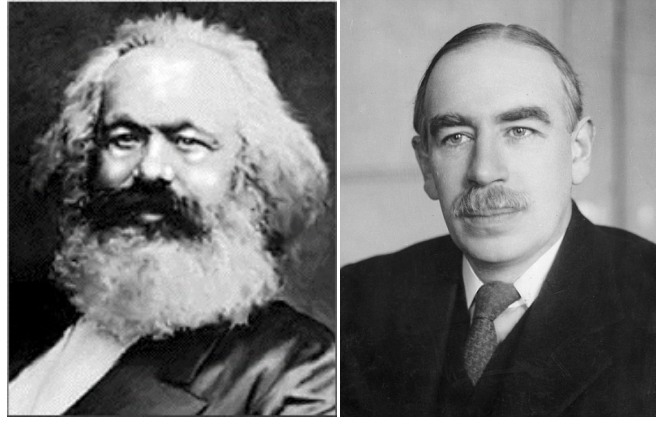


# Between Marx and Keynes



1

- I am going to focus on two economists that interest me: Marx and Keynes. The main reason is that both are relevant in the wake of the 2008 financial crisis
- NEW SLIDE Marx is obviously relevant as the great critic of capitalism.



2

- \* Marx devoted his life to trying to discovering how capitalism works, and exposing its weaknesses.
- I assume that the turnout here testifies his relevance now to the current economic crisis.
- Marx has also been described as the forerunner of Macroeconomics: the study of the economy as a whole; capitalism in its totality.
- NEXT SLIDE. The financial crisis has also seen a return from the dead of Keynes.

'The Ghost of John Maynard Keynes, the father of macroeconomics, has come back to haunt us' (Martin Wolf, FT, 2008)



3

- Keynes has also made something of a comeback. The Chicago economist Robert Lucas said in 1980: 'At research seminars people don't take Keynesian theorising seriously anymore; the audience starts to whisper and giggle to one another' (Krugman 2009), Well they are not giggling now.
- Even the Royal Economic Society, the bastion of orthodox economics, is funding PhD students in macroeconomics: a field which Keynes invented in the 1930s.
- For Martin Wolff of the Financial Times, the ghost of Keynes has come back to haunt us.
- NEXT SLIDE: Keynes has been invoked, alongside Marx, in arguments against the austerity that governments have imposed since 2008.



4

There are of course major differences in approach. Marx was a founder member of the international labour movement. He believed that social progress came through the collected strength of the working class.

- On the other hand, Keynes was an elite liberal. He thought that the problems of capitalism could be solved through policy: through the rational decisions of an enlightened elite. It is as if the size of Keynes's brain would alone be enough to solve the world's problems.
- But aside from these differences, and all the passion that this might entail, I am going to focus on their theories. What they saw as the key aspects of how capitalism works.
- I will start with Marx, not just because he pre-dates Keynes. He died in 1888, the year Keynes was born. But I think Marx's approach is more foundational. It provides an appropriate starting point for comparing Marx and Keynes.
- NEXT SLIDEk. I start by looking at Marx's method.

**'The economists of the seventeenth century, e.g., always begin with the living whole, with population, nation, state, several states, etc.; but they always conclude by discovering through analysis a small number of determinant, abstract, general relations such as division of labour, money, value, etc.'**

(Marx, *Grundrisse*, 1973, p. 100)

**'Levels of analysis approach step by step the form in which they appear on the surface of society'**

(Marx, *Capital*, volume 3, 1981, p. 117)

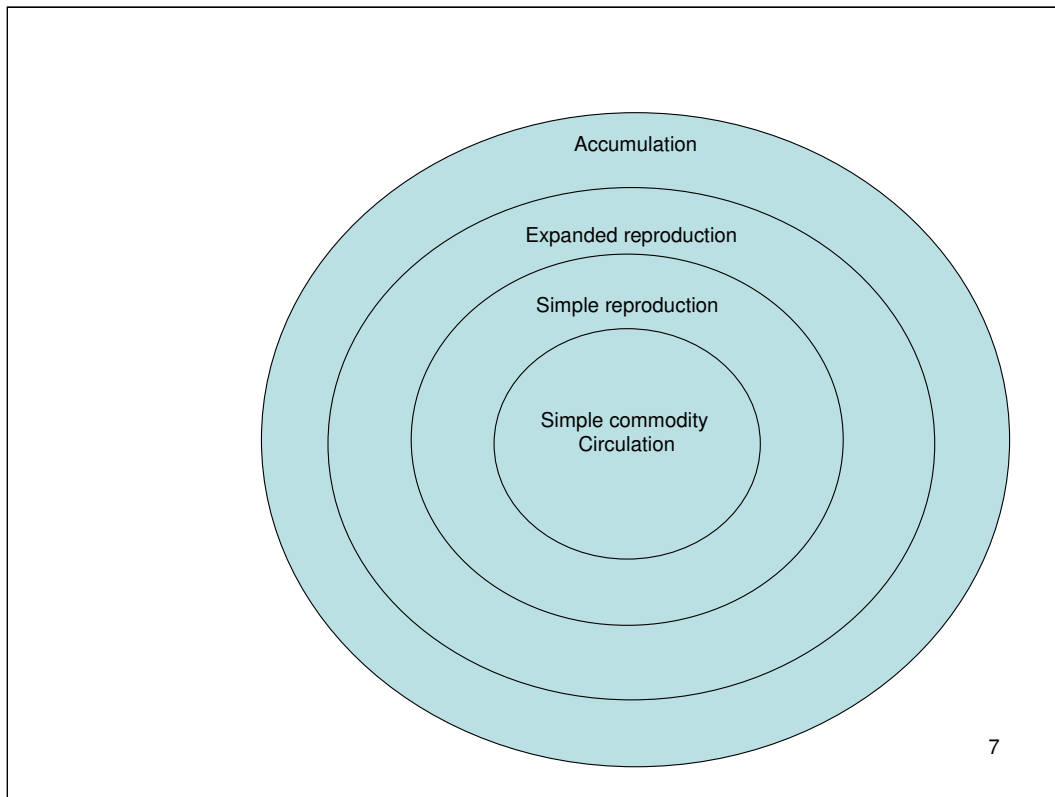
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- Marx employ a method of successive approximations, in which they focus in abstraction on the most important empirical features of capitalism, before moving towards concrete reality.
- I am particularly interested in the three things mentioned here: division of labour, money and value. (1<sup>st</sup> quote)
- Levels of analysis develop step by step in Marx's approach (2<sup>nd</sup> quote).
- NEW SLIDE This approach is a bit like peeling off onion skins.



6

- Bertell Ollman points out that abstraction, in the Latin *abstrahere*, means to 'pull from': to pull out separate layers of analysis in order to make sense of them. Hence the idea of pulling off skin of the onion.
- NEXT SLIDE shows a number of steps in Marx's analysis.



- Ask audience if they can define each. Note that simple commodity circulation is also known as simple commodity production.
- NEXT SLIDE This provides context for the most abstract starting point: simple commodity circulation:

# Simple commodity circulation

- **Social division of labour (independent commodity producers)**

In Ypres, Flanders, 1431: '704 people working at 161 different trades... only 17 hired journeymen'

(Ernest Mandel, 1968, *Marxist Economic Theory*, p.110, 1968)

Proto Industrialisation: rural cottage industries (Kriedte 1981, *Industrialization Before Industrialization*)

- **Pure labour theory of value**

**Prices = values**

8

- The first aspect of simple commodity circulation is that Marx assumes a **social division of labour**. Individual producers specialise in the production of particular commodities. And they trade their surpluses with each other.

- This is an abstract logical category, but traces of it can be found in history. The great Marxist historian Mandel identifies it in Flanders in 1431. Producers are basically working for themselves.

- The literature on proto industrialisation (early industrialisation) places importance on early cottage producers. Merchants would put out work to cottage producers, and even pay them an hourly rate for work.

- The second aspect of simple commodity circulation is that there is assumed to be a pure labour theory of value.

- NEXT SLIDE Consider a simple example where deer is exchanged for fur.



# Value Theory

- Two hunters meet in the forest, and exchange goods – say fur for deer.
- What determines the rate of exchange?

9

- A key problem for economics is to establish the value of commodities.
- What would determine the rate of exchange of fur for deer, for example.

Classical solution (Adam Smith, Ricardo):

- If deer requires 2 units of labour, and fur 1 unit of labour:  
exchange ratio = 1 deer for 2 units of fur.
- This is the labour theory of value – prices are determined by the amount of labour required for production.

Neoclassical solution (Jevons):

- \* Exchange ratio depends on how much marginal utility the hunters gain from deer and fur.

10

- In this example deer more difficult to produce than fur, so it has a higher price. The price is determined by the cost of production.
- In the neoclassical system, the price is determined by utility – by demand.
- Under simple commodity circulation, Marx assumes adopts the classical solution, where prices exchange at values.
- NEXT SLIDE. Two further aspects of simple commodity circulation are the functions of money.

# Simple commodity circulation

- **Money as unit of account**

All transactions are measured in money units. Good X has a money price that allows it to be compared with good Y. Price is the money form of value.

