

Currency Theory

(The crisis of currency-financial theories)

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CONTENTS

Introduction

Chapter I

EXCHANGE THEORY

Introduction to exchange

 The factual question of exchange

 The subjective question of exchange (value)

The origins of exchange

The concept of exchange

The Law of Exchange

Exchange is an economic good

Types of exchanges

 Intra-personal exchanges

 Inter-personal exchanges

Types of inter-personal exchanges

 Cash (barter and money)

 Credit

Pareto's Optimum and inter-personal exchanges

Property-exclusion-tragedy, the rights of commons

The cost of exchanges and externalities

Summary of exchange theory

Chapter II

CREDIT THEORY

Introduction to credit theory

The concept of credit

The necessary conditions for credit to exist

The conditions for compliance with credit

Types of credit

 Regular credit

 Irregular credit

The price of credit

Chapter III

CURRENCY THEORY

Introduction to currency theory

Liquidity

The concept of currency

The functions of currency

The price of currency (TET: p_m) *versus* currency prices (absolute)

Currency interest (i_m)

Currency theorem

The theoretical and factual origins of currency

Types of currency

 Money-currency

 Credit-currency

Equivalence and equality axioms of i_m and p_m

 Equivalence axiom $i_m \equiv p_m$

 Equality axiom $i_m = p_m$

 Terminology of the axioms

Currency, prices and interest

Interest as the price of currency (i_m)

Chapter IV

CURRENCY-FINANCIAL INSTITUTIONS

Introduction to currency-financial institutions

Other financial institutions (banks)

Theories and institutions

Institutions

Property and contracts

Exchange contract (as the perfection of the act)

Types of exchange contracts (cash and credit)

Currency-contract

Types of currency-contracts

 a) money-currency contract

 b) credit-currency contract

 b-1) regular-credit-currency contract

 b-2) irregular-credit-currency contract (PC)

Currency-financial symmetries and asymmetries

Chapter V

CURRENCY-FINANCIAL CRISES THAT AFFECT CAPITALISM

Introduction

Types of currency-financial crises

Types of currency-financial systems

Types of possible crises according to the currency-financial system

Crises with money-currency

Crises with credit-currency

Tragedy of the commons and negative (currency-financial) externality to the market

Analysis of historical crises

The crisis of the 1930's

How Argentina "attained underdevelopment"

The current international crisis

The euro crisis

The end of the *twin* (currency-financial) *crises* inflicted by capitalism

Economic democracy and politics (introduction)

Appendix A

THEORETICAL CONSEQUENCES OF THE CURRENCY THEOREM AND ITS AXIOMS

Interest theory – The equilibrium solution – Gibson's paradox – Keynes' Paradox – Inverted Keynes paradox – Keynes asymmetry – Interest paradox – Mercantile-financial economic reductionism – Phillips curve – IS-LM curves – Prices dichotomy – Endogenous and exogenous currency – Economy without money – The "Locke problem" – Garrison's graphics – Negative interest – Real (relative) interest *versus* currency (absolute) interest – the Gresham Law – Economic models – Neutrality of currency – Currency purchasing power – The impossibility of calculus in Socialism – Money substitutes – Regression theorem – Intrinsic contradiction between the Regression Theorem and Currency Substitutes – Quantitative Theory – Unknown debtor syndrome – Pareto's optimum – Exchange rate – Balance of payments – The Liquidity Trap – The common origins of current theories – Currency demand paradox – Barbarous relic – The origins of currency in the State and of credit in banking – Transaction Costs (Caose) – Adam Smith's invisible hand – Prices ($i_c \equiv p_c$) – Currency-financial commons tragedy – Currency-financial externality negative to the market – The Case of Somalia – Exchange law, its violation – Currency without backing.

Appendix B

JOURNALISM AND CURRENCY

Introduction

A specific case as a reference: Story in the Financial Times, *The crisis of capitalism*, by John Gapper, translation published by El Cronista – Argentina 23/01/2012

Notes

INTRODUCTION

*“Capitalism suffers currency-financial crises,
it does not generate them”*

Carlos A. Bondone

The object of this work

The object of this work is to present the *Currency Theory* derived from the *Theory of Economic Time (TET)* in logical-deductive form, the same as we have done with the *Theory of Interest* (text that can be obtained in this same site). Though it is not necessary to read the *Theory of Interest* to understand this text, the combination of both these texts offers a solid foundation to understand the basics of TET and its theoretical and practical projections.

As Karl Popper once said, every new theory includes primitive terms, and in this work we “officially” present new concepts -that derive deductively from the new tools TET presents- to scientifically explain currency and finance.

But this text is not limited to the theoretical sphere, and it includes the implementation of its proposals, which not only serves as a corroboration of its hypothesis, but also explains specific cases satisfactorily, specially referred to the understanding of the origins, consequences, and treatment of the *necessarily recurring currency-financial-crises* that affect capitalism.

Though at first the idea was to limit the text exclusively to theoretical developments, as we received consultations, preoccupations, clarification requests, etc., with growing interest for TET, we opted to extend the same to applied economics. That is why there are references to concrete cases of currency-financial crises, and we include a list of the theoretical developments that are no longer valid with the presence of TET.

The structure of this text

This text follows the theoretical-logical-deductive methodology that we have always used with TET, in this manner there is a strict causal order of subjects, and a subject cannot be approached without understanding the previous one, and it is not possible to speak of the current issue without referring to the next question. Forgetting this causality or not understanding it with the necessary intensity has been the origin of most of the theoretical blunders committed in the course of history, a situation that readers will acknowledge as they proceed with the text.

To reach the objectives we have stated with currency theory and practice, we summarily present the structure of the present text:

Chapter I: The theory of exchange. Here the whole deductive chain that will lead us to Currency Theory begins. Here are the essential tools that we believe a theory of exchange

needs; it is dangerous to proceed with the issues that are deduced from this theory –those related to economic exchanges- without them.

Chapter II: Theory of Credit. Reading the present chapter, you will be able to understand why we place Credit Theory after *Exchange Theory*, and before and essential to the development of *Currency Theory*. This comment is pertinent considering that you have not seen this deductive chain, since current theories treat currency financial issues in another manner. Here you will see why you can and should see it this way: exchange theory without credit theory; credit theory without currency theory. And why it is not possible to have a currency theory without a previous credit theory and a credit theory without a previous exchange theory. An extremely important observation, since we begin to see Copernican gyrations relative to the paradigms we are used to.

Chapter III: Currency Theory. The preceding chapter, together with the foundations of TET, lead us deductively to *Currency Theory*. Here you will find the development of the new tools presented by TET, which are central to currency theory: a *Currency Theorem*, that leads us to the *equality and equivalence axioms*, insofar as we know what economic time (TET) means. But this chapter does not end here, since it will be able to clarify –we believe definitively- the (theoretical and factual) origins of currency, and the relation existing between currency, interest and prices. Something current currency theory was unable to do, as Hayek said.

Chapter IV: Currency-financial institutions. Here we start to see the institutional derivations resulting from current monetary currency-financial theories. I.e., we will be able to analyze the essence and the reason for the existence of current currency-financial institutions and explain what their actions mean for our daily life. This institutional framework, presented in a different way from what you are used to seeing, becomes an essential tool to approach the rest of the text where we apply the new theoretical paradigm we have presented up to this point.

Chapter V: Currency-financial crises that affect capitalism. The title itself implies the concrete position deriving from TET: currency-financial crises (necessary and recurring due to current currency-financial systems) are not part of the essence of capitalism, they are alien, they are inflicted on capitalism. In this chapter we analyze well known crises, and present a panorama of future crises, considering the tools we have acquired in the preceding text, i.e. considering the foundations of TET.

Appendix A: Theoretical consequences of the Currency Theorem and its axioms. The reader that is specially interested in understanding what TET implies compared with current theories –many of them considered ultimate truths, that lose theoretical grounding when confronted with the new paradigm- can find here an enunciation of the same, which is summary and not fully developed, as some would merit. Even so, the reader will find the essence of the Copernican distance from which each one of them is analyzed from the point of view of TET, compared with what we have been taught about them.

Appendix B: Journalism and Currency. This appendix strives to show how current theories are present in all economic spheres, in this case journalism, and for this purpose we have selected an excellent piece, considering the level and prestige of its origin, to analyze from the point of view of TET.

An alert to the reader

The present warning will be received by each reader according to their degree of conservatism, fanaticism, work commitment, desire to understand, to question, to train, their satisfaction-dissatisfaction with what they know, in sum, according to their state of “juvenile” revolutionism, understood as a state of rebellion against the growing totalitarianism present in our institutions, that progressively suffuse our freedom. This work denounces scientifically the state of things in current currency-financial institutions, which has its origin in abandoning Carl Menger’s deductive logic, replaced by the dichotomies of Böhm-Bawerk and Wicksell, and expanded by the theoretical developments of the Twentieth Century.

The reader will find in this text, as in almost all the development of TET, that the theories here presented are opposed to the theories currently taught in universities –some of which we believe are nothing more than badly applied techniques-, which underlie specialized journalism, and currency-financial policy decisions, etc.

The theoretical-Copernican change presented by TET must be referred to all currents of thought, be they Austrian, Keynesian or Quantitativist-monetarist and cartalism (symbolically replacing fiat-money with fiat-currency). Though the reader that has previously read *The Theory of Interest* or knows TET, is already conscious of this situation, it is worthwhile to repeat it here, since we want to be concrete and tell you that if you wish to hear more of the same, you should not bother to read this text.

