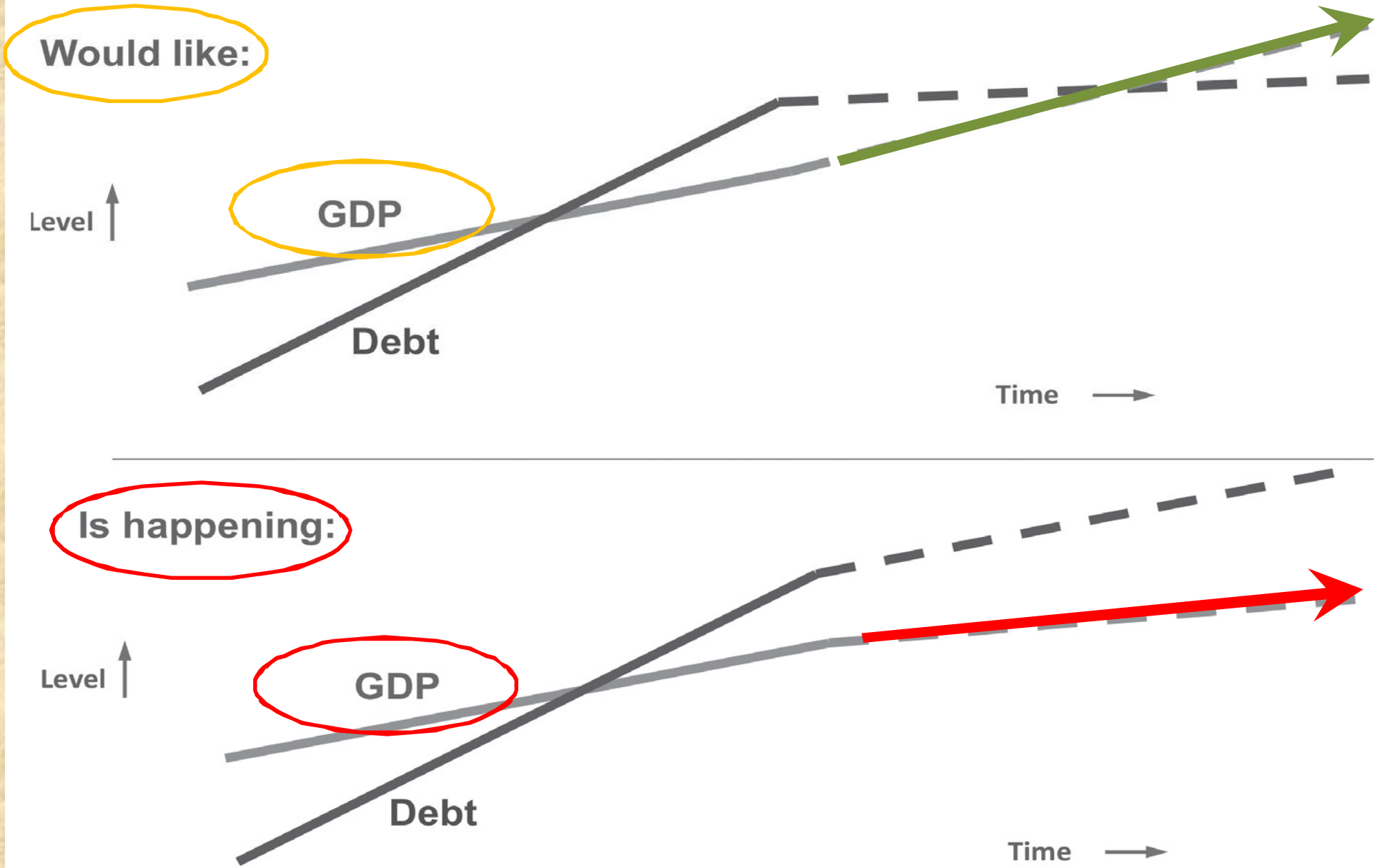
but do we really want to experiment with the economy – and frankly these probably won't work long term.

The incentive for authorities (in the absence of your voice), is to boost short term and hope long term isn't a problem.

Hope is not a strategy!

From my book: Kitchen Table Economics & Investing

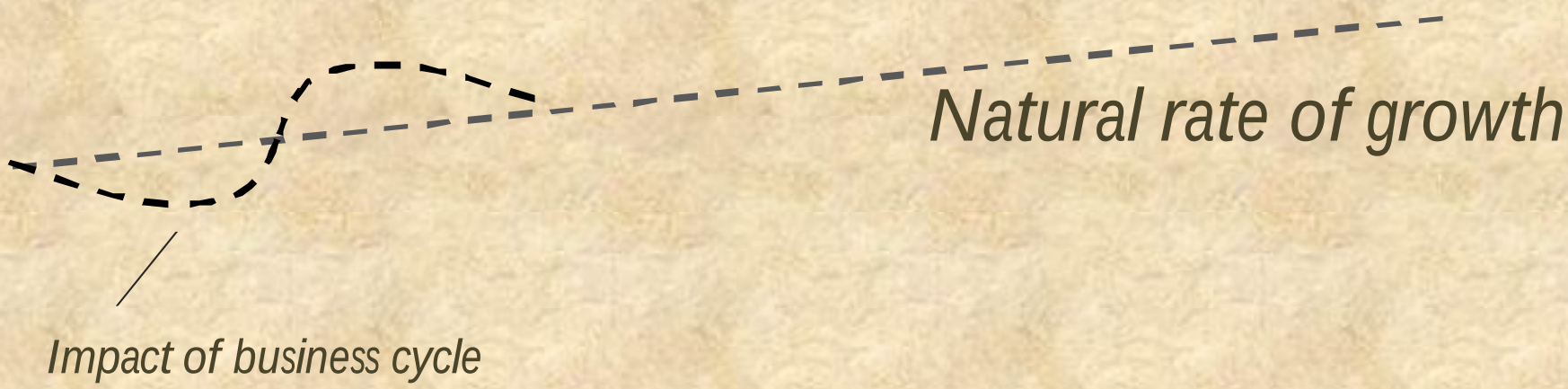
Figure 2: Structural issues in the United States



Hoping we get normal growth!

What's normal any more??

In a simple world we have a natural rate of growth.
We know there are business cycles. Let's say because
of build-ups of inventories.



Hoping we get normal growth!

What's normal any more??

So the central bank steps in to try to smooth the cycle

Ideally lower rates boost the economy when it would otherwise slow, and you can payback the debt, when things would otherwise naturally pick up, so flattening the growth path.

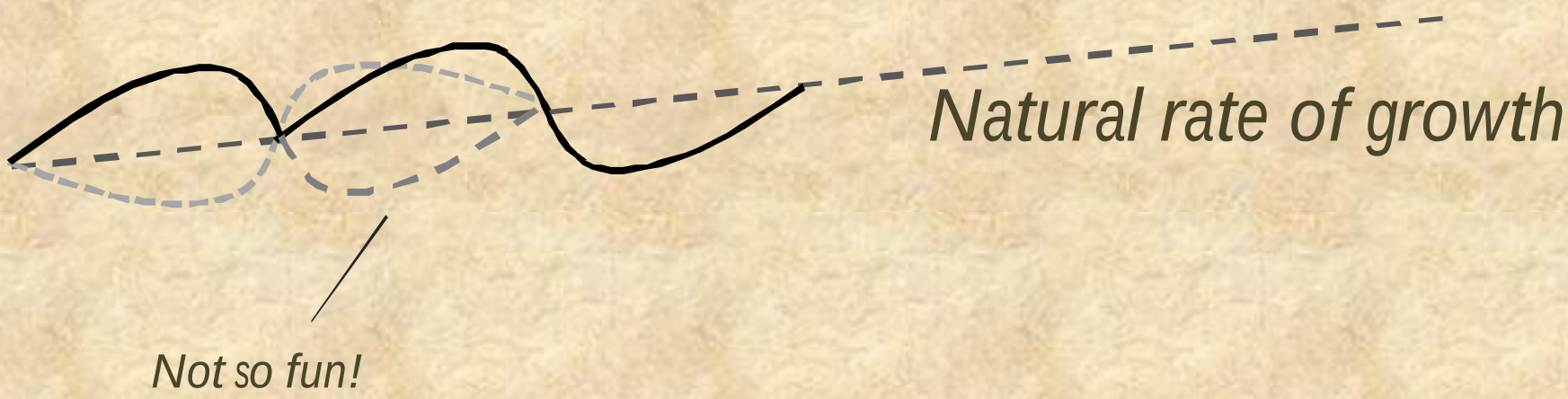
Hoping we get normal growth!

What's normal any more??

But sometimes the economy doesn't bounce back as much as we hope, so rather than normalising rates (putting them back to where they were)...

..the central bank moves rates even lower, giving a further boost, before we have experience the pain of payback.

So we are deferring the pain, and typically adding to the debt (as incrementally lower rates make adding debt easier).



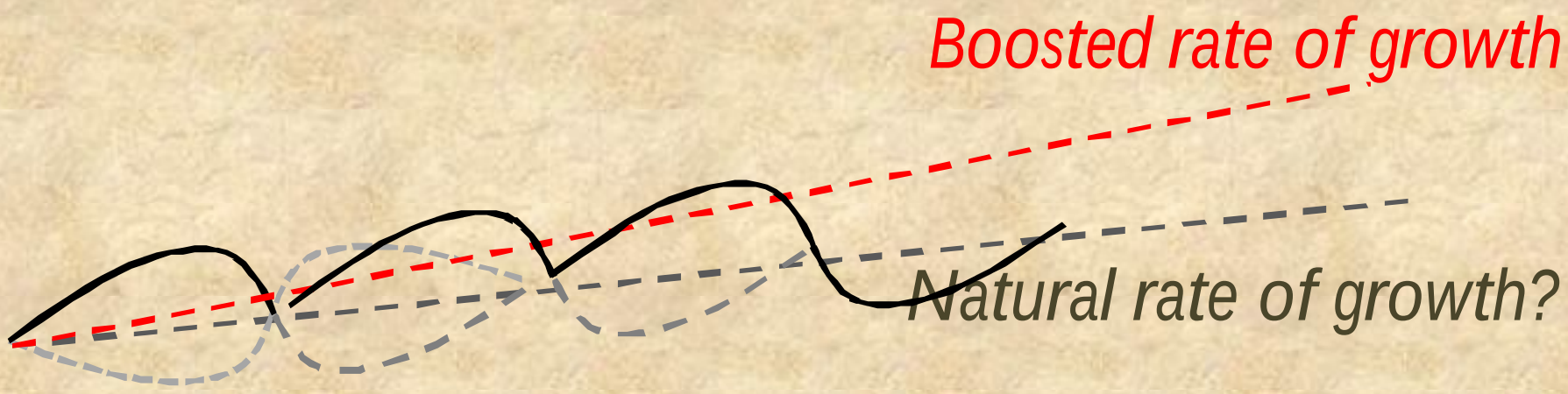
Hoping we get normal growth!

