

# Currency Causality

*“The theory of money necessarily presupposes  
the existence of a theory of liquidity of goods”*

Carl Menger

*“The theory of currency necessarily presupposes  
the existence of a theory of liquidity of goods”*

Carlos A. Bondone

*“Currency causality is in the market,  
not the State or the banks”*

Carlos A. Bondone

By Carlos A. Bondone

# Currency Causality

## Contents

Introduction  
Concept of currencies  
Types of currency  
Currency functions  
Origins of currency  
Currency causality  
Endogenous (exogenous?) currency  
Payment function of currency  
Interest and currency  
Currency demand paradox  
Relative prices (*versus* absolute prices?)  
“Locke’s problem”  
Liquidity of a good and state of liquidity of an agent  
Causality of central banks  
Theoretical origin of institutional crisis  
Conclusion

## Introduction

The dominant issue in modern economies with paper currency and fractional banking system is understanding *currency-financial causality*.

With this in mind, the object of this work is to present a compilation of the differences between the different schools of economic thought when explaining the causality, existence and functioning of currency and financial institutions.

We will be able to corroborate that there are no relevant differences between traditional schools (the mainstream that supports current institutions), but there are differences with the new Austrian proposal that at the beginning of the twenty first century presented the Theory of Economic Time (TET).

In this sense we will consider the following schools of thought

- *Keynesians*
- *Monetarists-quantitativists*
- *Austrians*: that are divided into
  - *Mises*, insofar as all his work can be considered a “compilation” of *post* Menger Austrian thought.
  - *TET*, insofar as it is the —*direct, with no intermediate stops*— continuation of Menger’s money theory. More specifically we refer to TET’s development of the Theory of Currency (Currency Theorem and its axioms of equality and equivalence), and Theory of Interest. <sup>(1)</sup>

The work will consist of presenting the relevant issues and the items that compose it, followed by a brief commentary. <sup>(2)</sup>

## Concept of currency

It is prudent to begin comparing the concept of currency in different theories:

**Chart 1**  
**Concept of currency**

School	Concept
Keynesians <sup>(*)</sup>	Common use means of exchange
Monetarists <sup>(*)</sup>	
Austrians	
Mises <sup>(*)</sup>	Economic good that satisfies liquidity
TET	
<sup>(*)</sup> Members of the mainstream, as this work will show.	

It is important to stress the implications of both definitions, insofar as TET’s definition includes that of the mainstream—the need for liquidity implies a means of exchange of common use—and at the same time it follows the “*fundamental economic causality: need (liquidity) → economic good (currency)*”. In this manner:

- It allows us not to worry about finding a definition that includes all the possible manifestations that can have the status of currency: money, credit (regular or irregular), bitcoin, digital currency, etc., and explain “the economy without money”.<sup>(3)</sup>
- Considering it an economic good, we need not search for a regression theorem or to resort to the “virtual Wicksellian” world of the mainstream to return to the “real” world.
- We can clearly differentiate the spheres of liquidity of an economic good, of the state of liquidity of an agent, to which we will refer.

### Types of currencies

Let us see the different types of currencies that the different schools of thought present:

**Chart 2**

**Types of currencies**

School		Possible currencies		
Keynesians		Currency ≡ Money		
Monetarists				
Austrians	Mises			
	TET	Currency	Money	
			Credit	Regular <sup>(4)</sup>
			Irregular <sup>(5)</sup>	

Chart 2 shows us that the traditional schools assimilate the concepts of money and currency, while everything that has the *function* of money is *money*, from where the practice of adding heterogeneous entities derives: M1, M2..., Mn, derived from the theoretical structure of currency base and currency supply.

TET, on the other hand, presents its *Currency Theorem*<sup>(6)</sup> that differentiates *money* (currency composed of present economic goods), from *credit-currency* (currency composed of future economic goods), credits that in turn can be regular or irregular (PM). Thus TET does not admit the addition of M1, M2,... Mn.

## Currency functions

In a simple chart (3) we can clearly observe the *basic concepts* that separate the different theories regarding the *functions of currency*.

We can observe essential differences pertaining to “contractual nominativity”, “payment function”, and “define the exchange”. These three new categories presented by TET, help explain *currency-financial asymmetries*.<sup>(7)</sup>

Chart 3

### Currency functions

Concept	Keynesians	Monetar.	Austrians	
			Mises	TET
Common use means of exchange	Current		Economic good <sup>(a)</sup>	
Conserve value <sup>(b)</sup>	Current			
Accumulate <sup>(c)</sup>	Current			
Unit of measure <sup>(d)</sup>	Current			
Buying power <sup>(e)</sup>	Current			
Contractual nominativity	“Locke’s problem”			
	Current		Does not exist	
Payment function <sup>(f)</sup>	Current		<u>Asymmetry</u>	
Define the exchange	No consideration		<u>Cash</u>	
			<u>Credit</u>	
<p>(a) See previous difference in the Concept of Currency presented by TET.            (b), (c) According to TET, these are non exclusive functions of currency and do not merit a special theory.            (d) Possibly it would be correct to say that currency is an accounting resource, an essential means for calculus.            (e) According to TET all merchandise has it, insofar as its buying power is the price arising from exchange.            (f) Referred to credit-currency, or specifically PC, since money has it per se.</p>				

*Contractual nominativity*: we interpret as such the mention or reference in contracts of temporal obligations to the economic good in which said obligations must materialize. I.e. it is the indication of final materialization in which a promise will be fulfilled at maturity, be it a debt or payment in compensation for a service to be performed (work, service, making a thing, delivering a good, payment of rent, etc.).

Contractual nominativity must not be confused with the final materialization of a credit, the nature of which belongs to the economic good. I.e., nominativity is the “deed” of the final materialization.

*Payment function:* see below “Payment function of currency”.

*Define the exchange:* for TET an exchange with *money* fulfills the *currency function* in a *cash* exchange (apart from the case where it is given in credit), but a *credit currency* fulfills the *currency function* in a *credit* exchange. A circumstance that clearly indicates that the type of currency defines the type of exchange.