For the reader in general, economics professors, and students and new academics in economics (that consult us when they present thesis, etc...) this is the specific content of the warning:

- I suggest you should not bother to read this text unless you are willing to get to know a new theory that can enrich your knowledge. In other words, if you consider that your current knowledge allows you to explain economic reality I suggest that you should not bother reading this text.
- If instead you believe or doubt whether recurring currency-financial crises have their origin in theories-techniques that do not grasp the essence of the matter, *this text may possibly be extremely useful for you.*
- If you doubt that recurring currency-financial crises are due to capitalism –if you (erroneously) believe that banks are “capitalism’s icons”- possibly this text will be extremely useful to you.
- If you have doubts that recurring currency-financial crises are necessarily recurring –yes, you read correctly, necessary and recurring- this text may possibly be extremely useful for you.

It is important to say that this text clearly states that the necessary and recurring currency-financial crises:

- Have a theoretical origin.
- Are present only in capitalism and not in socialism. And you will observe that currency-financial crises are inflicted on capitalism, which implies the totalitarian essence of current currency-financial systems.
- That their end is nigh, as soon as their essence is grasped and according to the political orientation humanity adopts.

If you are interested in economic issues, you are confronted with a serious dilemma, but that can be easily solved: you can consider this warning as an “act of arrogance” or the “desperate cry of the scientist”. As an economist, or if you are interested in its issues, it is evident that **the option is to read**, since:

- It only takes a few minutes of your time
- If it is an act of arrogance, you are not arrogant
- Possibly you will find here theories that you should not only adopt but that you can help develop and contribute to solving the central problem of the economy; to enjoy production, rewarding the merits of those that are efficient, i.e., enjoy efficiency and help others.

In this text we show that the **current** State-banks-markets triad must be seen as an “*icon of anti-capitalism*”, and that *capitalism with irregular currency-financial systems must suffer recurring crises*.

Acknowledgements

I wish to thank my dear friend Manuel Polavieja, who understands better than most the foundations of TET. This text includes issues inspired in our cordial “chats”.

Chapter I

EXCHANGE THEORY

Introduction to exchange

Since the reason for the existence of currency is exchange, this text begins by presenting the theory of exchange.

To understand man's economic life in society we can present the following chain of deductive reasoning:

Isolated Man → *Man in society* → *Division of labor* → *Specialization* → *Exchange* → *Barter-Credit-Currency* → ...

From the time man began living in a society he *spontaneously* discovered that if each individual specialized in what he had a productive advantage, he would produce more than what he needed of the economic product of his specialty. This would be true for each specialized business, and thus the *need* to exchange the surplus of the economic good each one produced with a relative advantage would appear.

It is of fundamental importance to understand that the exchange of economic goods includes two essential aspects, a factual (practical) question and a subjective question of value.

- **Factual question of exchange**

In the first phases of humanity, and given that there were few members of the tribes, men spontaneously discovered barter as a means of exchange. This meant that through barter, a person delivered *directly* certain amounts of an economic good in exchange for certain amounts of another economic good, to satisfy their own needs, and not for further exchange. As cities sprang up, productive units were organized specially to produce surpluses, which implied the *need* to find a solution to the *practical* problem presented by barter, due to the volume and complexity of exchanges. Thus the *need* for "**liquidity**" arose, i.e., finding an economic good that could replace *barter*, by then *costly* and *impractical*.

Also spontaneously, man discovered some economic goods that satisfy the need for liquidity better than others. Man discovered that such economic goods had to have two essential conditions (a historical process brilliantly narrated by Carl Menger):

- 1) To have greater salability (*easy and quick sale*).
- 2) *With the least loss of value between purchase price and sale price*. A condition observed by TET (see below in *Currency functions*)

Thus a good that had both essential characteristics could be received in exchange for surplus goods, with the certainty that the first could be exchanged for other goods very quickly (*high salability*) and with negligible or no loss (zero difference between purchase and sale).

What the *need for liquidity* implies is solving the problem of the high cost of barter, and man does this with a good that satisfies both aspects that offer a solution to the *illiquidity of barter*. Though this reasoning may seem trivial, it is not so, and this can be seen observing the consequences of theoretical developments of the Twentieth century that forget this simple deductive chain:

→ *Labor distribution* → *Specialization* → *Exchange* → *Barter (illiquidity)* → *Currency (liquidity)* → ...

We must not forget that in this deductive chain, exchange is previous to barter and currency. Altering this causal sequence has been the origin of very unfortunate theoretical developments in the Twentieth century. In other words, we must bear in mind that the central issue is exchange, while barter and currency are instruments (goods) that satisfy the need for exchange. Knowing that every economic good is preceded causally by a need, without which it is not an economic good, we can be more affirmative and say:

Without the need for exchange there would be no reason for barter, credit, or currency.

This approach is essential, since economic theory (Smith, Ricardo,...) comes as an “answer” to mercantile practices that had no theoretical basis, an unequivocal expression of which is that they equated riches with the possession of money. The theories of the Twentieth century inadvertently place currency in “such a special” place, that they have mercantile reminiscences in that currency is at the center of their theories. Proof of this are current currency-financial institutions, which constitute a necessary framework for the inevitable and recurring currency-financial crises. Based on this, TET refers to *modern mercantilism*, configured by the “State-Banks-Stock markets”, which we refer to as “*financialism*”, in reference to currency-financial scientific reductionism.

- **The subjective question of exchange (value)**

Proceeding with the chronological development of human knowledge, now we must produce a theory, i.e., explain the factual, the practical, the facts, daily life. That is how the *need* for a theory that would explain the reason for the existence of exchange came about.

In ancient times it was believed that in exchange, one side wins and the other loses, or that the value of things exchanged was the same, which led to a superior theory that tells us that all sides participating in exchange do so to improve their situation, exchange adds value to all involved, or there would be no exchange.

This theoretical advancement, essential to economic science, took place when the Theory of Subjective Value (TSV) appeared at the end of the Nineteenth century, which placed man at the center of the economic scene, trumping materialism which emphasizes things (currency for example), and was able to explain the value and price of things, eliminating the error implicit in classical objective value theory.

The origins of exchange

The subjective aspect of exchange allows us to understand its origins: man undertakes the act of exchanging economic goods to improve his current situation (which he may or may not attain, being fallible). From this subjective origin derives the idea that he will not offer in exchange a “dearer” economic good (that he values more) instead of a “cheaper” good (that he values less). This situation is so because if he offers the dearer good instead of the cheaper one he is either making an economic mistake or he is exchanging for “altruistic” needs.

This simple and decisive reasoning would be left aside by Twentieth century thinkers that concentrated on the study of currency and interest, generating unfortunate developments that are the basis for the current inefficient currency-financial institutions.

The concept of exchange

In economics we refer specifically to exchanges of *economic goods* that *man* produces in *periods of time*. In this simple definition we observe the following aspects that, though simple, are essential: a) man is the one who exchanges; b) what is exchanged are economic goods; and c), exchanges require time to transpire, even if it is the smallest period of time, in a specific spatial and temporal act.

Once again we see man, economic goods and economic time, which appears as a ratification of the *economic good-owner* axiom.⁽¹⁾ The third element, time, completes what we call the synthesis of economic thought, as we see that only the combination of the three productive factors with their respective retributions according to what each adds to the process are necessary: economic goods (rent), work (wages), and economic time (interest). Which we can sum up simply saying there are three productive factors that generate their respective prices, which become production costs when we apply the theory of input.

TET proved that there are only two production factors, work (wages) and economic goods (rent or profits) while time, a necessary production factor, depends on the other two. A dependence that TET expresses with its concept of indirect materialization of economic time, which has no life of its own, it always materializes in another economic good.

It is clear then that exchanges (of economic goods) by man are inter-temporal, something we must not forget, especially when referring to types of exchanges.

The reader that refers to previous classifications I have made of exchange will observe here a development of TET, since previously I underlined inter-temporal exchanges as another type of exchange, as exchanges of economic goods in time. The approach I present here is better, including it as a characteristic that is inherent to all forms of exchange, i.e., there can be no exchange without time.

Now we will analyze two central aspects of exchange theory, its law, axiom or the reason for its existence, and its condition of being an economic good.

The Law of Exchange

With the concept of the Law of Exchange we simply wish to refer to the fact that *those involved exchange economic goods wishing to improve their situation*. A desire that derives

from the subjective valuation the parts have of the circumstances that lead to the exchange. This means that human beings exchange economic goods to improve, because they value more the situation after the exchange than the one previous to it.

In this manner, every exchange implies an improved situation for all involved, and the same is expressed by a situation in which exchange is not carried out, i.e., valuing the preservation of economic goods as stock. This is a very pertinent clarification, since it leads TET to define the concept of *total or complete demand* and the derivations from it (inconsistencies in current theories that consider partial or incomplete demand, which has enormous and unfortunate importance for science).⁽²⁾

On the other hand, every economic human action implies the existence of the exchange of economic goods. In other words, the simple existence of fallible man implies work, and the existence of it implies necessarily the existence of an exchange, at least an intra-personal one, that requires time for its fulfillment, as in every exchange.

The reader will observe that everything expressed here is in agreement with the developments of the Austrian School on the subject (“human action”, “extroversive” work, etc.). It is hard not to agree with these simple concepts if we adopt SVT, that trumps its predecessor.

