Debt, Money and Sustainability: the case for and against monetary reform

Beth Stratford | Masaryk University | March 2015

What are we going to cover?

- What money is, where money comes from
- What are the implications of the current system for environmental sustainability
- Critical review of proposals for monetary reform

What is money?

Often defined by functions

- unit of account
- means of exchange
- store of value

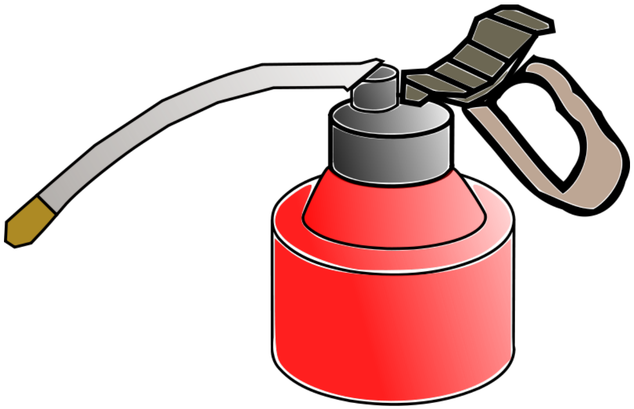
Money is a social relationship

- "An agreement within a community to use something as a medium of exchange" *Bernard Lietar*
- "Money is not metal; it is trust inscribed" *Niall Ferguson*
- What we use as money is a social contract – a "promise to pay"

Control of the money supply is a social and political issue

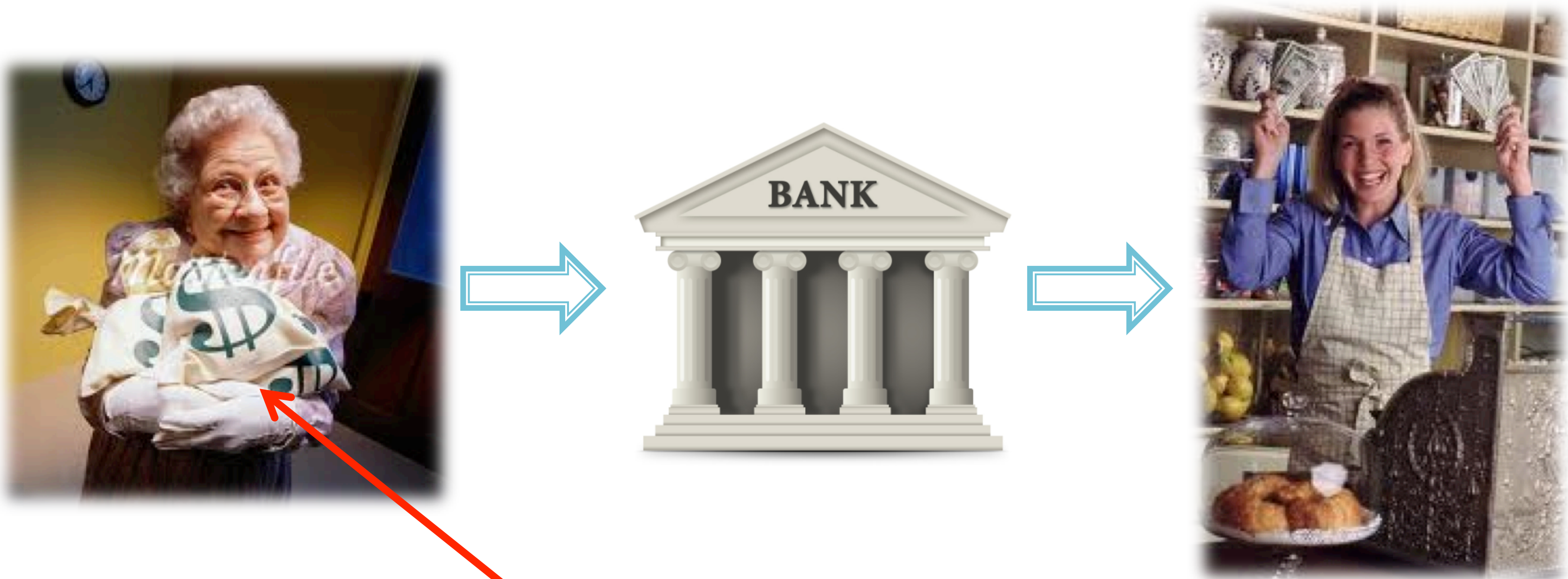
Conventional economics sees money as neutral

- Conventional accounts see money as a 'neutral veil' lying over the 'real' economy of production and exchange.
- Money is largely ignored in economic models
- This follows from a view of money as a convenient alternative to barter
  - In fact, our standard account of monetary history is precisely backwards. We did not begin with barter, discover money, and then eventually develop credit systems. It happened precisely the other way around. (Greaber, 2011, p. 40)
  - The reason that economic textbooks now begin with imaginary villages is because it has been impossible to talk about real ones. Even some economists have been forced to admit that Smith's Land of Barter doesn't really exist. (Greaber, 2011, p. 43)
  - See Felix Martin



The conventional view of bank activity

Lending our savings out to businesses and fellow citizens?



Where did this come from in the first place?

Commercial banks create money when they extend credit

"When banks make loans they **create additional deposits** for those that have borrowed" *Bank of England (2007)*

"… changes in the money stock primarily reflect developments in bank lending as **new deposits are created**" *Bank of England (2007)*

"Each and every time a bank makes a loan, new bank credit is created – new deposits – **brand new money**." *Graham Towers (1939), former Governor of the central bank of Canada*

"The **actual process of money creation** takes place primarily in banks." *Federal Reserve Bank of Chicago (1961)*

"In the Eurosystem, money is primarily created through the extension of bank credit… The commercial **banks can create money themselves**." *Bundesbank (2009)*