We cannot close this section without mentioning the relevance that derives from connecting the three functions *formally* included by TET:

*Contractual nominativity + payment function + define the exchange*

Functions that, related to the *types of currency*, allow TET to develop the currency theory that preoccupied Menger and Hayek. Part of its dimension can be appreciated in the section on “*Locke’s problem*” and when referring to *currency-financial cycles*.

### Origins of currency

Economics, insofar as it is scientific knowledge seeking to explain things, cannot escape the study of the origins of currency. Let us see the following chart related to it.

**Chart 4**

**Origins of currency**

Type of currency	Keynesians	Monetar.	Austrians	
			Mises	TET
Money	Market			
PC	State		Market	
Fractional bank-check	Banking system		Market	

We can clearly observe the differences between schools in reference to the origins of currency, when we speak of PC and “fractional banking currency”.

Here the Mengerian ascendancy of TET is plainly visible, insofar as its posture extends the *origins of money in the market to the origins of currency in the market*. I.e., all types of currencies have their origin in the market, be they money or credit (regular or irregular), state or private, monopolized or free, fractional or not. Let us see a summary of the explanation of TET of the origins of credit-currency in the market:

- 1) The reason for the existence of currency is the market, the sphere of exchange. *With a market and with no State currency exists, ergo, State intervention has no currency causality.*
- 2) Credit currency (PC) and fractional bank checks, become the *good- economic credit* when they are exchanged for the first time in the market for present economic goods. Then they circulate as credit currency.  
The demonstration is very simple: with the simultaneous use of double entry accounting, currency and physical. <sup>(8)</sup>

Thus TET showed that to determine the origin of credit-currency what is transcendental is who delivers the present economic good for credit to exist, not who prints the “paper” (be it State or private; monopoly or not; PC and/or bank check).

Finally TET establishes that currency is an economic good, be it money or credit (regular or irregular), with or without the previous existence of a merchandise (it does not need a regression theory).

### Currency causality

According to the origins and functions assigned to currency, we can summarize in a few lines the theoretical causality with which the different schools explain the fundamental economic causality: *need → economic good* <sup>(9)</sup>, of currency. Let us see the following chart:

**Chart 5**

#### Currency causality

School		Causality
Keynesians		<i>Goods supply ← Currency demand ← Currency supply</i>
Monetarists		
Austrians	Mises	
	TET	<i>Currency demand → Currency supply</i>

The common knowledge was that currency causality was:

$$Goods\ supply \rightarrow Currency\ demand \rightarrow Currency\ supply$$

and that when PC and the fractional banking system appeared this inverted the sense of causality:

$$Goods\ supply \leftarrow Currency\ demand \leftarrow Currency\ supply$$

This requires a technical observation: the term *Goods Supply* should be limited in its reach insofar as it is exchanged against credit with no need for currency; it does include the demand for currency required to cancel credit; it does not show the difference of currency demand according to the degree of integration of production; etc. On the other hand there is a currency demand not necessarily destined for what is considered production (stockpiling, speculation, precaution, etc.). This technical digression does not alter the mainstream idea, but it is the source of equivocal theoretical developments (ex.: quantitative theory).

We can state that the expression of causality linked to the mainstream (*Goods supply* ← *Currency demand* ← *Currency supply*) subverts the fundamental economic causality: *need* → *economic good*, since there is no economic good if there is no need. Though this subversion is attributed to Keynesianism and monetarism, since TET finds its origin in Say's Law <sup>(10)</sup>, Gresham's Law, and the dichotomies originated by Böhm-Bawerk and Wicksell, we also attribute it to the Austrian School-Mises (AS-M), <sup>(11)</sup> which is another reason to consider all of them part of the mainstream.

Let us see then a brief summary of how Say's Law, Gresham's Law and Bawerkian-Wicksellian dichotomies influence economic thought, a combination that according to TET led to the twin asymmetries.

*Say's Laws in Keynesians and monetarists:* Keynes rejects it, but not with the sufficient theoretical arguments of TET. <sup>(12)</sup>

*Say's Law in Austrians-Mises:* we consider very pertinent to refer to the expressions of professor Juan Carlos Cachanosky in *Déficit Fiscal y Equilibrio Monetario* (Fiscal Deficit and Currency Balance) <sup>(13)</sup> since it is an excellent summary of AS-Mises with our commentary in italics:

Say's Law is key for the macro economic theory (*Keynesian sphere*). If supply and demand of money behave the same as for any other merchandise then there is no reason for it to be outside what is called aggregate demand... this implies that demanding money has a different effect than demanding any other good. But there does not seem to be any solid argument to suppose such a difference. (*Currency must be treated as an economic good, it is not outside the economy*). Keynesian economists have simply ignored this point.

If, instead, supply and demand of money behave just as with any other economic good, then traditional macro economics would be in serious analytical trouble. Say's Law is an identity <sup>(14)</sup> and the Keynesian theory's approach would fall apart. Note: [Paul M. Swezzy says that: "Keynesian attacks, though they seem to be directed against a variety of specific theories fall apart if Say's Law is considered valid", Seymour E. Harris, ed., *The New Economics*, Alfred Knopf, 1947, P.105. (*TET says the same happens with AS-Mises even if Say's Law is valid*)]

*Gresham's Law in Austrians-Mises:* in Cachanosky we read:

... but money that loses its value is abandoned (except if there is legal tender law). People reject it. (*if there is a legal tender law they reject it anyway*).

Summarizing, we can say that in the case of money, as opposed to all other goods, variations in its exchange value affect its use value (*Misian summary, that TET rejects since this is true of all exchange goods*). This is a fundamental relation that has much greater implications than economists generally suppose (*underlined by us*).

Summary AS-Mises approach: we believe these expressions by Mises, in his *Theory of money and credit*, are pioneering and defining of his theory:

(p 331) Adopting a uniform procedure, banks can expand indefinitely their emissions... (*Inverted currency causality of the mainstream*) to whatever they wish... (*Credit without a present economic good, credit with no previous savings?*) (P. 25)... But securities (*currency substitutes*) are not economic goods proper, they are means to have them, in themselves they have no value... (*they would not be necessary or scarce, Wicksell's virtual money, Keynes'  $p_m \equiv i_m = 0$ , with no cost*)... (p. 238)... A credit transaction is an exchange of present goods for future goods...