In *Appendix A* we reiterate what TET considers, that Gresham’s Law is unnecessary, and the same is true for other theoretical consequences derived from the non-observance of the Law of Exchange, in this case referred directly to currency theory.

Exchange is an economic good

To comply with TET’s *economic good-price axiom*,⁽³⁾ we must remember that exchange is an economic good. Though the exchange axiom implies the idea that any exchange of economic goods is an economic good in itself, and since what man exchanges are precisely economic goods, we need to remember that the exchange of economic goods is an economic good. This concept is in complete harmony with the Law of Exchange.

We should remember here that, given that economic time is a necessary factor of production (with its special characteristic of being a dependent factor), it is also necessary for exchange as an economic good.

Types of exchanges

Having established that all exchanges require the presence of man, economic goods, and time, we now approach a task that is necessary in science, which is taxonomy, particularly overlooked in the case of the theory of exchange. The neglect, negligence-inadvertence of the subject in economic theory led to unfortunate currency, interest, and prices theories, which is the same as saying that it affected all economic theory.

With the new definition adopted for exchanges, it is simple to establish its different types, with the corresponding sub-classifications. And so we have the following classification:

- 1) ***Intra-personal exchanges***: are the exchanges of economic goods a solitary economic agent makes in time. In this kind of exchanges we observe the necessary presence of time in every exchange, and this is so since we are speaking of

exchanges by one agent, without the presence of another. For example: Robinson Crusoe, the man that decides to store, the man that decides to consume a stored economic good, etc., i.e., again we observe time as a necessary factor of production for every stock of economic goods.

- 2) **Inter-personal exchanges:** are the exchanges of economic goods between different economic agents. Here time intervenes in a special temporal instant in which the act of exchange is carried out. These exchanges are in turn sub-classified in two essential categories for currency theory, the neglect of which has led to the deviations we have mentioned.

Types of inter-personal exchanges

There are two types of inter-personal exchanges, according to the intervening types of economic goods being present and/or future:

- 1) **Cash:** inter-personal exchange in which there are only present economic goods present. This type of exchange includes two different types, according to the present economic goods that appear:
 - a) **Barter:** *cash* exchange without the presence of *money*.
 - b) **With money:** *cash* exchange with the use of *money*.

We must stress the use of the term money (a present economic good: gold, silver, cereal, etc.) in both cases, not currency (that can be credit). This is due to the difference established by TET between money and currency, different from current theories that consider them synonyms, because both have the function of currency, which we will see in greater detail in chapter III, Currency Theory.

- 2) **Credit:** that TET defines as *inter-personal exchange of economic time*, which coincides with the idea of *inter-personal* exchange in which present and future economic goods intervene. Chapter II is dedicated to its study specifically.

This logical deductive chain leads us to see that barter, money, credit and currency are consequences of the existence of exchange. These entities appear because of the taxonomic use required by exchange theory.

The contractual format will depend on the type of exchanges, which we will analyze in chapter IV, on currency-financial institutions.

The Pareto optimum and inter-personal exchanges

The Pareto optimum establishes that “the highest prosperity is attained when no person can increase his or her well-being in an exchange without causing harm to another”. This concept shows why it is necessary to mention the issue in this chapter on exchange theory.

It is evident that the Pareto optimum only includes interpersonal exchanges, not intra-personal ones. This is very relevant, because it is thought to refer to all exchanges, and if this were so we would not be able to explain the existence of stocks of economic goods that

are not interpersonally exchanged. We must point out that the Pareto optimum would be indicating the “limit” of the Law of Exchange for peaceful coexistence in society.

But the preceding paragraph leads to an extremely important deduction when we relate it to the Law of Exchange:

- 1) The Law of Exchange tells us that participants exchange with the goal of improving their situation previous to the exchange.
- 2) The Pareto optimum indicates that the maximum prosperity of the participants in the exchange is reached when nobody loses with the exchange while another benefits.

As a result of the two mentioned postulates, it is evident that the definition of the participants in exchanges becomes a central element, especially of the necessary participants, considering the transaction costs they imply (Coase). This circumstance will acquire extreme relevance in the currency financial theory we are analyzing.

Property rights-exclusion-tragedy of commons

Pareto’s Optimum shows the great importance of property rights and the need to determine on which economic goods the necessary axiomatic relation *economic good-owner* determined by TET is established.

From this reasoning derives the right of owners to exclude non-owners from exercising any right over their economic goods without their consent. When this situation is not so or when it is not clearly defined there is the risk denominated as the tragedy of the commons.⁽⁴⁾ As we shall see, this situation is what has occurred in the history of currency, with the support of current theories that act as the basis for said tragedy.

Costs of exchanges and externalities

Ronald Coase is often mentioned as the theoretician that established the cost of every transaction, but since exchange is an economic good, said concept is negligible, simply being a different terminology for stating that exchange is an economic good.

It is also very pertinent to remember that exchanges can produce effects on third agents that have not participated voluntarily and/or formally in the exchange, but suffer economic consequences as a result of the same. In this manner there may be what are called externalities of human actions, including exchanges, which we are referring to in this paragraph. Since the externalities of every human action can be positive or negative, the same is true for derivations of exchanges. In this text we will see the enormous importance of the negative externalities imposed on markets by current currency-financial systems, unnecessarily increasing their costs and limiting their freedom of action.

Summary of exchange theory

We can conclude this chapter assuming that an adequate framework for an exchange theory must include:

Necessary elements:

- 1) Groups of men
- 2) Economic goods
- 3) Economic time
- 4) Subjective valuation of exchange

Consequences of exchange:

- 1) The Law of Exchange
- 2) Economic efficiency (cost-benefit)
- 3) Pareto's Optimum
- 4) Property rights
- 5) Tragedy of the commons
- 6) Exclusion rights
- 7) Negative externalities resulting from exchange
- 8) Positive externalities resulting from exchange

Thus, we can conclude that human beings in society imply exchanges due to efficiency (distribution of labor, etc.); without a precise definition of the *economic good-owner* axiom it is not possible to apply exclusion rights and it is possible to incur in the tragedy of the commons; participants exchange as long as they consider their situation will improve; exchanges, being economic goods, have a cost; and exchanges can generate positive or negative externalities.

Everything that has been said here will be of special relevance when we refer to the relation between the market (private sphere) and State intervention (public sphere), when we refer to the *Theory of currency*, in so far as institutions that lead to the tragedy of the commons and negative externalities of exchanges (market), when the State becomes an unnecessary participant in exchanges in the precinct of the "market" derive from theoretical errors.

We need to consider here the tragedy of the commons and negative externality in exchanges (market) that appears when the roles of those participating in the exchange are not clearly defined. Though this aspect is comprised within the necessary precision of the components of the *economic good-owner* axiom, we can stress that in situations that seem trivial the role of each participant in their relation with the economic goods is often not clearly defined. Though this was studied and presented by Ronald Coase, through his proposal of assigning wave frequencies, and is recurring with each new invention by human beings, we are not exaggerating when saying the greatest difficulty was always "right in front of us, starting with the first human being", but economic theory was incapable of seeing it. We are referring specifically to the analysis of *time* as an *economic good*, that was the object of studies that began referring to the divine and the mystical and ended at the close of Twentieth century with the "para-scientific", and its essence was only understood with the appearance of the Theory of Economic Time at the beginning of the Twenty-first century,⁽⁵⁾ including its great influence on the theory of interest, credit, currency and prices. We will have the opportunity to analyze the tragedy of the commons and the most relevant negative externality, as a negative effect on exchanges (market) and referred to an incorrect

institutional interpretation of their role, in the *Theory of Currency and Currency-financial institutions*, and in Appendixes A and B.

Chapter II

THEORY OF CREDIT

Introduction to the theory of credit

TET alerts us to the fact that the theory of credit comes after the theory of exchange and before the theory of currency, since credit exists before it acquires the status of currency, both in its regular and irregular form, as we shall see here.

TET alerts also that it is not adequate to present and/or develop a theory of currency without previously establishing a theory of credit, since credit can acquire the status of currency as we shall see.

Not understanding the correct deductive theoretical causality that credit (no matter of what type) precedes currency, implies that credit can be currency, instead of trying to explain that currency can be credit, which affected all the developments of currency theory in the Twentieth century and before.

The concept of credit

We define credit as the *interpersonal exchange of economic time*. In correspondence with the indirect materialization of economic time we deduce that credit is the interpersonal exchange of present economic goods for future economic goods.

This definition is generally accepted, involuntarily forgetting that we are referring not only to the exchange of present for future economic goods but to the fact that it is an interpersonal exchange. This is an essential clarification since the act of saving of an economic agent is not a credit though it implies an inter-temporal exchange. On the other hand, this clarification is necessary since we know there are interpersonal and intrapersonal exchanges, and that all exchanges need the presence of time.

The preceding clarifications explain why we present credit as an inter-personal exchange of economic time, including all the categories we expressed in the preceding paragraph.

The necessary conditions for the existence of credit

For there to be credit, the following conditions are necessary, differing from the three essential components of all exchanges (man-economic goods-time) in formal aspects, as we can see:

- 1) The presence of two (or more) agents engaged in exchange. An only agent engages in *intra-personal* exchanges (in time), which does not configure a credit because of the absence of the other agent (different from Mises concept of credit that we have referred to in chapter VIII of the *Theory of Economic Relativity*).