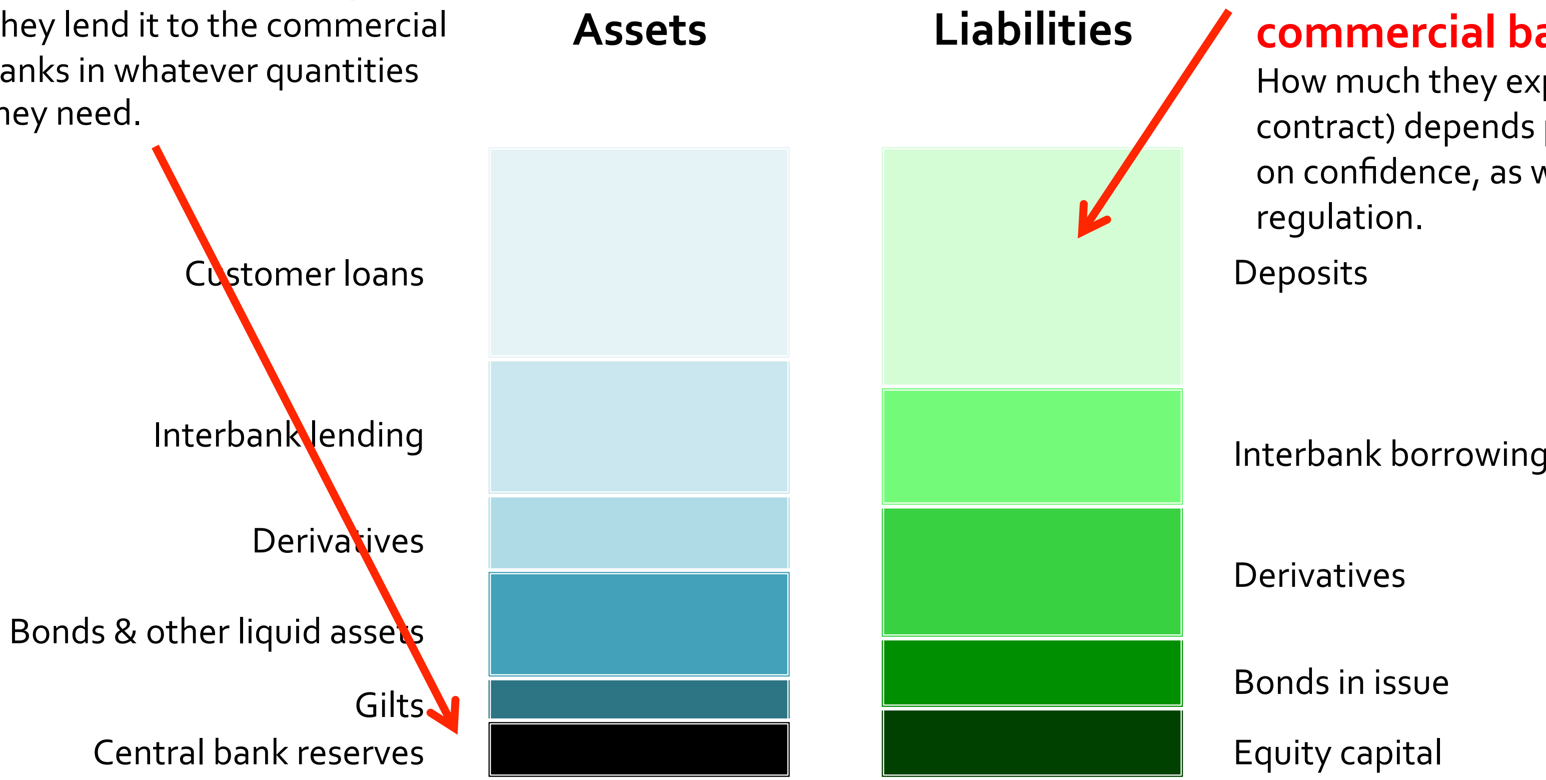
"Over time… Banknotes and commercial bank money became **fully interchangeable payment media** that customers could use according to their needs." *European Central Bank (2000)*

"The Bank **supplies base money on demand** at its prevailing interest rate, and broad money is created by the banking system" *Bank of England (1994)*

Simplified bank balance sheet

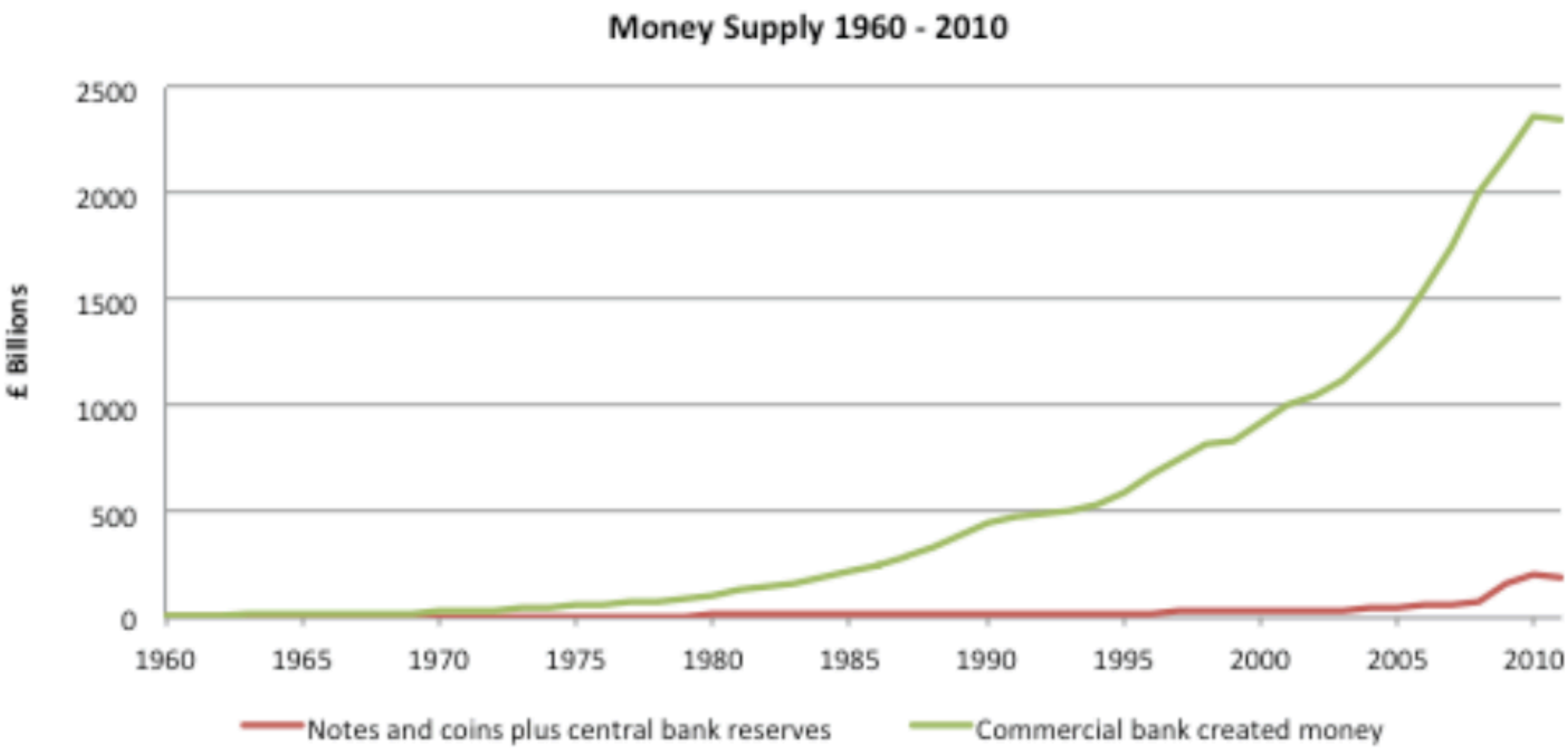
This is money created by the Bank of England
They lend it to the commercial banks in whatever quantities they need.