With this entire scenario, it is logical for Misian Austrians to be confused when studying TET and its stance that says PC is a credit.<sup>(15)</sup> Confusion that can only grow with this excerpt from Mises in *The theory of money and credit*:

(p.242):...If *credit* in the economic sense means the exchange of a present good or a present service against a future good or a future service, then it is hardly possible to include the transactions in question (*fiduciary means and circulating credit*) under the concept of credit (*possibly there is no more original way of naming the twin asymmetries: credit in a non economic sense*). A depositor of a sum of money who acquires in exchange for it a claim convertible into money at any time which will perform exactly the same service for him as the sum it refers to, has exchanged no present good for a future good. The claim that he has acquired by his deposit is also a present good for him (*if his "money" is a credit, with which he obtains a present good, we have an example of a crossover between monetary types*). The depositing of the money in no way means that he has renounced immediate disposal over the utility that it commands. ... The fact that anybody hands money over to a bank in exchange for a claim to repayment on demand certainly shows that he has confidence in the bank's constant readiness to pay (*credit is implicit in the word confidence*). But this is not a credit transaction, because the essential element, the exchange of present goods for future goods, is absent. (*Mises is right, without present goods there is no credit, Mises is wrong when he does not see that credit is configured when the security is exchanged in the market for a present good in THE FIRST EXCHANGE, which proves TET—Third Part of TER—, and then it circulates with that status of the economic good credit. This means that Mises does not advert the inverse, that when the market delivers a present good in exchange for a security already converted into credit, the credit is "endorsed", since the security is a non present good*). The note is a present good just as the money. **[IT IS DIFFICULT TO FIND SUCH A —WRONG— THEORETICAL BASIS FOR THE LEGISLATOR TO AWARD PAYMENT FUNCTIONS TO PC AND FRACTIONAL BANK CHECKS, which he will confusedly try to revert in Human Action. This statement by Mises is not only wrong, it is rash; if in exchange for a future good (credit) I obtain a present good, does it mean we must consider said future good as a present good, because through it I have obtained a present good? Then, what sense is there in speaking of and/or defining credit as a future good?]**

Here is the Misian-Austrian basis for monetary and financial asymmetries. Mises refers to the use-exchange of PC and fractional bank notes once the credit is already configured, with the first exchange in the market for a present good, a quality it does not lose even if it is "on sight". In his text he wished to alert economists to what he himself did not understand: pretending to explain (and wrong) credit-currency and the fractional banking system "from the *second accounting entry on, forgetting the first entry that places it as a credit economic good*". No doubt this was a slip by Mises, because you only need to refer to his quotation of Goethe to see he is an economist that respects accounting: double entry accounting is "one of the greatest and most subtle discoveries of the human mind".<sup>(16)</sup>

If we compare the previous quotations from Mises with his later book, *Human Action*, we see:

Claims to a definite amount of money, payable and redeemable on demand (...) render to the individual all the services money can render (...) we may call such claims *money-substitutes* (here they are credits! *Further on, in “Locke’s problem”, we will be able to see everything more clearly*)

Mises tells us, in another paragraph of *The Theory of Money and Credit*:

(p. 241) Fiduciary means increase the money supply in the broad sense, and therefore can influence the objective exchange value of money.

A simple expression that ratifies that Mises Austrian school belongs to the mainstream:

- 1) M1,... Mn, is considered money supply not credit denominated in currency. TET clarifies that liquidity is also solved by credit, and that contractual nominativity in currency in turn promotes credit.
- 2) Again the need to “touch-up” subjective value theory, to explain “money in the broad sense”. I.e., he ratifies the need for an *ad hoc* theory to explain what only becomes special if it is considered “virtual”  $\equiv$  extra-economic.

Evidently Mises was confused, but he sensed part of TET. Possibly his disciple Hayek summarized it all when he expressed his dissatisfaction with monetary theory. Let us see a *sufficient* summary of Mises currency, credit and interest theory: <sup>(17)</sup>

- 1) Confused by the presence of currency in the form of credit, *but not credit in an economic sense*; we must ask what sense a credit can have that is not economic.
- 2) Confusion of not understanding that interest is the price of economic time. A situation that he expresses in an extreme form when saying *interest is not a price in itself (a premonition of TET?)*.
- 3) He did not advert that the price of credit is interest because it is the exchange of economic time.

In short, we believe that TET —with its theories of currency and interest— clarifies that Misian Austrians have the same dichotomic Wicksellian origin as Keynesians and monetarists.

*Summary of Say and Gresham by Keynesians and Mises-AS*: The Mises-AS rejects Keynesians because they do not consider currency as an economic good and as part of “aggregate demand” (Keynes does not accept Say’s Law that is accepted by Mises-AS). But Mises-AS end up validating Keynesians when they exclude currency as an economic good, because it does respond to economic laws due to its nature as a “special good”. Thus they need an *ad hoc* value theory (adoption of the unnecessary Gresham Law, already included in market law, <sup>(18)</sup> and the defense of the unsatisfactory Say Law) to turn Wicksell’s “virtual” money <sup>(19)</sup> into “real” money.

In short, Wicksellian virtual currency was adopted by Keynesians, monetarists and Misian Austrians through different windows, but it is present in all their theoretical explanations of currency and interest. The proof is that they all develop their theories of currency starting from the theory of money, and in so doing they repeatedly (and unknowingly) cross the demarcatory boundary of currency established by TET: the money-currency sphere and the credit currency sphere, and within this regular and irregular credit. Taking one route or another, all the

mainstream had to generate *ad hoc* theories to return the currency that Wicksell deposited in “paradise” to the real world.

*Say’s and Gresham’s Laws in TET*: TET has shown that said laws are wrong and/or unnecessary. Which led TET to the unified synthesis presented in its Currency Theory (theorem and axioms) and Interest Theory, that brings to light the *Bawerkian-Wicksellian dichotomies*. A “redemption” of Menger that intuitively saw the deviation initiated by Böhm-Bawerk <sup>(20)</sup> and continued by Wicksell?; ratification of Hayek’s doubts on monetary theory?; ratification of Mises confused intuitions? Is TET a synthesis of currency and interest theories?