What's normal any more??

For twenty years rates have been moving lower.

We tend to judge what is normal based on the previous trend.

But we have been interfering so much, what feels normal has been boosted for several decades of debt growth!!



Borrowing and not paying back means we have been living beyond our means.

If we have been living beyond our means the natural level of GDP is lower than what we have become accustomed to

i.e. the natural level of spending (the lifestyle we have become accustomed to) needs to be a little lower to be sustainable.

Something needs to change. This isn't a rabid political view, this is just maths.

Either we redistribute or we can hope for growth (and get deeper into a hole and eventually have to redistribute even more if growth doesn't come).

If we redistribute you can either be aware and be part of the process or you will likely wear the cost.

Redistributing isn't all bad, it can be fair.

Not redistributing can be bad.

Let's revisit Ray's example of credit creation of a man in a bar.

Was lending money a good idea?

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video

It promotes drinking! The barman could also charge interest, then he'd be like a bank.

Redistributing isn't all bad, it can be fair.

Not redistributing can be bad.

If the barman charges interest then there is an incentive for him to lend more.

But obviously not all patrons are the same and it is riskier to lend to some patrons than to others.

So the barman, or a bank, has to balance how much lending versus how much potential profit.

If they get the balance wrong they end up with losses, not straight away, generally when times are tough – which then compounds issues as Ray indicated.

Lower rates allows debtors to service more debt!

What if too much was lent??

From Ray Dalio's 'HOW THE ECONOMIC MACHINE WORKS' video

A person who received more credit than they should have!

A person who lent more than they should have!

He would experience losses if rates hadn't moved lower.

So lower rates saves a lender who lent more than they should

This encourages bad discipline. It encourages lenders to be sloppy in their lending standards.

They get the interest along the way but don't bear the consequences. This is called 'moral hazard'.

Other people do pay.

Savers and those trying to live off their savings get lower rates of returns.

Low rates also impact asset prices, which skews things as well.

Lower rates supports asset prices at higher levels

As people can service more debt at lower rates, they can borrow more to buy assets, pushing up asset prices – such as housing.

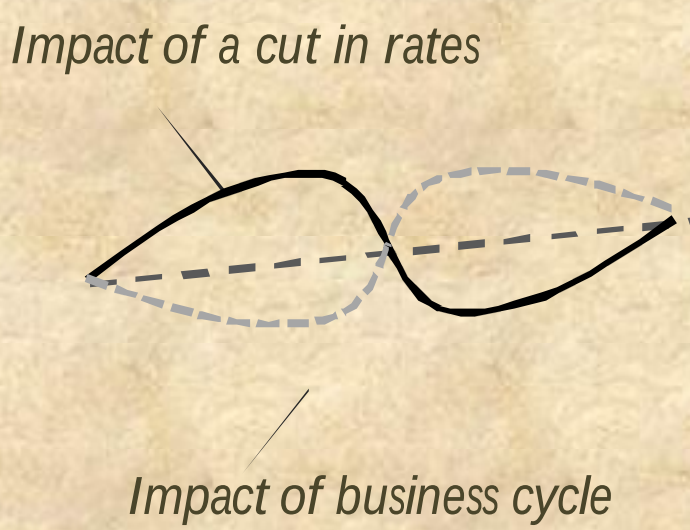
Young people bear the cost of higher asset prices as they then have to pay more for assets such as housing.

The risk associated with assets also increase, for if rates normalise there would be pressure for asset prices to renormalise (to fall) .

So bailing out the economy via lower interest rates is not a free lunch.

Do lower rates (including QE) act to reduce jobs and wage inflation, longer term?

We are now familiar with this style of curve - where lower rates stimulate things, then there is payback (hopefully smoothing an underlying business cycle).



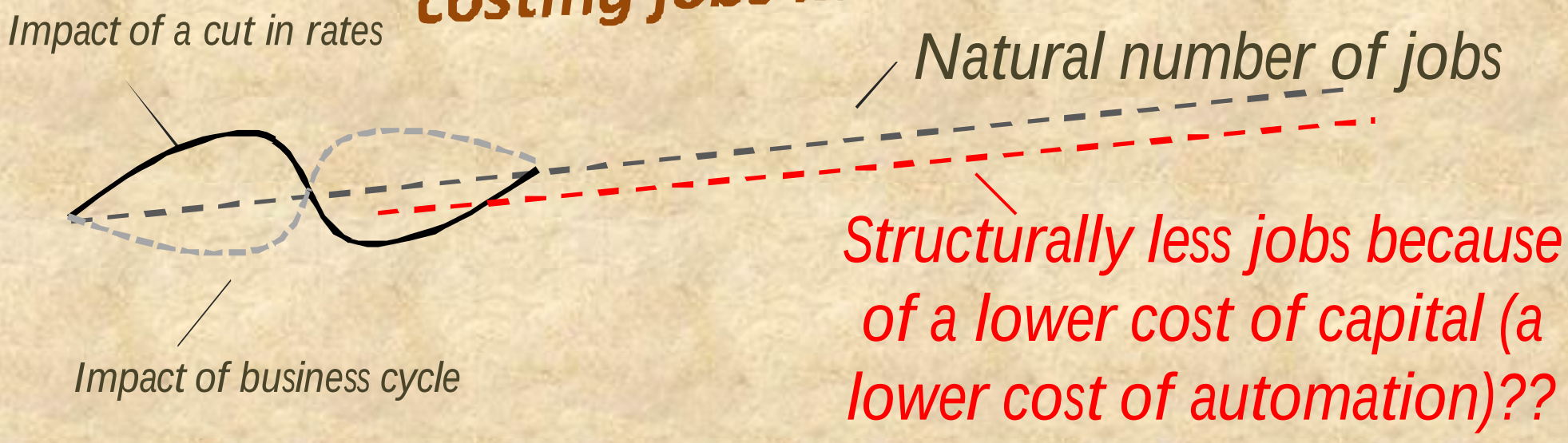
As employment levels tend to move with GDP, let's now consider the curves as representing job numbers.

Do lower rates (including QE) act to reduce jobs and wage inflation, longer term?

Lower rates means a lower cost of capital

i.e. It is cheaper to borrow to buy machines to automate processes.

Making it hard for labour to compete – possibly costing jobs in the long run.



So low rates aren't a free lunch

They help some people, but other people pay.

Low rates are a type of redistribution.

They even impact other countries, making it cheaper to produce goods say in the US, reducing the number of imports from say Europe – a redistribution.

So low rates aren't fair to all – they're ok for short term issues - but twenty years of falling rates?

So to reiterate my theme, we need a structure that gets things back to a sustainable equilibrium: debts at lower levels, balanced budgets, rates at more normal levels.

Over the course of the cycle things should be fairer – higher rates should mirror lower rates!

Most people accept a lower return on savings for a bit, if it helps us through a slump.

In theory, rates are a bit lower than normal at times, and at other times a bit higher.

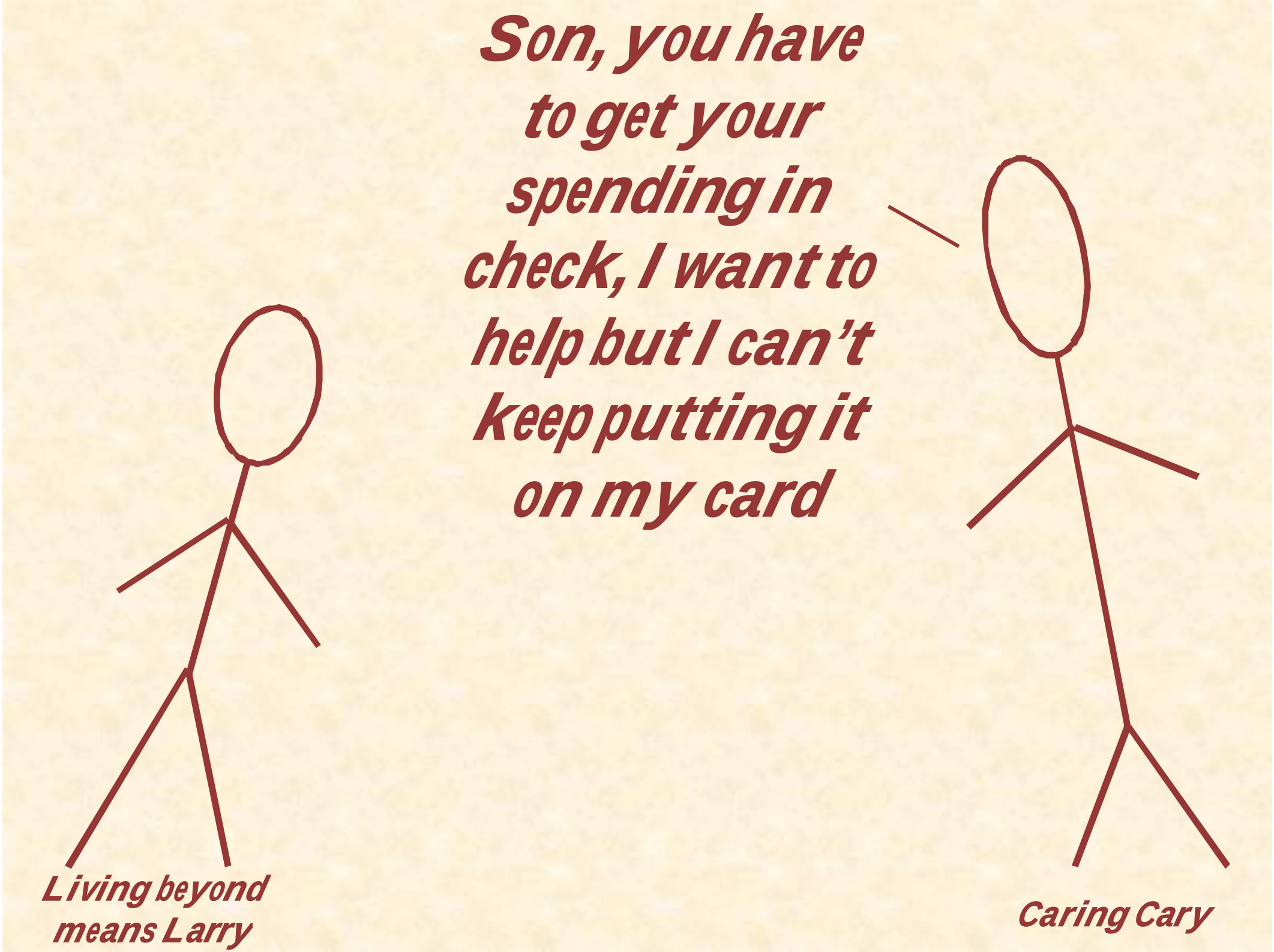
So monetary policy is and should be a cyclical tool, to make its impacts fair.