This is money created by commercial banks
How much they expand (or contract) depends primarily on confidence, as well as regulation.



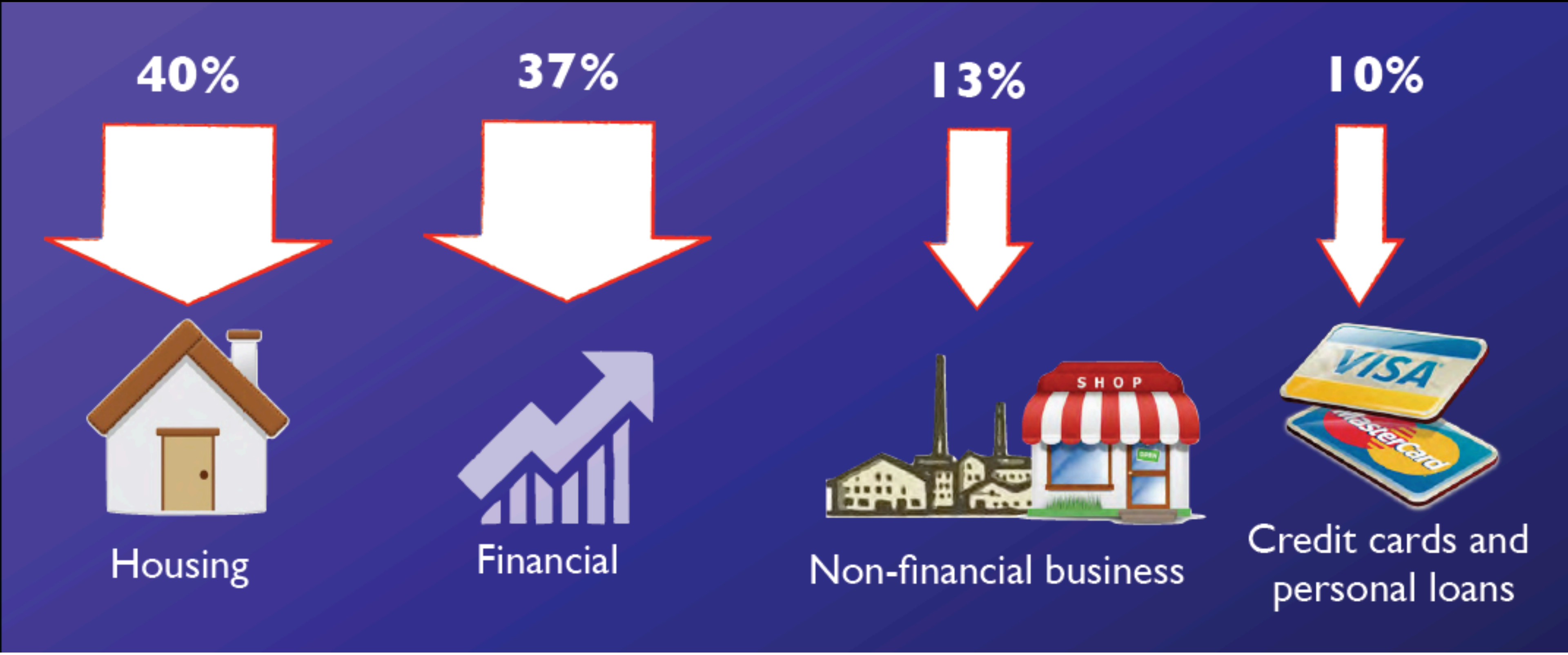
What have banks done with this privilege of money creation?

UK banks doubled the money supply in the space of eight years



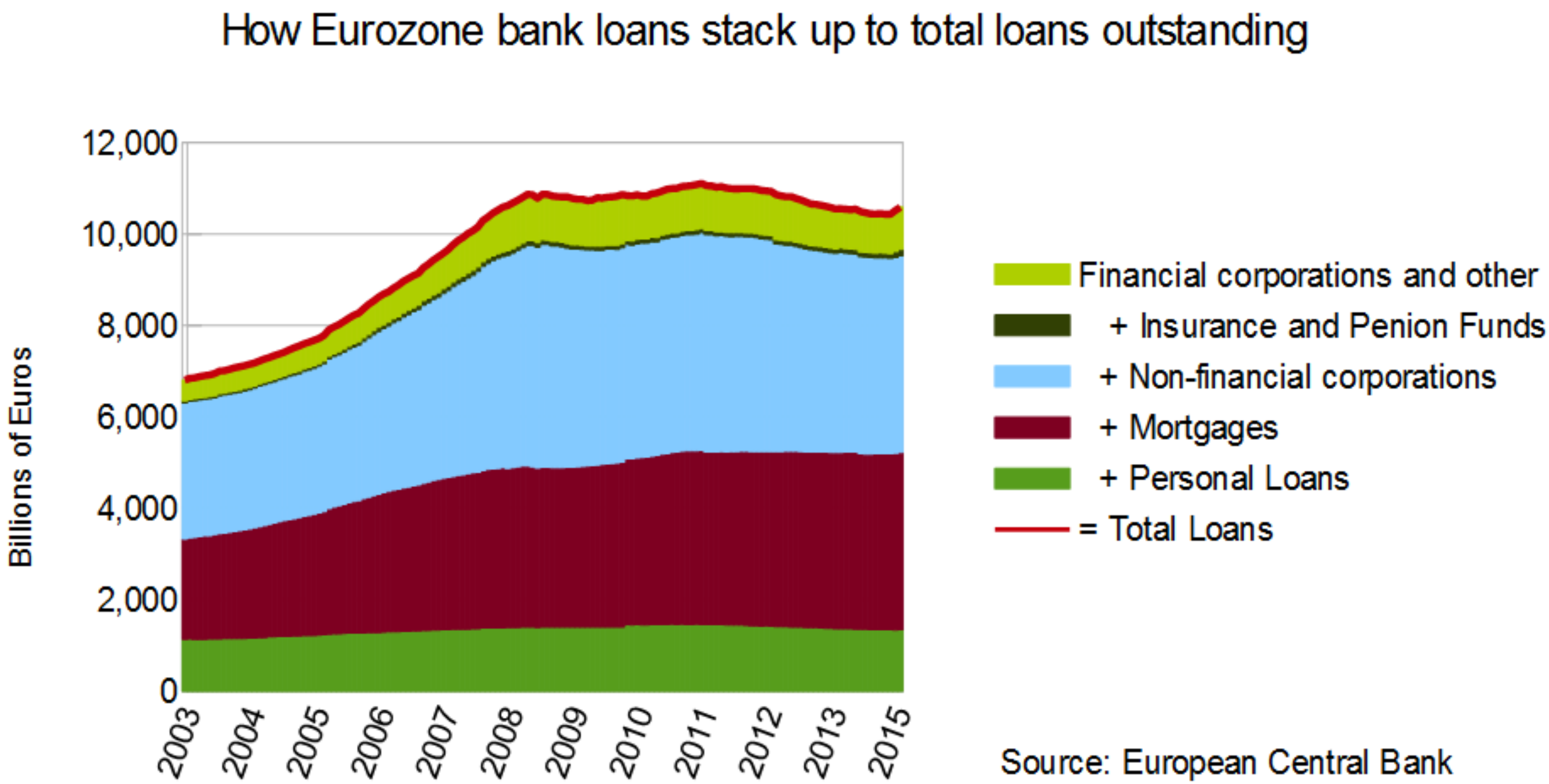
Source: Bank of England, Interactive Database, data series LPQAUYM (M4) LPQVQKT (notes and coins), YWMB43D (Central bank reserves).
(graphic taken from Positive Money)