- **Money as medium of circulation**

**C-M-C**

**(Commodity transactions are mediated by money)**

11

- First, money is a unit of account. It allows us to measure value in money units.
- Second, money mediates circulation. Commodities are exchanged between producers for money.
- Note that these exchanges are for equivalent amounts of money, and equivalent amounts of value. This is why its so important at this simple level to assume prices are equal to values. We don't want a situation in which there are merchants buying cheap and selling dear. We want to look at exchange in its most simple form.
- Of course built into this is a contradiction, that the merchant will intervene. Say to save the producer travelling to market.
- So under simple commodity circulation the abstractions are (a) money (b) commodities; (c) social division of labour
- Note that there are no social classes. Only equal exchange between producers. But in stage 1 there are no factories, no vast conspicuous consumption of the rich.. No state. No investment; it is a consumption only economy. All of this is abstracted from.
- But key even at this level of abstraction there the seeds are sown for economic crisis.
- I now turn to Marx's 1<sup>st</sup> most abstract form of crisis (ONE OF MARX'S EXAMPLES shown in NEXT SLIDE)

**Table 1      Simple Commodity Circuit**

Seller \ Buyer	Weaver	Farmer	Bookbinder
Weaver		20 yds linen	
Farmer			1 qt wheat
Bookbinder	1 bible		

12

- Table 1 shows a simple commodity circuit employed at the start (Chapter 2) of *Capital*, Volume 1. Though simple, there is a social division of labour between independent producers, each consuming each other's use values.
- The weaver sells 20 yards of linen to the farmer; the farmer 1 quarter of wheat to the bookbinder – Marx refers to him disparagingly as the bible basher. (He has him drinking gin later on in the story). And to close the circuits in Marx's example the bookbinder buys a quarter of wheat from the farmer.
- But this is not a system of barter; Marx introduces the circuit of money (NEXT SLIDE)

**Table 2      Simple Circulation of Money (£ units)**

Seller \ Buyer	Weaver	Farmer	Bookbinder	Total Sales
Weaver		2		2
Farmer			2	2
Bookbinder	2			2
Total Purchases	2	2	2	6

13

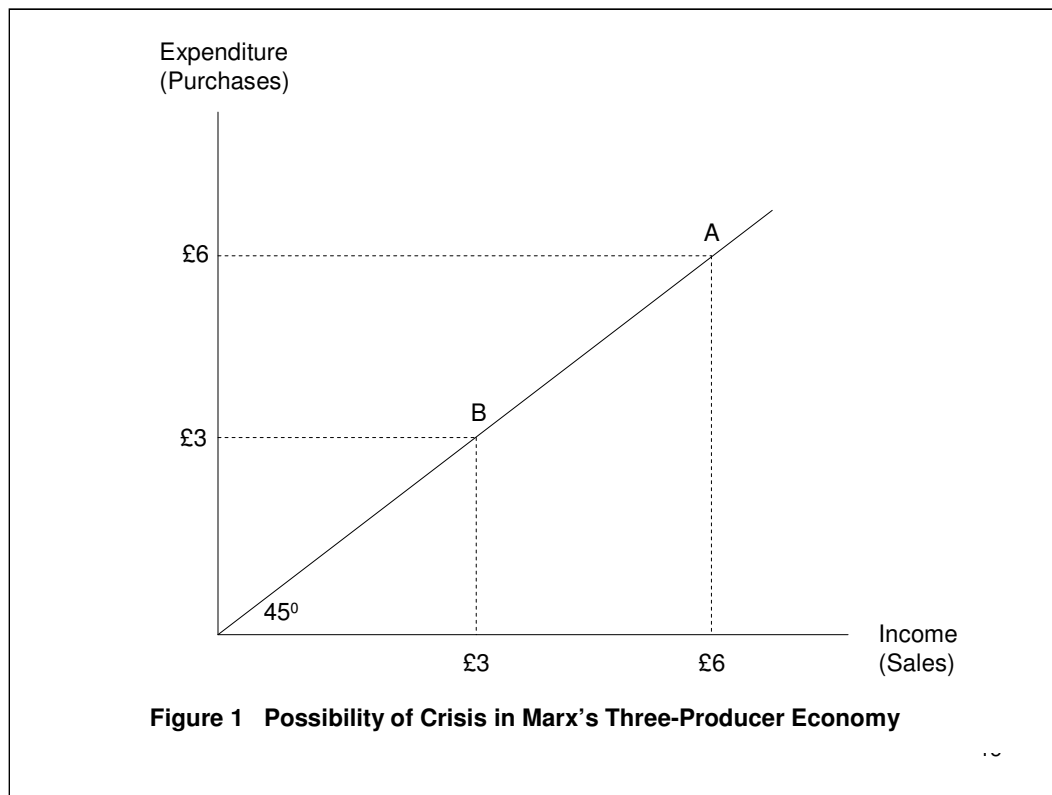
- Each producer sells his produce in exchange for £2: a flow of 2 gold coins in the opposite direction. Commodities exchange for money C-M-C
- Note also that each sale is also a purchase. C for M (The Weaver exchanging linen for the farmer's money) is simultaneously M for C (The farmer exchanges money for linen).
- As a result, total sales are identical to total purchases – Marx refers to this as a 'flat tautology': 'the number of sales accomplished is equal to the number of purchases'.
- Now Marx says that this could be interpreted as Say's Law: the law named after the classical economist Jean Baptiste Say. Under this law sales must be matched by purchases. 'every seller brings his own buyer to the market with him'. The weaver, for example, will only sell in order to buy.
- This can be summarised as 'supply creates its own demand'. But for Marx money plays a key role here; the circuit can be interrupted (NEXT SLIDE).

**Table 3      Interruption in the Circulation of Money (£ units)**

Seller \ Buyer	Weaver	Farmer	Bookbinder	Total Sales
Weaver		1		1
Farmer			1	1
Bookbinder	1			1
Total Purchases	1	1	1	3

14

- For Marx, 'no one directly needs to purchase just because he has just sold'. A sale can be made, without leading to a purchase.
- Let the weaver decide to advance only 1 gold coin to the bookbinder, with the other coin withdrawn from circulation.
- He now buys only half a bible – lets say only purchasing the Old Testament volume.
- This shortfall in demand can then have knock on effects, the bookbinder buying less from the farmer, and the farmer buying less from the weaver.
- There is the possibility of a general glut; a general crisis. This possibility of crisis is intrinsic to commodity exchange. Say's Law does not hold.
- NEXT SLIDE Now my next step is to represent Marx's example using a simple diagram.



- The identity between expenditures and purchases are represented in a simple diagram: known as the 45 degree diagram.
- We can see the initial starting point, with £6 worth of total purchases and sales. (refer back to original table)
- And then the new position, after the interruption, with £3 total sales. (second table).
- This shows just the abstract possibility of crisis; Crisis is associated here with withdrawal of money from circulation and a glut of produced commodities. Unemployment of labour would also be associated
- For Marx there is 'compelling motivating factor'..But since simple commodity circulation forms the basis for capitalism, any concrete crisis has to build on this abstract possibility.
- This interpretation is inspired by the work of Luigi Pasinetti (NEXT SLIDE)

# Luigi Pasinetti



16

- Pasinetti has been described as the senior living heir to the Cambridge school of economics. An Italian economist who has sort to unify heterodox economic theory, along classical and Keynesian lines.
- In the great dispute (capital controversies) between the two Cambridges, Sraffa and Kaldor both agreed that they didn't have sufficient maths to reply to Samuelson. They chose Pasinetti to be their attack dog. He forced Samuelson to concede.
- I have been up to Cambridge to seem him speak a couple of times, and there was nobody from the Economics Department there. They have no idea what they have under their very nose.
- NEXT slide: two main references that are relevant here, and have inspired my interpretation:



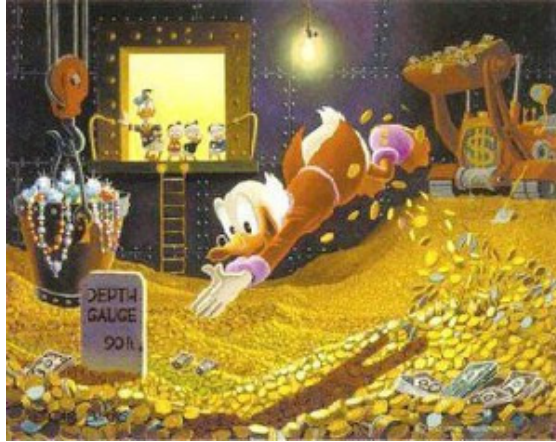
Pasinetti, L. (1993) *Structural Economic Dynamics*, Cambridge University Press.

Pasinetti, L. (1997) 'The principle of effective demand' in G. Harcourt and P. Riach (eds.) *Second Edition of the General Theory*. Routledge.

Sessions on 'Pasinetti Economics': ASSOCIATION FOR HETERODOX ECONOMICS  
15th ANNUAL CONFERENCE, London Metropolitan University, July 4-6, 2013

