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Resolving economic deadlock

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Resolving Economic Deadlock

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How to Save the Euro and All

Many economists agree that the Euro is doomed, or at least will continue to face stiff headwinds: This would be so because the participating economies are too disparate – some booming, some in deep recession or even depression - and there is only one interest rate for all (before credit spreads). It can never be right for all, hence tensions will persist and likely rise. Well then one could also a little mischievously say that the British Pound, while suitable for Central England, is 'too strong' for the deindustrialized English West, such that Liverpool should introduce its own currency.

In the time of the internet and discount airline carriers, this Zimbabwean style 'solution' smacks a tad of con-economics. For it would be hard to sell to the citizens of Liverpool: Would they willingly embrace their new Micky-Mouse-currency, with as first item on its agenda a massive devaluation?

There is a fundamental asymmetry between joining a new currency, and then splitting from it, not dissimilar to marriage. For all participants of the Euro (even including the Germans, though

this is not so perceived by many of them), the Euro is a stronger currency than what they had before, the Liras, Pesetas and so forth.

Would even the most remote Greek Farmer, checking out on the web the price for a new plough and a used Mercedes in terms of Euro, willingly hand over his Euros for comparatively worthless paper? Knowing that the price of his intended acquisitions would be double, triple, quadruple, in terms of his new money? Not likely (an old insight also known as Gresham's law). The roll-back of the Euro is very hard to imagine in a democracy in practice.

How about the argument you can hear sometimes that the Euro would be 'unnatural', a politically imposed super-structure above the nation-states, which hence is bound to ultimately fail?

The Colonial Powers traced more than a century ago the borders of many African States with a ruler, cutting right through peoples, languages etc. One may then surmise that these artificial, unnatural lines would be reorganized fast once the colonial powers leave.

However, it wasn't so: These borders have proven of remarkable stability. They should be thought of not as a mere function of something, but as introducing by themselves a 'new game'. And European Monetary Union is certainly less 'unnatural' than them.

And one last blanket argument without economic substance, but a cultural subtext: An economy run by 'dagos' is inherently inflationary, presumably because they like losing purchasing power, or are simply inept at handling it.

From an economic viewpoint we can note: The countries which industrialized first like England, had an efficient administrative infrastructure in place, which permitted easy taxation of the large scale ventures like industry and banking, which developed there first. Prussia, the nucleus of the German State, was built right from the start on strict regulation. In many Asian societies, centralized power structures and efficient administrations emerged early on to create and manage the large-scale irrigation systems needed for rice farming (*hydrological societies*), from Angkor to present-day China.

Spain was just 3 generations ago a mostly rural country – try taxing someone selling apples in the streets of some remote village.

In this setting an inflation tax – if handled responsibly and intermittently only – can be an alternative to replace revenues otherwise uncollectible, or too costly to collect. If everybody knows about it, mild intermittent inflation is no catastrophe, but can be the byproduct of the hospitals, roads, and other goods and services financed by it.

After European Monetary Union the inflation tax was no longer available, which in its first decade was masked by easy credit available at rock bottom interest rates.

If the peoples of Europe want to hold on to the European project, some countries would have to replace the inflation tax by other forms of taxes, meaning to effectively modernize their administration. In the age of easy cheap information processing, data-warehousing and cross-referencing, this is possible to accomplish if the political will is there¹.

1 Specifically the chances of Greece to get through the adjustment OK are not as bad as is commonly held. Taking the 'black economy' into account, Greece's real GDP is roughly 35 % higher than official GDP, so it would – after bringing half that on the books - be comparable to the case of Belgium, which reduced its debt successfully from 135 % GDP to 84 % within 14 years (see e.g. <http://www.imf.org/external/pubs/ft/scr/2011/cr1182.pdf>). With tourism revenues alone at around 20 % GDP, Greece has comparatively higher net exports than Japan. The mere elimination of simony and nepotism would, in conjunction with modernizing its administration, cut State expenses substantially and boost growth medium term. Under prevailing market conditions, voluntary debt restructuring is a realistic way to reduce debt by 15 % or so, and defer repayment for the large rest by, say, 15 years. Debt restructurings are typically done according to a menu – it's set though, not à la carte, and could look thus: The Starter – 65 now (in cents on the Euro). The Main – exchange bonds against new ones with 10 year longer maturity. The new bonds may have 'collective action clauses' and some type of limited principal guarantee by the EU at e.g. 15 %. Most importantly, they are acceptable as collateral by the ECB. This is for the major part of

However, the one important economic issue is as yet unanswered: One currency, one interest rate, with the participating economies being more autonomous than say the States making up the American Federation. Some economies experience booms, whereas others are in deep recession. A historically unprecedented project – can it work?

If that were all there is to it, I would side with many economists and say – quite possibly not. But it is not all there is to it. There is a very important and now little known monetary policy instrument called *Minimum Reserve Requirements*. Both the FED and ECB require reserving for: Fed – banks' call deposits at a rate of 10 %, but for nothing else. ECB - reserving of 2 % of balance sheet of a bank. Neither rate of reserving was changed in the last decade, but kept static – it was not used as a *policy* instrument.

This instrument has historically been implemented by the German Bundesbank, especially pre-1986. In Germany, the Central Bank has the power to require a compulsory escrow or deposit in the form of a remission of collateral for any credit extended by the private banks. Especially the pre-1986 German Bundesbank required such compulsory remission of collateral for a wide variety of loans of private banks: The rate of reserving required varied according to the maturity, according to their type, even according to who is the counterpart – whether it is a domestic entity, or a non-resident. Not alone that – the rate of reserving was sometimes also *progressive*, increasing with additional volume beyond certain stipulated thresholds. This achieves to only penalize *additional* credit-creation beyond the threshold, whilst leaving the cheap credit in place for existing loans.

Compared to the level of fine-tuning such a policy allows, the rate of interest is a relatively blunt tool.

In 1978, the Bundesbank even went as far as raising the rate of reserving required to nothing less than 100 %, historically the highest to my knowledge. This rate was implemented for certain foreign currency transactions vis-à-vis non-residents. But, if stipulated to apply for property developments in say Dublin, it is clear that the stranglehold that such high reserve requirements as even 50 % represent, could snuff out any asset boom, instantly.

Likewise, if the Central Bank were to require a compulsory remission of say 20 % collateral for every consumption loan extended for a bank-customer domiciled in a certain region or country, it would be very hard to inflate something consumption-price-wise, if you are up against *such* odds.

These high percentages would not be typical, as the policy instrument of reserving is *extremely* powerful due to the operation of the money multiplier (magnifying the monetary base into 'end-user'-money) in the financial system. In distinction from the very large percentages, but narrowly targeted ones just mentioned for illustrative purposes, a minimal *overall* increase in reserving will absorb a *vast* multiple in terms of money and credit. Effectively a reserving-policy reduces the money-multiplier, hence the 'end-user' money-quantity.

There is another important advantage. The different types of credit extended are already so labelled in the banks' balance sheets: As loans for real investments projects to entrepreneurs,

bondholders, the institutional investors like banks and insurance companies. The Dessert – just keep them. Not acceptable as collateral by the ECB any more – on the contrary, one could require banks holding them to put against them 30 % of own funds. This would effectively restrict the 'Dessert' to private savers, a small minority. The 'Main' does not generate any losses, neither for German and French banks, nor the Greek financial system. The lengthening does not harm them, as meanwhile, the bonds can be handed in at the ECB against money (just like any asset at the pawnbroker's). Lastly and most importantly, unlike Ireland, the USA etc., Greece had no popped asset bubbles, and these are far more dangerous for the real economy than most economists think, but to understand this we need to cover a minimum of economics in the next chapter.

loans for financial investments (*lombard*), loans for consumption purposes etc. They can hence be targeted directly at source with minimal administrative effort.

So in sum: Reserving is less blunt than the one interest rate because it a) is not a 'one size fits all' tool but can be made progressive; b) can target very specifically, and directly at source, credits = 'money creation' of the banking system by type² and c) regional discrimination is also possible.

Wouldn't the market adapt and try to find ways to circumvent the reserving? It sure would (try), so you have to design the rules well. In practice this issue looks less challenging for legal, institutional, and information-asymmetry reasons: It was not the Bank of China who fuelled and then lost their shirt in the Irish property bubble, it was the usual suspects – the locals and the local banks.

Minimum reserve policy is not just a quaint old forgotten policy instrument, it is more than that – it is nothing less than the key to prosperity.

Particularly in a context of 'quantitative easing', this should become more obvious. For what is the effect of 'quantitative easing'? As is officially touted, it is a tool to lower not just short term, but also long term interest rates. However, low or zero interest rates are not a sufficient condition to create full employment, they are fully compatible with protracted economic malaise. Japan for instance can already celebrate its 20-year-jubilee of this state of affairs³. Another side-effect of 'quantitative easing' is to provide zero or ultra-low-cost funding for banks in order to repair their balance sheets, over the next decade or so.

But the most important aspect of a Central Bank buying the bonds of its Government is this: The State duly makes principal and interest payments on all its debt, also on the bonds held by the Central Bank. The Central Bank, being an organ of the State, transfers each year the Central Bank profit back to the State. The State debt held by the Central Bank constitutes no burden whatsoever to the taxpayer. One could term this component *virtual* Government debt.

A large Central-Bank balance sheet without any reduction in the money-multiplier has one side-effect: It increases the money-quantity. So this raises the question of how to deal with potential excess liquidity.

No reasonable answer is put forward by the Fed to address this legitimate concern. Obviously, the mere possibility of reserving as a genuine instrument of monetary policy seems to be unknown or unimportant to most economic luminaries of our time⁴.

This is remarkable, for Central Banks around the world have since long ago the explicit legal title to it – without any necessity for new laws or new institutions. As for the Fed, it's *even* in the *name*: Federal Reserve System⁵.

By virtualizing as much as needed of Government debt, one can repair public finances, make them whole and sustainable again - without any outright contract abrogation, or its surreptitious variety involving currency debasement. At the same stroke it creates the leeway to

2 Potentially very important because raising the interest rate directly penalizes real GDP, and may at the same time be insufficient to achieve the desired effect of containing asset appreciation, because its expected return may trump the return in the real economy („*God stopped making land*“, „*this time is different*“). It is also unnecessary and even unreasonable to allow the private banking system money-creation free of charge, and quantity-wise unchecked, as is currently the case. This contributed a lot to the appearance of the various asset bubbles in many countries. Germany never experienced these in recent financial history.