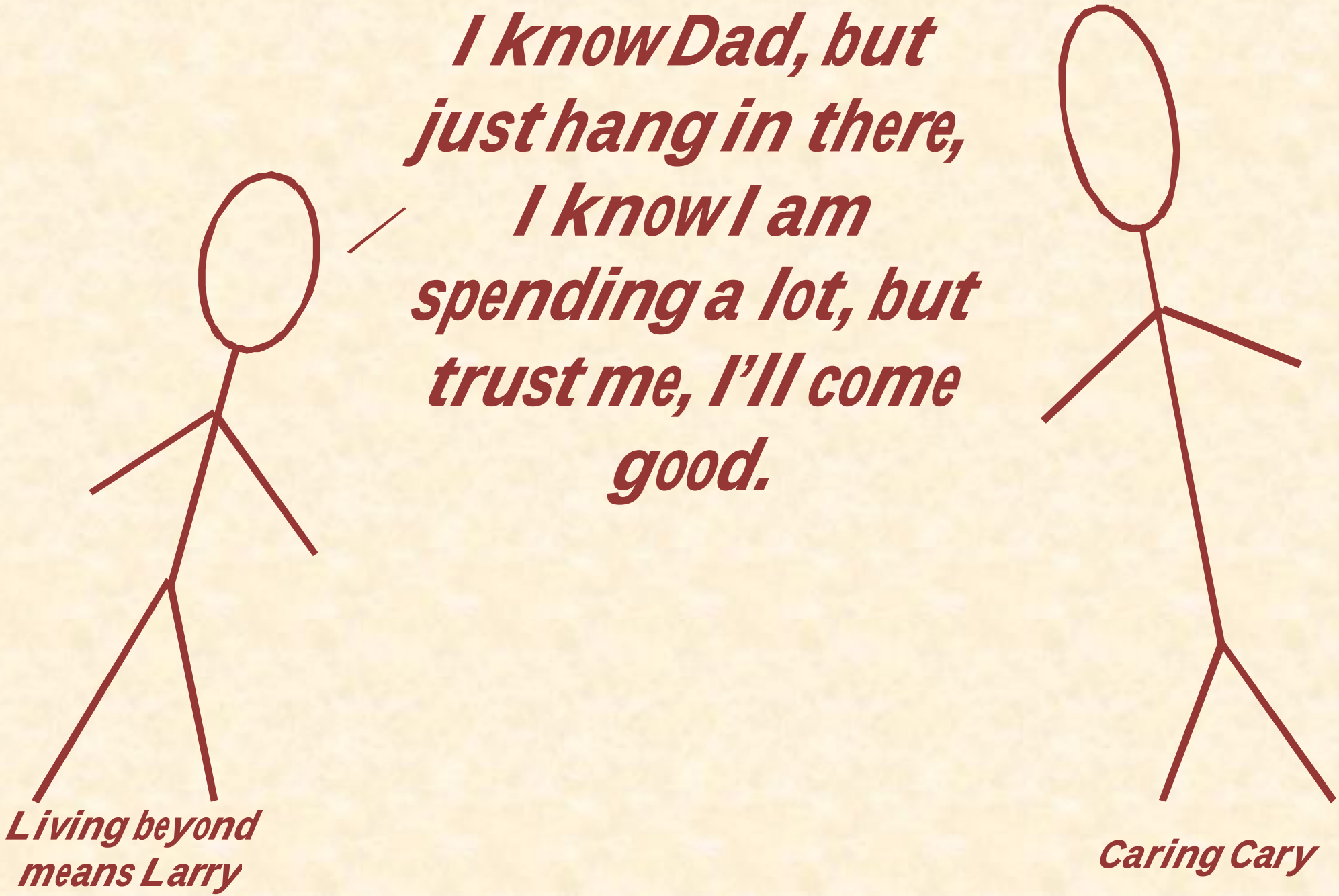
While low rates boosts things short term, a perverse outcome is that they mean that savers need to save more (as returns are lower), a drag on the economy down the track.

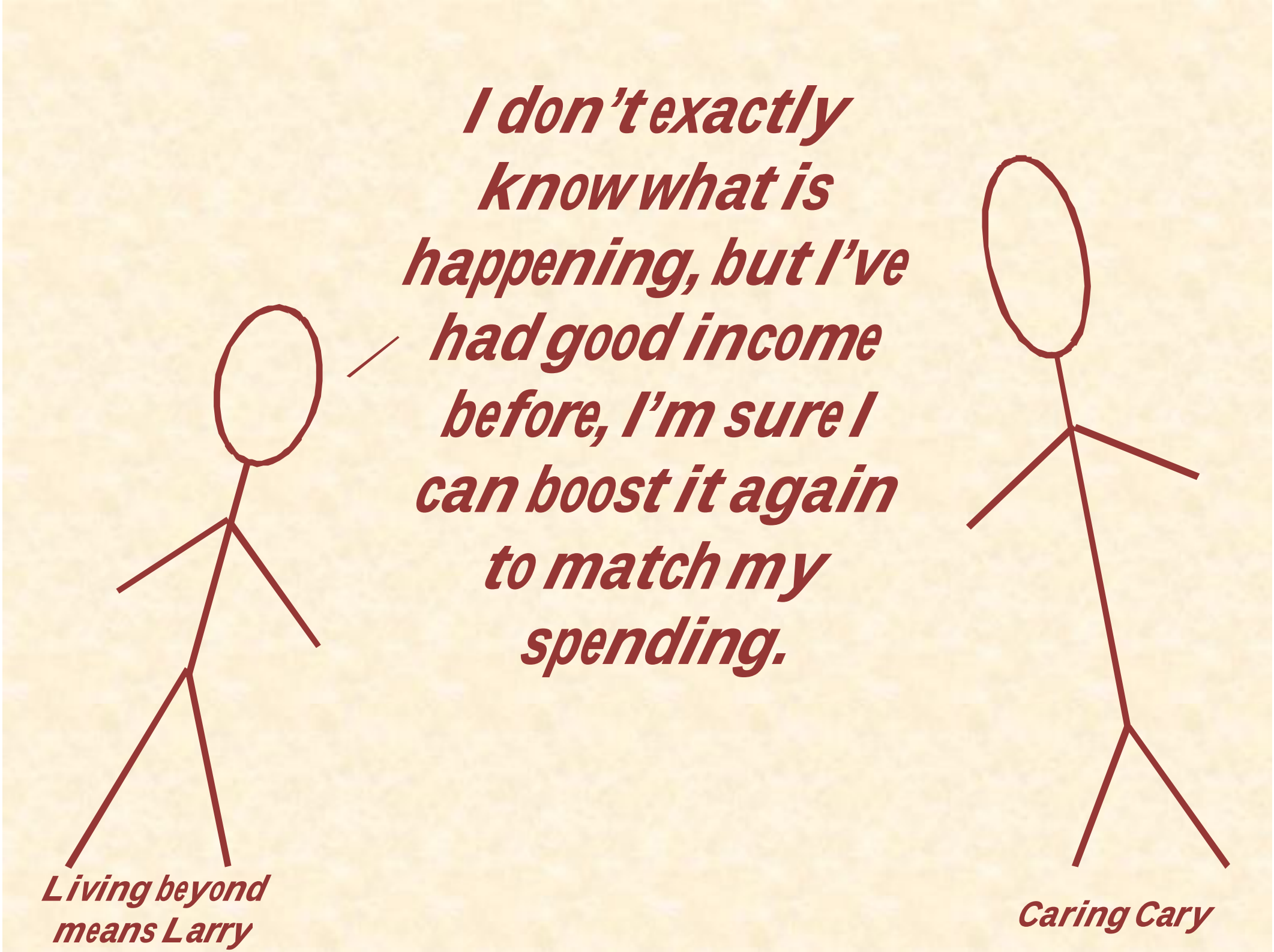
Over the course of the cycle things should be fairer – higher rates should mirror lower rates!