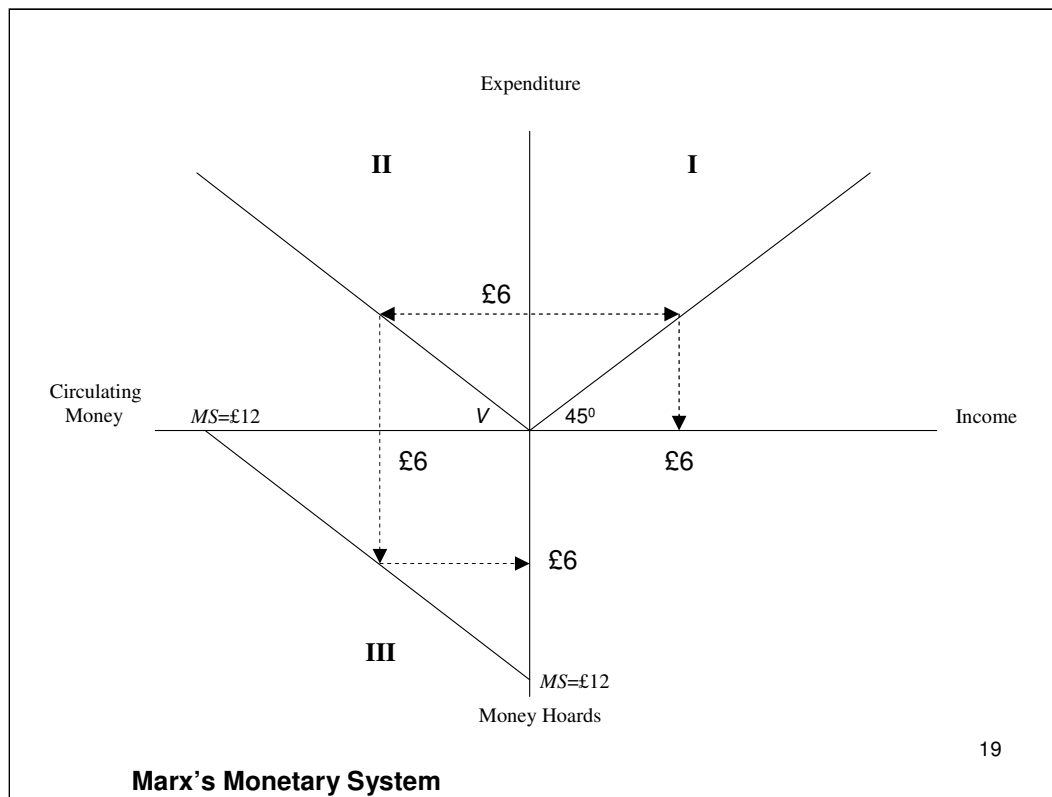
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- In the first, Pasinetti has a model which I have argued resembles simple commodity circulation. He has a pure labour theory of value, social division of labour etc. For those of you interested in development, Pasinetti uses this model to explore how there can be uneven growth between countries.
- The second reference is where Pasinetti suggests using the 45 degree diagram as a foundational starting point.
- And here is an advert for some sessions I am organising on 'Pasinetti Economics' at this year's Association for Heterodox Economics. July 4<sup>th</sup> this year at London Metropolitan University, down the road from here.
- NEXT SLIDE. To develop this approach further, as a model of Marx, we consider an additional function of money



18

- We can consider money as a store of value.
- Marx referred to this as money hoards. These have existed long before capitalism. The Staffordshire hoard of gold, recently discovered. The Hoxne hoard in Sussex. You can see evidence of these in the British Museum's new coin room, which has just re-opened.
- But what is remarkable is that people will hold money, in this case gold, to store value. Gold is held as something that can be used some time in the future to purchase commodities.
- NEXT SLIDE. The two roles of money as medium of circulation, and hoard are shown in a more developed diagram.



19

- We add two axes: the first for circulation money: the second for money hoards.
- We assume that there is a total of £12 in the money hoard, for our example.
- And as before you can see that our three agents (the weaver, farmer and biblebasher) are sending £6.
- They use £6 in circulation.
- Now we need a velocity of circulation: the amount of times a coin circulates. In this example the velocity of circulation is 1. Each coin circulates once.
- Now the residual, the amount left for hoarding, is £6.
- This is all under simple circulation: quite a sophisticated model of money.
- NEXT SLIDE We can model Marx's 1<sup>st</sup> abstract possiblitiy theory of crisis.





(Financial Times, March 19, 2013)

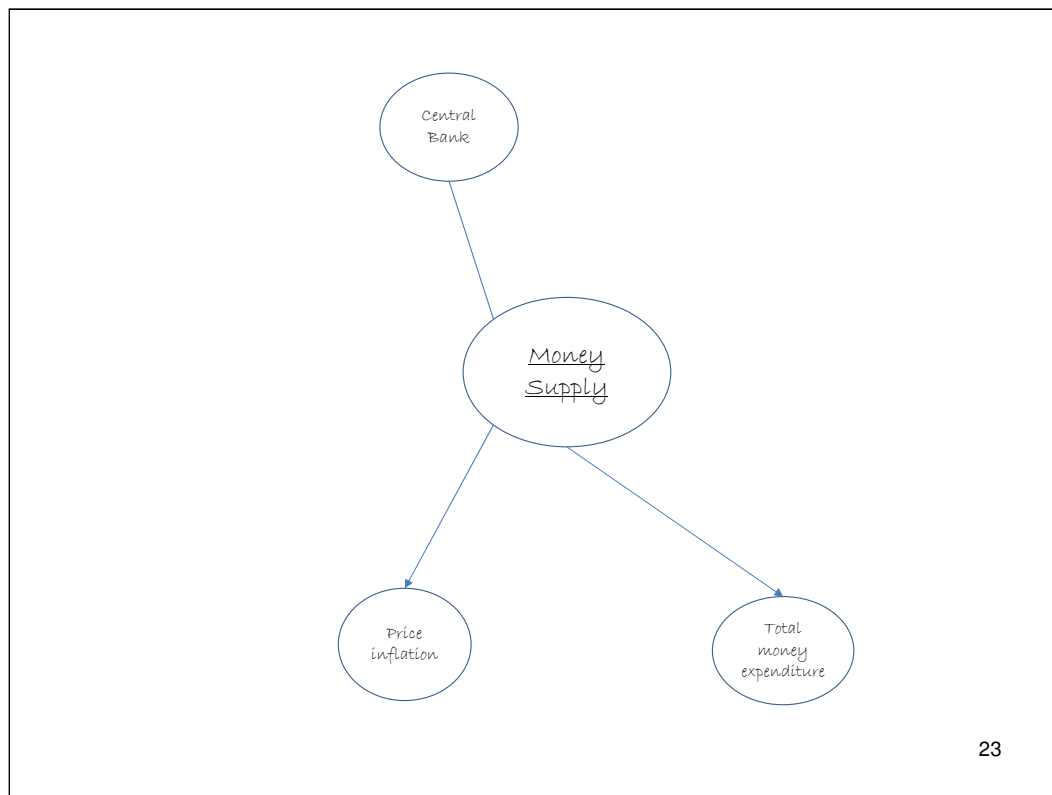
21

- Money as a store of value has a key role in the current financial crisis. We know that corporations are stock piling chash.
- This article from last week's Financial Times, shows how this has increased to record levels in recent years to over ONE trilliion dollars.
- A lot of which is held in tax havens, incidentally.
- NEXT SLIDE The situation might be summed up in another cartoon

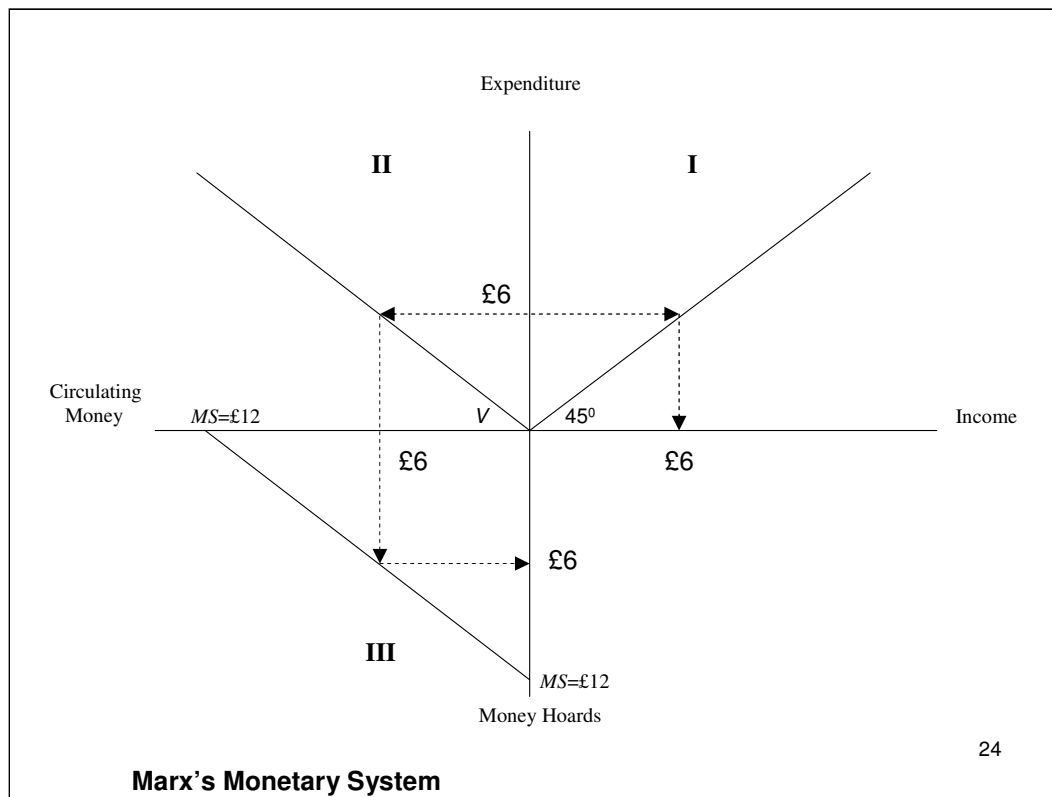


22

- This cartoon is a parody of the supply side position
- NEXT SLIDE Another supply side theory is the QUANTITY THEORY OF MONEY,