What did they create all that money for?



Increase in bank lending UK 1997- 2007
(graphic from Positive Money)

European banks better at productive lending

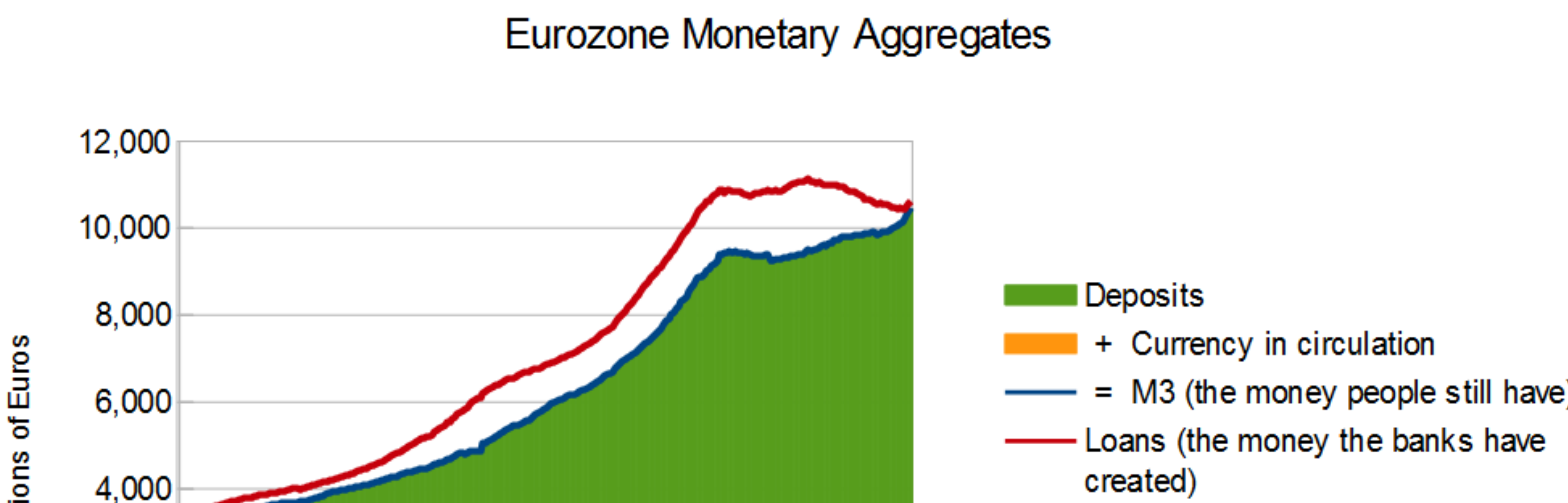


Source: European Central Bank
http://sdw.ecb.europa.eu/

DISCUSS: What do you think are the implications of this system?

1. Private profit-seeking organisations have a near-monopoly influence over the scale and allocation of new purchasing power.
2. Indebtedness is *required* to maintain money supply

Money and debt levels in Europe



The rest of the money has been paid to the banks or the governments

Source: European Central Bank
http://sdw.ecb.europa.eu/

DISCUSS: What do you think are the implications of this system?

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2. Indebtedness is *required* to maintain money supply
3. Money supply is elastic; Investment no longer constrained by savings

Investment no longer constrained by saving

"The invention of bank money – money that did not depend on existing economic activity, but *created* economic activity – meant that borrowers could end their dependency on those who were *already-rich*…. [T]o the astonishment and delight of many, money was no longer a scarce resources. *Once banks are able to create credit, investment is no longer constrained by saving"* (Pettifor, 2006:67).

The 'capitalist engine' cannot be understood at all without reference this distinctive monetary system (Schumpeter 1994 [1954]:318).

- Does increasing an increase in the money necessarily lead to an increase in economic activity?

Relationship between money and growth is complex and contested

The 'quantity equation' given by economic textbooks states that

$$MV = PY$$

- M is the quantity of money in circulation
- V is the velocity of circulation
- P is the price paid for each 'good'
- Y is the total quantity of goods

- Conventional view: 'the dominant influence ….of monetary changes is on prices, rather than output' (Friedman and Schwarz 1982: 623)
- Others argue that expansion and contraction of money supply can have a big effect on output.
- Growth of money supply is probably a necessary (though insufficient) condition for growth in output. It depends *for what purpose* money is created.

Consider five scenarios

What happens to output (Y), prices (P) and velocity (V) of money in each scenario?

1. A firm takes a loan to fund productive investment. They hire more staff and buy new equipment.
2. A household takes out a loan to fund consumption spending when money is tight. The firm that gets an unexpected sale as a result of this uses increased earnings to hire more workers, *and* invest in new equipment
3. Another household takes out a loan to fund consumption spending, but the firms who get an unexpected increase in sales as a result of this spending decides to simply to put prices up, instead of increasing output.
4. A financial institution takes out a loan to directly speculate on the price of financial assets.
5. A person working in real estate takes out a loan to buy three existing houses, to renovate, and then sell them on at a profit.