3 A theoretical argument of why low interest rates are less expansionary for the real economy than is commonly believed, is explained in the next chapter.

4 An exception being those in the Chinese Central Bank.

5 This is no coincidence either, because the issue of reserving was once very important and closely intertwined with the history of Central banking.

generate more demand, and/or lower taxes, in order to bring the private sector back to full employment⁶. It is then imperative to have an instrument capable of mopping up any outstanding excess liquidity. The instrument to do that for any desired length of time, and to any degree needed to contain inflation, is the minimum-reserve instrument. It can be set arbitrarily high, so that any goods, or asset price-inflation, with regional discrimination also being possible, is quelled at source. It thus has the power to ensure that any demand expansion required to close the output gap is absolutely non-inflationary. This would in principle be relatively easy and painless, as the State does not want to *crowd out* private demand by State demand - on the contrary, the aim is to lift overall demand. We only need to contain excessive demand for goods coming on *too fast* (contain a growth rate, not taking or taxing something away).

Such a policy – combining virtualizing debt with strong reserving in order to cure big output gaps, and/or unsustainably high public debt levels, was not yet considered or proposed before.⁷ It has the power to keep the economy inflation-free in a permanent and sustainable state of boom, or at least at full employment, thus making adequate use of the full human potential.

The Scientific Background

Since insolvency was already declared some time ago for the ramshackle Marxian projects, two matter-of-fact strands of economic analysis remain: Promarket liberalism = 'classical' economics, and the somewhat more interventionist Keynesianism.

The latter gained the upper hand for a few decades during and after the Great Depression till roughly 1980. The Great Depression seemed to evidence some kind of market failure. This market failure was rationalized by the Keynesians by 'rigidities' which hinder the market from

6 It is less well known that, similarly to the Fed, full employment is also one of the ECB's explicit objectives: The Treaty on European Union article 127.1 states: "*The primary objective of the European System of Central Banks (ESCB) shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union.*" Then article 3 is explicitly referred to, which contains "*aiming at full employment*".

7 First in my PhD in 2000. Two more legs of this policy need mentioning in order to understand it better: Firstly, the above does not mean that the State has the right to get and spend the full Central Bank profit *again*, which will be very large if the economy was just pulled out of a trough of say 10 % below potential, since this would create inflation in the absence of an output gap. While the economy is romping toward full potential, progressively more of these sums must be destroyed/purged/retired while on the Central-Bank balance sheet and not handed back. Secondly, depending on the savings rate within the economy, it may be necessary to implement a *temporary* constriction of consumption, thus giving precedence to industrial capacity building over consumption goods production. For instance via a *temporary* consumption tax if the purpose is to achieve high growth rates fast while avoiding consumption price *inflation*. Only *after* investment, real productive capital increases say by 25 % can *all* people work productively, and 100 % enjoy the prosperity=consumption that before only 80 % had. By the way it would work best in large currency areas, with an active trade balance, and a large and diversified domestic production base (which potentially renders the economy autonomous) like par excellence the Euro-area. If the exchange-rate would depreciate, while this policy is implemented (due to the perception, or opinion of 'the market', or the speculators therein), then for the large currency-zone, this would be part of the solution, for say a small African country (which needs vital technology-imports from outside to be paid for in non-domestic currency), it would be a major problem. Another aspect is that if you want to maximally boost the domestic employment effects of the policy, you should direct the demand primarily toward non-tradable products – which, due to their essence, cannot be imported, like roads, schools, hospitals, research, services of any kind etc. (which, so to say 'fortunately', constitute now the by far major component of economic activities in advanced economies; and again, yes, you can also discriminate regionally, by directing this demand to where it is needed most). The additional revenues generated in the economy ('multiplier effects') will also increase imports in 2nd rounds, but that in itself is not a problem (if while keeping the domestic economy at full employment 'too much' (!?) is imported from outside, the exchange rate will eventually adjust, rebalancing the foreign account, – and even if this were not so, then it would also not be a problem).

working 'perfectly' – for instance instituted rigidities like legislation on wages and labour-contracts, Unions, and suchlike.

While Unions may have been a case in point before they departed courtesy of today's globalized economies, capitalism has always had a way to work around these rigidities. If labour laws were too rigid, and profits can be made by outsourcing payrolls to less regulated temp agencies, then this is very likely what will happen.

The same is true for the type of goods price rigidities proposed by Joan Robinson, her concept of *monopolistic competition*, - which never caught on with Keynes, presumably because he intended his theory to be *general*. In a 1930s world of State railways, a State Postal system etc., monopolistic price setting behaviour may have had some plausibility.

In an economy not dominated by such State monopolies – our world in short – *monopolistic competition* is too strong a word. There sure are *brands*, and the firms legally owning these brands have undoubtedly some price-setting power over their products. But they too have competitors. For every Merc there is a BMW as an alternative, so the price setting power of these firms may in fact be quite marginal. And in a long term perspective – shall we say: nil, as they would go out of business in trying to charge a lot for paltry quality.

As Milton Friedman so succinctly put it – isn't being *free to choose* the essence of capitalism? Those who want to pay extra for Gucci-sunglasses are free to do so, and those who just want eye-protection from the sun can get it at rock bottom prices. Hence we can view the capitalist economy as being in fact *fully* competitive. The only effect of products being not 'the same' (=product differentiation), is that goods prices will be somewhat sticky to the downside, since deep discounting erodes the value of a brand. But, so what? Does that look like justifying any kind of State interventionism? Especially when factoring in longer-term competitiveness issues?

There is another implausibility hidden in the Keynesian approach, his *liquidity preference theory*: That people would save by simply (with)holding cash. This cash is then not spent, nor would it be invested, as it is stored at home (without triggering any signal that future consumption is intended). It is simply lost for 'effective demand'. While this is at least logically consistent in a low or zero interest rate environment, the magnitude involved is the problem. For this type of saving would clearly be marginal in a modern economy. To explain a full-scale economic slump in aggregate output by purely 'withheld purchasing power' is implausible. And for all other forms of saving, it no longer applies that they are a one-way-street of 'purely withheld' purchasing power. The asset closest to cash, bank term deposits, exhibits already a feature that all subsequent asset classes share: In giving your money to the bank, the bank has it, not you, and while you have a claim against the bank, the bank better do something productive with the money, which involves its spending, for otherwise it were unable to pay interest on your claim.

Due to the relatively weak justifications of Keynesian-style interventionism, and with the appearance of stagflation (inflation + unemployment⁸) in the 1970s, the tide turned again toward the pro-market classical approach.

Sargent⁹ nicely sums up the mechanism involved in what he calls the classical model: "*In the classical model the level of employment is determined in the labor market. The assumption of*

8 Which proved empirically that inflation is possible even in the presence of output gaps, and there are good theoretical reasons for it.

9 Sargent, Thomas J. *Macroeconomic Theory*, Academic Press, New York 1979.

perfectly flexible money wages and prices implies that the labor market 'clears', a real wage being determined at which the quantity of labor demanded by firms exactly equals that which workers are willing to supply. There can be no involuntary unemployment since the volume of employment is always equal to the labor supply forthcoming at the prevailing real wage. Everyone who wants to work at the existing real wage is employed. If for some reason unemployment were to emerge because of deficient aggregate demand, the unemployed workers would bid down the money wage. Since firms are competitive, this would lead in the first instance to proportionate reductions in the price level, which would in itself leave the real wage unchanged and do nothing to alleviate unemployment. But the reduction in the price level would increase the supply of real [money] balances, causing the interest rate to fall. That would increase the level of aggregate demand for goods and services and cause the level of employment to rise. [...] The interest rate plays the role of totally alleviating any 'Keynesian' problems of deficient aggregate demand."

If product differentiation is present in a major part of the economy, Sargent's classical mechanism is interrupted in that prices will not fall commensurately, and unemployment may persist, because then interest rates also don't fall (enough). Yet that is not a problem, for the Central Bank will then oblige and duly provide a zero-interest-rate environment.

Since *"the interest rate plays the role of totally alleviating any 'Keynesian' problems of deficient aggregate demand"*, it is imperative to get a better understanding of how interest rates work. James Tobin has found an easily understandable way to explain them (from his Nobel-lecture 1981): *"The aggregate stock of capital at any time consists of all surviving durable or storable goods, previously produced or imported but not consumed. These stocks are valued continuously in markets for the goods themselves (realistic examples are used vehicles and machinery, and existing residences and other buildings) and in markets for corporate securities or for entire businesses. These market valuations of old capital goods typically differ, up or down, from their replacement costs, i.e., from the costs of producing, and installing at a normal pace, new capital goods of the same type. These deviations are, in turn, the incentives for rates of investment faster or slower than normal. When equity markets place high values on capital goods, the margin above replacement cost induces investors to speed up capital accumulation. This inducement is essentially what the great Swedish economist Knut Wicksell ascribed to a natural rate of interest higher than the market interest rate."* And a bit further: *"q is the ratio of market valuation of capital goods to normal replacement cost at time period t. Its normal value is 1."* Tobin and Brainard (1990)¹⁰ state: *"If [capital] stock adjustment, no matter how large, costs neither time nor resources, actual and desired [capital] stocks will always be equal. Arbitrage via real investment would keep q continuously at 1."*

In an earlier publication (1969)¹¹, he goes as far as making real investment dependent on q only: *"The rate of investment – the speed at which investors wish to increase the capital stock – should be related, if to anything, to q, the value of capital relative to its replacement cost"*. So in short: Low or in the extreme zero or below-zero real interest rates have the effect to raise the financial value, or value in money-terms, of investments *above* their real construction- or set-up cost. Since cheap financing is also available, that should get a boom in investment spending under way, which would ultimately relieve unemployment, so long as this state of affairs remains in place.

10 James Tobin and William Brainard, *On Crotty's critique of q-theory*, Journal of Post Keynesian economics, Vol. 12, Issue 4, Summer 1990.

11 James Tobin, *A General Equilibrium Approach to Monetary Theory*, Journal of Money, Credit and Banking Feb. 1969.

While product differentiation in the goods market is macroeconomically speaking not a very interesting subject, as these little price rigidities can be overcome by Central Bank action, things will start to look very different if we cut an intellectual diagonal and look at them in terms of the *asset market*.

