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Reflection Around the Reality of Long-run concept: application to Money Neutrality

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Abstract:

According to my own thought I can assume that Economists often use the concept of long-term, without knowing that the said concept is the moment in which the major crises trigger. When the optimistic replaces the economic pessimism, the short-terms are born and the economic agents reproduce their stupid behavior which consists on the purchase of future transactions by the fictional creation of the money. The time, at the time of crises, increases speed by trying to settle transactions that occurred in previous periods in differentiated time horizons Present / Future.

Keywords: Time, Long run, money neutrality

Résumé:

Les économistes parlent souvent de long terme sans savoir qu'il n'est que le moment dans lequel les crises majeures se déclenchent. Au fur et à mesure que l'optimisme économique se généralise et commence à substituer le pessimisme alors les courts termes naissent et les agents économiques reproduisent leurs comportements stupides qui consistent en l'achat des transactions futures par la création fictive, dans l'immédiat, de la monnaie. Le temps, au moment des crises change de vitesse et augmente de célérité en essayant de régler les transactions qui ont eu lieu dans les périodes antérieures dans des horizons temporels différenciés Présent/Futur.

Mots clés : Temps, long terme, neutralité de la monnaie

Introduction

It is almost accepted that the monetary issue is one of the most debated topics without a consensus is reached. In the Wall Street Journal (1971) we read "A seminar of leading economists and experts of the International Monetary Fund, cannot be agree on what money is, not on how banks create them ". The classic debate revolves around two fundamental axes. The first stipulates that money is merely a means of transaction and can't in no way increase production which is determined ex ante by productive combinations of real factors (labor and capital). It follows that any increase in the currency, all things being equal, can be only inflation generator. But according to Keynesian thought this thesis is considered as dogma rather than science by giving to the money a positive effect on the real economy in the short term, but no long-term effect (hence its neutrality in the long period). Nevertheless, the central question on which J.M. Keynes cannot bring answers is the definition of the long-run. His citation that in the long-run we will be all died gave to this horizon a temporal dimension but not answered why money should be neutral?

However, a third way has emerged asserting the non-neutrality of money in the long run. The underlying problem with this argument is that it is not based on any theoretical basis. It is simply individual works that have responded to the stylized facts observed in some countries.

Thus the interaction between monetary and real variables remains viable and this research is still operated by economists hope that the empirical results converge towards a policy accepted by the business community.

Thus, in this general framework is developed our article which tries to study the interaction between monetary variables and real variables. The importance of this issue is twofold. First, we will try to understand the money reality and their real effects on real variables and secondly we will focus, our analyze, to redefine the long-run concept which is, in our sense, different to the universal definition adopted by economists.

II. The Money nature: myth or reality

The major problem is that the creation of money cannot be limited (especially the scriptural money) and by the extension of credit given by simple accounting entries (the feather money). The loans, especially in times of prosperity are given under lax regulation conditions. In other words, banks do not put significant barriers to access to credit. In what follows we will focus on the case of the US in which its monetary system had been the origin of all previous financial crises and possibly future.

When the question arises: who creates money then, many respond « the central bank ». However, if this response seems logical it is unfortunately false especially in the case of the United States where the Federal Reserve Bank is not considered a government agency but a private banking monopoly.

To slowly and surely advance our analysis we will try to expose the following testimonies. As an illustration we can refer to Thomas Jefferson which stated that « I believe that banking institutions are more dangerous to our liberties than standing armies. If the American people ever allow private banks to control the issue of their currency, first by inflation, then by deflation, the banks and corporations that will grow up around [the banks] will deprive the people of all property until their children wake-up homeless on the continent their fathers conquered. The issuing power should be taken from the banks and restored to the people, to whom it properly belongs ».

The famous banker Frank A. Vanderlip¹, known for his role in the creation of the Federal Reserve System, wrote « Despite my views about the value to society of greater publicity for the affairs of corporations, there was an occasion, near the close of 1910, when I was as secretive — indeed, as furtive — as any conspirator.... I do not feel it is any exaggeration to speak of our secret expedition to Jekyll Island as the

¹ Griffin, G. E. (1998). *The creature from Jekyll Island: a second look at the Federal Reserve*. Westlake Village, CA: American Media.

occasion of the actual conception of what eventually became the Federal Reserve System...We were told to leave our last names behind us. We were told, further, that we should avoid dining together on the night of our departure. ».