- 2) Indirect initial materialization, i.e., without delivery of a present economic good no credit occurs, an aspect not perceived by the currency theories of the Twentieth century, and the cause of their not being able to explain recurring currency-financial crises. Indirect materialization implies the necessary presence of economic goods for the occurrence of credit, since it is an exchange.
- 3) Economic time, necessary in all exchanges, bearing in mind it is a necessary production factor dependent on other economic goods (indirect materialization).

The conditions for compliance with credit

Cancellation of credit requires what TET calls final materialization, i.e., the delivery of a present economic good at the time of maturity.

Thus we see that credit, as an inter-personal exchange of *economic time*, requires indirect or improper double materialization, an initial one for its existence and another final one for its extinction. In other words, TET applies in credit in two instances, an initial and a final one, essential aspects for an adequate taxonomy in credit theory.

Types of credit

Now we can classify credit –following TET- in a necessary, and adequate form, previous to the development of a currency theory, as follows:

- 1) **Regular credit:** TET defines as such the credit that, in its origin, establishes the quality and amount of the future economic good with which the new obligation will be cancelled. I.e., at the time of its origin the regular credit establishes the quality and quantity of the present economic good in which the indirect final materialization will occur at maturity. In other words, together with the initial indirect materialization the final materialization is specified.
- 2) **Irregular credit:** As opposed to the previous case, TET defines thus a credit that at its birth *does not define* clearly the quality and/or quantity of the future economic good with which the new obligation will be cancelled. I.e, at the time of the origin of the irregular credit the quality and quantity of the present economic good with which the final indirect materialization will be carried out at maturity are not specified. In other words, the final indirect materialization *is not* specified together with the initial indirect materialization.

If you are wondering if irregular credit can exist, I not only say it does, but that your whole social economic life hinges on it, as we will see in the chapter dedicated to the *Theory of Currency*.

The price of credit

TET allows us to deductively conclude that the price of credit –being the inter-personal exchange of economic time- is the price of economic time, interest (*i*).

Considering that the price of economic time is interest, we also understand that it also has all the exclusive characteristics of economic time, such as indirect or improper

materialization, and its necessary presence of all economic goods, which implies here the necessary presence of interest in the formation of all prices.

This logical-deductive chain due to TET avoids all the byzantine discussions on the causality of interest-prices, interest-capital, interest-rate of interest, currency-prices-interest, and alerts us to the risks of establishing economic policies with the current econometric models, in so far as we do not see that we are in the presence of variables that are not independent (we are referring to the price of currency and currency interest).

Considering what we have said on the theories of exchange and credit, we believe we are now able to develop specifically a currency theory.

Chapter III

CURRENCY THEORY

Introduction to currency theory

Up to this point we have shown that it is pertinent to develop first an exchange theory, and then a credit theory. We had pointed to a causal theoretical-factual order, considering exchange theory comes before credit theory, meaning that we can produce a theory of exchange without a previous credit theory.

Then we also showed that credit theory is previous to currency theory, since credit exists without acquiring the status of currency, in its regular and irregular forms.

It is not adequate to present and/or develop a theory of currency without a previously established credit theory, since credit can acquire the status of currency, as we will see in this chapter especially referred to currency theory.

We also reiterate that not realizing that credit precedes currency –which implies that credit can be currency-, instead of trying to explain that currency can be credit, has been the cause of developments of currency theory in the Twentieth century based on Bawerkian and Wicksellian dichotomies.

To complete the necessary introduction to the theoretical deductive chain preceding currency theory, we must not forget that the origin of all this is interpersonal exchange. Forgetting this important fact has also added to the miscarriages of economic science, allowing us to consider the current state of currency-financial theory as “financialism”, compared to the well-known “mercantilism” that centered on money, and “dialectical materialism” centered on things, matter, not man. This situation can be clearly observed with the presence of recurring currency-financial crises, where it would appear that the center of all events is currency, not realizing that the essence of everything is interpersonal exchanges that generate the need for liquidity and, based on this, currency appears as an economic good.

Liquidity

In reference to the existence of the deductive logical chain of fallible man that has needs –that originate the existence of economic goods in the effort to satisfy those needs-, it is important to identify the need that originates currency. For this, exchange theory is essential, which again justifies its precedence over currency theory.

As the number of exchanges increased (in the amount of goods and participants) barter or *direct* exchange became impractical and/or costly. It is from this order of things that man discovers the need for *liquidity*, which would lead him to discover an economic good to satisfy it. It had to comply with the function of fast salability.

In terms of the theory of currency the following simple definition will suffice:

Liquidity is the *need* for an economic good with fast salability to make interpersonal exchanges efficient.

Evidently this definition is based on Carl Menger, from where we derive the characteristics that the good that will satisfy liquidity should have and that TET pretends to complete.

Having included the entity *liquidity*, we can continue the deductive chain that will allow us to introduce currency theory, as follows:

Need is the cause of efficiency, efficiency is the cause of specialization, specialization is the cause of interpersonal exchanges and inter-personal exchanges lead to the need for liquidity. This simple deductive chain –implying the concepts of marginal utility and distribution of labor- has enormous relevance for explaining with theoretical simplicity the entity currency, and what derives from it: its price as a unit of measure that facilitates economic calculus.

Liquidity implies temporal *immediacy*, i.e., minimal periods of time referred to the customary short, medium, and long term.

It is not necessary to present a currency theory to realize that, at first, exchange has the form of barter, characterized by the circumstance that the exchange of economic goods destined to satisfy the final needs (consumption) of those involved, is carried out directly. Let us remember that TET has clearly stated that credit (possibly irregular) could have appeared together with or previous to barter.

Thus, TET refers the subject of the instruments man uses for inter-personal exchanges to the historical-anthropological sphere.

The concept of currency

We define currency as the *economic good that satisfies liquidity*. In the same way that bread satisfies hunger.

The concept of currency presented here is broad, of a generic nature, as would be the definition of a means of transportation (exchange in space) and within this category we will find many types of means of transportation (cart, stage-coach, car, plane, etc.). This is central to the theory of currency, and not realizing it has been the origin of many unfortunate theoretical developments.

The first reflection when we refer to the satisfaction of a need is that there can be a variety of economic goods that will satisfy it (some satisfy hunger with bread and others with caviar, but we would not consider bread and caviar as the same thing). So we refer to different economic goods, which generate different prices, which inform man so he can choose one or another economic good.

From this we can derive two very important conclusions in economic theory, which will be extremely useful for a consistent currency theory:

- We must see that this concept of currency is in line with the *Law of exchange*, exchange is carried out to improve. In the case of currency it allows us to improve a state of illiquidity or lack of liquidity.

- It is possible to consider that for certain types of exchanges it is more convenient to use a different currency instead of the one in common use (used often in future exchanges, credit, price arbitrage, doable contracts, etc.), in the same way certain individuals use different means of transportation with different prices. There are even exchanges carried out without currency, though we are no longer in the era of barter (friendship, trust, etc.).

Everything we have said in this section is of great importance for economic theory in general and particularly for currency theory and the reader will be able to see this as we proceed.

This broad, simple and precise concept of currency allows us to identify the unfortunate foundations of currency theories developed during the Twentieth century and the reason for recurring crises in the economic world.

We end this concise section saying the concept of currency presented here is in tune with the *need-economic good-price* relation that TET's deductive chain presents as a necessary causality.

The functions of currency

It is important to compare the functions historically attributed to currency, since TET presents a theoretical framework that is completely different from the one we are used to.

From the point of view of TET we can say current economic theory assigned four types of functions to currency, which we will judge according to the basic tenets of TET.

- 1) *Exclusive functions*: satisfying liquidity and being the unit of economic calculus in so far as it is currency (implying its common use in interpersonal exchanges).
- 2) *Non-exclusive function*: therefore not justifying a special theory (preserving value, purchasing power, Gresham's Law, etc.).
- 3) *Non pertinent functions*: inducing therefore improper theoretical developments (not realizing they are typical of the good *economic time*, not currency) or inconsistent (related to "unemployment", price controls, etc.).
- 4) *"Virtual" or extra-economic functions*: possibly the most serious error, both because it affected the whole of Twentieth century thought, and because of the theoretical and institutional consequences derived from them. This theoretical error has its origin in Böhm-Bawerk's and Knut Wicksell's dichotomies.⁽⁶⁾

Assigning unnecessary functions to currency has contributed to generating theories that tend to explain that such and such a "currency candidate" is currency or not, or is similar to money, or is currency for a certain function and not for another, a currency substitute (if it is $M_1, M_2 \dots M_n$), etc. This justifies the dissatisfaction of the great Friedrich A. Hayek with the state of currency theory.

TET tells us that the necessary and sufficient function currency must comply with to be considered as such is to satisfy the need for liquidity. TET stresses that this is the essence, the reason or origin for its existence. The other exclusive function that is essential in economics, being a unit of measure that allows economic calculus, derives from it being currency. In other words, of the exclusive functions TET assigns currency, satisfying

liquidity is essential and being a unit of measure is derived and central to economic calculus.

TET establishes immediacy as a central element for defining liquidity, a need by which the market spontaneously discovers the existence of currency, and so *discovers and/or invents* (see *Theoretical and factual origin of currency*) the most efficient goods for this object. In this manner, the condition stipulated by Menger, that the condition of rapid salability must be attained with the lowest cost of its sale price compared with the purchase price, becomes unnecessary. This condition is unnecessary because it is already implicit in the law of exchange, no one will exchange against his own interest, in the same way no one will use a specific currency if there is a more efficient form of exchange (Gresham). The reader versed in Carl Menger's theory will now understand why we do not include this aspect in our definition of liquidity. Based on this same argument TET also objects Gresham's law, the "paradigm of currency demand", and others, since they are already included in the Law of Exchange.