Said dichotomies promoted all developments of currency and interest theories in the twentieth century, which TET considers responsible for subverting the currency causality analyzed here and all developments implying a non real monetary world: “currency virtualism”. <sup>(21)</sup>

Thus TET is simply limited to sustaining the fundamental economic causality: *Need* → *Economic good*

*Currency demand (need) → Currency supply (economic good).*

It is important to stress that we do not say: *liquidity demand* → *currency supply*, and this is so because currency can be demanded for different purposes, though we recognize that its origin was the need to go beyond barter (the need for liquidity).

### **Endogenous (exogenous?) currency**

Evidently, if there are differences regarding the origin, causality and functions of currency, there will be discrepancies when referring to what is called *endogenous currency*, arising from supply and demand of the market, and *exogenous currency*, derived from an intervention from outside the market. <sup>(22)</sup> Let us see the following:

**Chart 6**

#### **Endogenous and exogenous currency**

School	Feasible currencies	
Keynesians	<i>Endogenous and Exogenous</i>	
Monetarists		
Austrians		
	TET	<i>Endogenous</i>

Since it is well known and there is ample bibliography referring to the endogenous and exogenous monetary world of the mainstream, we will focus on the arguments that lead TET to consider only *endogenous* currency:

- 1) TET does not consider any economic good as exogenous, <sup>(23)</sup> therefore currency is not exogenous either. An economic good is or is not an economic good. It is one thing to refer to an economic good and a very different thing to refer to circumstances and facts that affect economic life, as could be the case of interventions of the State in the market.
- 2) That TET's Currency Theory does not consider the possibility of an exogenous currency (as an equivalent of Wicksellian virtual currency) does not imply that it does not study the forces that attack the markets.

Considering this order of things, we can ask TET: how does your Currency and Interest Theory consider interventions in the currency market? The simple answer TET gives us is that they must be studied in the same manner as economics treats price controls (quantities) of any economic good, with the “great exception” of differentiating the intervention according to the type of currency. If it is credit <sup>(24)</sup> we are speaking of a simultaneous control (maximum price): of interest —the price of economic time subject to indirect materialization and necessary presence in the production of all economic goods and the formation of their prices—, and currency. To which we must add its crucial functions as unit of measure for economic calculus, <sup>(25)</sup> of contractual nominativity and paying capacity.

Therefore, with the simple laws of supply, demand and exchange, TET sees it is enough to explain the consequences —**CYCLES**— of simultaneous price controls of currency <sup>(26)</sup> and interest, given the equivalence axiom,  $i_m \equiv p_m$ .

### Payment function of currency

It is of fundamental relevance to refer to the payment function of currency, understanding as such participating in cash operations, such as cancelling debts; what in Menger was “used for payment”. <sup>(27)</sup> This evidently has a direct connection with the types of currency that each school of thought considers, and from there we derive the following chart, where we indicate if each type of currency does or does not have a payment function:

**Chart 7**

#### Economic payment function

Concept	Keynesians	Monetar.	Austrians	
			Mises	TET
Money	Yes			
Paper currency	Yes		No <sup>(a)</sup>	
Bank check denominated in PC	Yes		No <sup>(b)</sup>	
<sup>(a)</sup> <i>scientific-legal currency asymmetry</i> derives from this. <sup>(b)</sup> <i>scientific-legal financial asymmetry</i> derives from this.				

Here we can understand the order of our story, insofar as the theoretical foundations of mainstream thought are the basis of the payment function the legislator gives PC and the fractional bank check denominated in PC. Thus, the payment function of PC is the necessary factual event that turns “virtual Wicksellian” currency into real currency.

It is prudent to reiterate that the payment function of PC and the fractional denominated in it derives from the current currency theory, since everything that has the function of money is money, and its essential function is to be a means of payment, for which *the gift of monetary asymmetry must be bestowed upon it: payment function*. Which means treating “legal” credit currency (a future economic good) as if it were money (a present economic good),<sup>(28)</sup> the factual configuration of the twin asymmetries.

Very possibly this juridical-factual event helps explain the concept of “legal money” that is introduced. Another attempt of the mainstream to give support to the payment function of credit.

### Interest and currency

Referring to the theoretical foundations of monetary and financial institutions determines that we need to refer to the meaning and role of interest. From the different conception presented by economic theories in this matter derive the most adequate currency and financial institutions that can be adopted by the community.

**Chart 8**

#### Interest in the different schools of thought

Concept	Keynesian	Monetar.	Austrians	
			Mises	TET
Interest	Price of currency		Price of credit	Price of Economic Time
				Price of credit
Currency interest with money	Price of currency		Price of credit	Price of Economic Time
				Price of currency
				Equality axiom $i_m = p_m$
Currency interest with PC	Price of currency			Price of economic time
				Price of currency
				Equivalence axiom: $i_m \equiv p_m$

From the preceding chart we deduce

*Keynesians and monetarists*: the price of currency

*Austrians-Mises*: the price of credit.

*Mainstream*: by deduction we see that when currency is credit, Austrians-Mises and Keynesians agree: interest is the price of currency. <sup>(29)</sup>

*TET*: by definition this theory considers interest as the price of economic time, and since credit is the interpersonal exchange of *economic time*, its price is interest. Therefore, economic time (and its price, interest) are subject to:

- 1) Indirect materialization in present economic goods — $i$  is a subordinate variable.
- 2) Permanent positivity of its price ( $i > 0$ ).
- 3) Necessary participation in the production of all economic goods and all prices, through interest.
- 4) When currency materializes as credit, the axiom of equivalence applies:  $i_m \equiv p_m$ .

*In short*: the link of currency theory to interest theory has given rise to the theoretical concept of “the indirect transmission mechanism” of the mainstream. <sup>(30)</sup> On the other hand, TET works with the simple theoretical framework with which economics studies price controls, <sup>(31)</sup> with no need for indirect mechanisms, which are unnecessary, complex and with as many interpretations as there are interpreters.