Logically we can say that the central bank and the bank system in USA are specific because they act as monopoly creating indefinite rents ex nihilo. This idea is confirmed even by politicians as Woodrow Wilson who considers that « the nation's growth and all our activities are in the hands of a few men ». The Congressman Jerry Voorhis (1943)² in his book, out of debt out of danger, had revealed the private nature of the Federal Reserve Bank asserting that « the Federal Reserve Bank has more than 15,000 private commercial BANKS ».

Thus, it is plausible to assume the private nature of the US central bank that we will later consider private and for-profit. A priori as private banks earn by granting credits, it would be difficult to limit them.

III. Non limitation of the Money Creation

When we admit the non-neutrality of money, in the short term, we recognize his positive impact on real variables (GDP) through bank credit channels that meet the investment needs of short, medium and long term. However, from a classical point of view, as we approach to the «steady state», any new money creation would be inflationary for the simple reason that the funds will be directly used to demand for consumer goods than investment goods.

This thesis, despite its simplicity and its abstract nature, brings us to raise the following points. The first is that the steady state is only a hypothetical situation and is part of the fiction of economists. Full employment, meanwhile, could never take place (even in times of war when all economic resources are assumed to be used and exploited) for the simple reason that the economy still able to support positive shocks and endogenous or exogenous technological progress which allows the firm to revise the initial productive combinations.

² Voorhis J (1943) Out of Debt, Out of Danger. Proposals for War Finance and Tomorrow's Money. 1943

The second remark stipulating that goods disappear through consumption while the currency remains in circulation is in turn a fiction because the currency can be destroyed at each moment (by monetary saving and hoarding or by different monetary policies). Therefore the money in circulation multiplied by the velocity of money should play the role of the money equivalent to the wealth created. Alas, this is a mere hypothesis and simple expectancy to fall haphazardly at the speed which provides said equivalence (We can imagine that the velocity can have more speed in one sector or in a region and not on any others). The intervention of the central Bank, as a regulator of the money supply relative to the demand that prevails in the economic cycle, is often questionable because the problem is that this institution is still in informational delay relatively to the real activities reflected into different markets.

The third point that we hold strong to explain is that as long as the money, especially the scriptural one, is created from nothing or *ex nihilo* creation (simple transfer of numbers from one Bank to another), then how we ask whether the granting of credit could it converge to a maximum? The answer to this question is negative because, *a priori*, money creation, for commercial banks, is without costs and therefore they still continue to credit the economy. Therefore, the logic says that this money creation should have an equivalent in production of goods and services. In fact, this cannot be occurred because it exist a delay between money creation and effective production. The other problem is that the gap between deposits that actually exist in the commercial banks and the volume of credit effectively creates will generate, in the future, a massive debts which affects both the developed and developing countries.

The result of this phenomenon is the simultaneous growth of production and the money quantity, which means and generates the inflation (if the money growth is superior to the production growth). At this stage of analyze, one question arises: why economists are attached and related to the money neutrality in the long-term? The answer to this question leads us to affirm that in such a theoretical framework, in which the banking system operates under economic optimism and under the benevolence of "*ceteris paribus*", the long term merges with the short term and the currency still produces wealth. The fourth point is the simple reproduction of the

famous principle stating that "those are the loans that create deposits rather than overnight deposits that create credit".