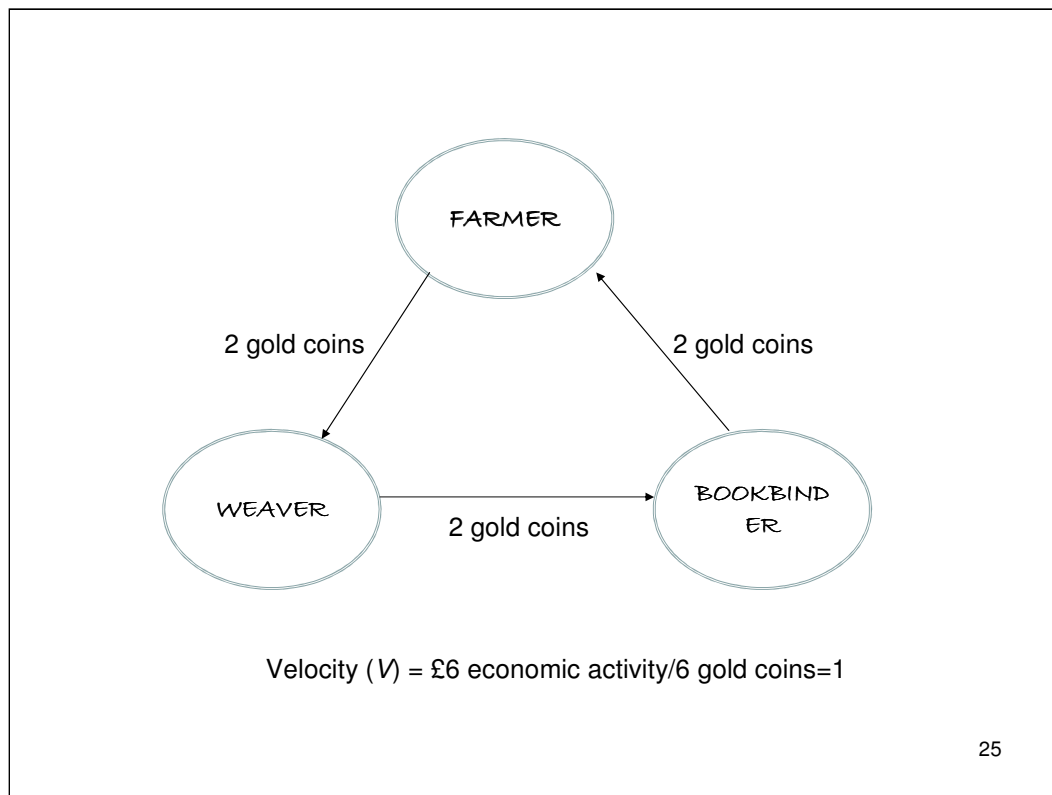


- The idea is that the money supply is set, in modern days by the central bank.
- In Marx's day it was just the availability of coins. So there was an increase in the amount of silver from the colonisation of Mexico in the early 1800s, which Marx wrote about.
- Under quantity theory, both money expenditure and price inflation depend on the money supply.
- Milton Friedman argues that the Great Depression was caused by insufficient money supply.
- Ben Bernanke, chairman of the Federal Reserve, is sympathetic of Friedman's interpretation.
- This may lie behind the current experiment with quantitative easing. Where electronic money is printed to address the current financial crisis.
- NEXT SLIDE. Marx criticised quantity theory.



- We can see that the money supply does not drive expenditure.
- Money and its use is endogenous. Since money can be hoarded, adding to the hoard will not stimulate expenditure.
- Marx criticises both Say's Law and the quantity theory of money.
- NEXT SLIDE We turn to Marx's 2<sup>nd</sup> abstract theory of crisis.

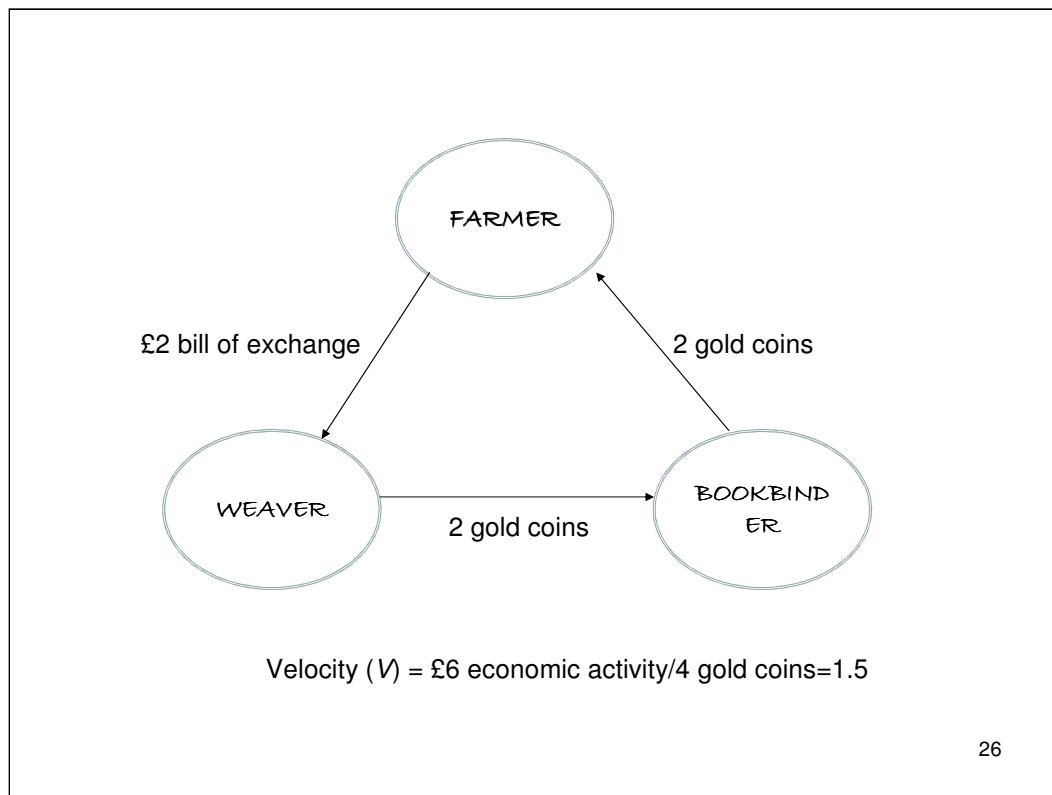




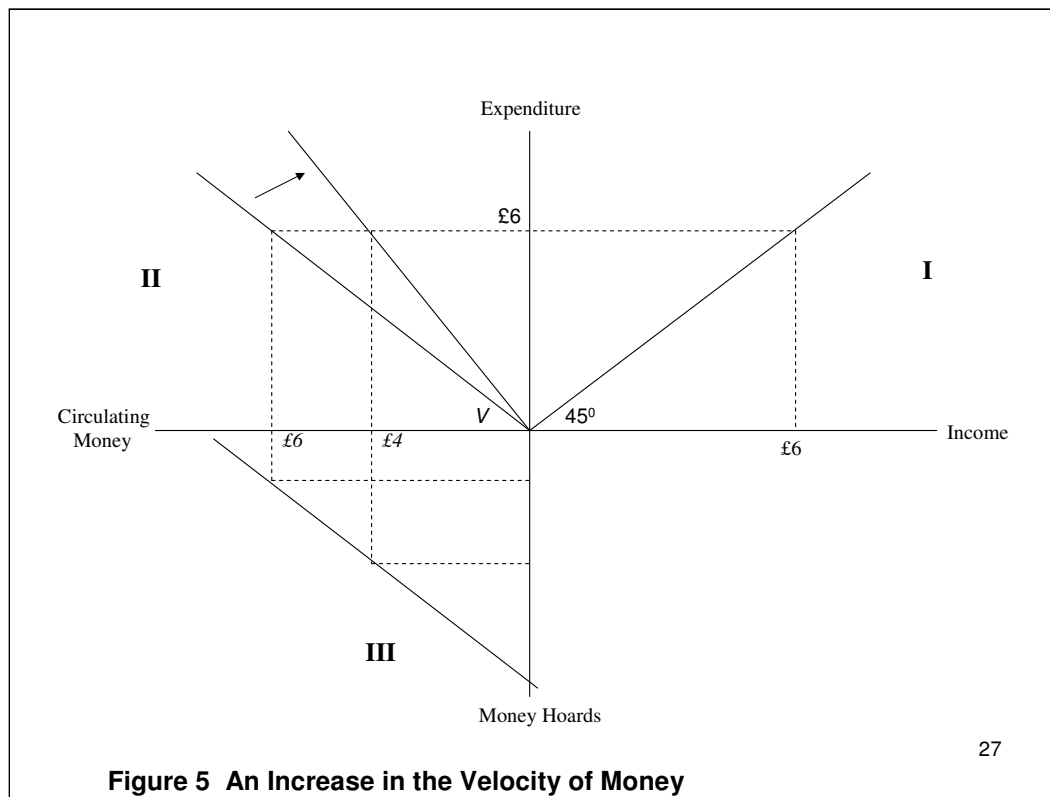
- We take a more detailed look at the flow of money between our three producers.
- The formula for the velocity is shown explicitly. Each pound circulates once.
- NEXT SLIDE we introduced borrowing:

•You may recall that in Marx's example the three producers each exchange commodities for 2 gold coins.