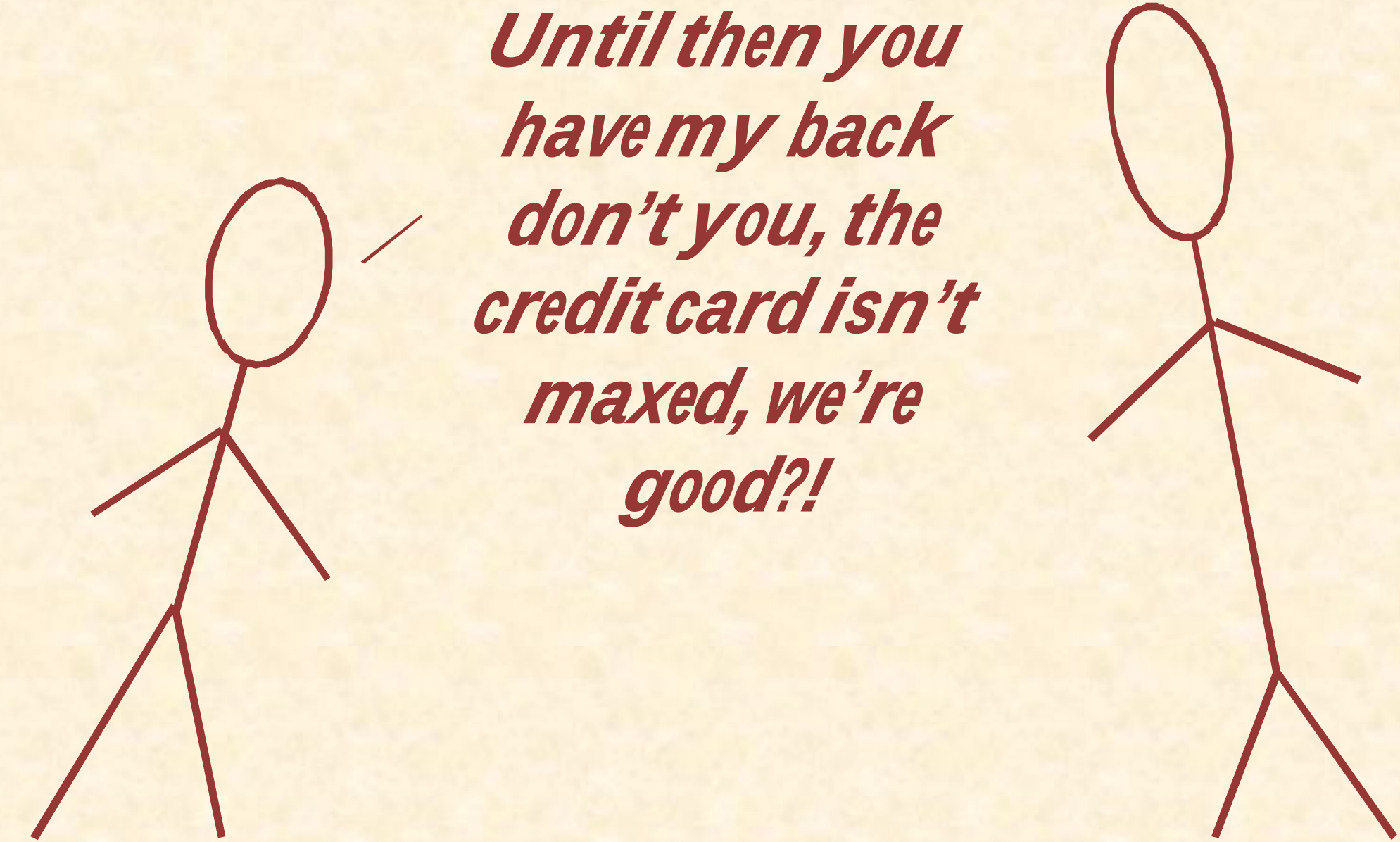
We have been winding rates lower, on the assumption that stronger growth will kick in, whereupon we would raise rates again.

Are we being responsible in our assumptions. What if the economy was a 20 year old son??


Son, you have to get your spending in check, I want to help but I can't keep putting it on my card
Living beyond means Larry
Caring Cary


I know Dad, but just hang in there, I know I am spending a lot, but trust me, I'll come good.
Living beyond means Larry
Caring Cary


I don't exactly know what is happening, but I've had good income before, I'm sure I can boost it again to match my spending.
Living beyond means Larry
Caring Cary



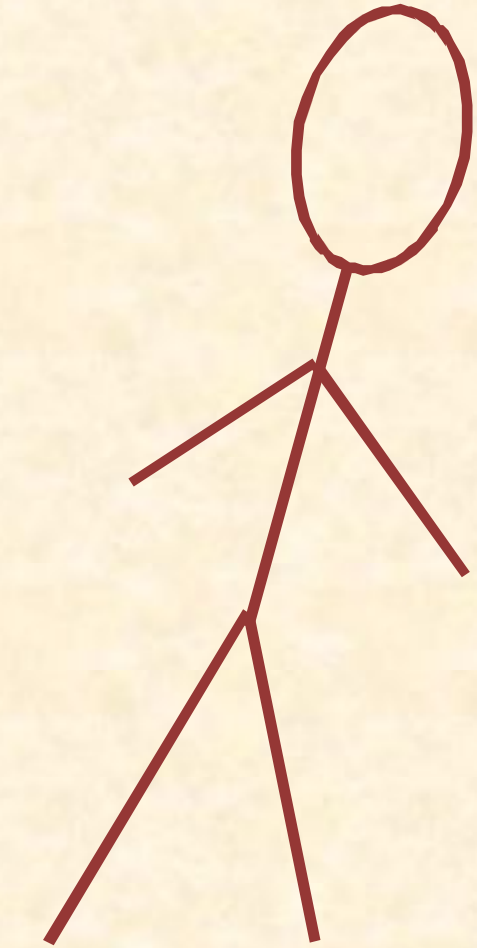
Living beyond means Larry

Caring Cary

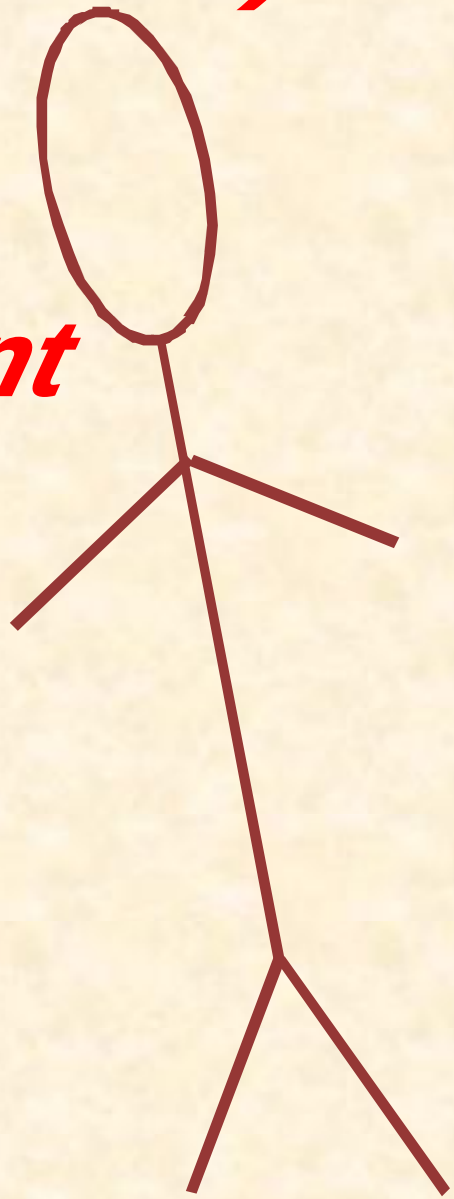
What's a good Dad to do:

a) Keep lending (moral hazard)?

b) Cut back his lending, encouraging his son to spend within his current means?



Living beyond means Larry



Caring Cary

Important concept!!

GDP Growth ≠ Healthy Economy

Using GDP as a measure of financial health is like looking at **Living-beyond-his -means-Larry's** spending as a measure of his financial health.

If **Larry** is **borrowing** to support his lifestyle his **spending** is a poor measure of health.

GDP Growth ≠ Healthy Economy

Yes more GDP generally means more jobs

Yes we have jobs problems, we want to get more people to work

But if we are simply borrowing (or encouraging borrowing via low interest rates) to create jobs..

..we are just moving the problem!

I'd prefer we measured GDP growth net of any increase in debt, as a better measure of sustainable growth

Infrastructure debt can be good debt (but not always)

Not all debt is bad

But if debt is growing faster then GDP long term – it's likely a problem (Ray's rules!)

If I build a factory or a road but don't need it for ten years, it is a waste.

Over building is also an intergenerational issue!

And it robs people in future years of work they had.

Summary of issues with money printing!

Money printing (as major central banks are doing) is just more monetary policy which could also be called interest rate policy.

Monetary policy eventually runs out. Interest rates are so low there isn't much juice left in that tank – long term rates US, UK, Europe & Japan can move a little lower but not much.

Theoretically you can really ramp up QE and government spending, this will increase spending in the economy but it isn't really fixing it.

Before you get to that point you want to fix the problem.

The problem is not getting a good year of GDP growth, jobs growth, or preventing deflation for a year.

We need to end up with something that will work. A formula that will ensure that things come back into balance.

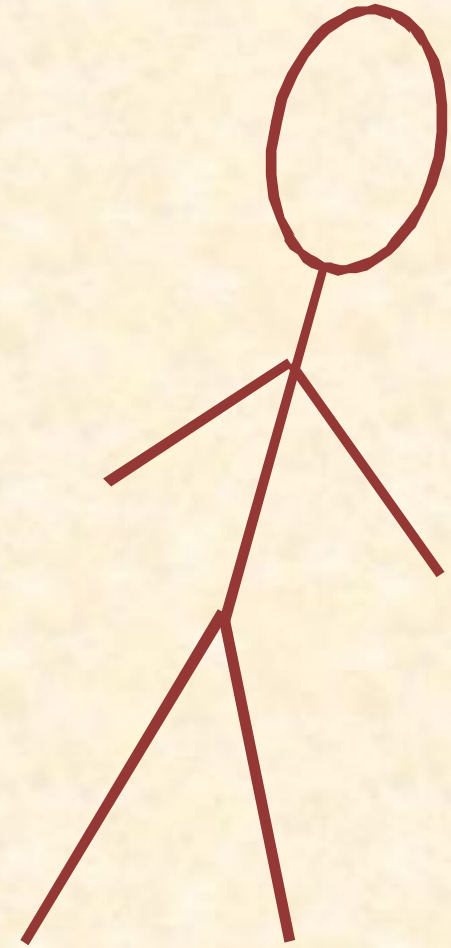
Not one that requires further extremes of debt or monetary policy to maintain GDP & jobs at acceptable levels.

So those are the concepts.

But the real world relationship isn't quite as we showed it for Larry and Cary?

Here's a more accurate representation!