Consider the following theoretical model: suppose an economy that operates in a normal environment where banks extend credit out of nothing. Suppose the deposit amount with a bank amounts to D ; a fraction (β) remains in deposits while a fraction $(1 - \beta)D$ will be affected as credits.

$$C^1 = (1 - \beta) D, \text{ with } m > 0. \quad (1)$$

A fraction $\theta < 1$ of this global offer back to the bank, $\theta(1 - \beta)D$, creating new money in addition to the rest of the first wave $(1 - \theta)(1 - \beta)D$. New loans are equal to $(1 - \theta)(1 - \beta)^2 D$ resulting in an overall sum offers

$$C^2 = (1 - \theta)(1 - \beta) D + (1 - \beta)^2 (\theta) D \quad (2)$$

A fraction θ of C^2 returns to the bank and allowing to create a new credit will be $((1 - \beta)\theta)((1 - \theta)(1 - \beta) D + (1 - \beta)^2 (\theta) D)$,

$$C^3 = (1 - \theta)^2 ((1 - \beta) D + (1 - \beta)^2 (\theta) D) + ((1 - \beta)\theta)((1 - \theta)(1 - \beta) D + (1 - \beta)^2 (\theta) D) \quad (3)$$

It follows that the creation of money will ever be finished, all things being equal, explosively and does not seem to converge. The central bank which, in principle has the control of the money supply seems not, have, the will to stop this process, given the strength of the banking lobbies except in crises where these lobbies are pushing the government through the central bank for to save the banking system in crises period. The experiences have shown and consolidated this logic (especially the subprime crisis that had as main cause granting loans with no guarantee or equivalent guarantees in terms of goods or in term of wage work).

This massive and uncontrolled offer enables banks to generate rents because the major part of their income is generated by the grant of credits on which they have not their

counterpart. Other thing should be presented at this level of analyze is how can the system be in equilibrium when the banks grant credits from nothing and when their interests are not created? The mathematic resolution of this enigmatic problem is impossible when the money is considered only as a mass, but given that the money is also a flow the system can function until the crises emergence.

Such senseless credits allow the economies to produce beyond their real capacity and beyond the real and natural full employment (due to the overinvestment). Indeed, in the context of a monetary system where money creation had always a real counterpart (gold standard, gold exchange standard). So how does the company react in such a system? Logically speaking in face to excessive credit, the companies will be incited to overinvest to meet on a fictitious demand (simply because it is financed by loans granted on the basis of promises repayment). The result is that companies now produce what they should logically produce in the future (thinking that full employment is still not achieved). This Faulty logic collapses when a crisis of confidence will take place as was the case in the years 1929, 1995 (in the Southeast Asia) and 2007.

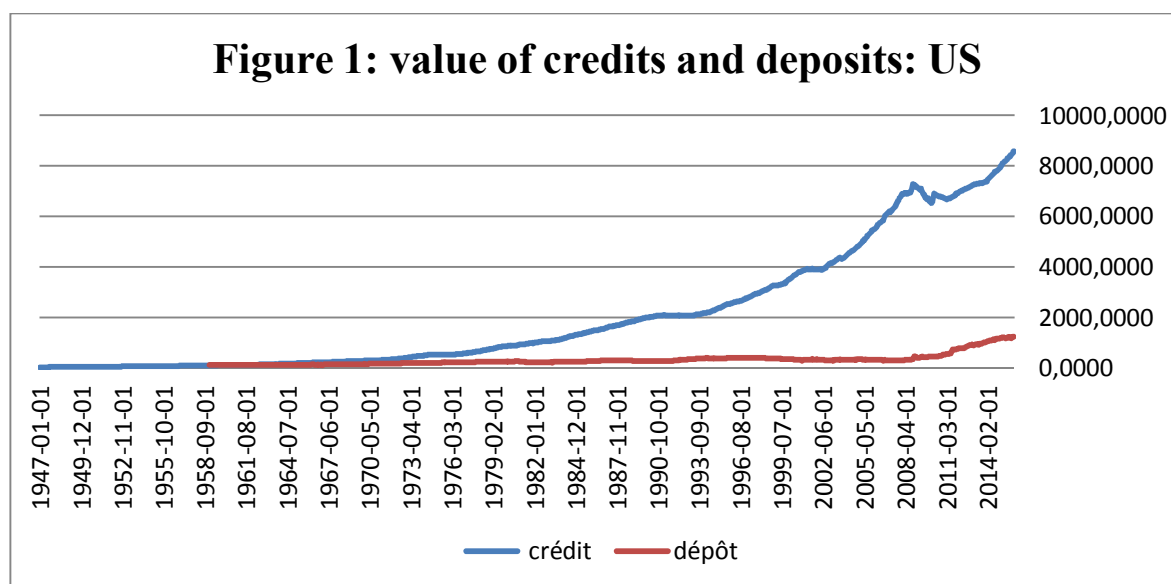
In the crisis period the economy should find the total amount of deposits. Hence, the obligation of banks to pay the duty payable to honor their commitments vis-a-vis his clients. The insurances should finance all risks inherent in the crisis and the all companies should honor their commitments vis a vis their creditors. In that time we can talk about the long term that defines in our sense as the time when the economy corrects the "Big Bang" generated by the explosive creation of money.