### **The currency demand paradox**

TET refers thus to the dilemma of the mainstream that *cannot explain how currency demand falls when its price declines, “going against the spirit of the law of supply and demand”*. This can be considered the expressive synthesis of the Wicksellian dichotomy and its virtual world that need to “reconcile” with the real world the origin of “special currency theories”.

What TET called the *Keynes Paradox*, in its Keynesian version <sup>(32)</sup>, how currency can go from costing so much (gold) to costing so little (PC), that gave origin to his famous “barbaric relic” (gold) and “green soap” (PC). <sup>(33)</sup>

On their side, Austrians denounce it with the argument that money is the “only” good in which use value and exchange value are the same. <sup>(34)</sup> Untenable argument —along with the theoretical inconsistency of not realizing the difference between money and PC that is credit— since this could apply to all exchange goods.

I.e., by one route (barbaric relic and green soap) or another (“special” value theory for money) and due to the same dichotomic Wicksellian origin, all of them developed currency theory starting from the theory of money, not realizing they were crossing the boundary that separates money from credit. It is well known that everyone flees from a credit when there is an increasing lack of trust in it being paid. Ergo, the only feasible paradox is that of developing currency theory based on money theory, not realizing that this is the sphere of credit.

TET clearly establishes there is no paradox whatsoever, since it is only possible with theories that do not realize they are considering credit-currency (PC) with the same criteria as money (present economic good).

Let us say it is not exaggerated to assimilate the fall of the *currency demand paradox* at the hands of TET with the fall of the *diamond paradox*,<sup>(35)</sup> at the hands of the theory of subjective value.

### **Relative prices (*versus* absolute prices?)**

This can also be expressed as real prices (*versus* currency prices?). It is the false dichotomy presented by the mainstream, derived from the Bawerkian-Wicksellian dichotomies. We especially refer to the theoretical developments based on which there is a pretense to give different explanations to the consequences of currency policies (cycles) among Keynesians, monetarists and Misian Austrians.

Dichotomies-Asymmetries that are not present in TET: given that prices are relative by definition, the entity “absolute prices” does not exist; it is a concept with which you can see that any attempt to refer to *non relative* prices (currency or absolute) speaks of the presence of *ad hoc* theory to explain what has no explanation.

We reiterate, TET explains “currency cycles” with the simple expedient of referring to the consequences of price controls, in this case the control of the *price of economic time* (interest), that by the axiom of equivalence is the same entity as the price of currency (not of the general level of prices).

### **“Locke’s problem”<sup>(36)</sup>**

Locke’s problem is identified with the following question:

*How can the treasury determine what the appropriate weight in silver of a shilling must be if the total number of possible shillings relative to the total amount of available silver is unknown?*

The modern version of Locke’s problem would be:

*How is it possible for multiple availabilities to be created with a one ounce gold coin?*

The mainstream’s answer is: with unfunded PC, which is multiplied by the fractional reserve bank system. This answer is as inconsistent as the one that was presented historically in response to Locke’s problem.

TET states clearly that Locke’s problem never existed in its old or modern version. It is a manifestation of the error of equating with money everything that has its function, not differentiating adequately money-currency from credit-currency (regular and irregular).

Here we can see why it was necessary to specify the *contractual nominative* function of currency. It tells us that *currency performs an essential service in contracts*; it is the reference point for the final materialization of all temporal contracts denominated in currency (debt-credit; action obligations, etc.)

Thus we understand it is theoretically wrong to say that multiple availabilities are created based on a simple gold coin.<sup>(37)</sup> What really are created in the market are debt-credit contracts

denominated in that gold coin. There is no multiplication of the availability of the gold coin, since the quantity of gold coins is not and does not need to be multiplied to solve liquidity, nor is there a multiplication of its function of availability or as a means of payment. Availability arises because someone makes the present economic good **available** to whoever needs it that, no matter if he has no currency, merits credit —facilitated by the fact that it is denominated in currency. I.e., availability is not only attained disposing of currency, but also with credit denominated in currency. Evidently credit denominated in currency is preferred to other credits in the market, and that is why TET stresses the **contractual nominative function** of currency.

We have no simpler way of proving what TET tells us, that humanity found in credit denominated in currency the solution to the need for liquidity. Then humanity saw that the best way to solve it is not only having currency available, the same can be attained having **credit denominated in currency “available”**. If the reader sees in this narration something akin to Menger’s explanation of the origin of money he is right, especially considering that money, the same as credit-currency, was not spared state “intervention”, which gave origin to what TET calls the “*monetary tragedy of the commons*”.<sup>(38)</sup>

Thus for TET all currency always has its origin in a present economic good appearing in the market, never the State or the bank system. Which leads us to conclude that there is no such thing as “unfunded” currency multiplication or credit derived from “nothing”. Concepts that must be clarified because that is precisely what the mainstream states. Also it is very important to say that the “multiplication” of availabilities derives from credit (denominated in currency) given by those that dispose of the present economic goods to those who need them. Therefore it is the market that multiplies credit, to the *limit* determined by that credit market —according to the financial-economic balance of the debtor. In all cases what exists is multiplication of credits with final materialization denominated in currency; there is no currency multiplication nor of means of payment —what not to deny that some of that credit becomes currency. On the contrary, what exists is the creation of debt denominated in currency, which on maturity will become payment or novation of debt, according to the currency being money or credit (regular or irregular), because now we know that the currency determines the type of exchange.

Thus we understand that the **currency’s value** will vary according to: 1) the type of currency and 2) its supply and demand. A determining factor of this will be the accumulation of maturities of debts and credits denominated in the currency, and the balances of the debtors and their relative share of the market. Then, according to the type of currency, we will see that the price *increases* when demand increases and/or supply decreases, and it *decreases* when demand for it decreases and/or its supply increases. I.e., **there is no paradox of currency demand**; it is only necessary to establish what kind of currency we are referring to.

**It is not prudent to say that “everything that has the function of money is money”**, since the contractual nominativity is not the same for the different types of currencies a community can adopt.