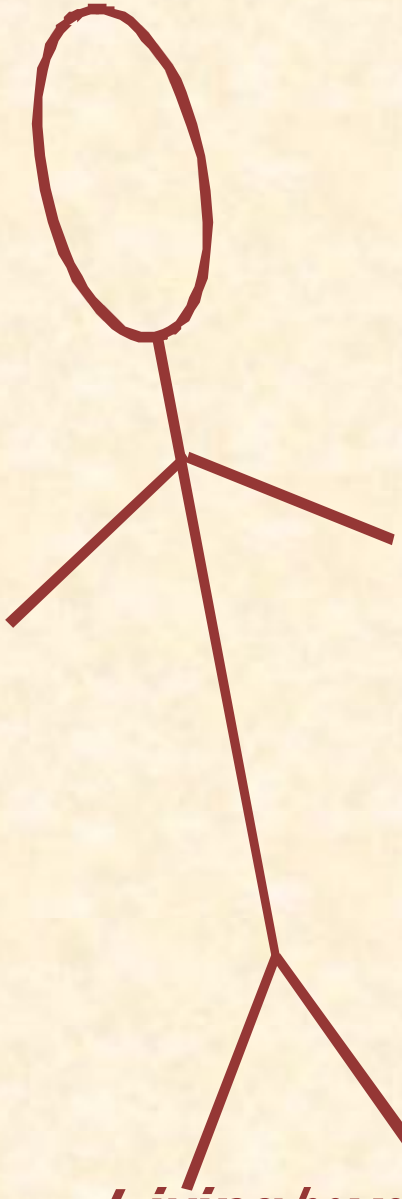
Let's reintroduce our players



Voteless Vicky

An adult in this story

Representative of the next generation



Living beyond means Larry

Stop Press!

Vicky is voteless.

But if you are 40, you might be working for 20-30 years.

Even if you are 50, you may be working for another 10 or more years.

You care about the future too!

We are all the next generation!

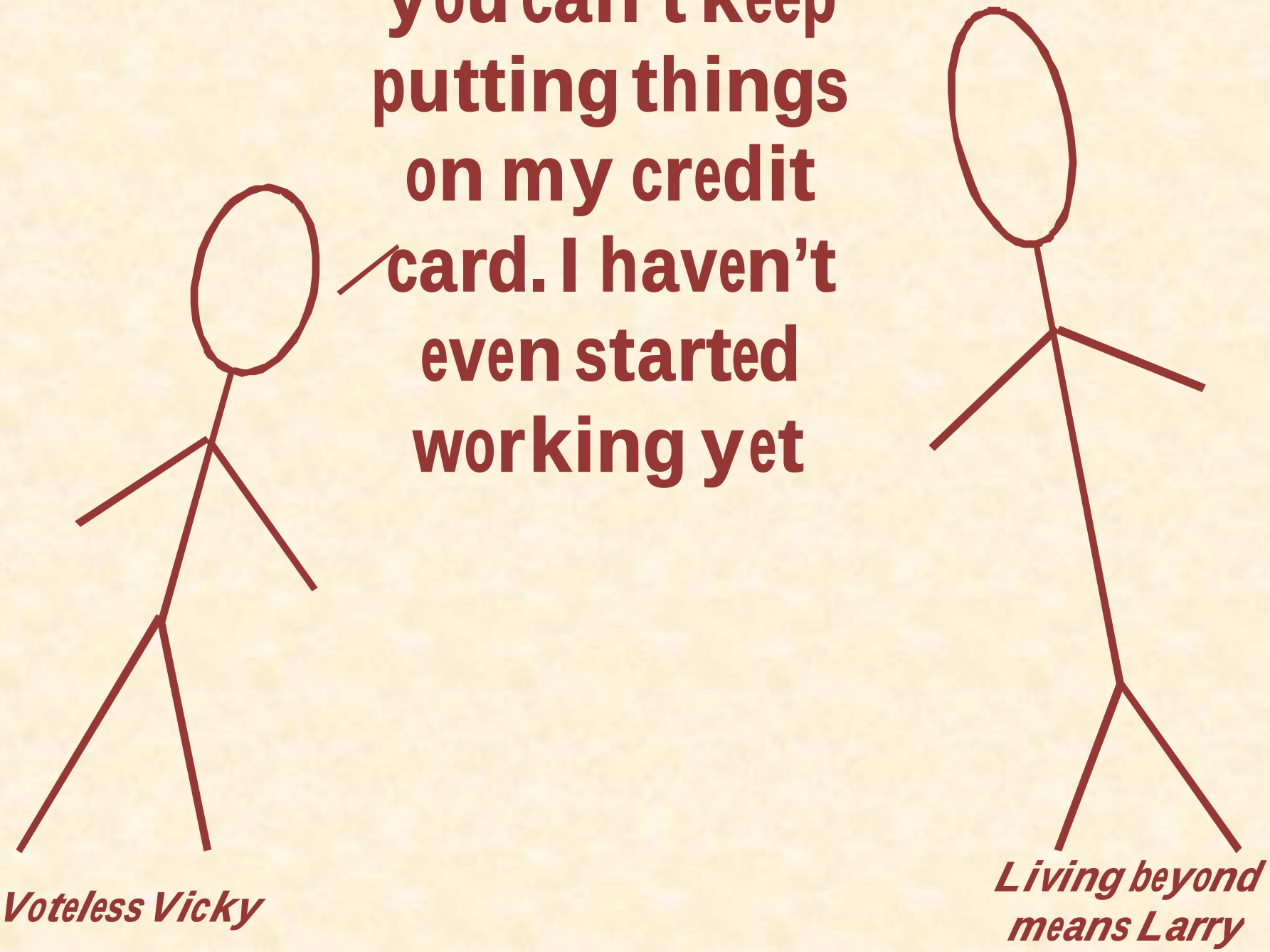
A bare naked economist

The Story of Production!

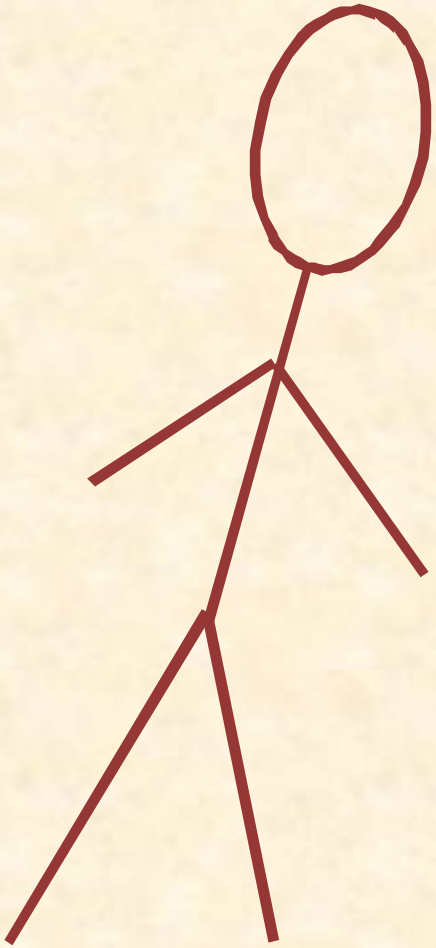
Voteless Vicky

and

Living beyond his means Larry

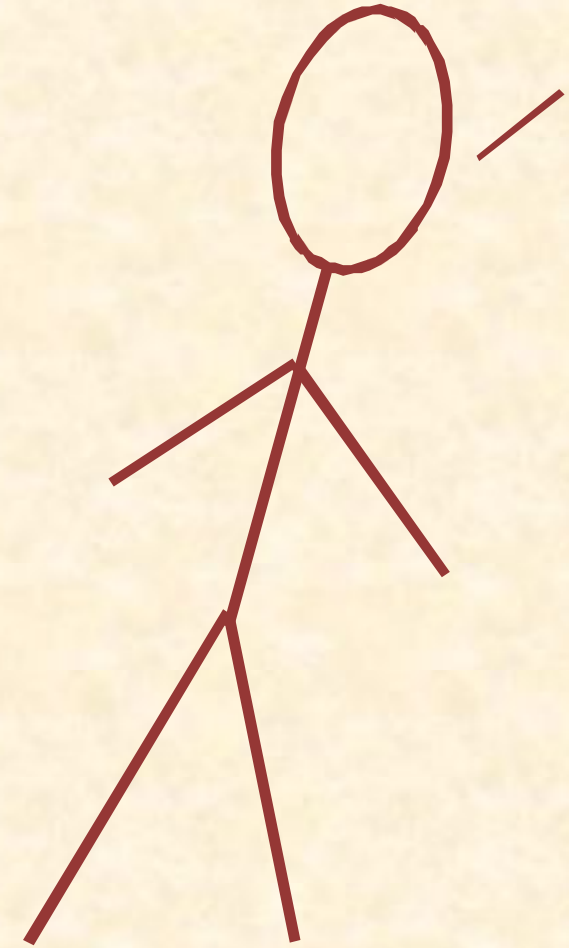

Uncle Larry, you can't keep putting things on my credit card. I haven't even started working yet
Voteless Vicky
Living beyond means Larry

It's all for you sugar, if we don't keep spending, 10% of your generation will be out of work!