The elasticity of money is a source of dynamism but also fragility

BOOM

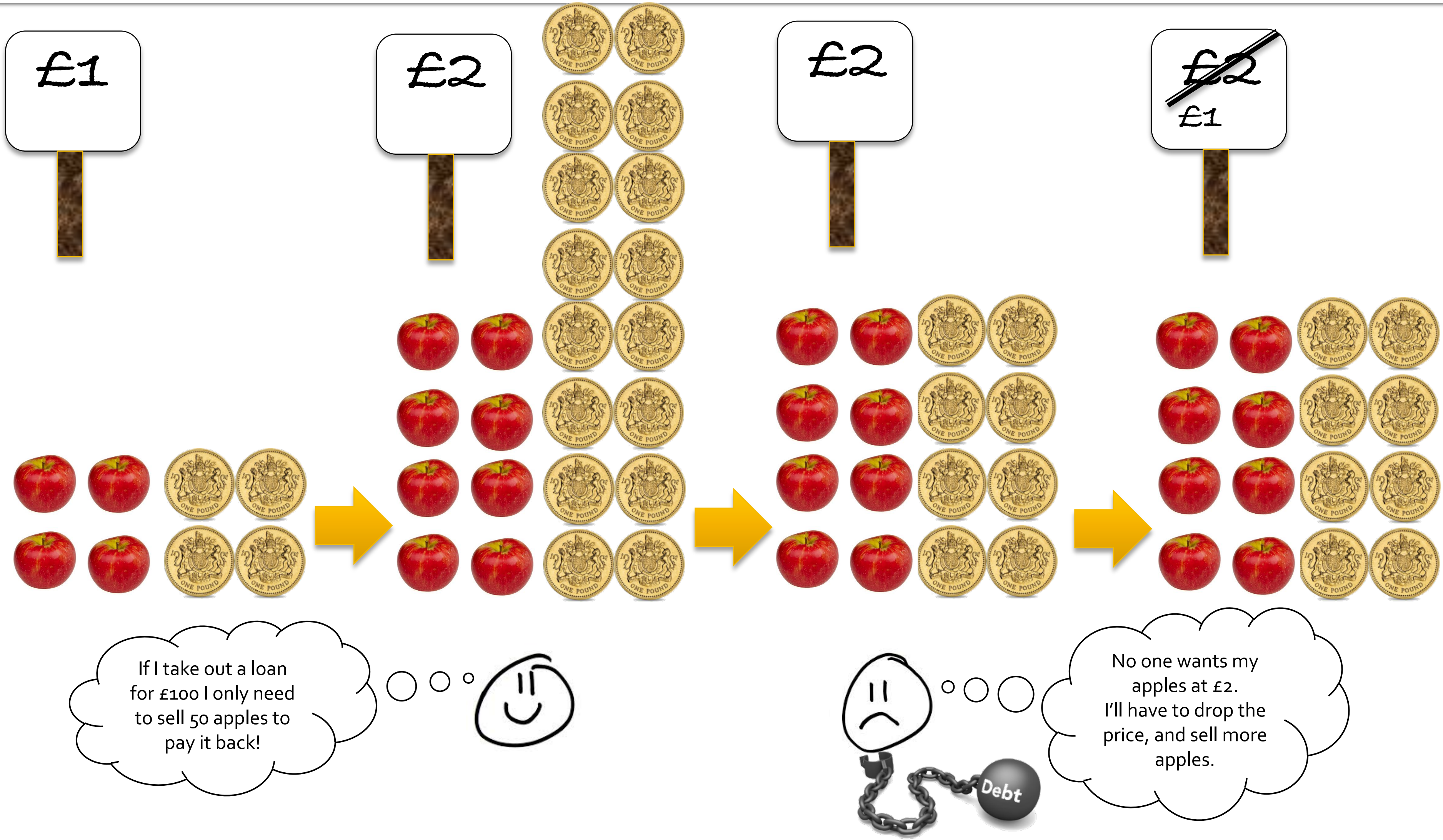
BUST

On the one hand, [the ready availability of credit-money] can have inflationary consequences – where debt-financed investment and consumer demand are driven beyond the productive capacity of the economy. On the other hand, debt inevitably entails the threat of default and the subsequent 'disappearance' of money in a process of debt deflation. (Ingham: 2008:66).

Deflation is painful

Deflation … involves a transference of wealth from the rest of the community to the rentier class and to all holders of titles to money; just as inflation involves the opposite. In particular it involves a transference from all borrowers, that is to say from traders, manufacturers, and farmers, to lenders, from the active to the inactive. But whilst the oppression of the taxpayer for the enrichment of the rentier is the chief lasting result, there is another, more violent, disturbance during the period of transition… Modern business, being carried on largely with borrowed money, must necessarily be brought to a stand still by such a process (Keynes, 1972:166).

Explaining debt deflation



Credit is an enabler but also an enslaver.

"Credit enables us to build up the present at the expense of the future. It's founded on the assumption that our future resources are bound to be far more abundant than our present resources. A host of new and wonderful opportunities open up if we can build things in the present using future income."

Yuval Noah Harari, 2011

"It is significant that the Sumerian word *amargi*, the first recorded word for "freedom" in any known human language, literally means "return to mother" – since this is what freed debt peons were finally allowed to do."

Graeber, 2011:65

Debt is a claim on future resources and labour

‘Debt peonage continues to be the main principle of recruiting labor globally: either in the literal sense, in much of East Asia or Latin America, or in the subjective sense, whereby most of those working for wages or even salaries feel that they are doing so primarily to pay off interest-bearing loans.’ (Graeber, 2011:368).

Are there alternatives to bank-created money?

YES! All money systems before 1694!

We tend to think of the monetary system as natural or inevitable.
But our monetary system **has "come about by agreement, therefore it is within our power to change it or render it useless"** if we so decide (Aristotle, 350BC, quoted in Graeber, 211:298).

People-Produced ("complementary currency")

- created by people by mutual agreement, eg strings of seashells, Swiss WIR , LETS and timebanks.