Tellingly the word *property* – ownership – designates nowadays figuratively this most important form thereof for private investors, 'real' estate.

Here is the older, but telling example of Korea right before the 'Asia crisis' erupted 1997: "*At prevailing prices, South Korea's land is worth around ten times as much as its GNP; by contrast, Japan's famously expensive land at the height of its financial bubble was worth only five times GNP. [...] Even a modest rise in land prices of, say, 5 % is enough to generate an investment profit equal to half the economy's entire output for a year. Anyone who owns land suddenly has money to burn.*"¹²

That this can happen at all is due to the presence of product differentiation in the real estate or property market, commonly referred to by the concept of *location*. The *locations* of the properties – their mutual interconnectedness, or the socio-economic space they form - create so many little monopolies. Only buildings, constructions are reproducible, but not land itself, nor *location*¹³. You can easily see the vast financial impact - and the macroeconomic consequences – of the existence of product differentiation within the real estate market in past and recent history in Japan, Korea, Ireland, Spain, the USA, and the UK. So it is certainly not so that product differentiation can be ignored on the macro level, from an asset market perspective.

Apart from 'directly' differentiate products like locations, there is also *product differentiation* within the realm of purely reproducible, manufactured products.

Price differences would only be competed away for totally interchangeable products, like the standardized economic good petrol (and then only if geographic location would not be an issue). This 'competing away' would work (as economists say perfectly) well in the case of undifferentiated goods, because a minimal price decrease by me would infallibly attract away the demand from all of my competitors, and redirect it toward me. Unfortunately for me, this is equally true for my competitors, so that prices would quickly deflate toward their 'real' or reproduction values. For differentiated products, this competing away-mechanism is obviously not operational to the same extent. For example: If the Bentley-corporation would lower the price of their products by 5 %, they may sell some more units, but not everyone in the whole economy will now buy a Bentley. (In order to sell more, you *need* to lower prices - or invest more into advertising which will also cost - otherwise you could have sold already more before, at the higher price.) In fact, whether it is worthwhile for any producer of a differentiated product to lower prices in order to attract more demand, depends on two parameters: On the % more sold when prices are reduced (price elasticity of demand); and also on the return on sales, or the profit margin per unit sold, in short the salesmargin. If you happen to have a profit margin of say 35 % per unit sold, there is clearly some scope for price reduction, at least in principle. If the sales-margin were merely 1 %, there is hardly any such scope. Whether product differentiation is important for the production of reproducible goods (for the real estate sector

12 The Economist, 3rd June 1995, Survey: South Korea, p. 17.

13 By virtue of the long-term permanence, and long-term use-value (low depreciation) of the buildings themselves, there is little economic incentive to replace a building just 5 years old with a new, bigger one, even if property prices had risen a lot since, because the current building is already there (and still almost brand-new), hence has a cost of zero, whereas replacing it with the bigger one entails large demolition and construction costs. Also certain types of constructions would unfavourably change the location itself, and would hence not occur. Lastly, especially for many European cities, many historic locations are simply protected by law.

it is significant anyway), can then be empirically determined by checking where most firms in the economy are situated within the 2-space of the variables *elasticity of demand* and *salesmargin*.

For illustration let us dress up a table with values in a broadly realistic range:

Salesmargin	Salesmargin after 1 % price decrease	Minimum % more sales to break even
2.00%	1.00%	100.00%
5.00%	4.00%	25.00%
9.00%	8.00%	12.50%
15.00%	14.00%	7.14%
35.00%	34.00%	2.94%

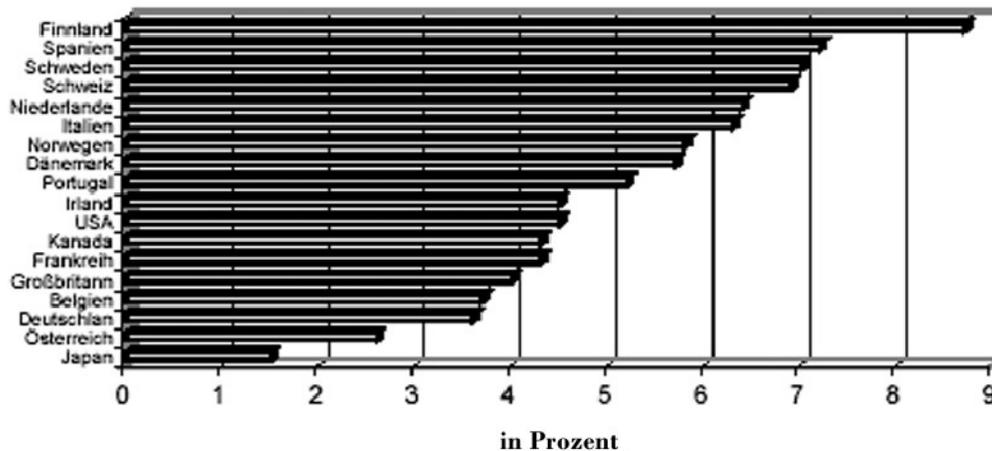
For instance take the 2nd line: The salesmargin is 5 %; by lowering the price by 1 %, a full 25 % more than before would need to be sold just to break even.

Such a sensitive reaction in demand as high as 25 % to a small price decrease of 1 % is totally unrealistic for any differentiated good. In reality, the highest observable price elasticities, as for petrol or ripe tomatoes, are situated at around 3.

Nevertheless, the green background marks the place where the 'Tobinian region' would potentially start, because elasticities of 3 are actually achieved by some existing products. But that would require a salesmargin of 35 % or more.

That is yet again totally unrealistic in competitive market economies for most companies. Here is an overview of salesmargins of big corporations in various countries (from 12 years ago, but still representative):

Netto-Umsatzrendite internationaler Unternehmen der gewerblichen Wirtschaft



Quelle: Institut der deutschen Wirtschaft

Deflationist Japan forms the bottom, whereas booming Finnish firms then reached almost 9 %. So let us take 9 % salesmargin as if it were the salesmargin in reality for all. That would require demand elasticities in order to sell more of at least 12.5. Which are in turn unrealistic.

To give an idea of the demand elasticity for really differentiate products (petrol and ripe tomatoes border on the homogeneous), in this case for the manufacturing output of British industry, Schiantarelli and Georgoutsos¹⁴ find a value of a mere 1.58.

So the answer is as clear-cut as one could wish for: Most economic activity is situated firmly within a 'non-Tobinian' region. Both the elasticity of demand and the return on sales are in practice *relatively low*. This would make price reductions in order to sell more, just because financing is cheap, not worthwhile. Hence they don't occur, so also no increase in demand, therefore no increase in production, meaning also no increase in employment.

This doesn't mean of course that price reductions don't occur. For instance many products have an issue of freshness (like ripe tomatoes), of up-to-dateness (computer- or car-models), or fashionability, so that the stock may rather be liquidated with a loss.

It means that prices are mostly driven by the supply and demand conditions in the goods market, not the asset market. In order to be driven by the financing side, elasticities of demand and salesmargins would have to be far higher than they really are. Salesmargins above 35 % may be reached by some firms producing a branded luxury product. But here again prices are driven rather by demand conditions in the goods market, because deep discounting erodes the brand value. Gucci-sunglasses are not desired because they would be cheap. More investment into advertising is in this case probably worthwhile, given that cheap financing is available.

The above argument is not just true for *branded* products. In the realm of the no-name, deep-discount type of products, those sold by the Walmarts and the ALDIs, salesmargins are typically very low. Here there is little scope for price reductions anyway. In this case prices are again driven by demand and supply conditions in the goods market, like new production technologies, or cheap imports, or rising commodity prices in world markets. The availability of cheap financing is nice, but not a sufficient condition for them to lower prices even more in order to sell more, as that would *reduce* their profit.

Hence most firms are located in the non-Tobinian region of the economy. If you go back to Tobin's quote above, you see that his transmission mechanism will not work: Asset bubbles, or easy, cheap financing for firms, or zero interest rates, by themselves are not enough to induce additional investment, if the demand at prevailing prices isn't there, or not enough more demand at the new, lowered prices *would* be there. So there is no point in lowering them. Hence also no getting under way of an economic boom, which would create more, let alone full employment.

What will occur 'automatically' in an environment of cheap financing is a *substitution effect*: The now cheap to finance machinery is used to substitute labour wherever technically feasible, enabling to increase profits by saving on payrolls. This does *prima facie* not look like a likely candidate which would create full employment¹⁵.

In situations of underemployment, the financial interest rate is often manipulated downward by the monetary authorities, whereas the real profit rate may remain high. So one may think à la Tobin that by incurring debt at the financial rate, and buying the real or profit rate, one could 'arbitrage' this differential, which by this arbitrage-process would generate real investment spending.

The issue is in fact so simple that it may be fiendishly subtle:

¹⁴ *Monopolistic Competition and the Q Theory of Investment*, European Economic Review 34, 1990.

¹⁵ But maybe this boom in investment spending (with the ultimate aim to substitute labour) increases via multiplier effects economic activity, so that, at least temporarily, the substitution effect is reversed, and more employment is created? But the Japanese case in the last two decades illustrates that it is not so, the supposed multiplier effects are far too low.

It is not so because you cannot 'get in' at the cheap (reproduction-)price and earn the profit rate, as the shares you buy in order to get in, or the land you buy in order to develop your property, have already a high q (high price-earnings-ratios), commensurate with the financial interest rate. The entrepreneurs however 'are already in', because the net present value of their firm has already risen in precise unison with the financial interest rate falling. They will not lower prices and expand output, as that would decrease profit hence the net present value of their firm. They will *reduce* their workforce by replacing people with the now cheaper-to finance 'capital'. Establishing a successful brand by inventiveness and dint will make you rich, and is, independent of where financial interest rates may be, always a good idea, but it is also something different from the aforementioned arbitrage.