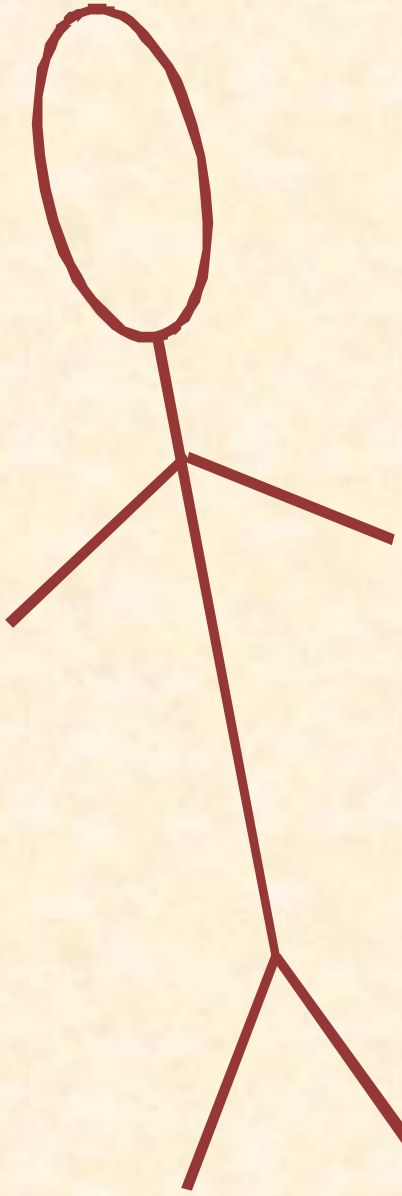


Voteless Vicky

Living beyond means Larry

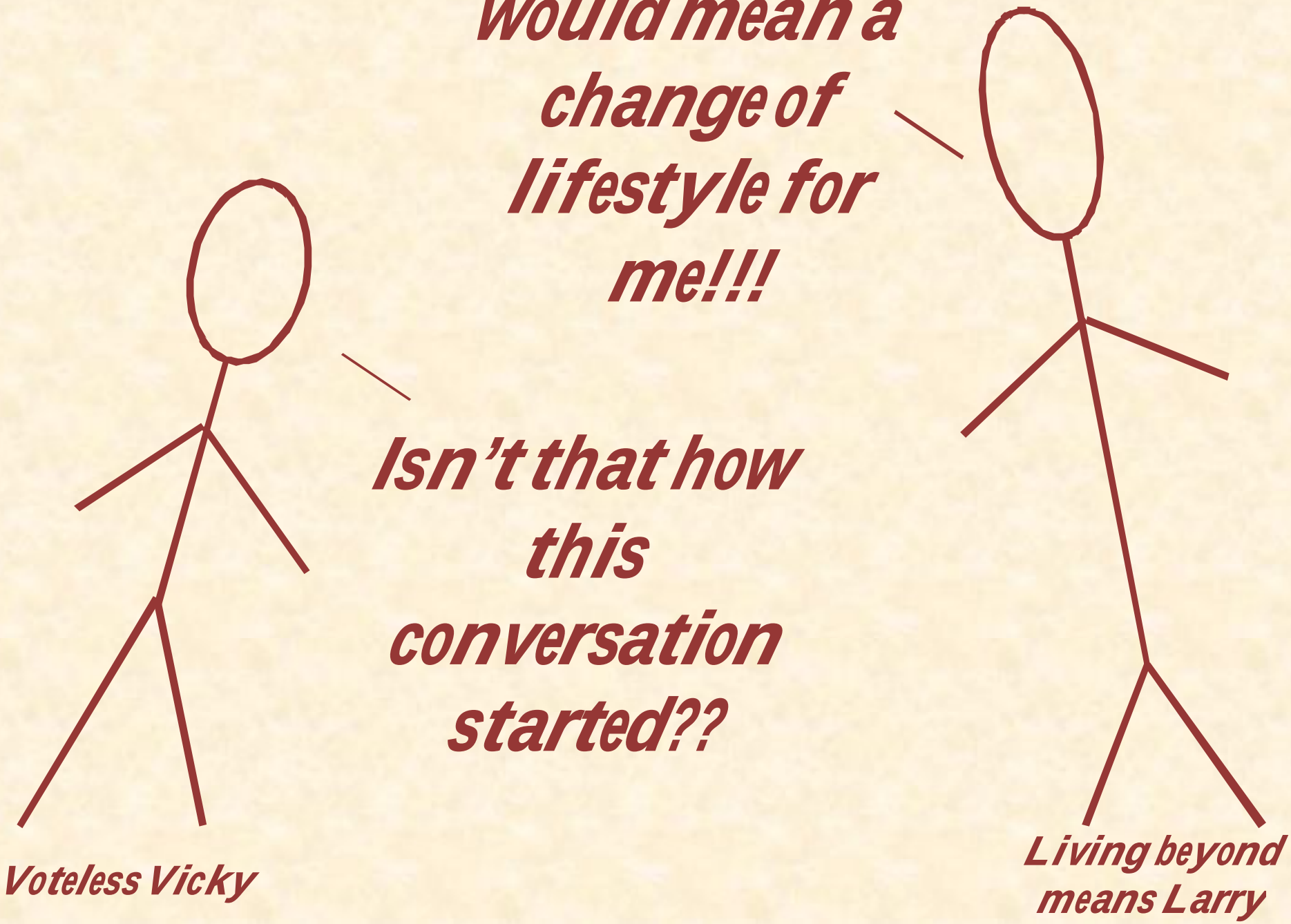


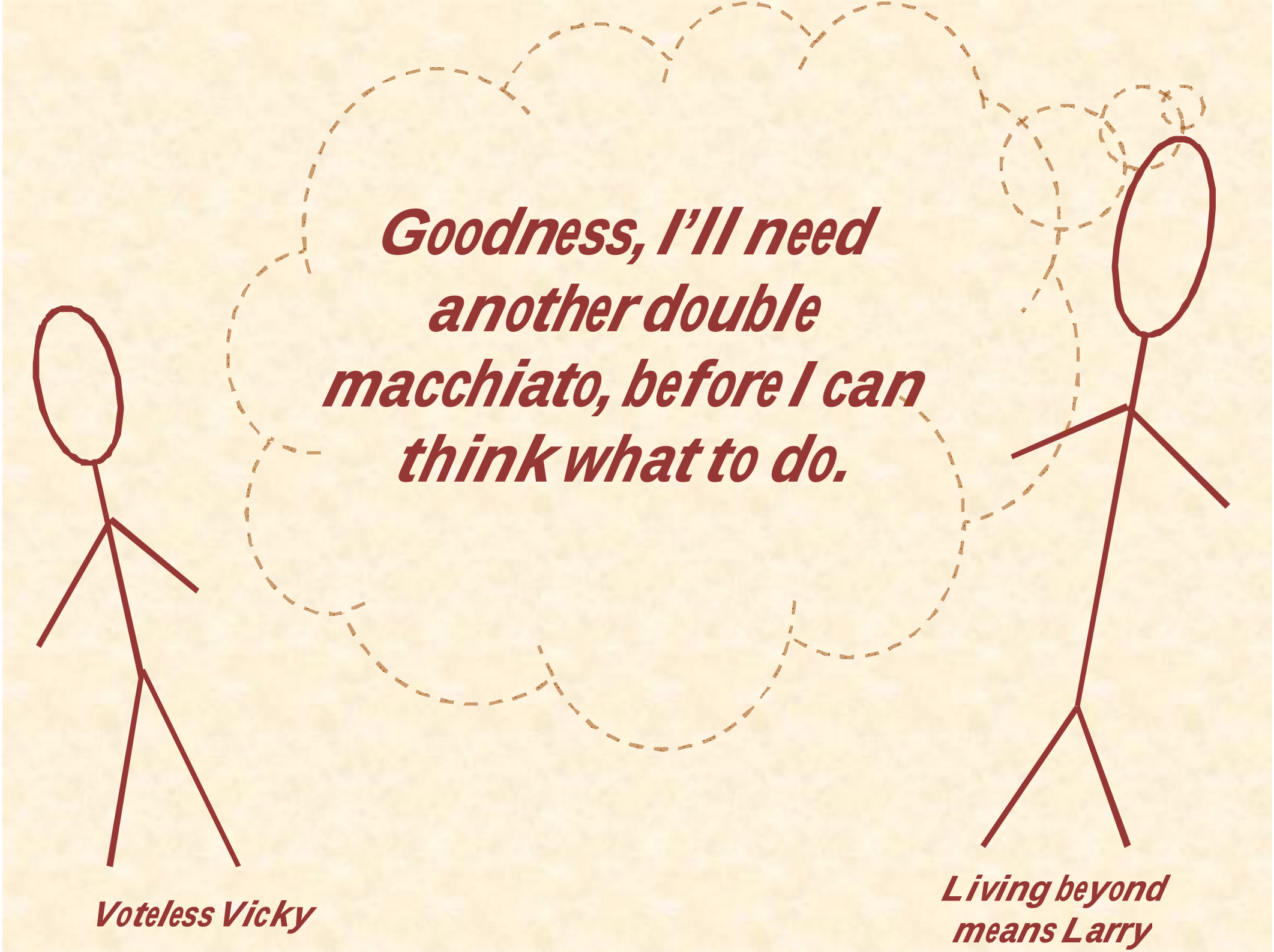
What if you all work 10% less hours? That would leave work for us. That way we all have jobs!