Government-Produced

- spent into circulation by state and collected as tax
- danger of 'sovereign abuse' and hyperinflation

Motivation for Degrowth advocacy of local currencies (Dittmer, 2013)

community building

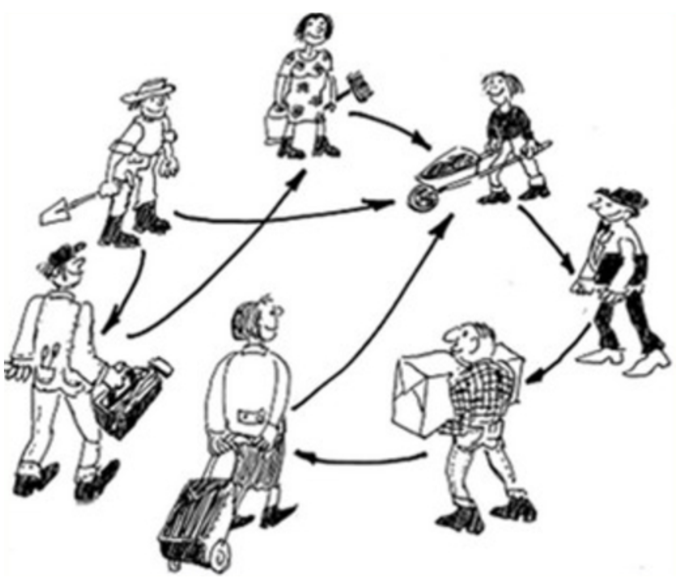
alternative values

alternative livelihoods

eco-localization

Local Exchange Trading Systems (LETS)

"There is no good reason for a community to be without money. **To be short of money when there's work to get done is like not having enough inches to build a house.** We have the materials, the tools, the space, the time, the skills and the intent to build … but we have no inches today? Why be short of inches? Why be short of money?" (Michael Linton, LETS creator)

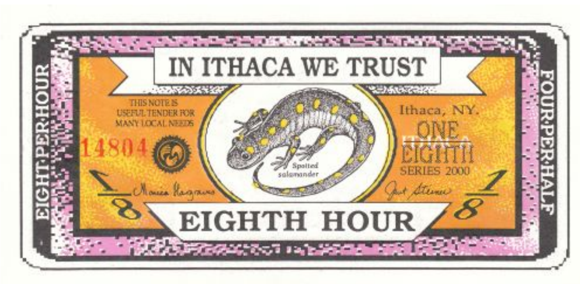


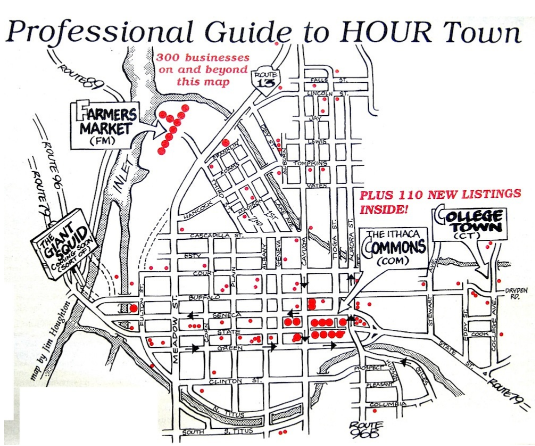
- Membership clubs using currency created at the moment of transaction as a credit for the seller of a good or a service, and a debit for the buyer.
- All participants start their accounts at zero, and can spend before they have earned any currency.
- Individual account balances are disclosed to deter abuse, and some apply debit limits, but no interest is charged on negative balances

Time banks (a.k.a. time dollars or service credits)

- formalizes the exchange of personal services by means of a time-denominated currency that assigns a uniform value to everyone's labour time
  - (i.e. one hour of time is worth one Time Credit/Dollar, regardless of the service provided in one hour or how much skill is required to perform the task during that hour).
- Different forms
  - Person to person
  - Person to Agency
  - Agency to Agency
- Associated with idea of 'co-production' which aims to make social welfare services more effective and humane through a participatory approach
- Time Banks have been established in 34 countries, with at least 300 Time Banks established in 40 US states and 300 throughout the United Kingdom

Non-convertible local currencies





- This is the most straightforward of local currencies – a printed piece of paper allowed to circulate freely in a locality with no backing from legal tender
- Best known example is Ithica HOURS, created in 1991, in context of recession.
  - (LETS scheme had failed a few years earlier, and the objective was to estbalish "a more fluid and inclusive medium of exchange".)
  - Although the currency was called 'hours', the exact rate of exchange for any given transaction was to be decided by the parties themselves
  - Support from a credit union, through which one of the initiators obtained a grant to work as a full-time developer
  - Centrally controlled issuance, high quality design
  - Businesses signed up to accept a limited number of HOURS in return for free advertising in the newspaper produced by Glover

Convertible local currencies

- Most recent type. Less of a radical break with the official monetary system, because the norm is for full backing with main currency
  - i.e. One Brixton pound costs one Pound Sterling, so issuance does not generate additional purchasing power, only subjects the existing stock to more spatial friction.
- Designed for businesses appeal. Principally aimed at localising economy.
- German *Chiemgauer* has c. 600 business members and an annual turnover of 6.2 million Euros in 2011 (Gelleri, 2012).
  - A demurrage charge is meant to deter hoarding and speed up the circulation (but does this drive additional consumption?)
- In Bristol UK, the local government has agreed to accept Bristol Pounds in payment of council taxes from businesses in the city (Brown and Kuchler, 2012)

Do local currencies succeed?

Dittmer (2012) is rather pessimistic

Criteria	LETS	Time banks	HOURS	CLCs
Inclusive community-building	Improve local social networks, but limited by low trading levels, dependence on pre-existing sense of community, and barriers to participation for the socially excluded.	Improve local social networks. Good at reaching the socially excluded.	Improve local social networks, but membership strongly biased towards highly educated, self-employed whites.	May have some limited community-building potential (research is lacking). Not socially inclusive, because as scarce as official money.
Alternative values	Flexible libertarian measure of value, often failing to resist mainstream values.	Unflexible egalitarian measure of value, therefore largely confined to unskilled personal services.	Claimed to encourage egalitarian valuation of labour time, but standard market prices are the norm.	Measure of value completely subordinated to official money.
Alternative livelihoods	Supports partial autonomy from formal employment under certain conditions: access to land for growing food, a part-time job, and a wider network of mutual aid.	Do not support autonomy from formal employment, since they only give access to a limited range of unskilled personal services.	Possibly supports primary occupations in the 'alternative' service sector (research is scarce), but straining providers of essential goods.	Less likely than more abundant local currencies to support alternative livelihoods, as a result of their scarcity.
Eco-localization	Moderately increases local self-reliance by facilitating informal resale, repair, and sharing of commercially produced goods. Inadequate to business.	Does not increase local self-reliance or localize supply chains, being confined to unskilled personal services, already local in nature.	Possibly facilitates local purchasing (research is scarce). Small scale means any localization effect so far is minimal.	Good at attracting local businesses. Ability to localize supply chains not sufficiently researched.