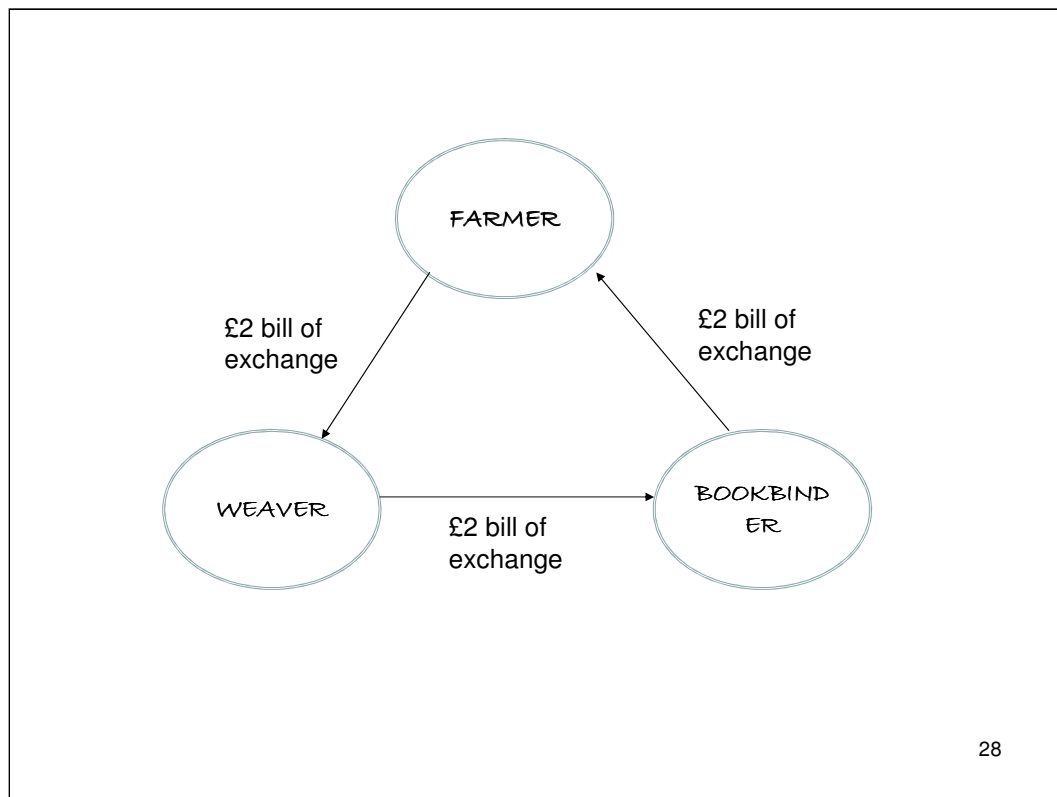
•We can define the velocity of circulation: total economic activity divided by the number of coins in circulation. Each gold coin circulates once, on average. The



- Assume that the farmer now pays for the linen NOT with gold coins; but with a bill of exchange. A promise to pay the £2 at a later date.
- Money now functions as a means of payment, to settle debts when they fall due.
- Now only 4 gold coins circulate, for the same £6 level of economic activity. The velocity increases to 1.5.
- This change in velocity can be shown in our Marx model (NEXT SLIDE).



- The increased velocity shifts the line to the right in the second quadrant.
- For the £6 level of economic activity only £4 of circulating money is required (instead of £6 before).
- So our model allows us to introduce money as a means of payment.
- NEXT SLIDE develops this further.



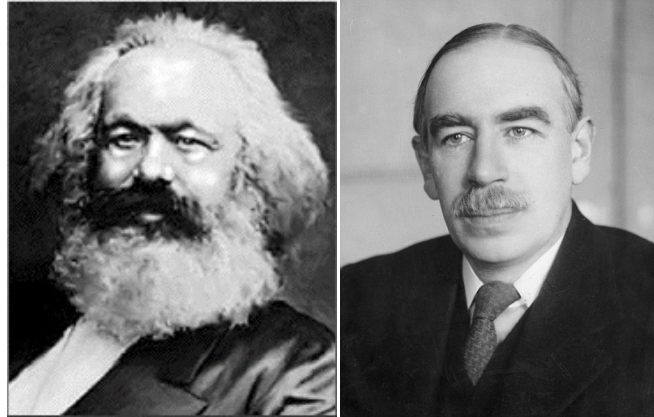
- Consider what will happen if all transactions are carried out using bills of exchange.
- For Marx this increases the possibility of crisis: makes it more concrete.
- Consider this quote from Theories of Surplus Value (NEXT SLIDE).

- The spinner cannot pay because the weaver cannot pay, neither of them pay the machine manufacturer, and the latter does not pay the iron, timber or coal supplier.....Thus the general crisis comes into being' (Marx 1968, p. 511).

29

- There is an extended degree of connectivity between the producers – this leads to more financial fragility.
- This is the financial fragility that we associate with Hyman Minsky: where producers are connected through credit debt relationships.
- It obviously has great relevance to the fever of the current financial crisis. There is a network of credit relationships throughout Europe and the global economy. All due to money as a means of payment.
- Note that we are still under simple commodity circulation. And these are only abstract possibilities of crisis.
- But this model has the advantage that it is very much under our control. It is like a controlled scientific experiment in which we have controlled for various complexities.
- To develop these complexities further I am going to look at Keynes in the next part of the presentation
- NEXT SLIDE looks at Keynes.

# Between Marx and Keynes



30

- OK. So I am going to look at Keynes now.
- In the main, Keynes was disparaging about Marx. There are only three mentions of Marx in his *General Theory*. He consigns Marx to the heterodox underworld, alongside two minor thinkers, Major Douglas and Gesell.
- However, it should be born in mind that the *General Theory* was designed as a critique of mainstream economics. It took the postulates of neoclassical theory as its starting point. Keynes would not to distract from this by considering writers from the underworld.
- Keynes was, however, more open to Marx in his early drafts of the *General Theory*, around 1933. This is the main substance for claims that Keynes and Marx can be unified.
- NEXT SLIDE shows a passage from an early draft of the *General Theory*

'He [Marx] pointed out that the nature of production in the actual world is not, as economists seem often to suppose, a case of C-M-C', i.e., of exchanging commodity (or effort). That may be the standpoint of the private consumer. But it is not the attitude of business, which is the case of M-C-M', i.e., of parting with money for commodity (or effort) in order to obtain more money'

(Keynes 1979, p. 81, *Collected Writings*, XXIX)

'Marx's theory has no category equivalent to that of a 'monetary 'economy in the sense of that expression used by Keynes, for whom it designates a capitalist economy.'

(Germer, C.M., Monetary Economy or Capitalist Economy?, *International Journal of Political Economy*, vol 27, Fall 1997, pp. 6-34

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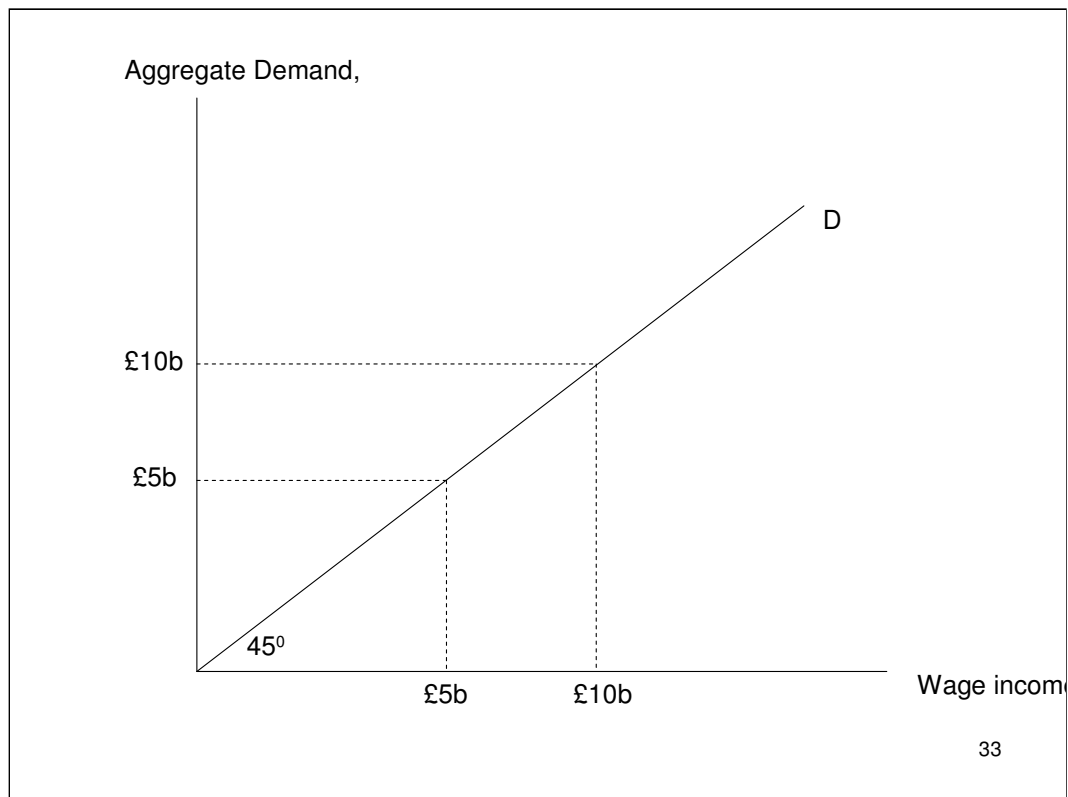
- Here Keynes is recognising that capitalism involves money begetting money. The production of a surplus.
- So Keynes is important for his insights into full blown capitalism, in which there are capitalists making money. We can move beyond the confines of simple commodity circulation.
- It should be noted, however, that there is a Marxist literature that is critical of making too much of this comparison. Keynes refers to capitalism as a 'monetary economy' and this is mixed up with Marx's analysis of money under simple commodity circulation.
- Germer points out that Marx distinguishes between money and capital. These are the titles of the two parts of the Grundrisse.
- To explore this issue we will build up approach by looking just at simple commodity circulation.
- NEXT SLIDE We first need to look at AGGREGATE DEMAND.