Let us address an empirical counterargument you may have in mind, and frame it as a little discussion:

- Look for instance at the Irish property boom from the late 1990s to 2006. God stopped making land, so that is not reproducible, but the buildings which litter the Irish countryside are. So for the latter it makes sense to talk in Tobin's fashion of a high q – their high price meaning being above reproduction cost, and by this fact creating automatically an economic (property) boom. And look how marvellously it has worked, a large oversupply in terms of buildings was created. So Tobin is right!
- Yes, the real supply was indeed created, that is undeniable. But the argument is false. For this property boom would hardly have come under way if land prices were simply high, but say stationary. So they don't change. That is not what would drive a boom this scale – in order to invest and profit you want prices to go up, of course. And what happened here is exactly the contrary of what Tobin predicted – investment is accompanied by a *steadily rising q* . Tobin's arbitrage argument implies that the occurring investment is accompanied by a *steadily falling q* , converging slowly to 1. So this is actually a good empirical illustration that he is wrong.
- Wait a moment. It is true that he talks mostly about a falling q while the real investment is going on. But that has nothing to do with it. An increase in supply will tend to satisfy more demand, hence depress price. Q was only rising because this effect was compensated by yet more demand coming on. Eventually the first effect, the increase in supply, will catch up, because it'll keep going as long as the market price of something is above construction cost, exactly as Tobin says. That would obviously be true also if prices were stationary.
- Well, I am not denying that new apartments will be built if land prices were high but stationary. But look at the mechanism involved then: For they are not *really* being built because $q > 1$. Saying that makes it look as if the builder could somehow pocket the difference between mere construction cost and sales price. But the seller knows the zoning laws equally well as the builder, and he knows exactly the financial value it would have to replace an old building with a new one x storeys high. So he is selling it to you – if you were the builder - very dearly. Such that, for you, q is already at 1! With high but stationary land prices, the only profit you make is your 'normal' profit as a craftsman, as a builder, not as a 'land speculator'. You don't profit in any way from the high land prices

- themselves. What you profit from is that there is *sufficient effective demand* for the result of your craft – that is all. But beware if land prices were falling! Then you would get *less* than the normal profits for your craft. Falling land prices will drag you into hell's kitchen. Do you think that then the developments will keep going?
- Hmm, so maybe the q-theory should then not be applied to real estate investments, as they have some kind of 'limiting factor' in it, land. You are playing *advocatus diaboli* in applying it that way. Tobin wouldn't have approved.
 - Maybe so. But didn't he claim more generality for his theory than that? Saying q is falling when new investments come online is only applicable to cases where q is falling is bordering on the tautological. But anyway he definitely applied it to stocks, and in this case, it has even much less explanatory power. High but stationary land prices would generate at least some construction activities over time – not on the scale of the Irish case, as the wealth effects are missing. In the case of high or even steadily increasing stock prices – with all other things being equal, excepting wealth effects - you have *zero* additional real investments (except for some additional marketing expenses of luxury brands).
 - But that cannot be true! Maybe it is so that the entrepreneurs 'who are already in' as you said, won't expand production, as that would diminish their profit. But other people, who 'are not in', would *crowd in*, and to do that, *they* would lower *their* prices, because they would be happy even with a smaller profit than those 'already in'!
 - But don't you see that you are now making a *category mistake*? Do you seriously suggest that the 14 % now unemployed Irish, after having exhausted their land play, can knock up another Mercedes-Benz-Company in the same way?! A firm with existing production facilities and distribution networks around the world, 100+ years of accumulated know-how, associated legal patents, and the income to keep it going? All this arose initially from inventive entrepreneurial activity, something completely distinct from your financial 'arbitrage'. There is another economic argument. Let's stay in Germany: As the boss of Deutsche Bank (having become a famous hate-figure therefore) says, 25 % return on equity is the benchmark (return on equity p.a., not on sales). This towers so high above any known financial interest rate that the real activity to capture it would happen anyway, no matter what. Real entrepreneurial activity is *always* worthwhile. Those who can, do! What you will get with implementing the lower interest rates, which raise financial valuations of property or dot-com-start-ups above set-up-cost, is precisely a type of activity *anybody* can crowd into. Anybody can 'do up' a property, or get together with the buddies from Uni, knock up a website, slap in a few powerpoints and, with collusion from bankers, sell it as a 'start-up' to 'financial investors'. But this is precisely the type of economic activity you don't want. The type of activity you do want, actually producing goods and services, wanted for themselves, which fortunately still make up the biggest part of economic activities - those of the boring kind -, are precisely the activities *not* generated by your low interest rates. You said above q kept on rising because of further oncoming demand, outstripping the rising supply. Of what kind was this demand – of the real, or the other kind? If it was of the real kind, real prices being paid for something really desired, how could there ever be a

catastrophic collapse? And by the way: The financial gains generated by this other, 'wrong' type of economic activity, could be implemented much easier and equally well by the Central Bank, and that – if done professionally – without any catastrophic collapses weighing on real GDP for decades to come. In fact, in our world of fiduciary money, it ultimately was created by the Central Bank.

If one would say: *Of course, as long as the price of 'capital' (an economic good like any other) is higher than its manufacturing cost, more of it will get manufactured. This is obviously true, even self-evident.*

The fallacy lies here, in the undercomplex notion of the term 'capital'.

The approach does work for the production of totally homogeneous products, and for activities 'anyone' can crowd in to. In this case, there are no constraints, no restrictions, no limitations. Take milk: Whether the price of milk is rising or falling is fundamentally unimportant. As long as the market-price of milk is above its production-cost, you keep producing more of it to make more profit.

The approach breaks down in the real estate market, because that has a limiting factor in it, land, magnified by it being highly differentiate. Similarly for stocks of companies producing differentiate products. Here the limiting factor is (put succinctly): In market economies production-profits and the demand for this production (arising from the incomes having been generated) tend to bear a certain relation to each other, firmly outside a region in which the economy would behave macroscopically Tobin-style.

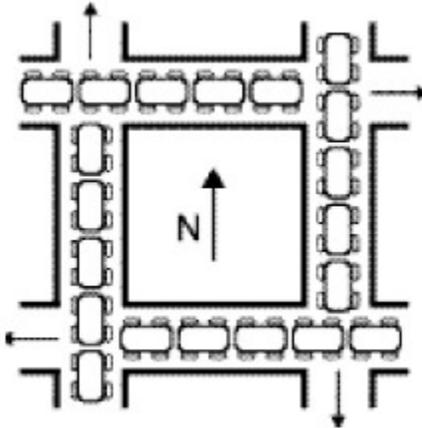
The self-evidence of the approach is in fact created by the simplistic concept of capital being treated like an ordinary homogeneous good, and is of a circular nature. It is a mere restatement of profit maximization involving the word *capital*¹⁶.

All neoclassical theories, based on a general equilibrium, market driven approach, share the simplistic treatment of 'capital' as a homogeneous entity, like 'any other economic good'. They originate in the work of Léon Walras in the late 19th century, who started to frame mathematically the 'classic' market approach, hence referred to as *neoclassical*. Tellingly, he concentrated his work on the goods sector. The treatment of capital as a simple good has been maintained ever since. Keynesian economics sees more scope for policy-intervention to counter market-imperfections than the pure classicists, but it shares with them the same simplistic treatment of capital. The latter point is so fundamental in shaping the results, that it outweighs the former. The main implication of the treatment of capital as a good is that the classic pro-market theory and policy, and the deficit-spending-style Keynesianism which presently rule the world, are both at heart theories of full employment. Even though the word *unemployment*

16 If people get ensnarled in nonsense, it is mostly not because they 'reason' or 'calculate' wrongly, which the use of mathematics could relieve, it is rather because they use nonsensical concepts or premises (such as *witches exist*) for their reasonings. The self-referential concepts which shape a religion, a world-view, a (social or political) philosophy, and sometimes also a scientific game, are rarely adequately questioned, even though in their end-results, they can be in so flagrant conflict with or denial of reality as bordering on the delusional. In economics, you can often see that certain theories, which prove much less than their authors think they do, are then justified with purely circular intuitions. A simple example is Milton Friedman's slogan "*There is no free lunch*": Behind each lunch, there is always some effort of preparation, borne by someone. This would be always true (tautological). You can also understand the slogan in a *strong* sense: *Overall*, there are *no idle resources viz. the economy* is running at full capacity; so that any additional demand e.g. by the State would entail an immediate and equivalent reduction somewhere else ("*crowding out*"). The plausibility, hence ubiquity of this thinking comes from not distinguishing between the weak, banal sense, and the strong sense (which in this case is equivalent to hypothesizing away the possibility of an output gap), such that a cliché seems to teach economic wisdom.

appears in many neoclassical books and articles in economic libraries written in the last 100+ years, this unemployment meant is of a small-scale and transient nature¹⁷. Full employment either occurs naturally, as the classical model predicts, provided that wages, prices and interest rates are fully flexible, or, failing that, can be achieved by some deficit spending and manipulating interest rates downward (= by providing a high Tobin-q environment). Only recessions can occur in neoclassical thinking, not an outright *depression* (=a structural, longer term output gap).

Let us give a little more methodological depth to this blind spot of neoclassical economics in a condensed fashion by using the following analogy¹⁸:



This situation is called a *deadlock*: The automobilist sees only that in front of her traffic is jamming, but not that the distribution of automobiles in time and space is blocking *itself*. The deadlock is visible, exists so to say, on a macro-level only. Furthermore it is *path-dependent* (in time and space): Had one of the car-lines passed a bit earlier, the others might have passed unhindered as well.

There is a very important body of neoclassical work, the engine for neoclassical reasoning on almost any topic, called General Equilibrium Theory, which is firmly and emphatically based on micro-foundations (only). The components of the models (the production- and utility-functions, the 'factors of production' like capital) are structured in such a way that the equilibrium, the globally optimal solution, exists, is *attainable*, and is also *actually attained*. Deadlocks are thus excluded a priori.

In the economic realm, a deadlock-situation could be formulated thus:

The firms know how to produce their output, and they could easily produce more of it - much more if we have significant un- or underemployment, as then additional labour is available at the going wage rate. The firms will only do this if they deem they could actually sell this

17 The only exception is the disequilibrium-style Keynesianism of Clower and Malinvaud, which has remained relatively marginal and did not become policy relevant. Unemployment can therein be a more tenacious problem. The reason advanced for it – the 'market imperfection' - is a special type of auction, such that transactions would take place at the 'wrong' prices. This inefficiency is an implausible ad hoc assumption. If the auction is so bad, then capitalism would evolve and new platforms/markets/exchanges/auctions would open, which work better. Also they have not been clear on the solution to the problem of larger-scale unemployment should it emerge, instead focusing on justifying their disequilibrium mechanisms. Deficit spending hinges critically on multiplier effects which are too low, and simple money-finance without reserving will become inflationary longer term. Implementing it without a temporary constriction of consumption spending in order to give precedence to industrial capacity building, means it may become inflationary short-term if the propensity to consume out of income is high. All these legs are necessary for a sustainable and inflation-free solution to the problem of underemployment.