But complementary currencies can be crucial in times of crisis

- “This is not to belittle the usefulness of non-convertible paper currencies for coping with situations where the formal economy and the state withdraws from covering the consumption needs of the population. Coping with chaotic, involuntary degrowth, as non-convertible barter currencies helped millions of Argentineans do in 2001-02, is nevertheless different from advancing the project of voluntary degrowth…” (Dittmer, 2012)

The Miracle of Wörgl, Austria 1932

Michael Unterguggenberger

- PROBLEM
  - Great Depression, 1500 local unemployed
- SOLUTION
  - issued a demurrage currency known as labour certificates ‘backed’ by 40,000 shillings public funds
  - Undertook an impressive series of public works paid in labour certificates (re-paved streets, new water system, new bridge, new houses, a ski jump)
- RESULT
  - The demurrage charge encouraged circulation: “every one of the schillings in stamp scrip created between 12 and 14 times more employment than the normal schillings circulating in parallel” (Bernard Lietaer)
  - earned an international reputation as the ‘miracle of Wörgl’
  - 200 towns ready to copy
  - 1933: outlawed by the central bank

See Leitaer (2001) The Future of Money

Full Reserve Banking

- Two basic types of private bank
  - deposit banks (limited to providing payment system and safe-keeping)
  - lending banks (pure intermediaries between savers and borrowers)
- New money is spent into the The central bank would conduct monetary policy through quantity control of the money stock, not through interest rates

REVISION!

BOOM

Private banks have a near monopoly on the creation and allocate of new purchasing power in the economy.

A serious problem arises if inflation is so high that banks can't maintain a positive real interest rate within causing widespread defaults.

But this is difficult job: "the function of the federal reserve is to take away the punch bowl just as the party is getting good." (former-Federal Reserve Chairman William Martin)

BUST

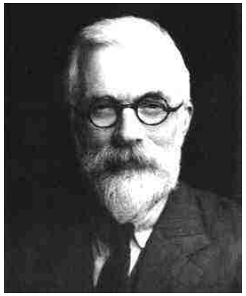
When money is created for productive purposes, output tends to increase. When money is created for unproductive purposes (i.e. to buy exiting assets) prices tend to increase (See Werner, 2005)

The job of Central Banks is supposedly to raise interest rates to discourage borrowing when if inflation is too high.

Hence, widespread contagious defaults are 'normal functioning events' in a debt-financed capitalist system (Minksy 1982:37)

Where does the idea come from?

- Frederick **Soddy** – chemistry nobel laureate
  - Aimed to set out a system in line with physical principles which he believed to underlie wealth
- Frank Knight picked up the idea and wrote a memo outlining the scheme to Roosevelt signed by Henry Simons and others colleagues **at University of Chicago:**
  - presented as a **free-market alternative to the danger of bank nationalization.** "…most of us suspect that measures at least as drastic as those described in our statement can hardly be avoided, except temporarily, in any event." (Knight (1933)



- Irving **Fisher** became most conspicuous advocate, and outlined four main advantages (Fisher, 1936):
  - better control of increases and contractions of bank credit
  - eliminate bank runs; protect payment system from risk of bad lending
  - dramatic reduction of (net) government debt
  - Potential for dramatic reduction of private debts

The idea is enjoying a resurgence!

- See IMF Working Paper: Benes and Kumhof (2012) . The Chicago Plan Revisited

Green arguments for full reserve banking: # 1

This system "would restrict borrowing for new investment to existing savings, greatly reducing speculative growth ventures", so that "the classical balance between abstinence and investment" would be re-established (Daly 2013; see also Daly 1999: 154).

Green arguments for full reserve banking: # 1 (unpicked)

- Dittmer (2015) argues that this would cause higher/more volatile interest rates -> high discount rate; perverse allocation effects; Regressive distributional effect.
  - But this assumes that demand for credit remains high, which may not be the case if other measures also implemented (such as financial transaction tax, CO_2 caps, measures to bring house prices down, etc).
  - Also, perhaps the state ensure credit for investment in "social goods" at low interest through state banks?

Green arguments for full reserve banking: # 2

Reduce the dominance of profit maximization over other criteria for allocating the productive resources of society (Farley et al. 2013; Mellor 2010a; 2010b; Robertson 2012).

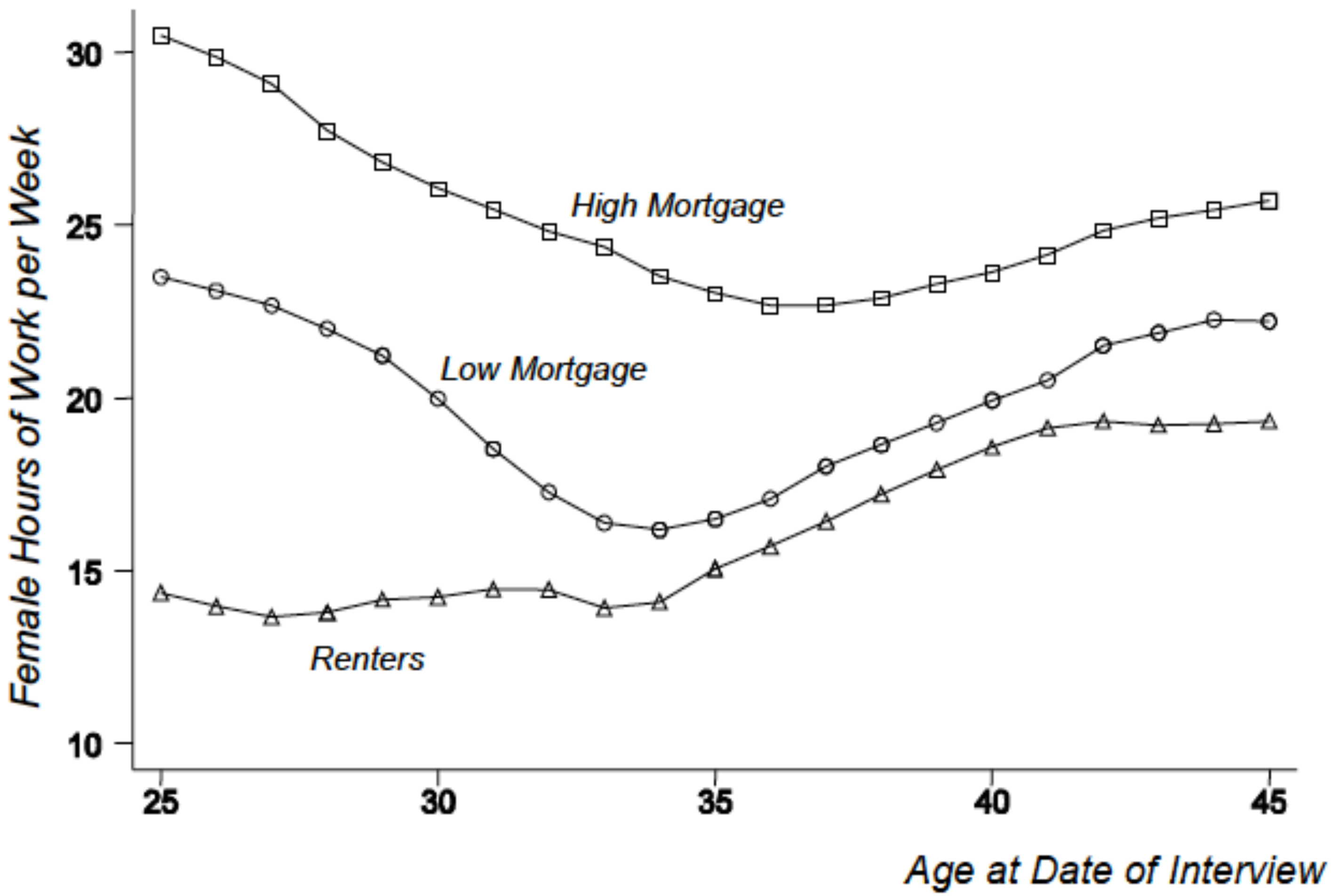
- allow the government to issue more money without causing inflation
  - assumption that a savings-constrained banking sector would lend less than today, freeing up existing productive resources – such as labour-power and natural resources – to be claimed by public spending. (Dittmer, 2015)
- steer commercial bank lending in certain directions
  - Practical and political problems, in particular the specification of eligibility criteria for borrowers (Dittmer, 2015)
- NB Monetary reform is not necessarily required to do either of these things (see Campiglio, 2014; Strategic QE reports from NEF and The Green New Deal) but might make it easier for state to hold onto the reigns.