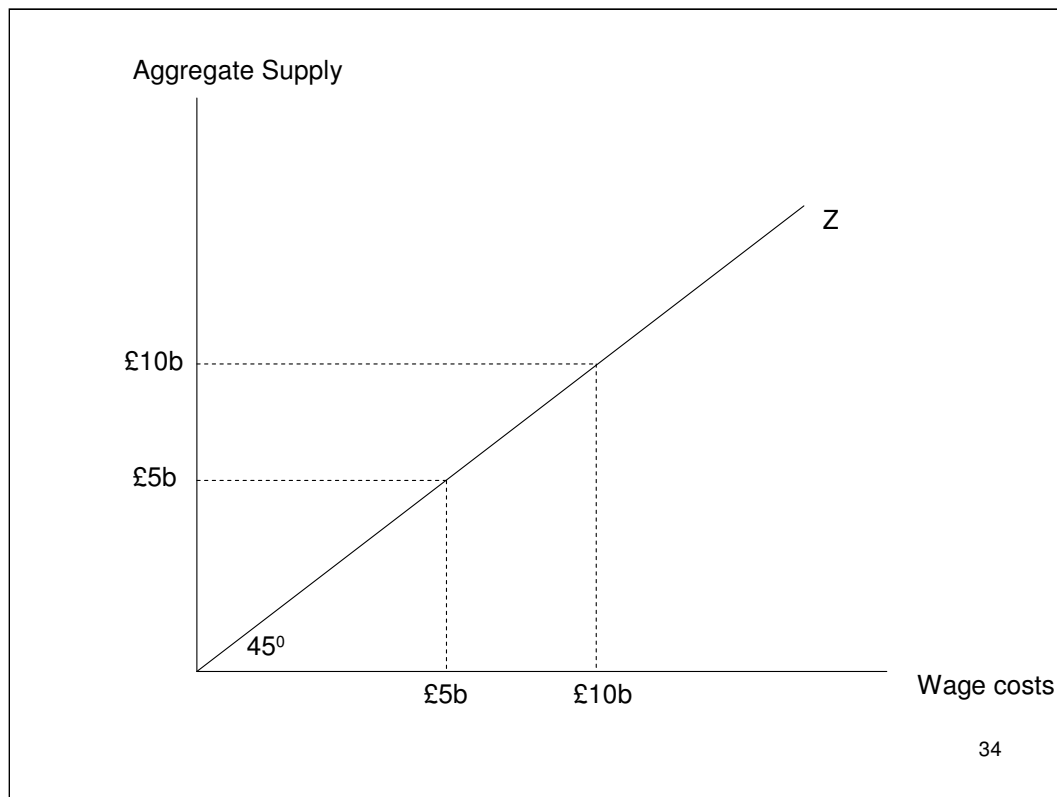
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- And key to aggregate demand is the proceeds producers expect to receive from employment (I stole this from John Weeks here at SOAS).
- NEXT SLIDE. These proceeds can be shown in our 45 degree diagram (under simple circulation).

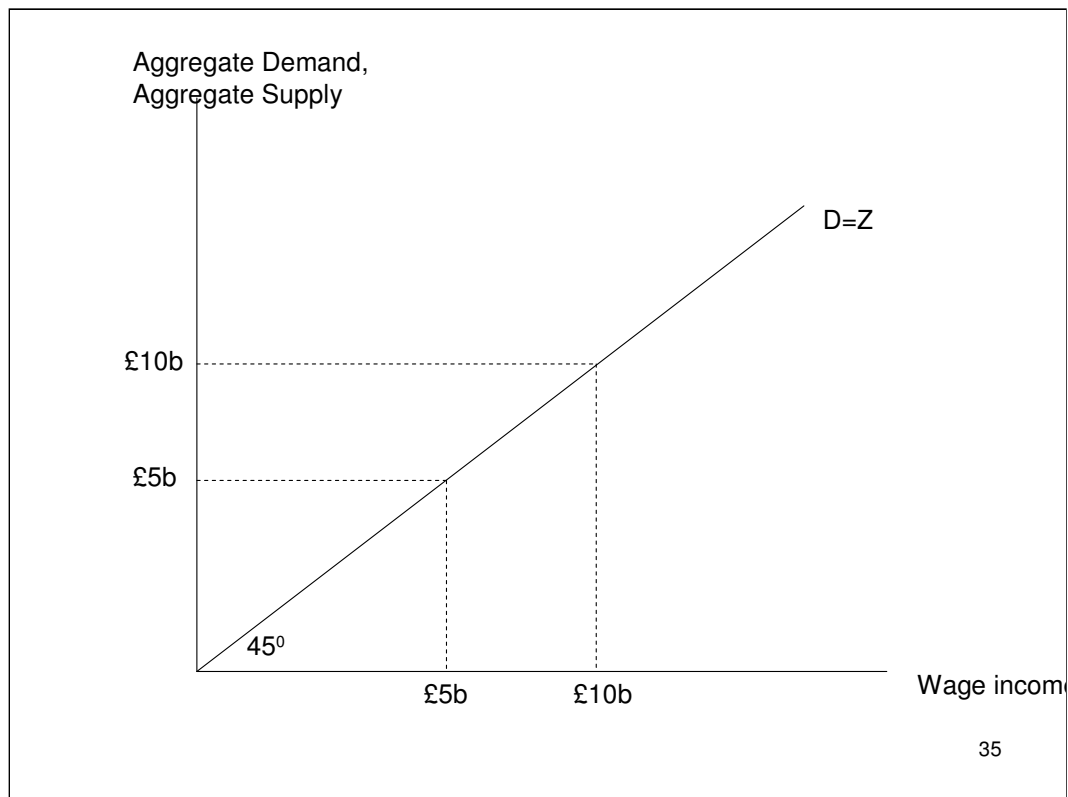




- Since this is simple circulation there is only wage income. Independent commodity producers are paid an hourly wage for their outputs.
- Aggregate demand is represented by D
- If the wage outlay is say £5 billion, then producers will expect that all of this will be spent. So the expected proceeds (aggregate demand) are £5 billion).
- Similarly, for a wage income of £10 billion, the expected proceeds are the same.
- Hence, the 45 degree line models aggregate demand.
- NEXT SLIDE looks at aggregate supply.



- Aggregate supply is the expectation of proceeds that will just must make it worthwhile to cover wage costs.
- Aggregate supply is represented by Z
- If wage costs are £5 billion, then the aggregate supply price is £5 billion. The proceeds that would just cover this wage bill.
- NEXT SLIDE Points of effective demand.



- These are all points where aggregate demand and aggregate supply are equal. Points of equilibrium. Points of effective demand.
- Now Keynes uses this model when  $D=Z$  at all times, to argue that it represents Say's Law.
- Under Say's Law, supply creates its own demand. So if, e.g. workers are hired for a wage bill of £10 billion. This means that the aggregate supply price is also £10 billion. Now if all of this wage bill is expected to be spent, then aggregate supply will be matched by aggregate demand. Supply creates its own demand.
- NEXT SLIDE shows you some quotes from Keynes on this.

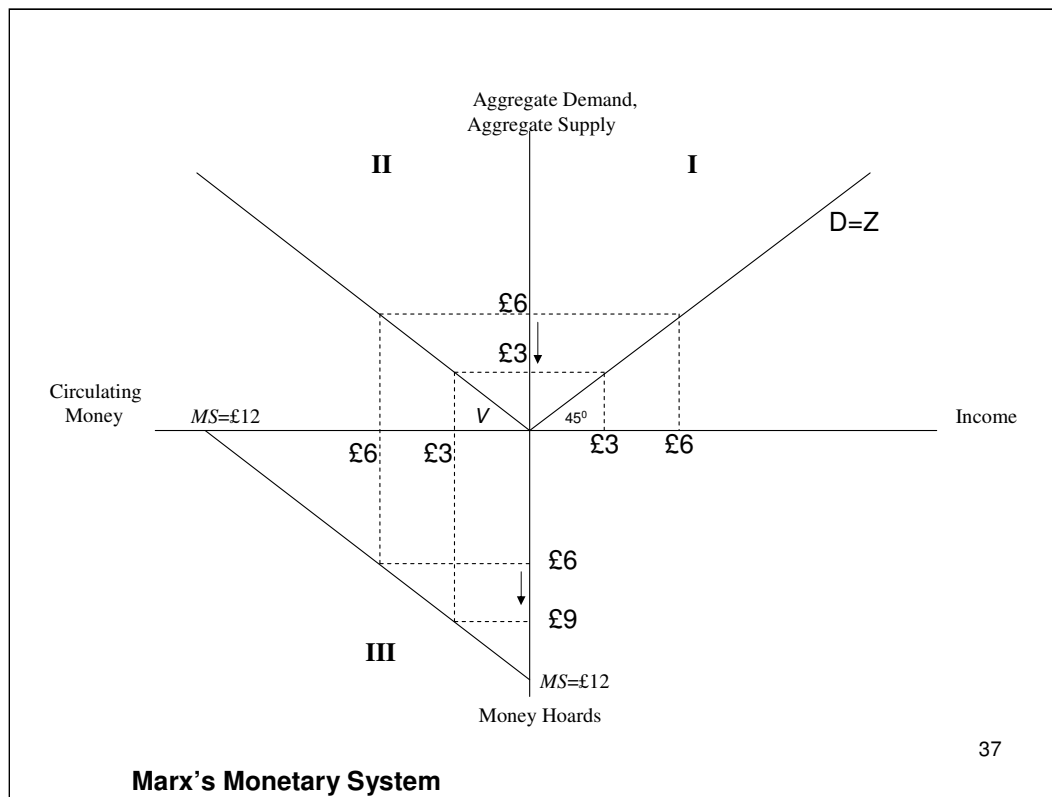
'The classical theory assumes..that the aggregate demand price (or proceeds) always accomodates itself to the aggregate supply price; so that, whatever the value of  $N$  may be, the proceeds  $D$  assume a value equal to the aggregate supply price  $Z$  which corresponds to  $N$ . That is to say, effective demand, instead of having a unique equilibrium value, is an infinite range of values all equally admissable'

'Thus Say's law, that the aggregate demand price of output as a whole is equal to its aggregate supply price for all volumes of output, is equivalent to the proposition that there is no obstacle to full employment.