Money	(gold–gold standard)
Regular credit currency	(gold standard exchange rate)
Irregular credit currency	(paper currency)
Non fractional bank check with money	
Fractional bank check with money	
Non fractional bank check with gold standard exchange rate	
Fractional bank check with gold standard exchange rate	

Non fractional bank check with paper currency  
Fractional bank check with paper currency

Monetary-bank systems ordered from the one presenting less risk for the consequences of contractual nominativity (gold), to the one that presents the highest risk (fractional bank check denominated in PC).

Thus through TET once again we prove that:

***The market multiplies credits denominated in currency, there is no multiplication of currency by the State or the banks***<sup>(a)</sup>

<sup>(a)</sup> Then, the credit multiplied by the market, by to be nominated currency will facilitate that part of it is used as currency.

I.e., the “*multiplication of the loaves*” occurs in the market (TET), it is not a product of the “Wicksellian biblical narrative”.

In short, the answer to “Locke’s problem” (ancient and modern) is found in the fundamental causality of the economy presented by TET:

Need (liquidity) → economic good (currency)

Causality that, in the case of the *PC-fractional bank check*, is present with the currency function of “contractual nominativity” altered by the twin asymmetries that leads to the “*currency-financial tragedy of the commons*”.

### **Liquidity of a good and liquidity balance of an agent**

Both in theory and in practice, it is very common to confuse the need for *liquidity*, satisfied with an economic good (currency), with the financial balance of an economic agent. Nothing better than to refer again to Mises in *The theory of money and credit*:

(p. 237) For the activity of the banks as negotiators of credit the golden rule holds, that an organic connection must be created between the credit transactions and the debit transactions. The credit that the bank grants must correspond quantitatively and qualitatively to the credit that it takes up.

This is true for the financial state of any agent, and it has to do with the analysis of his accounting balance sheet to determine if he can honor his commitments. But in this terrain at least two considerations are in order:

- 1) It is necessary to consider also the economic situation (possibility of generating profit) and balance sheet (net worth over assets, leverage, etc.).
- 2) The financial state, not only referring to the assets in terms of the stock of currency, but also the liabilities—including their type, amount, nominativity, and maturity.

Here we need to remember that a 100 dollar “bill” is the same in the hands of a poor person or rich person. But it is not scientifically correct to stray from the theory of subjective value: *the same 100 dollar bill has a different value for the poor person and for the rich person.* This issue, which seems trivial, is much more important than it seems: confusing liquidity of a good with the state of liquidity of an agent implies reasoning within the sphere of objective value theory and not subjective value theory, which is precisely what helped us discern that the same good (bread, meat, etc.) does not have the same value for all, and that is what gives rise to the benefits of exchange.

You can now understand why TET insists so much on separating the scenarios of:

- 1) **Currency**: referring to an *economic good* that satisfies a need
- 2) **Finance**: referring to the state of *need*.

We reiterate, you only need to remember the fundamental economic causality that TET applies to currency:

*Need (financial state) → economic good (liquidity)*

Thus, once the type (quality) of the currency unit is identified, the quantity follows — ordinate pair <sup>(39)</sup> with which the agent subjectively decides, always in a situation of scarcity (human fallibility).

What is important is to separate the liquidity of the good from the situation of liquidity of each individual that values subjectively. If this is not clearly established, you come to the “chaos”, in which “always” everything is connected to everything, not realizing that financial chaos has three origins: 1) bad currency that affects *all these functions* leading to the *monetary-financial tragedy of the commons*; b) insolvency of a relatively big debtor (Eg.: State-Bank system); and c) simultaneous maturity of debts, with disperse probability in free markets.

All this confirms that the *generalized degradation of liquidity states* is inevitable when the economic good chosen to satisfy “liquidity for all” has lost the condition of economic good that satisfies liquidity (“paradox of currency demand”).

In short, when we refer to the generalized degradation of liquidity, TET clearly establishes the origin and shows us how to diagnose and treat the recurring economic chaos called “currency cycles” <sup>(40)</sup> —the extreme expression of the *monetary-financial tragedy of the commons*.

### **The causality of central banks** <sup>(41)</sup>

Insofar as currency causality always has its origin in the market, it is evident that any activity interfering with it is extraneous to said causality. Therefore it is clear that there is no sense in discussing the pertinence of the origin of currency authorities (once tariffs are applied to foreign trade, customs are “born”). So we need not enter into debates on interpretations of Mises referring to free banking and fractional reserves, <sup>(42)</sup> since TET places Mises squarely in the mainstream. In other words, it is perfectly comprehensible that there are as many interpretations of Mises as there are of Keynes, since they all derive from the virtual Wicksellian legacy, configuring a species of system with more variables than equations, and that leads to infinite answers.

In the theoretical sphere, TET clearly establishes that recurring to the expedient of “channeling” the financial-currency issue to the multi-disciplinary sphere (preferentially juridical), as Huerta de Soto does,<sup>(43)</sup> is eluding scientific responsibility. That economics should not acknowledge the twin asymmetries and the tragedy of the commons derived from them, is as if chemistry were to leave the responsibility for establishing the poisonous nature of hemlock to justice.

### **Theoretical origins of institutional crisis**

While mainstream thought states that the bad behavior of State-financial authorities is the origin of financial-currency crisis, TET says that the theories on which the mainstream bases its ideas are responsible for them. Thus for TET it is no wonder that no (State or bank) currency authority has ever been punished for a financial-currency crisis, a situation that would have occurred had there not existed the theoretical error that sustains the twin asymmetries and originates the financial-currency tragedy of the commons.

It is honestly hard for us to understand the “irritation” of some academics when they here this from TET, *that mainstream theories are the origin of the financial currency crisis that affect capitalism*. Irritation that is easy to avoid, you only need to study TET and the other approaches, adopt one and defend it, or simply show different alternative theories, knowing that this is not producing theory but carrying out the sacred task of making them known to the public.<sup>(44)</sup> We must also assume that a new theoretical proposal does not only demand the effort of studying it but also the additional effort of studying the new primitive terms it includes, which if absent would mean it is not a new theory (Popper). Theory and primitive terms that, precisely because they are new, demand intellectual honesty and the effort of understanding them, not only because we are not used to them but because they oblige us to review everything we “already know”. We ourselves have been obliged to do this when we discovered TET and everything it altered that we considered almost sacred: *it was and is difficult for us too, but it is worth the wager*.<sup>(45)</sup> On the other hand, just as there are new theories, there are pioneering academics that assuming their responsibility as teachers to their master or doctorate students, have taken on this difficult task, and are already starting to present TET as the continuation of Menger’s legacy — enormous task of intellectual integrity.