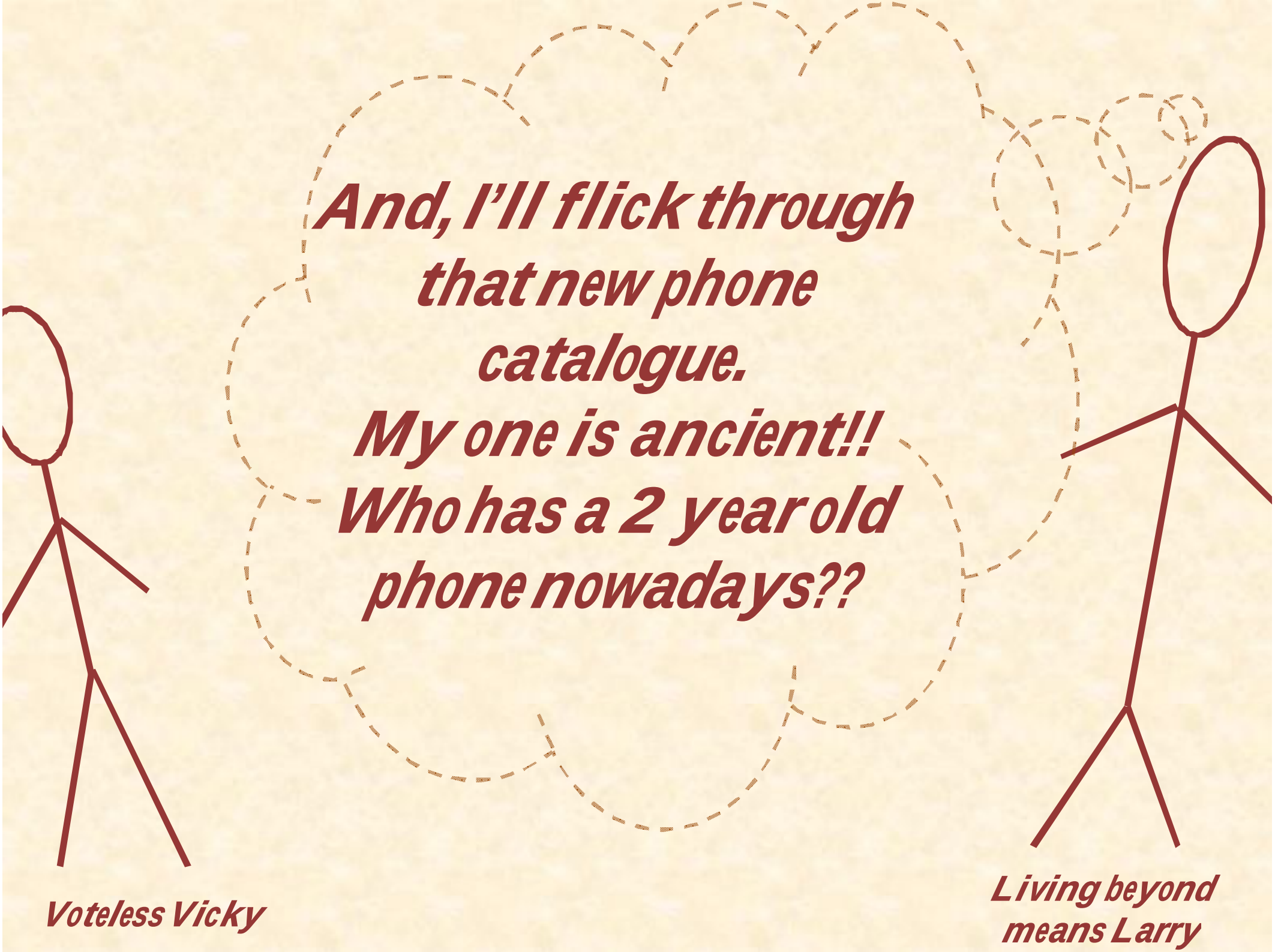


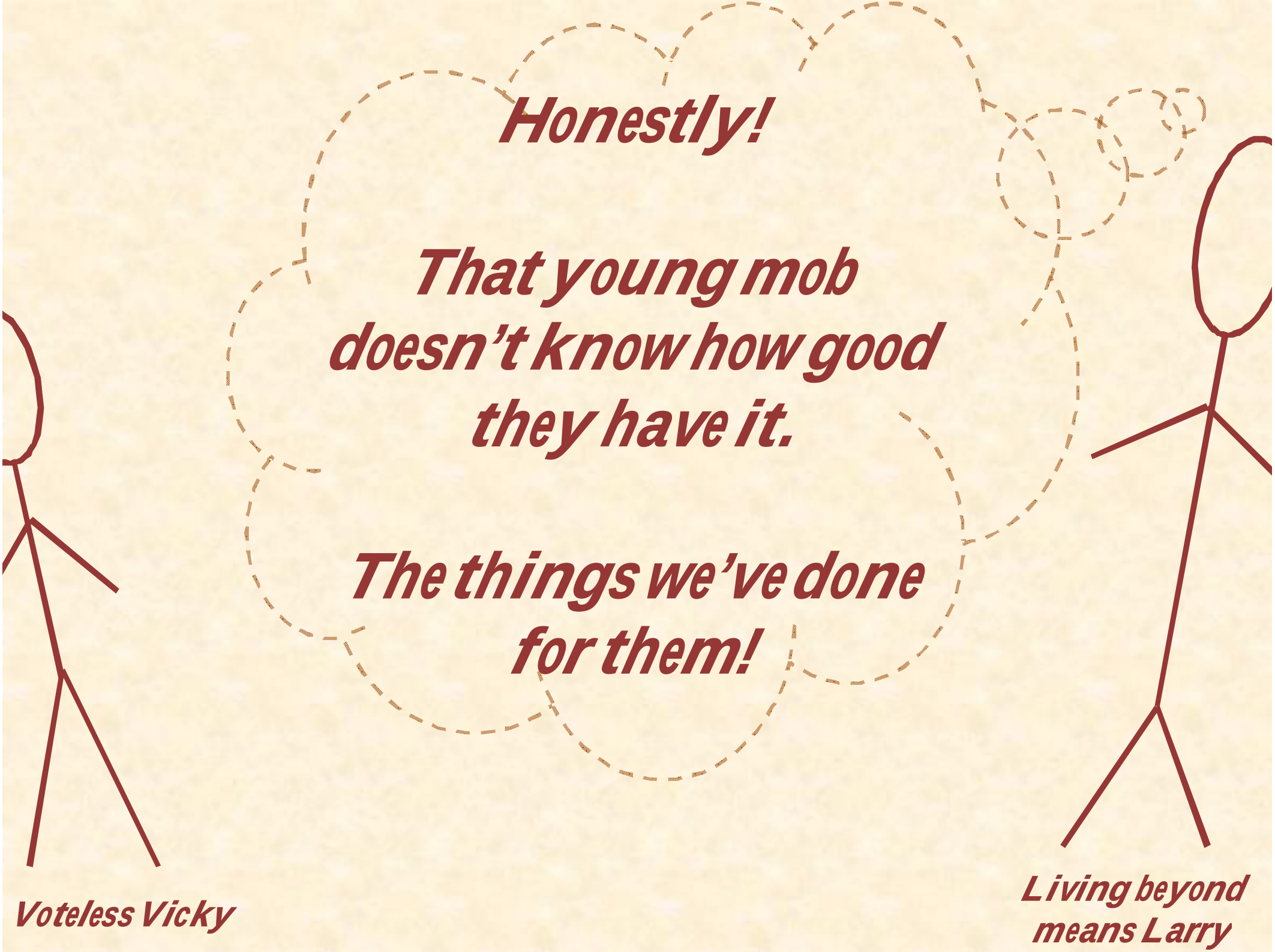
Voteless Vicky

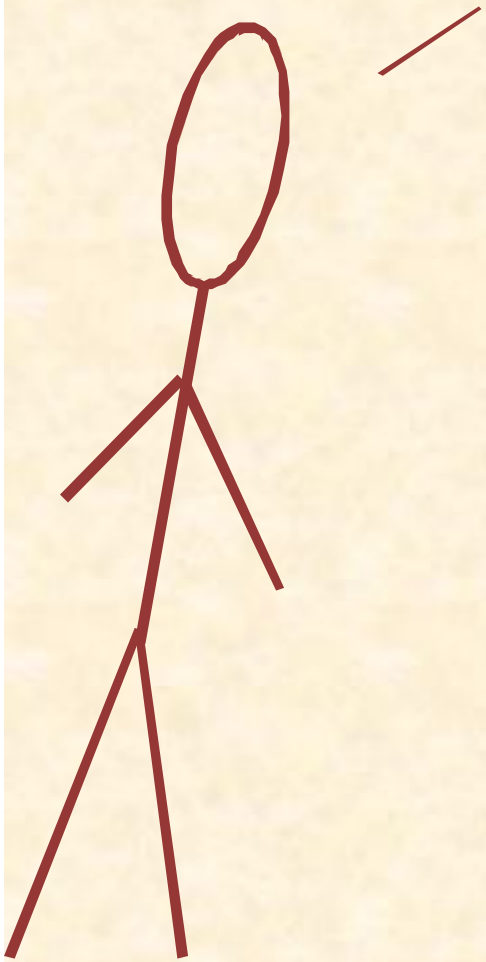
Living beyond means Larry


But, but that would mean a change of lifestyle for me!!!
Isn't that how this conversation started??
Voteless Vicky
Living beyond means Larry


Goodness, I'll need another double macchiato, before I can think what to do.
Voteless Vicky
Living beyond means Larry

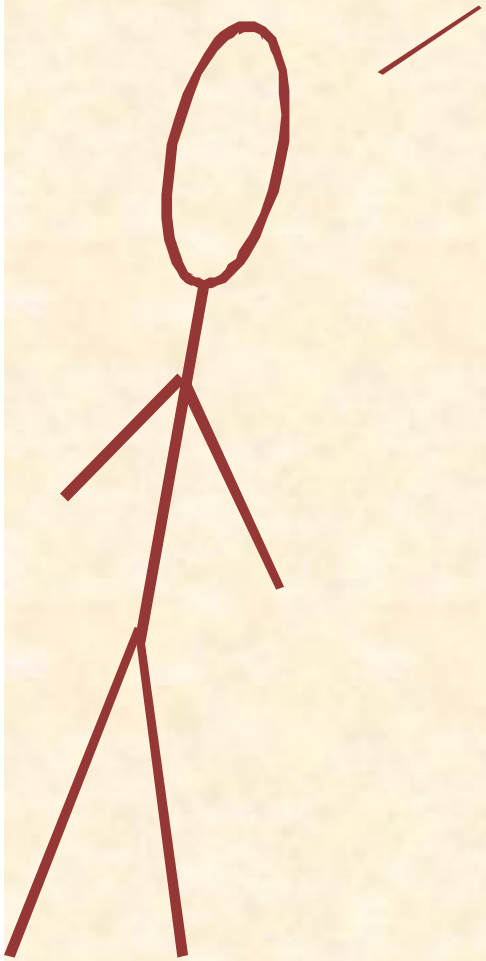

And, I'll flick through that new phone catalogue.
My one is ancient!!
Who has a 2 year old phone nowadays??
Voteless Vicky
Living beyond means Larry


Honestly!
That young mob doesn't know how good they have it.
The things we've done for them!
Voteless Vicky
Living beyond means Larry



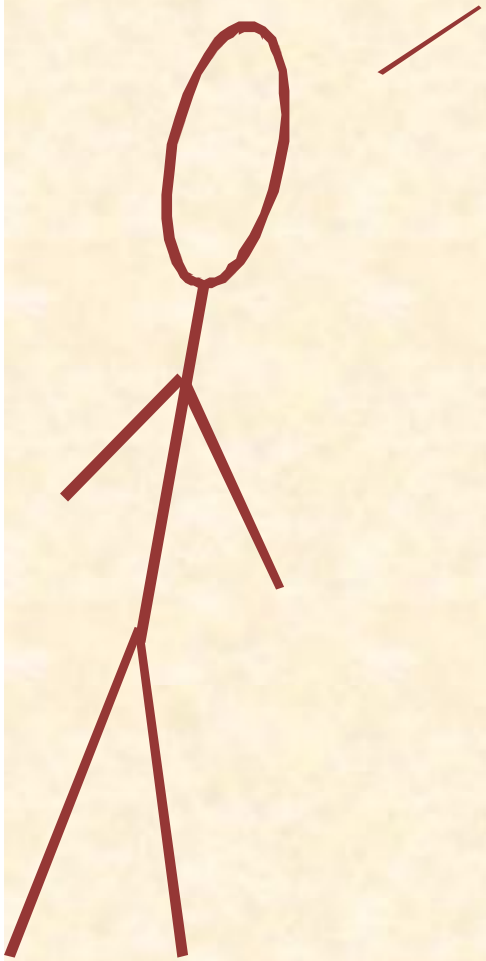
I like Uncle Larry,
we are family,
I want to help!