Now we will study currency from the point of view of the functions that were traditionally assigned *specifically* to it, and we will analyze them based on the ideas contributed by TET.

Unit of measure: since currency is an economic good that implies massive exchanges, it has rapid salability, and its *price* is an ideal unit of measure for the permanent calculation of prices that characterizes "economic calculus".

It is very important to stress that in the preceding paragraph we said the unit of measure is the "price of currency". In other words, what is used as a unit of measure is the price of currency, not currency itself. Economic calculus are made based on the prices of goods (*quantities for calculation*), not economic goods (*qualities for evaluation*). This is the basis for Mises' correct criterion (with a theoretical objection by TET) when he refers to the impossibility of calculus in socialism, which originates in turn the transcendental importance that TET assigns to the difficulty-impossibility of calculus in capitalism with socialist currency systems, as we shall see.

In short, of the functions that are accessorially assigned erroneously and/or confusedly to currency, one that becomes essential is allowing economic calculus when being used as a unit of measure, something as simple and forceful as the kilo, the meter... Try to imagine what it would be like to try to understand each other in common things without the universal concept of meter or kilo. We will now have the opportunity to appreciate the enormous importance of this supposed "triviality" (when we refer to the axioms of equality and equivalence between currency prices and currency interest, and the erroneously called general level of prices of goods or currency prices or absolute prices instead of referring to the price of currency).

Preserving value or value deposit: This is another one of the functions assigned to currency, since the appearance of Knut Wicksell. TET simply tells us that every economic good must preserve or be a deposit of value, otherwise it would not be an economic good. In other words, we need not assign this function to currency, much less develop a special theory to "explain" currency.

Value is a necessary or existential condition for every economic good, which indicates that the simple posture of assigning value to currency is pertinent only in theories that

suppose the possibility of currency not being an economic good. But this is the central foundation of current currency theories, based on the Bawerkian and Wicksellian dichotomies developed up to the end of the Twentieth century. It is our intention that readers should understand the reason for our insistence on this subject, which is recurring in so far as it contaminates the whole of economic theory.

The purchasing power of currency: we continue with the task of eliminating from currency theory unnecessary developments that complicate its analysis and comprehension, which according to TET does not need special theories that separate it from other economic goods (except economic time). Now we must refer to the concept presented (as far as I know) by Knut Wicksell of *purchasing power* or *currency purchasing power*. In this sense and following the scientific precepts that refer to all economic goods, TET tells us that every economic good exchanged has “purchasing power”, which shows that the theoretical need to refer to purchasing power derives ad hoc from inconsistent theories.

Currency theory does not need this theoretical entity, since it is part of the definition of exchange, of the Law of Exchange, of price, and of value of all economic goods. In other words, every economic good interpersonally exchanged has “purchasing power”, or there would be no exchange. This same reasoning is used by TET to refer to the unnecessary “statement” of Say’s Law, considering whether an economic good is or is not an economic good.

Currency price (TET: p_m) versus currency (absolute) prices

With the unfortunate appearance of Knut Wicksell we have grown used to such concepts as:

- *Currency prices of economic goods*
- *Absolute prices*
- *Relative prices*
- *General price level*
- *Etc... etc. analyzed with the expression p_m*

As we have emphatically stressed in the *Theory of Interest*, Knut Wicksell was impelled to resort to the dichotomies of interest, currency, prices, etc., because of his misguided basic economic concepts. In other words, he forced upon us the ad hoc structure of two worlds, one real (relative, non-currency) and the other virtual (absolute, currency). As a result he ended up explaining a world with currency from the hypothesis of a *virtual* world without currency, using Knut Wicksell’s own words.

We believe that just mentioning the title of one of the chapters of this work by Knut Wicksell will suffice to sum up the inconsistencies of his theory that dragged with it all economic thinking in the Twentieth century: *Relative prices and money prices*. A title by Wicksell that leads us to think there are different prices from the ones defined by science (relative), and introduces “currency prices” that in economic thought would mean the price of goods expressed in quantities of currency units for which they are exchanged – considered virtual since currency would not be an economic good-, instead of saying that it

is the price of currency expressed in the amount of units of the “other” goods for which it is exchanged.

This inconsistency had to be accompanied with assigning that new entity (*currency prices*) the also inconsistent name of “*absolute prices*”, the plural implying a reference to the price of goods that are not currency, instead of referring to the price of the economic good currency (which, as all prices, is by definition relative).

This last observation must be what led Wicksell to “create” a new terminology for prices, because as is well known the term price is relative by definition, but since he is in a theoretical labyrinth, which he cannot solve within the primitive term, he includes an ad hoc one, and which is very unfortunate.

Our greatest desire is for the reader to realize the enormous importance of this initial error, which would continue until the arrival of TET at the beginning of the Twenty-first century. We are referring to an alteration of the theory of prices, with the role they have in the “spontaneous order” (Hayek) of economic life in freedom. An appreciation that will allow TET to compare the concept of the impossibility of calculus in socialism by Mises, to the impossibility of calculus in capitalism with irregular-fractional currency-financial systems, a socialist order ⁽⁷⁾ sustained by current theories.

TET tells us that the use of prices of goods expressed in currency (p_m) called *currency prices* or *absolute prices of goods*, according to the concept of price is the *price of currency*, a price reached in each spatial-temporal exchange for other economic goods.

The currency prices of economic goods are nothing more than the amount of units of the economic good currency for which the specific quantities of those economic goods were exchanged. In this manner, if “x” units of different types of economic goods expressed in currency prices (p_m) appear, we are only expressing the amount of currency units for which each of those “x” units of those different economic goods were exchanged. The comparison of the initial and final summations of the period of those statistical values, will allow us to obtain the median variation of the price of currency, relative to that basket of pre-selected economic goods. This is what is known as the “variations of the general level of prices”, not realizing they are statistical variations of the price of currency, not variations of the general level of prices of those goods nor their absolute prices, a concept that has no theoretical entity. The unfortunate concept of absolute price implies considering currency as a virtual, extra-economic, entity.

In short, we must refer to the price of currency (p_m) knowing there is no need to speak of the relative price of currency, since all prices are relative. Which clarifies that there is no entity such as absolute prices, that could only have appeared as a desperate attempt to force a theoretical deductive chain, a priori and erroneous –as in the case of Knut Wicksell- that was not understood during the Twentieth century, since all currents of thought pretended to have the greatest analytic power, centered on the question of “*relative versus absolute prices*”.

Currency interest (i_m)

Knowing that according to TET interest is the price of economic time, and its exclusive characteristic is the indirect materialization in other economic goods, currency interest (i_m) is interest materialized in currency. TET tells us that both the economic good time and its price (i) are subordinated to TER, because when this indirect materialization of interest

appears through currency, we are in the presence of currency interest (i_m). We will now have the opportunity to realize the enormous consequences of this, according to the type of currency.

Currency theorem

Considering:

- 1) Economic goods can be present and future (there are also past economic goods, that are of no consequence in this case) categories sufficiently established by Böhm-Bawerk, and recovered by TET as a central piece of economic theory.
- 2) That currency is an economic good.
- 3) That money is the present economic good that acquires the status of currency.
- 4) That credit is a future economic good.
- 5) That credit and currency both imply interpersonal exchanges.

If we place the preceding chain of elements within the logical-deductive chain of TET we can postulate the following theorem:

If currency is not money, it is a necessary and sufficient condition for it to be credit.

This means that the economic good currency satisfies the *need* for liquidity is a present economic good (money) or a future economic good (credit).

This theorem was proven with the use of double entry mixed currency and physical accounting of present economic goods.⁽⁸⁾ A demonstration that has not only established that currency is money or credit and corroborated the indirect materialization of economic time, but has also proven who is the debtor and who is the creditor when currency is credit and when there is a fractional banking system.

As we shall see as we proceed, this theorem together with the axioms derived from it, clarifies issues such as the origin and anti-capitalist essence of currency-financial crises; the tragedy of the commons; negative currency-financial externality to the markets; the syndrome of unknown debtor; the unsatisfactory state of interest, currency, credit, prices, origins of money and cycle theories.

It is important to stress the theoretical impossibility of understanding the Currency Theorem if we do not see the relevance of the classification offered by TET of the different types of cash and credit exchanges. Currency being a good with the function of facilitating or making exchanges efficient, the currency theorem derives from an evident logical-deductive chain.

Another way of expressing the currency theorem is saying that currency is an economic good that satisfies the need for liquidity, therefore it *cannot not be an economic good* (something “virtual”, as Knut Wicksell convinced all schools of thought of the Twentieth century). In this manner, if the economic good destined to be currency –because of its common use that allows rapid salability- is not money, *necessarily* it owes its condition of being an economic good to being credit. We know thanks to TET that credit has its origin in indirect initial materialization,⁽⁹⁾ without which it cannot appear, an essential aspect for understanding the origins of currency, both in its theoretical and factual aspects.