The long run is a fictional situation which has different senses according to the economists which used him (Alfred Marshall, Keynes, and Friedman). According to our point of view this is the time when economic actors begin to cease their activities and settle scores between them. This is done by excellence during financial crises. By analogy, the short term is the time horizon in which the economy operates without the economic actors require immediate settling of accounts even if this situation lasts long.

Therefore, the money is it neutral in the long term? Depending on the definition given by us to the concept long term» money can never be neutral for the simple reason that the loans are granted for no consideration and excessively from nothing. The enterprises react for meet new demands by accumulating more of capital. The endogenous or exogenous technical progress allows economies of scale and a cost reduction. Consumers buy goods and services and increase their welfare by mortgaging their futures. The depositaries continue to deposit their savings in banks while having confidence that in any moment they can recover their saving. The result is that the money created simultaneously the property, labor and inflation.

The stagflation period is a special case of our thesis that we are currently developing in this article where economists have noticed that the Philips curve is taken into failure. This is not true because this situation is closely linked to the abandonment of the convertibility of the dollar in 1971. In fact, just after the abandonment of this system banks began to grant loans by asking for guarantees for not diminish the confidence of economic actors whom have the habit to convert their dollars into gold. As much as the economic agents' confidence increases the banks grant more loans. However, the real crisis of 1973 has generated a sharp inflation and a sharp drop in demand. So, the monetary creations had amplified the problem of inflation and has further reduced demand and prompted companies to reduce their workforce.

On the other hand how a dollar invested in the purchase of capital could, in the long run be neutral? Indeed, investment income financed by loans is always productive. The result is that the dollar that is invested and not hoarded has always a counterpart in real terms. Once a crisis of confidence will take place the enterprises will be obliged to honor to their commitments vis-a-vis their depositors. It remains in circulation than dollars without consideration. Generalized to the entire productive system, during deep and major confidence crises the goods disappear and remains in circulation only the money hence the neutrality of money. In conclusion the long term in which the neutrality of money can take place is simply the moment where the crisis occurs, confidence is shaken and pessimism reigns. The figure (1) illustrates these facts.



Source: The author from the World Bank data

According to figure (1) we note that the abandon of the convertibility of the dollar into gold in 1971 had contributed to an explosion in the credits grant relatively to the amounts of deposits available in commercial banks. The gap between credits and deposits become more and more great and had achieved its maximum in 2007. In 2008 a relative decrease in credits had recorded. Nevertheless from 2010 the credits had followed their ancient velocity linked to an increase in the deposit amount. The gap seems to decrease relatively to its level in the period of subprime crisis.

IV The model³

Recall that the Federal Reserve of the United States has a special particularity which should be presented in our analytical context. It consists of a Board of Governors, the

³ We recourse to the same function used by Patrick Belseret Martín Rama [2001] « State Ownership and Labor Redundancy: Estimates Based on Enterprise-Level Data from Vietnam » Policy Research Paper 2599. Washington, D.C: World Bank.

Federal Open Market Committee (FOMC), twelve regional banks (Federal Reserve Banks), member banks and several advisory boards. Therefore, we can deduce that the structure of the Federal Reserve includes public and private aspects. Such a structure is assumed to be unique in the world. Thus, we can say that the Federal Reserve will not only maximize the sole interest of the US government but also the interest of private banks. This brings us to ask the following question: how a central bank controls a money supply which she created.