### **Conclusion**

It is not scientifically correct and less still is it necessary to abandon the fundamental economic causality:

$$\textit{need} \rightarrow \textit{economic good}$$

to develop a theory and explain currency and banking institutions.

The encouraging fact is that the conclusion is in line with the Popperian epistemology of the *sacred respect that science must have for its primitive terms*, the foundations of all theoretical-scientific development. On the other hand, the conclusion we come to seems to indicate that science *does not* progress through Kuhnian “paradigms”. These could explain, instead, states of stalemate and decay (Bawerkian-Wicksellian dichotomies). Whatever our opinion, it is clear we do not know about epistemology what we presume to know about economics.

Buenos Aires, January, 2013

## NOTES

- 1) Available at [www.carlosbondone.com](http://www.carlosbondone.com) (ww.cb).
- 2) Which in turn answers the queries we have received on TET (especially those from students for their doctoral thesis).
- 3) See in *Capitalism and Currency*, appendix B ([www.cb](http://www.cb)).
- 4) *Regular* credit is that which at the birth of the credit does establish the quality and quantity of the good in which the credit will be canceled.
- 5) *Irregular* credit is that which does not establish at the birth of the credit the quality and quantity of the good in which the credit will be canceled. See more in *Currency Theory* at [www.cb](http://www.cb).
- 6) See *Currency Theory* at [www.cb](http://www.cb).
- 7) Currency and financial Asymmetries are the discrepancies between the economy and legislation, insofar as TET does not consider as canceling operations (cash) those in which credit-currency (PC and/or fractional bank check) intervenes, because it is credit. A juridical error theoretically based on Bawerkian-Wicksellian dichotomies, adopted by mainstream thought. See more in *Currency Theory* at [www.cb](http://www.cb).
- 8) *TER*, *Third part* (p. 225...).
- 9) See more in *TER* ([www.cb](http://www.cb)). There are authors that do not clearly see if money facilitated commerce or if the need for commerce originated money; they evidently confuse origin with development.
- 10) See more of TET and Say's Law in *TER* (pp.: 63, 316, 328). In said text we stress the possible interpretations by Keynes on which he based his rejection, to which we add here the Austrian interpretations that defend Say's Law.
- 11) We only need to quote Huerta de Soto in *Dinero, Crédito Bancario y Ciclos Económicos* (Money, Bank Credit, and Economic Cycles), (p. 531):

...The main defect of the analysis of "currency equilibrium" in Selgin is that he does not accept that the *supply of fiduciary means generates, to great extent, its own demand...*, not realizing that the demand for credit of the public is a magnitude that depends, precisely, on the inclination of the bank to lend...

As a Misian fundamentalist, Huerta de Soto: 1) does not see that it is not the bank that lends; 2) defends the inverted causality of currency he attributes to Keynes and Selgin, with the caveat "to great extent", similar to being "a bit pregnant".

- 12) See more in *TER*, chapter XVI, *Keynes* at ([www.cb](http://www.cb)).
- 13) See in Cachanosky, Juan Carlos: *Déficit Fiscal y Equilibrio Monetario*.
- 14) Other authors also mention Say's equation.
- 15) More in *TER*, *Chapter VII – Cash*, especially: *Money substitutes*, at ([www.cb](http://www.cb)).
- 16) Quotation from Ludwig von Mises, *Human Action*.
- 17) See *Interest Theory* at [www.cb](http://www.cb), on Mises confusion of interest theory (temporal preference) and interest rate.
- 18) Simple law —of clear Austrian origin— that states that parties exchange to improve on their previous state. See more in *TER* and *Currency Theory*, AT [www.cb](http://www.cb).
- 19) "Virtual", textual term by Knut Wicksell.
- 20) See Menger's depreciative expression on Böhm-Bawerk, cited by Schumpeter (*Currency Theory*, [www.cb](http://www.cb)):

“There will come a time (*appearance of TET?*) in which people (*TET?*) will realize that Böhm-Bawerk’s theory “is one of the worst mistakes ever committed”.

- 21) See in *Currency Theory* and *Interest Theory* (at [www.cb](http://www.cb)) the consequences of Bawerkian-Wicksellian dichotomies deriving from real vs. virtual currency.
- 22) One of the best expressions on endogenous and exogenous money of the mainstream can be found in Alberto Benegas Lynch (II) in *Fundamentos de Análisis Económicos* (p. 260 and following pages).
- 23) TET considers that to refer to an exogenous economic good implies violating the definition of economic good: scarce goods because *demand* > *offer*; the positivity of prices axiom does not apply:  $p > 0$ ; and it refers to unoccupied economic goods: ( $i_c$ ?).
- 24) Applies equivalence axiom  $i_m \equiv p_m$ . See more in *CURRENCY Theory* ([www.cb](http://www.cb)).
- 25) See *Currency Theory* ([www.cb](http://www.cb)).
- 26) Not of general price level, or absolute prices of goods. There are only relative prices generated in spacio-temporal exchanges that are unique and unrepeatable.
- 27) See quotation in *Principles of Political Economy* by Carl Menger, *Chapter VIII*, section 1: *Nature and origin of money* (German meaning of the term).
- 28) Huerta de Soto in the book we have quoted (p. 544) in his debate with Selgin, after asserting his ideas are based on Keynes’, says (our commentary in italics):

... That is why it is not correct to qualify as savings any increase in fiduciary means (*H. de Soto here ratifies virtual currency, since it is the same as saying that credit can exist without the presence of a present economic good, or that there can be credit with no previous savings*) .... it would be the same as saying that any creation of money, in the form of deposits or bills, on the part of a bank in a free banking system with fractional reserve supposes, in the last instance, granting “a posteriori” of a loan to the bank of the same import (*he does not realize the currency causality presented here, the same as the Keynesians he criticizes*<sup>(a)</sup>). However, the bank generates credit from nothing... (*the same virtual Keynesian argument he criticizes*). Nonetheless, “money is in itself a present good”... (*idem*<sup>(a)</sup>) Note 141: Money is a present good, perfectly liquid. (*He confuses liquidity, established by the present economic good delivered when the currency-credit is originated, with the nature of “on sight credit” of PC*).