(Keynes, *General Theory*, p. 26)

36

- So Keynes argues that this is a model of Say's Law. Since  $D=Z$ , supply creates its own demand. (1<sup>st</sup> quote)
- He argues that there is therefore no barrier to full employment (2<sup>nd</sup> quote)
- HOWEVER, we may argue with this on the basis of Marx. It is possible that the circulation will be interrupted. (NEXT SLIDE) This is because of hoarding. Producers may decide to hoard instead of spend. So supply does not create its own demand.



- This is the earlier example of an increase in hoarding from £6 to £3.
- Here producers expect the proceeds to only cover £3 of aggregate supply. So an aggregate demand of £3 prevails. This could be a position of equilibrium below full employment.
- Now this relates to Keynes, NEXT SLIDE has quotes on hoarding and liquidity.

'The concept of hoarding may be regarded as a first approximation to the concept of liquidity-preference'

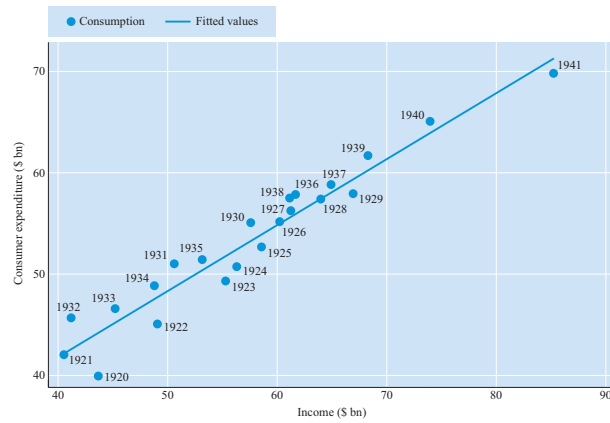
'The motive of liquidity – to secure liquid emergencies, difficulties and depressions'

'Unemployment develops, that is to say, because people want the moon; - men cannot be employed when the object of desire (i.e. money) is something which cannot be produced and the demand for which cannot be readily choked off'

(Keynes, *General Theory*, p. 174, p. 108, p. 235)

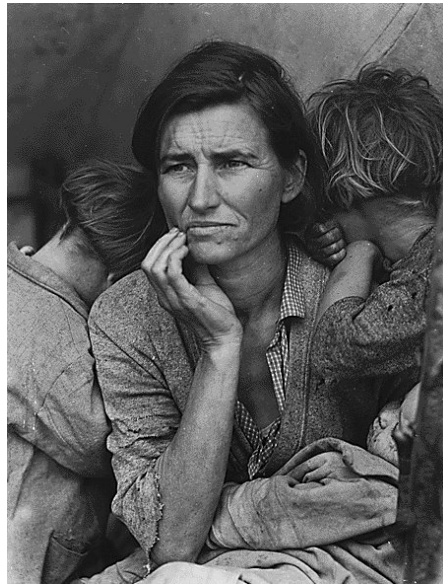
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- Marx's concept of hoarding is related to Keynes's concept of liquidity (1<sup>st</sup> quote).
- And Keynes gives motivations for why there is a motive for liquidity (2<sup>nd</sup> quote): notably in times of depression.
- Also Keynes develops the reasoning as to why money leads to unemployment. Because if producers hold money then this does not lead to any employment.
- But the problem may be that Keynes, if you look at the *General Theory*, is concerned largely with liquidity in relation to business investment.
- By sticking to the confines of simple circulation (under Marx's method), we are looking at liquidity in relation to consumption only. It might be possible to critique Say's Law even under simple circulation, using Keynes's principle of effective demand.
- BUT all we have done is demonstrate the possibility of crisis, the possibility of an interruption in the circulation of money.
- We may still have not theorised enough of a barrier to full employment. To do this we might develop Keynes more.
- Question to audience, What are the main components of aggregate demand?
- We develop his approach to investment, and before that his analysis of consumption (NEXT SLIDE).



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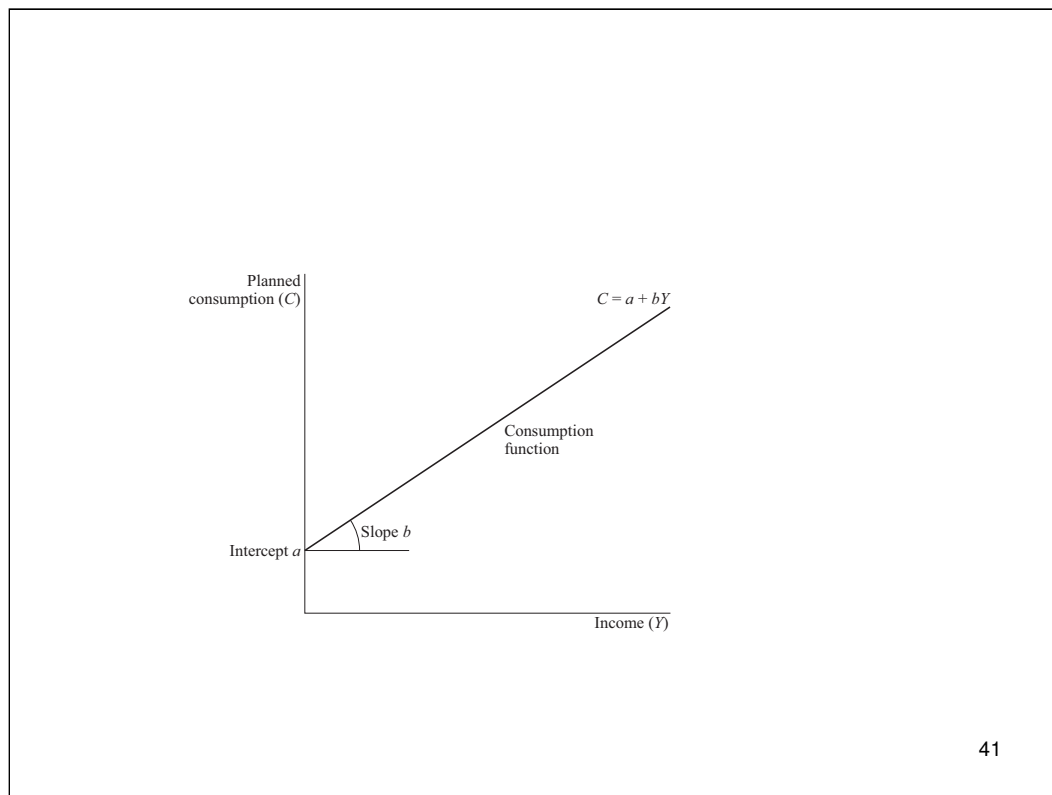
- This shows income and consumption data for the US between the wars.
- Note there is a tendency for consumption and income to increase together, as shown by the line of best fit.
- But note the collapse in consumption and income after 1929.
- NEXT SLIDE Behind these statistics are millions of stories of depravation and desperation.



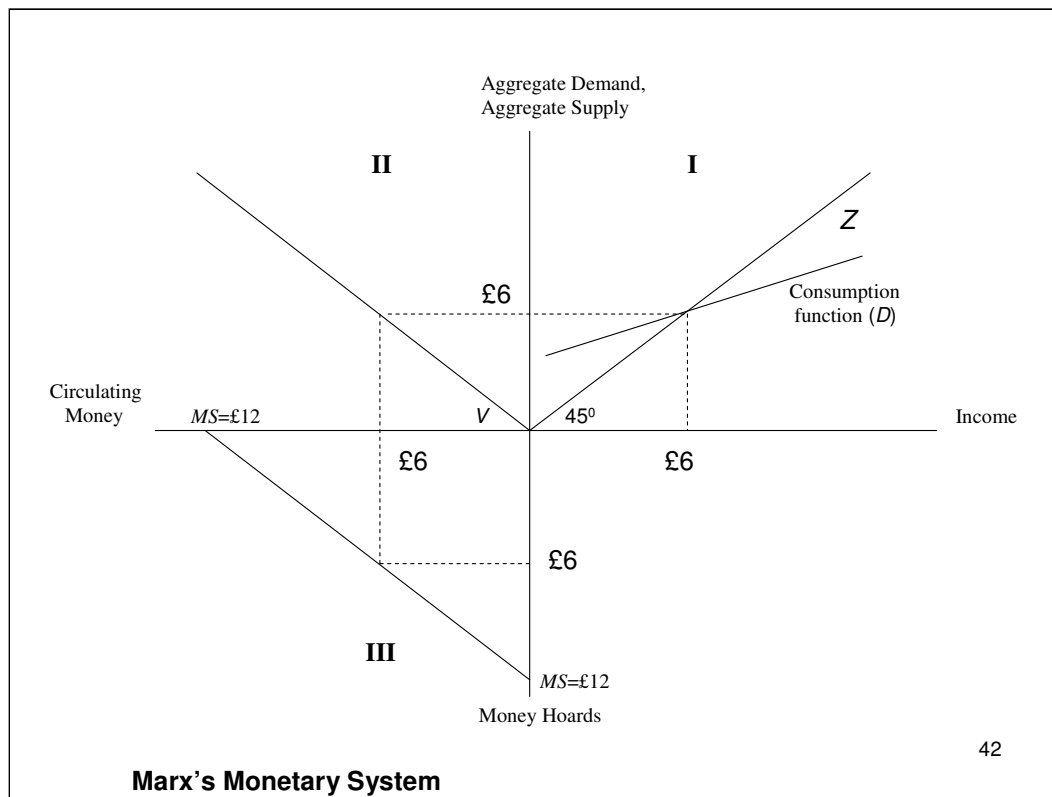
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- This is a picture taken by Dorothea Lange of migrant mother, at the time when John Steinbeck wrote his *Grapes of Wrath*, about the people of the mid west moving to California to look for work.
- NEXT SLIDE I will show you a diagram that summarises the relationship between consumption and income.