In conclusion the long term in which the neutrality of money can take place is simply the moment where the crisis occurs, confidence is shaken and pessimism reigns. It seems that we should talk of neutrality in post-financial crisis period, rather than long-term neutrality. The monetary history is the story of an oligarchy that wanted to have while giving very few for individuals.

Assuming a central bank that seeks two objectives. The privately interests, explained by the amount of profits they generate from credits granted, and the public interest (here explained by the level of GDP). The utility function it seeks to maximize the function is given by:

$$U = \Pi^s Y^{1-s}, \quad 0 < s < 1 \quad (1)$$

Where (s) and (1-s) are respectively the weight accorded by the central bank to the objectives of bank profits and production. Y is the level of GDP ($Y = L^\alpha$) nous pouvons déduire la fonction de profit qui est donnée par l'expression

$$\Pi = (C-D) i - wL \quad (2)$$

Where (C) represents loans granted, (D) the deposits held by banks, (i) the interest variance, (w) the wage rate and (L) the labor

Thus, the utility function of the central bank will be as follows⁴ :

$$U = ((C-D)i - wl)^s L^{\alpha(1-s)} \quad (3)$$

Assuming that $C = D^t$, with $t \in [1, T]$

Where (t) is the time horizon; $t=1$ signify the actual moment while $t=T$ is the long-run moment, where the financial and confidence crises will occur

The equation (3) become

$$U = ((D^t - D)i - wl)^s L^{\alpha(1-s)} \quad (4)$$

$$\frac{\partial U}{\partial D} = 0 \Rightarrow s((D^t - D)i - wl)^{s-1} (tD^{t-1} - 1)i L^{\alpha(1-s)} = 0 \quad (5)$$

In the optimum

$$(tD^{t-1} - 1)i = 0 \Rightarrow (tD^{t-1} - 1) = 0 \Rightarrow D^{t-1} = 1/t \quad (6)$$

We multiply by D on both sides there will be $C = D/t$ (7)

According to equation (7) it is concluded that as much as deposits increase the banks give more credits. However the most important result is that in the long term (t tends to $T = +\infty$) then the credits should be equal to zero. Thus, in the crisis period, the time stretches and will not work in the same way. Indeed, where the crisis will take place (at any time), the time changes, in a qualitative way, and will have an infinite speed and begins to force economic agents to settle all transactions they have planned in the future. Actually the logic of Einstein on time finds verified (stating that the time cannot flow in the same way in all circumstances).

When the economy converges to the financial crises the time converts immediately to the long run. Credits vanish because the economy prepares itself to do the settlement of bilateral or multilateral accounts. The lowering of credit in time is explained by the fact that there is a saturation phenomenon and that borrowers have had, in the short-run (the prosperity period) sufficiently credits. Also, in the case of a real economy, where (C) should be equal or almost equal to (D), time does not play a role because any loan, has its real equivalent in gold or any other precious metal. In this context the concept of full employment has

meaning because money plays the role of means of transaction and has its real or quasi real equivalent.

In our time the credits granted through the fractional reserve system never converge, in the context of a rational and strategic monetary policy, to an optimal level of credits, but continue always to be explosive. They converge only where the crisis occurs. Thus, it is important to say that the concepts of short and medium term have no meaning in itself.

Apart from the financial crisis, the economy remains always in the short term and it reacts in a continuum of short-run time horizons. However, in the moment where is triggered the crisis and where is deteriorated the social base of trust, we are so in the long term where each agent tries to restore its Balance and reduces its losses (abstraction done if this term is one day or hundred years). In this moment, the credits will be cancelled because they do not find their equivalent in term of goods and deposits. Thus the long run should be the moment of the financial crisis and where all banks should honor their commitment vis-à-vis their depositors.

V. Conclusion

As a conclusion we can say that the money topic is always a subject of confusion in the core reflection of economists. The said confusion turns around three points. The first is that money cannot be neutral in all cases except in the crisis period. The second is that the short or the long run, are not determined in function of the time horizon but in the basis of the economic situation. The third is that the long run cannot exist as a concept but as an economic state where the major crises began.

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