18 Picture from Gary Nutt, Operating Systems, 1997.

additional production. The unemployed, on the other hand, do not have the purchasing power to buy it, and would need to get a job first, then the money for their work, and only then could they buy the products they crave. Each side needs to wait for the other to make the first move - till then, things stay put – a classic deadlock.

The deadlock emerges in the above picture because the 'world' pictured in it has a certain *structure*. There is a street-grid, and a number of cars in it, and certain rules. With different rules, the deadlock may not emerge. If the cars were allowed to move in 3-dimensional space, for instance. Or, more radically, too little structure - if there were no grid at all. This would remove essential constraints of the world pictured.

Similarly, 'capital' framed as a homogeneous entity in neoclassical thinking, is a spurious assumption which *removes* constraints, and has in itself 'too little structure'. It is hidden deep down at a very basic level of economic theory-design.

Thanks to this assumption, full employment and no-deadlock are theoretically guaranteed.

Economics is often defined as *the study of scarcity*, of using limited means for competing ends. While this doesn't sound wrong, it moves the focus of attention away from something very interesting. An economic deadlock is like a *reverse-scarcity*. There is not a scarcity of something *real*, there is only a *real* surplus – un- or underproductive human potential, the most precious real resource of all. This would be next to impossible to conceptualize within the scarcity-economics-approach. (The scarcity is in this case *purely financial* - so the deadlock should also be addressed financially).

Relaxing the simplistic assumptions about the nature of capital does not mean that 'anything' could happen, or that the analysis becomes computationally intractable. That depends on the concepts used for an analysis. Obviously, whole branches of exact sciences, like statistics, are based on a so-to-say newly discovered simplicity on a meta-, or macro-level. You do not need to follow or model the behaviour and interactions of each molecule of a gas with the others, in order to make scientifically highly accurate statements about the properties of gases, as little as you need to follow up on each individual's unique trajectory towards death, which often comes unexpectedly, in order to successfully run the business of insuring against or more precisely around it.

Our analysis from above has two immediate consequences which simplify the thinking about the economy enormously. First consequence: Since most asset prices do not converge to 1, they simply acquire a kind of autonomy of their own. In Tobinian and all other neoclassical thinking, them being above replacement cost of 'capital' catalyses automatically real, broad-based, overall economic investment activity. Second consequence: The latter is simply *not* catalysed. At least in the major part of ordinary real economic activities.

Tobin thinks – due to the undercomplex concept of capital - that by manipulating interest rates downward, *all* economic activity is 'floated'. That is not true. Only a minor part of economic activities is floated, and it is a part which one shouldn't want to float.

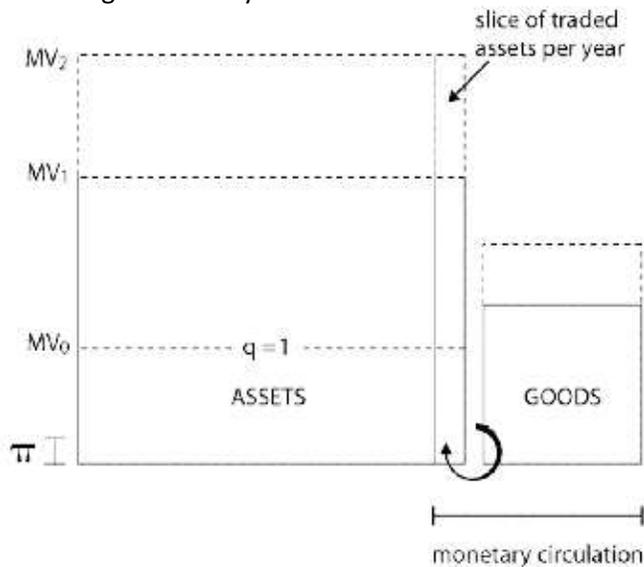
The two consequences could be restated shortly thus: a) Emergence of asset bubbles. b) Possibility of not just cyclical unemployment, but unemployment of a more tenacious nature (a *depression*, an economic deadlock).

In the following we shall summarize the analysis in macroeconomic, i.e. monetary terms.

All economic transactions are money-mediated by definition. The transfer of assets is commonly referred to as *saving*. It is easiest to picture it within a basic intergenerational context: Assets embody purchasing power, and a slice of them is *handed through* from old to young every year: The young forego some consumption, in order to save, while the old draw down their assets to finance their consumption while in retirement from active work. With asset prices acquiring a degree of autonomy, this value component of assets will now bind a certain quantity of money to transfer it. *This* money-component does not exist in neoclassical thinking. Neoclassical thinking knows only one money-quantity, that mediating goods and services, since asset prices are 'at reproduction cost', in the long run equal to normal goods prices ($q=1$). But autonomous asset prices bind for their intermediation a separate, commensurate, autonomous part of the quantity of money.

Secondly, with asset prices acquiring a degree of autonomy, there is now also an 'autonomous' financial wealth-component (viz. Korea's former example).

The following sketch may serve as an illustration:



The adjustment mechanism which clears the money market is the now 'autonomous' asset price level. Assets can be: Real estate, stocks, and bonds (to some extent commodities when used as a device for 'speculative'=purely financial demand).

Let us illustrate it one last time in a context of either 'quantitative easing', or the normal way most Central Banks operated – who would automatically finance any asset boom, so long as goods prices inflation stays low, from 1980s Japan, to 1990s Korea, the USA, to Ireland¹⁹.

The demand for goods in terms of private consumption depends on what Milton Friedman called the permanent or projected lifetime income, composed of income and savings (or debt). The operation of the Central Bank buying some existing bonds leaves *both totals unaffected*. It only changes the composition of the total financial wealth in the whole economy. Since both income and total net worth remain the same, so will private consumption.

Hence there will also be no goods prices inflation due to higher consumption demand.

¹⁹ Whether the Central bank buys longer dated Government bonds with the beneficial side effect of virtualizing this debt, or takes in at face value certificates issued by banks, which finance the real or asset booms, is at bottom not much different. It provides the money finance for these things to happen, in an economy as ours with fiduciary money a *conditio sine qua non*.

On the other hand, a part of the assets has now been replaced by money, which introduces some excess liquidity in the system. Some agents (or the economy as a whole) have now *more* money on their hands than they actually need in order to power/mediate their desired goods-and-services consumption, and also their desired asset-transactions, at current prices. How is this excess liquidity 'purged' from the system – what is the adjustment mechanism? If it is not spent for consumption, people will spend the excess liquidity for assets (= they want to save it). This drives up the price of assets. If asset prices move higher, this also requires more liquidity to implement the asset transactions at the now higher prices; their quantity remains unchanged. At the new, sufficiently high asset-price level, the excess of the liquidity will have vanished, because all of the money will now be needed for either the turn-over of real things (this component hasn't changed), or the turnover of assets. And no new real investment, no investment boom is automatically triggered by high asset prices as such. A boom may be triggered by the *positive wealth effects a rising q creates*. And by the manufacture of the real things which underlie some assets, in particular real estate (buildings). In distinction from neoclassical economics, inflation of goods prices can now also be driven by the autonomous price level of assets.

The above-sketched theory avoids the Achilles-heel of Keynes' liquidity-preference theory, of 'withheld spending' lost to the real economy in being simply stored in cash. Our theory allows for another logically consistent manifestation of 'unproductive savings', in that they can be imagined to be spread across all sorts of assets other than cash, manifesting themselves in a value component above replacement value. This would be a far bigger reservoir to absorb idle savings than cash could ever be.

The differential between financial and profit rates can persist, as there is no process by which these two rates would converge. Indeed, I would contend that it would be difficult to make sense of the real world were it otherwise. That means there is no 'natural rate of interest', as Wicksell would have it, or an equilibrium rate of interest, which equilibrates the economy intertemporally. There is however a financial rate of interest, which is the equilibrium rate in the financial sector, balancing asset prices with the money-supply as provided by the Central Bank. Various assets can be impacted differently by trend-following behaviour, the important point being their prices need not come down to $q=1$. Real profit rates are *prima facie* independent from money interest rates. The economy is potentially intertemporally inefficient, as output gaps can occur.

In that real profit rates acquire a kind of autonomy of their own independent from interest rates, the present take on the economy would naturally blend with those of David Ricardo, Karl Marx, and Piero Sraffa. As in Marxian thought, an 'industrial reserve army' of unemployed is a possible, long term phenomenon. Further, real crisis could be triggered by purely financial developments, another important point in Marxian thought.

Also, our economic description is quintessentially *Keynesian*: It is effective demand which determines the level of output, hence the level of employment. This is so because there is nothing else left to reliably expand output and employment from a supply-side, so to say (specifically $q>1$ isn't enough).

And yet, it is based on the full equilibrium, full competition, market approach²⁰.

20 And as yet I cannot see any realistic alternative. The 'left' nowadays does not even have an economic theory any more, instead, 'taming' the economic by 'the political' in a basis-democratic kind of way is spoken of. Would you as a patient want to decide, together with the nurses and doctors, and each has equal 'voice', what happens in the operating room, while anybody can take coffee breaks? I think not. Similarly, the economic is a fully crystallized

Lastly the approach is very robust: Expectations can be as rational as you like, the sizes of spending multipliers play no rôle (whereas they are critical for the deficit-spending-style Keynesianism), all markets are in equilibrium, no special type of auction, no market imperfection, no institutional (extra-economic) rigidity anywhere.²¹

The very fundamental generality of the argument, involving no mathematical complexity whatsoever, is what makes it so strong. While the run-of-the-mill Keynesianism breaks down under strong market rationality assumptions, which work around its flimsy rigidities, that products are not 'the same' and that financial markets exist, is pretty hard to deny.

The most important conclusion from the above is:

Since products are not 'the same', the financial value of the product-producing stock of capital can deviate very substantially from its real or reproduction value. This would in effect open up the possibility of 'purely financial' investments, and profits, which are not accompanied (at least not necessarily fully) by commensurate real investments. Hence unemployment may occur and persist.