- This is the consumption function, which those of you who have studied economics will know.
- It has an intercept showing what planned consumption would be at zero income.
- And its slope is the marginal propensity to consume, that shows how much of income would be consumed for each extra unit of income.
- NEXT SLIDE. Now we can add this to our Marx-Keynes model.



- This consumption function represents a new aggregate demand schedule (*D*).
- Now this provides us with a unique position of equilibrium. If *Z* was more than *D*, then costs will exceed expected proceeds. So there would be an incentive to cut income. If *D* is more than *Z* then it is worthwhile increasing income.
- The argument is that this allows us to establish a position of underemployment equilibrium. It allows us to show how the macro economy can get stuck at a particular level of income at which there is unemployment.
- NEXT SLIDE summarises this using a quote from Victoria Chick

'But it was Keynes's aim not just to demonstrate that involuntary unemployment was possible, but that there were circumstances in which it would persist'

(Victoria Chick, *Macroeconomics after Keynes*, 1983, p. 74)

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- This helps to theorise why the economy might flat line. As the UK is at the moment. There is mass unemployment, there are hoards of cash, and yet the economy seems to be stagnating at a particular level of income.

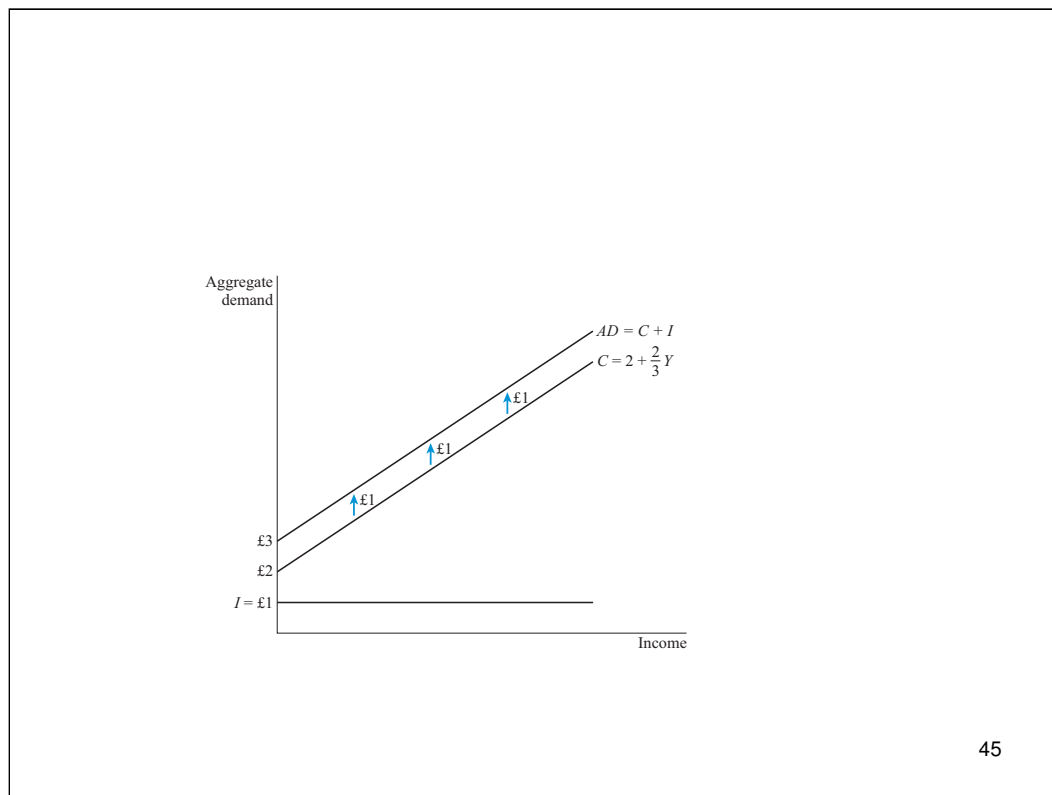
- NEXT SLIDE Of course there is much more to the Keynes explanation. To develop it we might turn to expanded reproduction. Questions for audience. Aspects of expanded reproduction?

# Expanded reproduction

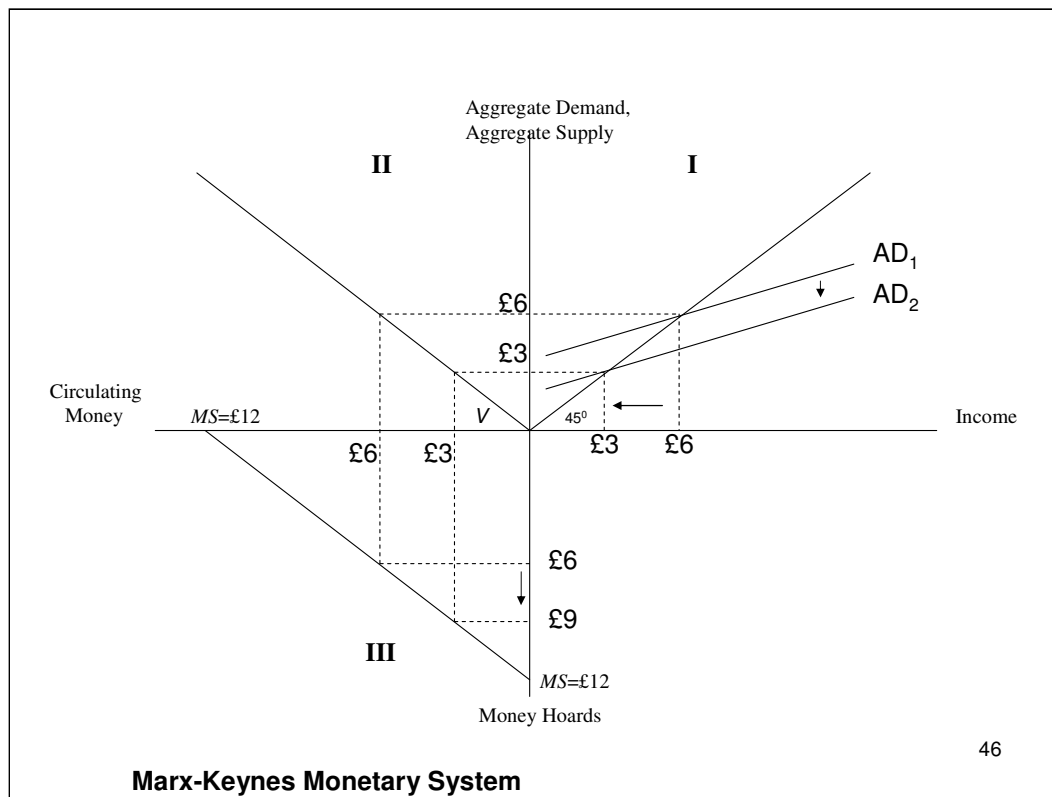
- Two main classes, workers and capitalists (entrepreneurs)
- Two types of expenditure, consumption and investment
- Workers sell labour power (employment)
- Pursuit of profits (M-C-M')
- Expanded reproduction of capital (investment)

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- Both Marx and Keynes, look at capitalism along similar lines.
- Both have workers selling labour power. They are not simple commodity producers.
- Both have capitalist making profits.
- And both have expansion of capital. Keynes calls this investment.
- NEXT SLIDE, Investment plays a key role, as can be shown in another diagram.



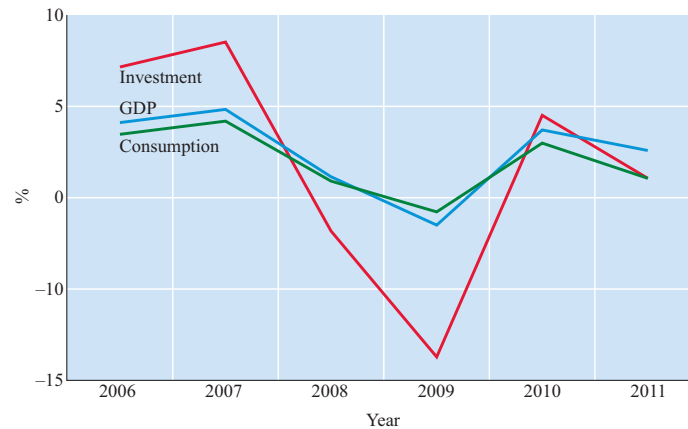
- In this example, we assume that investment is £1, the same at all levels of income, as shown by the horizontal line.
- For Keynes investment is not dependent on income; it is autonomous.
- He adds the investment to the consumption function to get a new aggregate demand schedule.
- NEX SLIDE This can then be incorporated into the Marx-Keynes model.



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- You can see how if investment falls the aggregate demand curve shifts downwards.
- A collapse in investment leads to a new unemployment equilibrium of £3.
- NEXT SLIDE We can see for the recent financial crisis how volatile investment is.

# Collapse of UK Investment



• (ONS, 2012)

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Source: ONS (2012)

- This shows the collapse of investment in the UK, during the crisis that started in 2007.
- Consumption also falls, but the main stylised fact is the collapse of investment.
- To really analyse what happens in a crisis, we need to look at capital and investment.

## Towards an actuality theory of crises

- Credit money/banking
- Finance of expanding capital.
- Realisation of mass of profits.

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- This model throws up difficult questions about the role of money.
- Marx shows that money hoards are no longer sufficient to finance investment (capital expansion).
- Bills of exchange between producers, with money as a means of payment, will also be insufficient.
- To get investment there needs to be a banking system, which loans out credit money.
- To model actual crises finance need to be incorporated into the model.
- In relation to the falling rate of profit, under accumulation. I would make two arguments;
  - 1. That we should model how vast increases in capital stock are financed.
  - 2. We should take into account the huge increase in total profits that needs to be realised.



# Further Reading

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