It is important to observe that the historical evolution of a present economic good (gold) that reached the status of money (brilliantly narrated by Menger) does not require Mises' Regression Theorem, since it does not explain cases in which currency has a different origin from that established by Menger. In other words, that currency must be an economic good does not imply that it previously has to have been an economic good nor the impossibility of it being currency without being money. Man has proven his capacity to invent economic goods in many fields of the economy, and we see no reason to reject the possibility of this being so in the case of currency. This is a curious approach since it has been upheld by economists that consider invention an essential tool for economic development, opposing monopoly, etc.

In short, TET's Currency Theorem does not imply adherence to Mises' unnecessary and inconsistent Regression Theorem, on the contrary, it considers the case of the historical origin of money presented by Menger as a legitimate alternative of the origin of currency (money in this case), that we will now analyze.

Theoretical and factual origin of currency

With the currency theorem we can give a clear answer to a problem that is as old as the existence of currency itself: ¿what is the origin of currency? Answer that must contribute a theory capable of explaining the factual aspect, the different cases that history has presented and those that will appear in the future.

We understand a good theory of currency must be able to explain its origin. Here we will see that TET can do it for all cases. Generally it is presented the other way around: with a case and building a theory out of it. Here it is convenient to reiterate what we have expressed before: *not realizing that credit precedes currency –which implies that credit can be currency-, instead of trying to explain that currency can be credit, has been the cause of almost all developments of currency theory in the Twentieth century and previously.*

It is important to see we present this issue previous to treating the different types of currencies that can be present in reality, which is another expression of our respect for the logical deductive chain that must be used in science. Not proceeding in this fashion led to producing as many theories of currency as there are cases in reality, instead of developing the necessary process of abstraction that leads science to be able to explain all observed cases.

Theoretical origin of currency: Though we have already referred to the subject, it is no less important to present a specific paragraph on the origin of currency from the theoretical point of view.

The logical-deductive theoretical chain produced up to this point, based on the foundations of TET, is concrete and evident demonstration that currency always has its origin in the market, independently of the types of currency, which is the reason why this issue precedes the study of the types of currencies. This chain states as something evident that without the market (the place of exchanges) currency has no reason to exist, and this is so because its specific function is to satisfy the need for liquidity, which exists in interpersonal exchanges (market) without which that need would not exist.

It is very important to realize that the *Currency Theorem* in TET ratifies the content and the sequence of the logical-deductive chain seen up to this point.

- 1) Currency is an economic good, since it satisfies a need (liquidity) and does so based on scarcity.
- 2) The economic good destined to cover the function of currency can do so within the two possible categories of economic goods: a present economic good that acquires the status of currency (money) or a future economic good that acquires the status of currency.

Evidently the process of conversion of gold, by which it acquired the status of currency, is included in the currency theory of TET, and the same is true for credit-currency.

From another point of view, we can say that the *Currency Theorem* completed the initial idea present in Menger and Mises, in the sense that currency had to be an economic good previous to being currency, but not necessarily in the condition of money. Confusion that led to the unnecessary Regression Theorem and concluded with the unfortunate attempt to correct this with “Monetary substitutes”. Paraphrasing Popper, TET is superior because it offers simplicity and amplitude when stating that currency can be either money or credit, and as simple things do, it avoids ad hoc developments.

TET allows us to include as plausible the circumstance of an economic good –present or future- originating exclusively to have the function of currency, i.e., not having a previous existence. Another way of showing the inconsistency of the Regression Theorem, in so far as it pretends theoretical significance based on a historical case.

Another important aspect we must stress is that *Currency Theory* allows us not only to avoid Mises’ Regression Theorem, but also allows us to reject currency theories that tacitly or implicitly validate the existence of “virtual” currency. More broadly we can also say TET rejects any theory that totally or partially admits any of Böhm-Bawerk and Knut Wicksell’s dichotomies.

We must not forget that based on the meaning of economic good (an entity that satisfies a human need from a state of scarcity) the logical-deductive development we have made can be understood clearly. We define the need to be satisfied (liquidity) and the means for this purpose (currency), central pattern of economics that allows us to understand the theory of currency. Base on this we arrive at the *Currency Theorem* that tells us that the need for liquidity is satisfied from the sphere of money and/or credit, but always from the sphere of an economic good. If not we would be in different terrain from economics. And this is the reason why we reiterate our rejection of the dichotomies that appear in Böhm-Bawerk and Wicksell and all those that have originated in economic theory.

To end this paragraph it is important to realize why we have used the expressions *discovers and/or invents* when referring to the way man chooses currency, as he does with so many other economic goods when seeking to satisfy his needs. Currency is not alien to this typically human process of improving through discovery and/or invention.

Factual origin of currency: we refer specifically to the debate relative to credit-currency having its origin in the State or the market. We only need to state that TET has clearly proven ⁽¹⁰⁾ that the origin of currency (money or credit) is always in the market. Later on we will analyze each case according to the different currencies.

The logical-deductive chain developed up to this point clearly indicates that currency has its origin in exchange, the market is the “place” of exchanges, ergo, it is inconsistent to

say that currency can exist without the market. But it is perfectly feasible and correct to say that currency can exist with the simple presence of the market, without the presence of the State (we will see this in *Negative currency externality of the market*)

It is important to see that the preceding section on the *theoretical origin of currency* makes the *factual origin of currency* redundant. A fact that establishes the logical-deductive solvency of our development, since we have arrived at a point where the theory explains all the feasible cases, i.e., a theory that explains facts.

Types of currency

The fact that we are only now referring formally and specifically to the taxonomic aspect of currency is due to our explicit intention of stressing that it was possible to attend previously to the other issues, including the transcendental *Currency Theorem*, considering they are common to all types of currencies. Once this has been established, we answer the need to “*separate*” the different scenarios *currency theory* confronts, according to the different types of currencies.

Not realizing the necessary bifurcation that currency theory presents, according to the different types, has been the origin of the common mistake of all theories developed in the twentieth century. In this manner, the “differences” presented by the different schools of thought on the theory of currency (Austrians, Keynesians, cuantitativists-monetarist and cartalists, in so far as their so called “modern currency theory” pretends to be a synthesis of currency thought of the twentieth century, through the simple resource of referring to “*fiat-currency*” instead of Mises “*fiat-money*”) become unnecessary or irrelevant.

TET offers a very clear distinction relative to an essential classification of the different types of currencies, be they money or credit, and in the case of credit, regular or irregular.

Money-currency: present economic good that has the function of currency, i.e., satisfies the need for liquidity based on it’s being a present economic good (gold, silver, cereal, etc.).

Credit-currency: credit that has the function of currency, i.e., satisfies the need for liquidity based on it’s being credit. On the other hand, TET tells us that credit can be regular or irregular, a sub-classification that will be central to the currency theory we are presenting.

This distinction is essential, since it is two very different things to refer to a present economic good (money) and to a future economic good (credit), and in this last case it is also very different to refer to a regular or an irregular credit.

All theories previous to TET developed based on the two Wicksellian worlds: “real” currency (non-money), and “virtual” currency (money with “printed paper” and financial with Wicksell’s “bank entries”). In this form the theoretical analysis of everything referred to the function of currency (M1, M2,...Mn), was unified, not realizing that in one case the theory of present economic goods should be applied and in other we should apply the theory of future economic goods, and pay attention to the difference between regular and irregular credit. Terms such as monetary substitutes, fiat-money (now fiat-currency?), absolute prices, interest as the price of money and/or credit, currency prices and interest,

currency-interest-prices transmission mechanisms, *interest is not a price in itself* (Mises), etc., emerged from this scenario.

Precisely, not seeing the crucial difference between present economic good currency and future economic good currency is what led all economic thought previous to TET to assign “special” characteristics to money-currency (treated as a unique entity, while currency is everything that has the function of currency). Attitude that also led to generating “special” (ad hoc) theories, which constituted a process full of violations of scientific principles of economics, stressed in detail in the *Theory of Interest* (dichotomies) and previous works in the framework of TET, which we will give more scope and precision in this text.

We can clearly see that the theoreticians of currency and interest did not perceive the infinite number of times the dividing line between money (present economic good) and credit (economic time) was crossed. We can see they produce currency theory continuously, not realizing when they cross from the sphere of money to the sphere of credit and vice versa. This is as if we were speaking of means of transportation (exchange in space) and referred to the wooden shafts of carts when speaking of modern cars.

Equivalence and equality axioms of i_m and p_m

We continue with TET’s theoretical-logical-deductive chain that allowed us to produce the *Currency Theorem* and from there deduce the axioms derived from it.

Equivalence Axiom $i_m \equiv p_m$: when *the currency is Credit, by axiom $i_m \equiv p_m$* . Axiom that renders inconsistent the mathematical models that consider currency interest (i_m) and the price of currency (p_m) as different “entities” in a credit-currency regime. The expression of equivalence (\equiv) stresses that i_m and p_m are the same entity since: a) the price of currency (p_m) refers to a credit (credit-currency), and b) the price of credit is interest (i), which in this case is (i_m), considering the indirect materialization of economic time and its price.

Equality Axiom $i_m = p_m$: when *currency is money, by axiom $i_m = p_m$* . Axiom that, different from the preceding equivalence, renders inconsistent the mathematical models that consider currency interest and the price of currency as different “variables”, independent, since both entities are the same. This means they are not equivalent entities, they are numerically equal, since we are in the presence of money currency, not credit currency. A situation that implies the presence of non-independent entities, not because of the presence of the indirect materialization of economic time –since here currency is money, not credit- but because the price of currency is used as a unit of measure to calculate the market rate of interest.