Poverty=underproduction=underemployment, far below what would be achievable with the currently known technology and logistics²² and the market *can* coexist for extended periods of time, as they do and historically did in many regions of the world.

In the following a few less theoretical, more policy-relevant points shall be addressed in loose order.

We have seen above that all neoclassical thinking about the economy takes full employment for granted. Depressions, major and tenacious output gaps, cannot exist.

That is why in the last 100 years or so, none thought about a solution to a non-existent problem. There were earlier economists who took 'the flaws of capitalism' like unemployment, poverty, and financial crisis more seriously, like Karl Marx. Amazingly though, they did not offer any substantial answer on what they intended to replace it with. The meagre semblance of an answer would run thus (Engels 1880): *"The proletariat seizes public power and transforms by this power the means of production slipping away from the hands of the bourgeoisie into public property. [...] A social production along the lines of an explicit plan now becomes possible."*²³

subsystem of society, with its own rules and complexities, the acts of which are closed by handing over a substance called 'money' (which could serve as a non-tautological definition of economics). If the rules of the game are not understood, messing with it is a recipe for disaster. That does not say anything yet about the extent of property rights. The market can be part of a highly egalitarian society, with tax finance of many services (like in Sweden), or not. Here people should be free to choose politically. And by eliminating deadlocks, it were also prosperous societies, either way.

- 21 Like the Indian blind men describing an elephant – 'The elephant is like a snake!' – 'Not so, it is like a column!' – 'Nonsense, it is like a fan!' – different economic schools seem mutually contradictory, but when one can find a simple, economical way to reconcile much of them, I cannot help noting that this feels like the hallmark of truth.
- 22 Here again, it would help to lift confusion if you look at these things in real or engineering-style terms. In the 1990s, after the first euphoria of German Reunification abated, you could read in the economic press that realistically it would take Eastern-Germany 40 years to catch up. What!? While whole, giant economies can reach growth rates of 13 % per year? What would Hitler have said if someone told him in the 1930s: Look, the economy is weak, we are in a depression, like the rest of the industrial world, globalization, mutual interconnectedness, y'know, so realistically, it will take a bit longer to build up for your war, you can have it in 1975... Realistically? While 7 million Germans are hanging out in the streets doing nothing? Surely they can lend a little hand, right? But you can amuse yourself with the disastrous so-called advice, dispensed in all earnest by our dismal scientists...
- 23 My translation of: *"Das Proletariat ergreift die öffentliche Gewalt und verwandelt kraft dieser Gewalt, die den Händen der Bourgeoisie entgleitenden gesellschaftlichen Produktionsmittel in öffentliches Eigentum. [...] Eine gesellschaftliche Produktion nach vorherbestimmtem Plan wird nunmehr möglich"*. In *Die Entwicklung des Sozialismus von der Utopie zur Wissenschaft* 1880.

While having a plan is a good start, for a project this size it is imperative to be more specific. Apparently he held that with the end of 'exploitation', everything would be OK, and 'the workers' can run the economy by-the-by. This is simply naïve, as it is not taking seriously economic-organizational questions of the greatest importance. You can hear the echo of this still in communitarianism. It is similarly true for other, more marginal economic schools thereafter. 'Critical discourses' of various kinds are developed, without offering any macroeconomic solution on how to do things differently (they are purely descriptive and have no economic alternative to offer). That is certainly not the case for my approach. It is also not based on a 'new' or 'different' economics, but on the simple quantity theory of money and the classic market-model itself, with only a minor change. The latter involves a more realistic treatment of what 'capital' is, by focusing on money traded assets and product differentiation. Since these exist, that makes it very hard to argue with. It subtly pivots the whole edifice of neoclassical economics by 180 degrees. It has the advantage to preserve the microeconomic *acquis* and plausibility of the neoclassical paradigm, but to avoid its macroeconomic and financial implausibilities. Phenomena like tenacious underemployment and asset bubbles are hard to tackle in the original framework, and are hence flatly denied by its adherents, but become effortlessly explainable with this one stroke.

Let us now go back to the 'deficit spending'-Keynesianism. In order to recommend deficit-spending, you *must* suppose that any slump in output is only temporary, or cyclical, around the long-term full employment trajectory. Otherwise, i.e. if structural output gaps, or outright *depressions* were possible, as opposed to mere *recessions*, debt-financed spending would be unsustainable.

It is in fact astounding to observe how the mainstream view can so universally hold sway (Wittgenstein used the term *bewitchment* for the unbelievable grip certain doctrines can have on the minds of men), despite important inconsistencies. One can read often in the papers, at the current period of wide-spread unemployment: *We cannot continue to live at the expense of future generations, we have to tighten our belts etc.* Consider the issue not in *financial*, but *real* terms: How *could* you ever live 'at the expense' of future generations? Have your unborn children's children already worked their hands weary, to produce the goods you now consume? By which magical operation do you transport the goods from the future into the now? If additional debt-financed Government spending now is at all successful in bringing about the production of additional things *now*, this additional production is provided by those present *now* (instead of them being idle or unemployed), and can obviously not be transferred forward by some financial tricks or wizardry. What have the future generations in 2060 (some Government bond maturities go that far), and the taxes they inherit to pay them off, got to do with our present economic demand-deficiencies? For consider the *nature* of *debt*: Debt makes sense if current resources are strictly *limited* (respectively the economy is at full employment, viz. output cannot be increased). The size of the pie is so to say a given: If you want to have more of it now, this can only happen if someone else has less of it now, - so that you are *indebted* to him. In a situation of an output gap, it no longer holds that someone else must have less, exactly in proportion to another demanding more, as the size of the pie can expand. Debt financing of Government outlays makes only sense if no output gap or unemployment are present²⁴. If it is, the output gap should be closed by 'virtualizing' this part of the additional

24 As Nobel laureate James Buchanan noted (in his *Palgrave* article on Public Debt): "*The Keynesian argument was driven by a stance on policy that viewed public debt as the only means of financing demand-increasing deficits during periods of depression. The primary policy instrument of Keynesian economic policy was the budget deficit, and there was an elementary failure on the part of pro-Keynesian economists to recognize that demand-enhancing*

spending. If it is not, meaning that the additional spending is financed not by virtual debt toward oneself, but by real, external debt toward non-Government organs (as is mostly the case), then this unnecessary and in fact illogical inflation of real, external debt creates a problem of sustainability in the long run.

It should in fact be very questionable that debt-financed outlays *could* at all create net added value²⁵ or an economic stimulus, as you *take away* with one hand elsewhere what you spend with the other, - so that the net effect would be zero.

This issue was rediscovered by economists not so long ago, and it was then denied that so-financed (Keynesian) spending is at all effective in raising output (instead of questioning its logical necessity in the face of an output gap). The incontrovertible empirical fact is, however, that *even* external-debt-financed spending is *effective* in raising output. This fact would indeed be very, very hard to explain within the neoclassical framework, where money only circulates as a shadow-image of goods-and-services exchange (GDP) since $q=1$. It *can*, however, be effortlessly explained if purchasing power stored in financial assets can somehow be *swapped out* by some financial operation, and would now become effective as additional purchasing power in the goods sphere. This would again point toward *two* components of the quantity of money (one mediating asset transactions and the other mediating goods- and services transactions), as explained above, from an empirical perspective this time.

For the last two decades no Central bank (except in China) implemented any policy to subdue asset bubbles. In fact even their very existence was denied, which is quite remarkable when considering their magnitude. At best the bubble was viewed as a transitory phenomenon accompanying a rock-solid real economy, which was seen as the true driving force.

That position has been disproved above – the real economy is less resilient than economists think, because they have a wrong theory of interest rates and their financial mirror image, asset prices, due to an undercomplex capital-concept. Their theory implies that a) lowering interest rates gets a real boom automatically under way and b) big, longer-term financial bubbles don't exist ($q=1$). The reverse is true: It is the bubble which can drive a real economic boom via *wealth effects* (ultimately Central Bank financed/enabled).

Once the process reverses (asset bubbles deflate), this would become a major problem if:

- a) The bubble-activities and their ripple-on effects constitute a major part of the real economy (like the former 20 % construction sector in the Irish GDP); and/or
- b) The additional purchasing power created by the bubble is *swapped out* and used as collateral for financing present consumption (like in the USA). If this credit-financed consumption constitutes an important part of total consumption, a problem arises when the bubble deflates, for then you are left with the bills and no job.

So if the bubble-activities themselves, or the activities financed by the bubble, constituted a very considerable component of domestic demand, which has now broken away, then the recession will be deep, because the country has so-to-say find a new business model.

And now that the big bubble – the existence of which was denied in the first place - *has deflated*, and Uncle Sam and the Irish Government own most of their respective local real estate, some economists suggest to create more inflation.

deficits could be financed with non-interest bearing money creation. If this macroeconomic objective is the only justification for the creation of budgetary deficits, it becomes totally unnecessary to impose the future-period taxes that debt interest reflects. Money creation in such settings carries with it no future-period burden." Indeed – but he didn't elaborate as he is an adherent of the neoclassical, full employment school of thought.

²⁵ As already David Ricardo noted in his *Principles* in 1817.

Since debt financed spending is unsustainable in a large recession or depression, especially so when debt levels are already high, and if one thinks only in terms of the conventional two means of finance: *simple* money (forgetting the influence reserving has on the money multiplier) and *simple* debt (=external debt) - then inflation is indeed (apart from outright debt repudiation) the only way to 'repair' the balance sheets of the public and private sectors, without defaulting. However there are two problems. Firstly the magnitude of the bubble and the potentially large dose of inflation required. This device has the effect of rewarding the speculators, who are reflat²⁶, at the expense of the others, the people working for their income, in real jobs, the cautious, who didn't speculate. So the second problem is a political one when trying to implement it, and an issue of social justice.

The consequences of our theory for monetary policy are quite straightforward: In order to forestall excessive demand for goods coming on too fast, which drives up their price (inflation), it were well advised to monitor and actively manage potential spillovers of the money between the asset and the goods sphere. The suitable instrument to do that would be a proactive and strict imposition of minimum reserve requirements at the level of the banking system. As an empirical input for the rates of reserving required, that demands the monitoring of multiplier effects and economic dynamics, and the discriminating between different kinds of credit. By adjusting reserves required for credits for: consumption, or real investments, or investments in 'real' estate, or asset purchases etc. one *could* finely manage the quantity of money within the two spheres of the economy, and contain goods and asset price inflation at will, even in the presence of a large Central Bank balance sheet.