ess Vicky



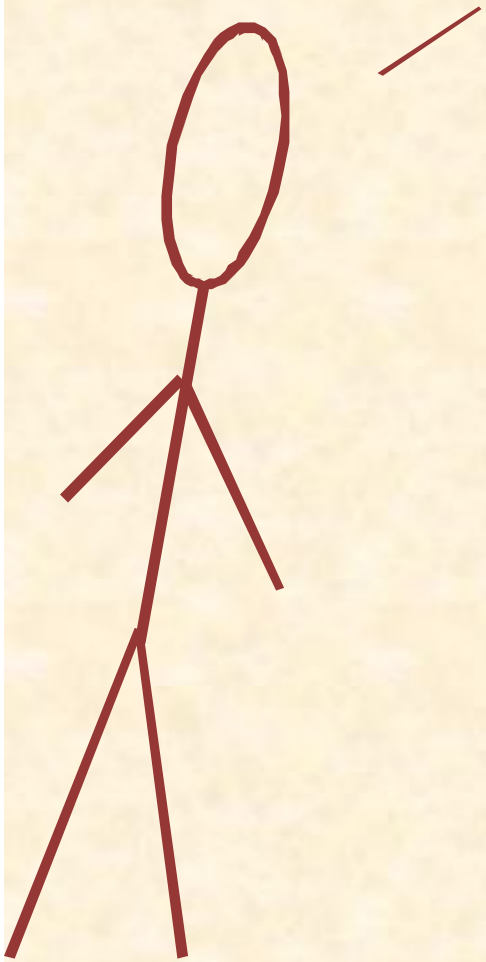
But he seems to think that if everyone in his generation borrows and spends, that this will boost the economy, and then he can pay back his debts.

ess Vicky



Can more debt mean less debts??

ess Vicky



If we all become more productive ,I could see how that would work. But we have always tried to be as productive as we can be??

ess Vicky

That's the end of this episode!

What will happen next episode?

Will growth be as strong as we hope?

Or will something else need to change?

If something needs to change, is sooner better?

Stay tuned in a decade we will know!

Are you voteless Vicky?

Are you, or is your generation Living beyond his means Larry?

I've focused on the US but across the global, most major economies there are troubles.

We need to decide what we value.

Ray showed pictures of civil unrest if things slow. This scares me too.

Anger focussed at other countries can distract from economic tensions.

Incentive!!

Some standard recipes from authorities:

1. Keep pushing for growth, even if it is pulling growth from the future.
2. If things get bad, blame others, including other countries (even start wars).

Everyone across the globe, in the Americas, China, Japan, Europe, Russia, Middle East, Africa, India, Australia & everybody else.

We need to decide what we value, and demand that of politicians.

Remember that this is like global warming but here & now!!!

The longer we delay the worse the possible outcomes!

It may be okay, growth may come.

I hope & pray it does!

But if it doesn't we are deeper in the hole!

My framework

I believe:

1.

That we should set things up with stabilises such that budgets automatically come back into balance, and debts are automatically brought under control

For example, taxes that automatically increase, say 1% each year, until debts are brought back, or are clearly on the way to being brought back, to a predefined limit – to say of 60% of GDP.

I believe: 2.

That central banks need processes to ensure that interest rates average more natural (fair for all) levels over time.

It is somewhat of a reversion to previous approaches, but perhaps they should aim to constrain the ratio of 'total credit to GDP' in the economy.

This would prevent excessive debt burdens (in line with Ray's rules) which then require ever lower interest rates.

If interest rates don't get back to normal, we don't have the ability to cut interest rates if we have negative shocks. This makes the system very risky!

I believe:

3.

That a right of a modern society is that the government provides a climate for jobs or supports the unemployed

If we don't, increased interest rates and taxes necessary for a sustainable system (my first two points), could send the economy into a depression like spiral as described by Ray.

This means more sharing between haves and have nots.

I would argue pure free market conditions have favoured the cost of capital over labour for decades, so this is just capping free market outcomes not discarding them.

(btw there is more on this in the talk to camera video I am making 'Fine Tuning the Economic Machine')

I also believe:

Such a framework gets us out of the current situation.

That if growth was destined to come that it would come anyway under this framework

Ray's money printing might help is the pain of transition under such a framework but without such a framework it is anaesthetic without the operation.

Our incentive is, as with global warming, that the consequences of failing to act, if growth continues to disappoint, are horrendous.

This is just a view

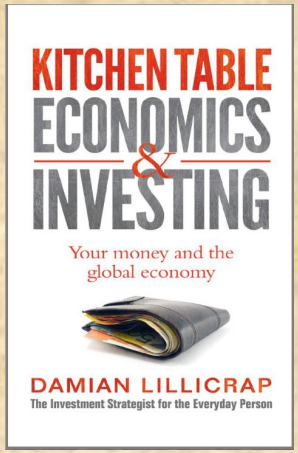
What's your view? Hopefully between Ray and I you are concerned enough to want to develop one if you don't feel strongly.

I've written a book to try to help everyday people understand.

This isn't an ad for my book (ok maybe a little) but it is primarily a call to arms.

I'd like you to understand the risks and demand a less risky path of politicians.

My incentive is to try to increase the chances of a happy, peaceful life for myself and my family and friends.



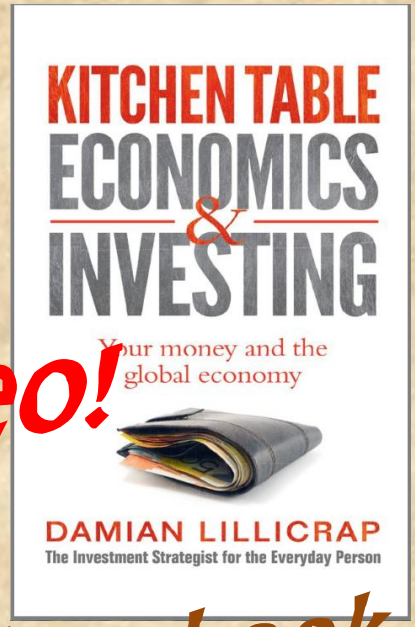
An unstable economy risks this.

I'm prepared to pay a little to get to a better place.

What do you value?

Are you with me?

If so share the link to this video!



Do you want to know more? If so read my book, or tap any source, but please understand the risks. Particularly if you are young: 20, 30, 40, 50...

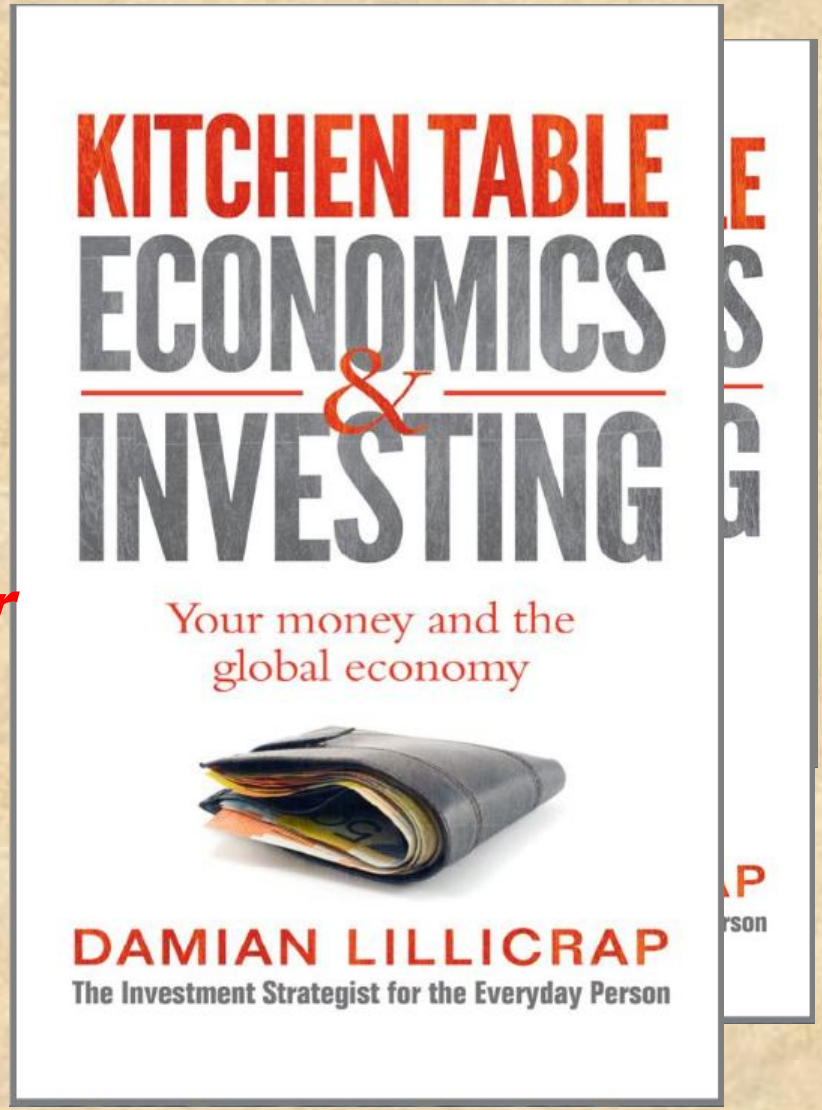
Or if you care about the next generation!

This is not just about the US, think about the next biggest economies, there are intergenerational issues (debt and over building) in China, Japan, Europe..

Thanks again to Ray Dalio for his video trying to promote an understanding of the economy and where things are at.

Please share the link to this video!
Please develop a view.
Is hope our strategy, or do you prefer my framework for certainty?

(Also check out my talk to camera video 'Fine Tuning the Economic Machine')



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www.barenakedeconomist.com

By the way, the site explains that my initial formal training was as an engineer, and that I later studied accounting, that I am not economist (nude one degree!), although I have been in finance for nearly 20 years.