Some alerts referring to the equivalence and equality axioms: since it is very possible that the reader encounters them for the first time, we not only present below the *Terminology of the axioms*, but also stress the following:

- With the axioms of equivalence and equality we take up here, it is very important to differentiate between the concept of price (of a punctual spatial-temporal situation

of a unique and unrepeatable exchange), from the variations of the price of a good (a *periodical* spatial temporal situation of multiple exchanges of the same economic good) that originate statistical numbers or indexes.

This aspect is of fundamental importance because it can lead to confusion in the use of the symbols i_m and p_m , in so far as they signify variable, which implies variations in time, i.e., they follow the conduct in time of the entity they refer to. In this way, with both symbols we are referring to the conduct of two variables of price, one of interest (price of economic time) and the other the price of currency in time. If we pretended to refer to a spatial-temporal price of a unique and unrepeatable interpersonal exchange, we should use, according to what is customary in mathematics, the terms in capital letters. Apart from the terminology, the important thing here is to stress we are speaking of variables.

- Though we have already clarified it, p_m means the variations of price of currency, not the variations of currency or *absolute* prices of other economic goods. I.e., if you need to exchange more units of the same currency for the same economic goods, it implies that the price of currency has decreased, not that the price of other goods has increased: it is commonly said that the price of bread, meat, etc. has gone up... when what is correct is to see that the price of currency has decreased. A triviality that, when overlooked, leads to the Bawerkian and Wicksellian dichotomies.
- To clarify another technical conceptual aspect, we must say that we should not forget when we speak of the market price, that we are generally referring to the price with the highest occurrence in the exchanges of the economic good we are speaking of, which makes a lot of sense, since markets tend to balance out the differences in prices that can appear.

It is very important to differentiate the equivalence from the equality, since they are different entities that share a “numerical” similitude. Which can be expressed saying that i_m will always be the same number as p_m if we refer to interest in currency terms, be it money currency (where the $i_m = p_m$ axiom operates) or credit (where the $i_m \equiv p_m$ axiom operates). In other words, while the equivalence axiom refers to the essence of one entity (identified with two different names), the “numerical” equality refers to the same number of different entities, variation of the price of currency in time (Δp_m) and the price of economic time (i_m) in a period of time.

Terminology of the axioms

It is very important to remember that referring to interest implies speaking of the price of economic time, an aspect that we must not forget considering we must not confuse the use of the concepts i_m (temporal *flux*) and p_m (the temporal variation of the price of currency), that can refer to the price of a present of future economic good.

This is why we have decided to present this new expression of the *equality axiom*:

$$i_{mn} = p_{mn}$$

and it is also possible to use

$$i_{mn} = \Delta p_{mn}$$

Expression that tells us that currency ($_m$) interest (i) in a period of time ($_n$) is equal to the variation (Δ) of the price (p) of currency ($_m$) in that period of time ($_n$).

Though conceptually we can understand that the *equality axiom* refers to different entities that have the same temporal quantitative behavior, we must not forget that we are in the presence of different entities, one is the price of economic time for a certain period (interest) and the other is the variation of the price of an economic good in the same period.

The reader would need the same mnemonic clarification in the case of the *equivalence axiom*. Though here it is not as necessary, because it refers to the case of credit-currency and, being economic time, its price is interest. But there is no inconvenience in using it if it helps to clarify things, and the following equivalence can be used (though we will still resort to the one we have used till now):

$$i_{mn} \equiv p_{mn}$$

In the case of the equivalence axiom, it is not necessary to add the symbol Δ , since in both cases we are speaking of flux variables, currency here being credit. The *equivalence axiom* refers to an only entity and it is a flux variable, interest; different from the equality axiom where there is a flux entity (the price of economic time, interest), and the periodic variations of the prices of stock entities (economic goods).

To the effect of presenting TET we use the formulas indicated above: $i_m \equiv p_m$ e $i_m = p_m$.

Currency, prices, and interest

We cannot leave the chapter on the Theory of Currency without referring to the huge implications and/or consequences that TET has for the theory of prices in general and interest in particular.

To refer to the new paradigm presented by TET in reference to the theoretical relations between these three entities, we will only need to refresh the following basic tenets of TET:

The *theory of economic time*, with its exclusive characteristics of indirect or improper materialization –that implies it is a dependent variable- and its necessary presence as a production factor for all economic goods.

The *axiom of the permanent positivity of all prices* ($p > 0$), considering that, by definition, we can only refer to relative prices. It is evident that there is no theoretical meaning in speaking of zero and/or negative prices, or of the neutrality of any price, concepts that can only appear in the theories based on the Bawerkian-Wicksellian dichotomies, which recognize economic entities that are neither economic goods nor prices.

The *Theory of interest*, its simple and precise definition, as the price of economic time, which gives it its exclusive characteristics: indirect or improper materialization, necessary presence in the formation of all prices, and since it is a price, participating also of the axiom of permanent positivity of prices ($i > 0$).

The *Currency Theorem* with its axioms of equivalence and equality, according to the type of currency.

From these simple and forceful basic tenets of TET we can deduce the following theoretical consequences, in clear discrepancy with current paradigms.

Interest as the price of currency (i_m)

Though we have already referred to currency interest (i_m), we have done so from the point of view of the indirect materialization interest is subject to, as the price of economic time, here we refer to it from a completely different and also transcendental point of view: the recurring debate in preceding theories on currency, prices, and interest, deriving in such unfortunate developments as the so called “indirect transmission mechanism”, and others.

In this respect, TET says the relation between these entities is direct, and the only acceptable difference refers to applying the currency theorem and the axioms derived from it, according to the type of currency: money or credit, and the alternative of this being regular or irregular. Considering that in all types of currency it is pertinent to include the *strict financial intermediation* nature of the financial-banking system, we develop chapter IV, *Currency-Financial Institutions*.

Thus, TET is the first currency and interest theory that presents a situation in which interest is at the same time the price of currency (by equality or equivalence), as opposed to all known currency and interest theories, that present them as different and/or independent variables. This theoretical finding of TET severely question the usefulness of mathematical models developed in the Twentieth century, based on said independence (prices in one ordinate and interest in the other).

It is very important not to make the mistake of saying that Keynes already stated that interest is the price of money. TET stresses that interest is the price of economic time, not money. If Keynesian theory had understood TET’s causal chain, it would also have perceived the equality and equivalence axioms between i_m and p_m and would not have considered them as independent variables (in its theory and models).

It is also important to stress the same reasoning in the Austrians, which said that interest is the price of credit. TET defines interest as the price of economic time, and since credit is economic time, its price is interest. On the other hand, when currency takes the form of credit, interest is the price of currency, presenting a typically Keynesian theory, which they did not perceive because they ignored the *Currency Theorem* and the deductive chain that leads to its equality and equivalence axioms. If their statements had followed TET’s deductive chain, Mises and his followers would have denounced that manipulating i_m is equivalent to manipulating p_m , which makes economic calculus impossible in capitalism (market), similar to the impossibility of calculus in socialism, that Mises correctly denounced (with the corresponding theoretical objection by TET). Denunciation that TET presents at the beginning of the Twenty-first century with the severity that corresponds to the alteration of economic information centered on prices deriving from exchanges in the framework of the market.

Consequences of the necessary participation of interest in the formation of all prices

I believe it is convenient to reiterate that the theoretical findings of TET, the necessary participation of interest in the formation of all prices and the equality and equivalence axioms according to the type of currency, is a determining factor of mathematical models. The fact that this was not realized was a factor in the discredit of economics as a science, with its technological excesses (econometrics) without theoretical backing.

Finally, we only add that the differences are not limited to those we have pointed out here, and that they are not simple semantic issues, considering that from supposedly similar terms and/or concepts derive deductive chains with completely different theoretical consequences.

“The semantics of terms disappears when they produce different causalities and derive different consequences, especially when they include primitive terms”.

Chapter IV

CURRENCY-FINANCIAL INSTITUTIONS

Introduction to currency - financial institutions

In this chapter we will reveal that the currency and financial institutions that govern our daily life have a close relation with the theories derived from the dichotomies of Böhm-Bawerk and Wicksell which TET so often refers to.

When humans act without previous theories we say they apply “techniques”, if the opposite is true, we say their actions are based on science. But acting according to science does not necessarily mean it is an adequate science, and when a science cannot explain facts and events it is necessary to revise it. And once the science is “repaired” or its “paradigms” (as Thomas Kuhn would say) are changed, it is necessary to revise the state of institutions, based on the new theories.

This section will have the purpose precisely of revising current currency-financial institutions based on the foundations of the currency theory we have seen.

Since we are adding the term “financial” to the concept of currency or monetary referred to up to this point, we will previously refer to banks.

Other financial institutions (banks)

If we pretend to analyze financial institutions we need to have a brief synthesis of the theories and techniques underlying banking institutions, since we have only referred to currency institutions. This has been so because:

- 1) TET has clearly stated that there can be a currency theory without referring to banks. The difference with the traditional approach used in universities is evident, since money and currency are considered to be the same, and hence the theory of currency based on the theory of money, the reason why the banking system is considered an integral part of currency theory, making the currency and financial issue a totality. The dichotomy origin in Wicksell is evident in all this confused scientific-academic order, where PM is “added” to Wicksell’s “bank entries” (M1, M2... Mn).
- 2) There is abundant literature destined to explain the “technical mathematical or multiplying coefficient” operation of the fractional banking system and its “expansive” effect on financial activity. We alert readers to simply follow the mathematical study of the issue, the coefficient, not the rest of the theories presented there, because they do not show that the “multiplied” credit has its origin in the market, not the banking system, as those texts state. As in the case of PM, checks or Wicksell’s “bank entries” only become credit when the first exchange for present economic goods occurs in the market.