Green arguments for full reserve banking: # 3

Debt creates growth imperative. Monetary reform would lower debt levels.

- Some versions of argument emphasize the effect of compound interest on behaviour: 'Highly indebted protagonists get trapped into hurried, short-term growth paths' (Leitear et al, 2012: 203).
- Evidence to support this idea is mixed at firm and country level. (ask me for references)
- In UK 80% of firm investment comes from savings. Pressure for firms and countries to grow exists independently of debt levels. See e.g. Gordon and Rosenthal (2003).
- But clear that indebtedness stands in the way of working hour reduction

Female Hours of Work by Housing and Mortgage Status *(Bottazzi et al, 2007)*



And of course it's not just mortgages…

Green arguments for full reserve banking: # 3 (continued)

Other versions of this argument emphasize that if we are paying interest on our entire money supply, then the money supply must expand in order for interest to be paid.

- See e.g. Hixson (1991: 188) Douthwaite (1999b:28) and Brown (2008:31). NB Similarilty with 'profit puzzle' – see Tomasson and Bezemer (2010: 3).

But this argument is based on a confusion of stocks & flows!

- Both Keen (2010) and Andreson (2006) have developed mathematical models to demonstrate that – at least in theory - it is possible to sustain a *steady* amount of economic activity, *and* pay interest on the entire money supply.
- *But* their models assume that interest flows are re-circulated into the economy in a way that does not increase inequality. E.g. that bank profits are not used for further accumulation; that credit allocation decisions do not cause asset bubbles etc..

So perhaps the real problem is the contribution of the monetary system to *inequality*?

- NB Interest and debt could still build up after monetary reform

Recommended reading

How the current system works, and implications for financial instability

- Ryan-Collins, J. et al., (2011). *Where does money come from?* New Economics Foundation. See: http://www.neweconomics.org/publications/entry/where-does-money-come-from
- Read 'Chapter 1: Introduction' and 'Chapter 2: The Chicago Plan in the History of Monetary Thought', in Benes and Kumhof (2012*) The Chicago Plan Revisited*, IMF Working Paper WP/12/202

The "green" case for monetary reform

- Douthewaite, R. (1999b). *The Ecology of Money*. Green Books. Read online: http://www.feasta.org/documents/moneyecology/contents.htm
- Douthwaite, R., 2012. Degrowth and the supply of money in an energy-scarce world*. Ecological Economics* 84, 187–193
- Mary Mellor (2010) Could the money system be the basis of a sufficiency economy? *real- world economic review* 54 www.paecon-net/PAEReview/issue54/Mellor54.pdf
- Lietaer, B., Arnsperger, C., Goerner, S., and Brunnhuber, S. (2012). *Money and Sustainability: the missing link*. Triarchy Press. Read online: http://www.money-sustainability.net/read-the-book/
- Farley, J.; Burke, M.; Flomenhoft, G.; Kelly, B.; Murray, D.F.; Posner, S.; Putnam, M.; Scanlan, A.; Witham, A. (2013) Monetary and fiscal policies for a finite planet. *Sustainability,* 5, 2802- 2826.
- Scott Cato, M. and Suárez, M. (2012). STROUD POUND: A LOCAL CURRENCY TO MAP, MEASURE AND STRENGTHEN THE LOCAL ECONOMY. *International Journal of Community Currency Research*. Volume 16 (2012) Section D 106-115

Critical responses

- Dittmer, K. (2015), "100 percent reserve banking: A critical review of green perspectives", *Ecological Economics*, Volume 109, January 2015, Pages 9–16
- Dittmer, K. (2013). Local currencies for purposive degrowth? A quality check of some proposals for changing money-as-usual. *Journal of Cleaner Production*, Volume 54, 1 September 2013, Pages 3–13

Alternative proposals that stop short of monetary reform:

- See argument for **Strategic QE** report from NEF: http://www.neweconomics.org/publications/entry/strategic-quantitative-easing
- For monetary tools to guide finance in direction of green investment: Campiglio, E. (2014). Beyond Carbon Pricing: The role of banking and monetary policy in financing the transition to a low-carbon economy. Centre for Climate Change Economics and Policy Working Paper No. 181.
- Also see argument for **credit guidance** in Werner, Richard A. (2005). New Paradigm in Macroeconomics: Solving the Puzzle of Japanese Macroeconomic Performance, Basingstoke: Palgrave Macmillan

History of money creation:

- Ingham, G., (2004). *The Nature of Money.* Polity Press.
- Felix Martin Money: the unauthorised Biography