But the instrument is not used – so that, medium term, some of the new money issued in a 'quantitative easing' context (or one where private banks – abetted by the Central Bank – issue new money/credit derived from asset appreciation) will result in some undesired goods price inflation, which presumably, in the simple theory of the 'hawks' who knew it all along, would lead to them cutting back on virtualizing debt (in association with equivalent demand creation the one thing which has the power to cure an economic depression), and hike the old interest rate, in order to get inflation under control. They could have achieved that by the reserve-instrument without forcing the economy back into recession.

Even 'Draconian' reserve requirements would merely come in the form of temporary high collateral-coverage for credit, which is a good thing, for it discourages financial speculation plays. In effect, it would replicate, and this time also *financially* (*first* the saving, *then* the consumption), which is what happens in the actual, physical process which provides this consumption. *First* the investment, and the production, then – for whole economies with large output gaps a few years later – the consumption. When full employment is reached, the economy may sustain itself for a while, - or not, if you continue to curb asset prices. But by now you know you don't have to rely on the asset booms – with their wasteful side-activities and their unsound, shaky finance - any more in order to achieve full employment.

China

In this and the next chapter we address the empirical question of whether, perhaps, the here-proposed economic policy was already put into practice somewhere. We require large output

²⁶ That would also suggest that medium to longer term, the multipolar Euro should be less inflationary than the USD or GBP. Because in the latter cases, the property bubbles were on a national scale, hence some measure of reflation is tempting, whereas in EMU only Spain and Ireland – the minority - were affected.

gaps to start with. These could be the result of a large decline in output and employment = an economic depression. Or else because the country simply never had a high output and productivity in the first place, being a 'developing' country. Further, due to the non-Keynesian nature of large output gaps, we need a large, multi-year, long-term macroeconomic spending and development program inducing capacity building, while microeconomically the economy should be based mostly on market mechanisms. Critical is the financing side of this massive development program, where the Central Bank needs to play a decisive rôle in enabling it, bridging the purchasing power deadlock. In order to avoid the crowding out of capacity building by production for consumption, and to avert goods prices inflation, this must be accompanied by a constriction of consumption, either by a naturally high savings rate or high taxation. One likely contemporary²⁷ candidate would be China, where the Central Bank is part of the Government. It need not be the case that the Central Bank overtly provides direct money financing to the Government, it can happen in a more hidden, yet ultimately equivalent way. Remember that the banking system there is also owned by the State, and the State can and does order the banks to provide more credit for specific purposes or regions on a large scale in connection with its 5-year development plans. If Ben Bernanke can contrive to provide his commercial satellite banks with virtually free money for credit creation, so can the Chinese Central Bank with the banks in its jurisdiction. Credit creation in the banking system is, by operation of the money multiplier, also purchasing power creation, just like virtual debt finance would be. In contradistinction from it, the private banks' credits will have to be paid back later. In the case of popping asset bubbles, this creates a problem of bank solvency of course. In the Chinese case, that is so far not a big problem if the development strategy, the projects financed by the loans, are reasonably well selected. China being a developing country comes from a low base, and has achieved by a sensible economic policy very high real growth rates, which – in order to attain full potential in line with currently known technology – can be projected to last for roughly another two decades. A growth rate of 10 % means a doubling time of seven years only, and this provides an enormous safety buffer for a banks' loan book. Even if it contains quite a few dud loans due to inept decisions by bank managers in collusion with regional politicians, they are likely to be compensated by the good ones. The Chinese Central Bank keeps interest rates low, using minimum reserve policy to contain inflation (in combination with fiscal measures) – bravo - and this mixture has the effect of engineering an easy monetary flowback to validate the loans: 3 % interest rate on loan, 4 % inflation, 13 % real GDP growth, and 19 % growth in exports per annum. If the development project financed by the loan is even halfway sensible, it is likely it will subsequently be monetarily validated by sufficient flowback, because of its cheap funding cost and the high nominal growth of the economy in general.²⁸ This state of

27 An older example is post WW II Japan. Credit cards and loans for consumption were hardly existent or used, very high saving rates the norm. The almighty Ministry of International Trade and Industry (MITI) coordinated industry and set aggressively higher production targets year-on-year for industrial capacity building, which were routinely financed by new money and cheap credit – the money being provided by the Central Bank and its affiliated commercial banking system (by operation of the money-multiplier), the credit by the newly set up Japan Development Bank. Inflation was with around 6 % higher than in other industrialized countries, but so was the real growth rate which was still above inflation. After 40 years of this policy Japan – a country with very little natural resources - rose to being one of the most prosperous nations on earth. At the close of the 1980s the super-asset-bubble which was allowed to develop on stocks and real estate collapsed, while the debt overhang (another phenomenon inexplicable by neoclassical economics) was preserved, which dragged the real economy into stagnation for the following decades.

28 Even if this were not so in some cases, it is no major problem either, because most Chinese commercial banks are already 'bailed out' by being State-owned, and can be kept afloat by yet more cheap funding and recapitalization from the Chinese Central Bank (or other entities benefiting from an expansionary monetary policy of the Central Bank).

affairs is in essence similar to Central Banks in Western economies automatically financing an asset boom – the difference is that the investments so financed arise in the one case 'spontaneously' from 'the market', such as the apparent demand for ghost estates in the Irish countryside, and are in the other case consciously and carefully selected with a view of promoting long term technological and economic development, like high-speed train networks. Let us now address the argument that the Chinese economic miracle comes in fact from an export-led growth-strategy involving cheap labour costs. That labour costs are cheap in developing countries, in line with cheap prices for non-tradable, domestic products, is not China's fault, it's in the nature of things. An export-led strategy as an initial catalyst for growth makes a lot of sense for technologically backward countries, as it invites in a decentralized, non-macro-managed way foreign capital and technical know-how in order to build the industrial capacity to churn out the products the 'first world' craves. Another beneficial side effect is the accumulation of foreign currency due to net exports, which can be used to buy more foreign technology and know-how in order to advance local research. After the technical know-how has been acquired, though, progressively more Chinese employees are sufficiently productive hence affluent to afford themselves the flatscreens before glued together for the use of foreigners, and the export-strategy loses a lot of its lustre. You can read off the waning of the importance of this export-strategy from two things: Most of the foreign currency reserves accumulated from net exports are not even used to buy foreign goods and technology any more, but simply held in foreign treasury bonds. And secondly, domestic technological know-how is now sufficiently advanced in order to produce locally technologically accomplished goods (soon even including stealth-fighters, efficient and safe nuclear fuel technology), the production of which can also be financed locally, on any scale desired by the above-sketched mechanism (so long as output lags potential), in order to promote domestic prosperity without any need to export something for acquiring foreign currency (not being put to much use anyway). In the next chapter, we shall briefly review the little-known and misjudged, but highly instructive case of a technologically fully developed country - without any export- or development-issues - after experiencing a large-scale economic depression, that of Germany from 1933 to 1938.²⁹

Germany 1933-38: The Nazi Recovery

In 1929 a financial crisis swept the world, starting with a hefty slump of asset prices in the USA. Even back then, with a less integrated world trade exchange as compared to today, contagion quickly spread, and a real crisis came in its wake. A few years later, in 1933, the unemployment rate was 25 % in the USA, and around 30 % in Germany. Very likely in large part due to the destitution and discontent such a number represents, Hitler came to power in 1933. The following table gives the evolution of GDP and other figures in Germany from 1932-1938 in billion Reichsmark (bn RM), else in fractions³⁰:

29 We are focusing solely on the financial aspects of economic policies, which could equally well be implemented by democratic States. That in the case of Nazi-Germany, the leadership was pretty much evil personified, and the ultimate political aims utterly objectionable by all accounts, moral, humanistic, the Enlightenment etc. should not deter us from assessing the economic policies as such. Further, the nature of the additional production – whether it be U- or sailing-boats – takes 2nd seat, what interests us is how the demand pick-up was financed.

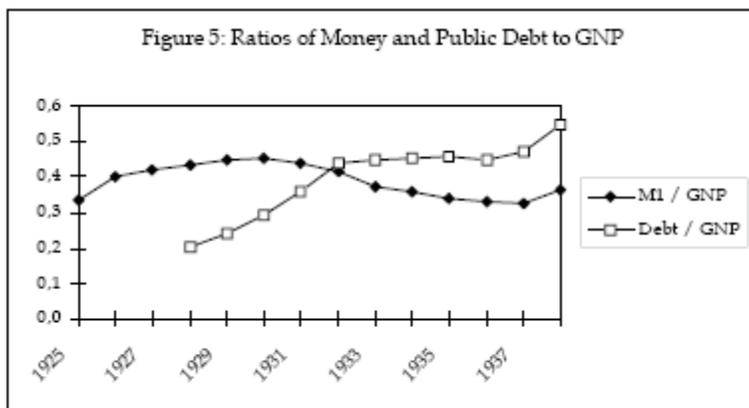
30 The GDP figures are from N. R ath (2009), *Rezessionen in historischer Betrachtung*, a publication available from the Statistisches Bundesamt, inflation-adjusted figures of GDP are with respect to base-year 1936, Investment-figures from Ritschl (2000, working paper): *Deficit Spending in the Nazi Recovery, 1933-1938, A Critical Reassessment*.

	1932	1933	1934	1935	1936	1937	1938
GNP	56.7	58.4	65.5	73.1	81.2	90.9	100.2
GNP inflation adjust	59.1	62.8	68.2	74.6	81.2	90	99.2
GNP Nom growth		3%	12%	12%	11%	12%	10%
GNP real gr		6%	9%	9%	9%	11%	10%
inflation		-3%	4%	2%	2%	1%	0%
Investment	4.2	5.1	8.3	11.6	13.8	16	19
Public Investment	1.05	1.683	3.32	4.64	5.52	6.4	7.6
Inv/GNP	7%	9%	13%	16%	17%	18%	19%
Loan share (work)		0.63					0.57
Loan share (work) in bn RM		36.792					57.114
							55%

GDP increased at a very brisk pace since 1933. Inflation was not an issue, as you see in the subsequent line, most of this growth was actually in real terms. Full employment was already reached in 1936. Even beyond that point, real GDP kept on increasing: This can only be due to either longer hours worked, new entrants to the workforce (like women), and/or substantial improvements in productivity due to high investment. When looking at the investment figures, you see that their very rapid increases are actually driving this boom. About 40 % of this investment are direct public projects/works programs, the rest is investment for private goods' production, or for yet other production demanded by the State (e.g. armaments) going to private firms. Since the loan-and-wages share of the economy decreased from 63 % in 1933 to 57 % in 1938, most of the increase in investment spending must have occurred for the provision of State demand. Still, total wages paid out, and available for consumption spending by the workers, increased from 37 billion Reichsmark to 57 billion within 5 years, that is by 55 %. So not all of the additional production went into arms (*guns, not butter*), but a substantial bit went into better living standards as well.