- 29) That is ratified by reality; let us see: US\$ 100 in physical gold, supporting 10% of PC emission, which implies US\$ 1000 credit-currency in PC that, with fractional bank reserve of 10% implies fractional bank check for US\$ 10000. In short, the gold which, according to the mainstream has multiplied its availability by a factor of 100, represents only 1% of the “available currency” (US\$ 10000) —an oversimplified example. In short, reality clearly ratifies TET’s currency theory, insofar as gold has no relevance whatsoever in connection with the credit currency existing in an economy. I.e., according to the example, contractual nominativity in currency “pays”:

1% with money (gold).

10% with PC

100% with fractional bank checks denominated in PC.

It is easy to see why the market chooses the fractional bank check denominated in PC. Once again it is clear that the currency-financial causality is the market, not the State nor the bank

system, a presumption for which we need to “pardon” officials, insofar as mainstream theories validate the inverted causality on which legislation is based. It is also evident that the community pays the pertinent interest, which is determined by financial “experts”; this goes against exchange, development and social justice.

- 30) For more on this see *TER, Currency Theory and Interest Theory* (www.cb).
- 31) Insofar as (subsidized) maximum price implies “an excess consumption”, whatever the economic good (consumption, capital, “time”-credit).
- 32) For more: *TER and Currency Theory* (www.cb).
- 33) Expressions of his *General Theory*.
- 34) We have already quoted Dr. Juan C. Cachanosky on the subject. See more in *Human Action* by Mises, chapter XVII, *Indirect Exchange*.
- 35) Paradox in which was reflected the classical vice of his objective value theory: how can a diamond, obtained from the ground, be more valuable than a kilogram of bread, that needs more elaboration? It would be solved by the subjective value theory, one of the greatest findings of economic science, which in our view was already present in Gossen’s reflections.
- 36) For more see *TER* – p. 320 (www.cb).
- 37) We only need to quote and comment again Huerta de Soto, now from page 551 of his *Dinero, Crédito Bancario...*

...when a bank grants loans based on the money deposited on sight a “double availability” is created based on the same amount of money: one for the original depositor and the other for the debtor that receives the loan. Clearly two individuals cannot dispose simultaneously of the availability of the same thing (*in terms of physics this is impossible, but TET showed this was also impossible in economics. De Soto does not realize that the “availability” is established by the credit with “contractual nominativity” in currency which in the case he is referring to is credit that acquired the status of currency*), and that conceding a second availability on the same thing to another person is acting in a fraudulent manner... (“selling” what belongs to others is a crime in any circumstance, there is no need for a special theory of “double availability”).

In other words, Huerta de Soto belongs to the mainstream from which he pretends to separate himself, insofar as he maintains that credit is granted by banks (that the availability of a present economic good obtained by the debtor is contributed by the banks).

- 38) See development in *Currency Theory* (www.cb).
- 39) Remember the ordered pair quality-quantity of *Decision Theory*, derived from Popper and Hayek. For more see *TER* and *The Curve of Human Evolution, and its continuation* (www.cb).
- 40) See interpretation of the crisis of the 1930’s by TET in *Currency Theory*, section on the *Crisis of the 1930’s* (www.cb).
- 41) On the theoretical explanation of the origin and the impossibility of the independence of central banks there are works and special sections deriving from TET available at www.cb.
- 42) Debates deriving from different interpretations of the matter: Stephen Horwitz, Joseph Salerno, Huerta de Soto, *versus* Lawrence H. White and George A. Selgin. Here we simply say that George A. Selgin “seems” to sense the currency causality of TET; if so he evidently is not in line with Mises, since he would be closer to TET and Menger.
- 43) Explained his approach in his book, *Dinero, Crédito Bancario* (the text speaks for itself) *and Economic Cycles*.
- 44) Unless one adopts the posture of saying: *accepting that would imply recognizing I have been wrong all my life*.

45) A difficulty we are “spontaneously and agreeably” involved with my dear friend Manuel Polavieja, insofar as we have formed a *unique* scientific society with the “quixotic goal” of developing and transmitting economic theory, motivated by the progress of science.

## Bibliography

- BENEGAS LYNCH, Alberto (h) en *Fundamentos de Análisis Económicos* – Octava edición corregida – Editorial Abeledo-Perrot – Buenos Aires 1985.
- Bondone Carlos A.: *Teoría de la Relatividad Económica* – Editorial Distal, Buenos Aires 2006, *Theory of Economic Relativity* ([www.carlosbondone.com](http://www.carlosbondone.com)) (www.cb)
- Bondone Carlos A.: *Teoría del Interés, Interest Theory* (www.cb)
- Bondone Carlos A.: *Teoría de la Moneda, Currency Theory* (www.cb)
- Bondone Carlos A.: *Curva de la Evolución Humana, Human Evolution Curve* (www.cb)
- Bondone Carlos A.: *Curva de la Evolución Humana – Continuación, Human Evolution Curve - Continuation* (www.cb)
- CACHANOSKY JUAN CARLOS: *Déficit Fiscal y Equilibrio Monetario* <http://www.hacer.org/pdf/Cachanosky03.pdf>
- HUERTA de SOTO, Jesús: *Dinero, Crédito Bancario y Ciclos Económicos*, Unión Editorial-Madrid 1998.
- MENGER CARL: *Principios de Economía Política*, Ediciones Orbis SA, Buenos Aires 1985. *Principles of Political Economics*
- MISES, LUDWIG Von, *La Teoría del Dinero y del Crédito*, traducción de Juan Marcos de la Fuente, Unión Editorial, Madrid, 1997. *The Theory of Money and Credit*.
- MISES, LUDWIG Von, *La Acción Humana: Tratado de Economía*, traducido por Joaquín Reig Albiol, Unión Editorial, Madrid, España, 1980. *Human Action*.