How was all of this additional spending financed? By Keynesian-style deficit spending? Maybe, as Joan Robinson remarked: *Hitler had found a cure against unemployment before Keynes was finished explaining it?* This Keynesian-orthodox position was later challenged, with the argument that actual Government deficits and the associated debt-build-up were in fact not that large. So Ritschl (2000): *"We conclude that the Nazi recovery was not a textbook exercise in Keynesian demand stimulation, although the state absorbed an ever-growing share of the idle resources for its own use. Economic recovery in Germany in the 1930s remains the paradox case of public demand expansion without Keynesian demand creation."* And, before that: *"In sum, the results of this section suggest that Keynesian fiscal impulses were present in the 1930s but remained too small to account for the Nazi recovery. In contrast to what research has shown for the U.S. and Britain, we do observe a Keynesian policy cycle in the German data. However, the magnitudes remain doubtful. In order to be consistent with Keynesian assumptions, public deficits between 1933 and 1935 would have had to be two to five times larger than they actually were. In addition, the sluggish response of private consumption to fluctuations in disposable income suggests that there is little of a Keynesian textbook-style income-expenditure mechanism being operative in Germany at the time. Apparently, fiscal policy was not the instrument that engineered the Nazi recovery."*

Among others he produces the following interesting chart (Ritschl 2000):



Ritschl states: *“The remarkable stability of the debt/income ratio during the 1930s is once again an indication that fiscal impulses are unlikely to have generated the Nazi recovery. Had deficit spending been the major demand impulse, the increase in debts should have been higher than GDP growth.”* I would tend to disagree with this, but anyway - after real GDP increased by a staggering 71 % within 5 years, total debt of the '3rd Reich' would still pass the Maastricht criterion of 60 % GDP max with flying colours. How come?

Let us have a look at the actual mechanisms involved back then. Hjalmar Schacht, a banking professional, was appointed head of the Reichsbank in 1933, in addition Minister of the economy in 1934, and from 1935-1937 in addition plenipotentiary (*Generalbevollmächtigter*) for war-preparation. He was also the driving force behind the scheme of Mefo-bills-issuance. Here is an extract from the case of the prosecution at the Nuremberg-trial against him (Source: Nazi Conspiracy & Aggression, Volume II, Chapter XVI, pp.738 ff.): *Transactions in 'mefo' bills worked as follows: mefo bills were drawn by armament contractors and accepted by a limited liability company called the Metallurgische Forschungsgesellschaft, m.b.H. (MEFO). This company was merely a dummy organization; it had a nominal capital of only one million Reichsmarks. "Mefo" bills ran for six months, but provision was made for extensions running consecutively for three months each. The drawer could present his mefo bills to any German bank for discount at any time, and these banks, in turn, could rediscount the bills at the Reichsbank at any time within the last three months of their earliest maturity. The amount of "mefo" bills outstanding was a guarded state secret (EC-436). The mefo bill system continued to be used until 1 April 1938, when 12 billion Reichsmarks of mefo bills were outstanding (EC-436). This method of financing enabled the Reich to obtain credit from the Reichsbank which, under existing statutes, it could not directly have obtained. Direct lending to the Government by the Reichsbank had been limited by statute to 100 million Reichsmarks (Reichsgesetzblatt, 1924, II, p. 241). Schacht has conceded that his mefo bill device 'enabled the Reichsbank to lend by a subterfuge to the Government what it normally or legally could not do' (3728-PS).*

So in short mefo-bills were a substitute for Government bonds, which the Central Bank monetized/virtualized. In addition to mefo-bills, mainly used for armament spending, there were other such bonds, issued for financing the public works programs, called *Öffa-bills*. Both of these, *Öffa* and *mefo*, are already included in the outstanding public debt figures from Ritschl above. The total outstanding amount of mefo-bills in 1938 was around 12 billion RM, *Öffa*-bills little more than 1 billion.

Ritschl's 'paradox' is due to this fact, namely that these debt-figures are 'too low', in that they seem not compatible with the actual increase in production. A key to this puzzle is the position of Hjalmar Schacht, who, being at the same time in charge of a large part of the (fiscal) demand

management, and also the monetary authority hence its financing. If you go back to the last chart, you see that the sum of both of the two possible means of financing, debt- and money-issuance, expanded exactly in line with the gross national product itself, no less, no more. Some of the debt certificates were not monetized, but continued to circulate within the private sector, - being kept by some as a device for saving as they carried 4 % interest. As was stated in the Nuremberg-trial-excerpt, tellingly most of these debt certificates had very low maturities, of 3 to 6 months (but were extended on demand for those circulating externally). Many could come and go without ever making it into a year-end balance sheet. Since Schacht controlled both sides, the expenditure and the financing side, most significantly the Reichsbank, he could choose to 'virtualize' the bills by letting them expire on and within the Central Bank, or other funds he controlled, creating no 'external' debt burden for the State, or the quasi-State-agencies issuing these bills (which were Reichsbank-funded and State-guaranteed).

Hence the total amount left outstanding of those bills is certainly misleading, if the purpose is to judge thereby the total volume of goods and services historically financed by them. The amounts *left* outstanding and visible are at any rate too low to account for the total expenditure and production, but that was precisely the idea.³¹ One thing however is absolutely certain: *Either* the demand by the State for goods and services wasn't paid for - simply seized without, or inadequate compensation, likewise services being provided would not be paid for (at least not adequately = forced labour) - but this was not the case until after the beginning of the war in 1939, it didn't happen on a big scale up to 1938, - or else this demand *was* paid for, it was financed by something, and if that wasn't debt, it must have been money³². Since the demand - which was obviously mainly driven by accelerating State demand - did actually, historically occur, the demanded goods being produced, the private firms producing them making large profits, which were real (the profits of private firms from trade and industry rose from 6.6 bn RM in 1933 to around 15 bn RM in 1938), the latter must have been the case. In effect you can read it off the above chart.

Schacht, after 1938, proposed to phase out these financing devices, very likely because full employment was attained, and keeping them in place in order to finance yet more armament production would mean that this production would have to come about by crowding out private demand somehow (ultimately via inflation), which Schacht apparently didn't want to endorse. Hitler wanted nothing to hear of it and fired him 1939 from his jobs. The Reichsbank was placed under direct orders of 'the Führer' himself, who then decided on the volume of credit accorded to his own Government, and renamed it to *Deutsche Reichsbank*. This marked the transition to openly inflationary war finance. Till 1938, however, under the direction of the cautious and

31 As Ritschl notes: *"Issues of data quality have long obscured the precise timing and magnitude of deficit spending in Germany during the 1930s. From 1934 onwards, central government accounts were largely kept confidential. The information that transpired through official statistics and semiofficial publications did not suffice to obtain a full picture of the magnitudes involved. Moreover, large parts of the deficit were channeled through an elaborate system of shadow budgets, using the services of public banks and setting up other money-laundering devices. The clandestine nature of these spending programs has made it notoriously difficult to calculate their volume.[...] Obfuscating Germany's central government accounts had been an industry already in the 1920s, largely in an attempt to hide deficits away from the Reparation Agent's monitoring staff in Berlin."*

32 Or, the last possibility, tax. Taxation was indeed extraordinarily high in those times of rapid economic expansion, but for that matter I refer to my discussion of the Haavelmo-theorem elsewhere.

professional Schacht³³, who expanded money supply exactly in line to finance additional real production, but not more (in fact somewhat less, with a little debt left outstanding), in Ritschl's words: *"Conventional wisdom has it that the introduction of price controls in the year of 1936 marked the beginning of repressed inflation. The evidence in Figure 5 [the last chart reproduced above] does not lend much support to this hypothesis, except for the year of 1938. The money/income ratio did later skyrocket during World War II, ultimately leading to West Germany's currency reform of 1948, which reduced savings to about 15% of their nominal value. In the pre-war monetary data, however, there is only scant indication of repressed inflation."* And how did the USA fare meanwhile, in dealing with their economic depression? FDR *"was elected President in November 1932, to the first of four terms. By March there were 13,000,000 unemployed, and almost every bank was closed. In his first hundred days, he proposed, and Congress enacted, a sweeping program to bring recovery to business and agriculture, relief to the unemployed and to those in danger of losing farms and homes, and reform, especially through the establishment of the Tennessee Valley Authority. By 1935 the Nation had achieved some measure of recovery, but businessmen and bankers were turning more and more against Roosevelt's New Deal program. They feared his experiments, were appalled because he had taken the Nation off the gold standard and allowed deficits in the budget, and disliked the concessions to labor. Roosevelt responded with a new program of reform: Social Security, heavier taxes on the wealthy, new controls over banks and public utilities, and an enormous work relief program for the unemployed."*³⁴

So Roosevelt couldn't go through fully because the prevailing economic orthodoxy and establishment turned against him. He did achieve to reduce unemployment from the initial 25 % to around 14 % in the following years, but in 1937 unemployment rebounded again to 19 %. In 1940, the official unemployment rate was still an unpleasant 14.6 %, ten years after inception of the Great D. But soon, the necessity to go to war cut short any misgivings about deficits, and unemployment completely disappeared wondrously almost overnight, in lockstep with swiftly rising effective demand – go figure...

33 Interestingly, it was also in 1934 under Schacht's direction that novel legislation was created which allowed the Central Bank to require minimum reserves from the commercial banks under its jurisdiction. It was not used back then, as there wasn't any significant inflation, since the demand expansion was so engineered as not to overstretch the elasticity of supply, but the real reasons for this to be at all possible were a) as Ritschl notes, low multiplier effects=a high savings rate and b) already high taxation constricting consumption. Yet it shows that he was thinking ahead.

34 Source: <http://www.whitehouse.gov/history/presidents/fr32.html>.