- 3) Current law has extended the capacity (“cancellation rights”) of PM as legal tender to bank checks, which are also denominated in PM. We observe that the asymmetry between the law and the economy, exposed by TET, can be extended to the whole banking system. That current theories, which are the basis for current law, have not seen this, is precisely what led to the development of a currency theory based on money theory (M1... substitutes... Mn) and to technicalities with no theoretical foundation, which were nevertheless called “theory” (quantitative money theory).

TET, with its accounting corroboration in the book *The Theory of Economic Relativity*, has shown that the “multiplying” effects derived from the fractional reserve systems used by banks, do not originate any credit, because credit is established when its “checks” are exchanged for present economic goods in the market. In other words, the banking system is not the origin of any credit, only the market is. The same as with PM, the origin of credit is always the market, and it could not be otherwise since without the market (the framework of interpersonal exchanges) there is no credit, nor currency.

It is important to observe that we are referring to the fractional banking system –that is not the origin of credit- without any need to refer to any type of currency, i.e., fractional banking is not exclusive of any type of currency.

From the preceding paragraph we derive two aspects that are of vital importance for the economy:

- 1) The multiplying effect of the fractional banking system is more or less unstable according to the type of currency in which the whole currency-financial system is denominated, i.e., with irregular currency (PM) the system will be more unstable, as are the current systems under analysis in this section and the next.
- 2) The diagnosis and treatment of recurring currency-financial crises must consider that currency is one issue, and the banking system another. Forgetting this has been the cause of devastating social and economic tragedies (Argentina 2001/2).

From the above we deduce that everything said about PM can be extended to the fractional banking system, a simple institutionalization of Wicksell’s “banking entries”. Thus, it is sufficient to consider that the asymmetry between economic science and law, which appears clearly in PM, can be extended to the whole fractional banking system, and this allows us to ratify that we can consider the whole currency-financial system as a socialist-state-monopoly-irregular structure.

Theories and institutions

It is generally accepted that human needs –of man in society- can be satisfied by the market and/or the State, and there are adequate institutions, norms and/or rules for the coexistence of man in society. From this derives that man’s life in society is conditioned by the quality of the institutions that govern the social sphere, which in the economy is the market. This does not imply that the State is alien to human beings, something out of this world, which is not as trivial a remark as may seem, considering the arrogance so common in officials.

On the other hand, after the mercantilist phase (pre-Newton era), defined by institutions derived from techniques with no theoretical basis, a group of thinkers give birth to a scientific-theoretical scenario for economics, led by the legendary Adam Smith and his work “The wealth of nations” (Newton era), circumstance that supposedly led to the end of mercantilist monetarist reductionism. But we do not exaggerate in saying that the Twentieth century and what has passed of the Twenty-first can be called the “financier” era, with the “financier”, allied with the powers that be (King-State), replacing the “merchant”.

At the end of the Twentieth century we find the scenario of “financierism” as the defective theory –we can no longer speak of techniques- and a similar panorama to that of the technicist-mercantilist state, specially concerning the theories of interest, currency, and the banking system, with strong influence on prices, that similarly place currency at the center of all economic events. All economic knowledge with its “scientific basis” since then has served as the foundation for current economic institutions. Ergo, the recurring crises of currency-financial institutions establish the need to *revise* the theories that sustain them, a situation already pointed out by Hayek when he manifested his disagreement with currency theory, which mobilized us in search of what we finally discovered, TET.

At this point, every time we are in the presence of *recurring economic crises* we encounter two alternatives: applied economics (through its institutions) either *does not adopt correct theories* or *adopts incorrect theories*.

This state of things shows the huge importance of economic theories that help man –or not- to identify the institutions that do not allow the Law of Exchange and Pareto’s Optimum to come into effect, the generation of the tragedy of the commons and negative externalities to the market; the impossibility of identifying precisely the role of participants in the market, recurring interruptions of the virtuous circle of capitalism,⁽¹¹⁾ implementation of measures that block the efficient information generated by prices in the market (because of ignorant theories that do not admit the *Currency Theorem* and its equivalence and equality axioms), adopting institutions based on “para-scientific” interest theories, and everything derived from TET that collides with current theories, that we will summarily analyze in the appendixes.

Institutions

According to Martín Krause: *The role of institutions, then, is to generate the predictability of actions or at least reduce the uncertainty as much as possible. Institutions, from this perspective, are regular patterns of conduct that orient our actions and allow us to coordinate them with others.*⁽¹²⁾ Precisely, the intervention of institutions created on the basis of inadequate theories is the cause of the uncertainties of recurring currency-financial crises in capitalism (collectivist systems, though they generate generalized poverty, do not suffer these crises).

Speaking of institutions, it is pertinent to remember that *David Hume (1711-1776) included fulfilling contractual obligations as something originated in the second and third law of nature. The three laws mentioned by Hume as the foundations for peace and security in society are stability of property, its transference by consent, and fulfillment of promises. These three laws are basic and necessary for the functioning of markets and the economy... Contracts, also, are a cost that must be considered in exchanges. These costs owe their name to Ronald Coase, who called them “transaction costs”.*⁽¹³⁾ Central to this text is

compliance with contracts, specially concerning the importance of identifying the role of the different parts when the currency is a credit-debt (and even more relevant when it is irregular, as in the case of PM), central defect underlying current currency-financial institutions, as a consequence of the erroneous theories they are based on.

Property and contracts

In the framework of TET to speak of interpersonal exchanges –derived from the division of labor- implies referring to the *economic good-owner* axiom, that ratifies the existence of *property* as an entity inevitably linked to human beings and economic goods. In other words, said axiom is a *necessary condition* for the existence of interpersonal exchange.

Thus, knowing of the importance of exchange in human life we can see *contracts* (between human beings, referred to economic goods) as a *central institution*, since their presence is necessary for interpersonal exchange.

Exchange contract (as a perfection of the act)

Interpersonal exchange implies a contract that is perfected between the parts in explicit-written or implicit-not written format.

Though this may seem trivial, this classification is very important since it allows us to align legality with economics, i.e., it will allow us to show the asymmetric relations established between existing institutions and the institutions recommended by economic science. This approach will allow us to clearly show the deviations of economic science, when it does not denounce the inconsistencies of economic institutions (derived from current law) that are not aligned with adequate economic theories or are aligned with inadequate theories.

Types of exchange contracts (cash and credit)

TET specifically points out two types of *interpersonal exchanges*, cash and credit (it does not deny the existence of others, such as rent, leasing, etc.). These categories are completely in line with the corresponding contracts, *implicit-not written* (cash) and *explicit-written* (credit). A situation that can be observed in everyday life where cash operations are not accompanied by any written document (which does not deny the possibility of doing so) since the parts deliver present economic goods (barter and money), the opposite of credit operations, where it is appropriate to produce a written contract since there are future commitments that must be fulfilled.

Relative to credit contracts, TET establishes a very important difference for taxonomic purposes, related to currency theory. In this manner TET presents two types of credit contracts, depending on the presence of *regular or irregular credits*.

We have better conditions to carry out our task with the presence of a more precise conceptual framework, which links the institutions related to interpersonal economic exchanges derived from current law with those derived from economic science.

Currency-contract

With the currency theory presented by TET, we will now study some of the currency institutions that influence our daily lives.

Considering the *exchange contracts* we have seen here –cash and credit (regular and irregular) contracts- we will focus on the exchange contract where currency is involved, i.e., we exclude barter and focus on the currency-contract.

Evidently, since we are referring to a means of exchange of common use it is extremely important to analyze the currency from the point of view of the contract institution to acknowledge precisely the consequences derived according to the correction, or lack thereof, of the scientific tenets that validate them. TET’s equality (money) and equivalence (credit-currency) axioms are an excellent *scientific* starting point to analyze these issues; we could even say they are the cornerstone of the institutions deriving from the new currency theory.

Types of currency-contracts

Applying said axioms leads us again to a scientific taxonomy, classifying the different types of contracts implied by the different types of currencies. Said classification will be extremely useful for judging the relation between theory and institutions.

a) Money-currency contract

Considering we are in the presence of a cash exchange, i.e., of present economic goods, we will probably resort to the concept of implicit-not written contract, to avoid transaction costs.

History shows us as a typical case what is known as the *X standard* –generally known as the *gold standard* (considering X = gold)-; it is the direct use of the present economic good as currency, or a *deposit certificate*, described as irregular since we are speaking of a non-fungible good (there is no “registered” good in deposit), i.e., the “irregularity” in this case is theoretically different from the irregularity of credit referred to in TET.

With this type of contracts we are in the presence of TET’s *equality axiom*

$$i_m = p_m$$

b) Credit-currency contract

It is the case in which a credit is adopted as currency. Here we are in the presence of an *explicit-written* contract, and this is so because all credits involve temporal commitments of the debtor to the creditor. We have already presented the pertinent theoretical considerations involving tribal credits, between friends, family members, etc., that we do not study here, considering there is no currency present. In other words, this section is dedicated to the study of credit-currency contracts as formal social institution.

With this type of contracts we are in the presence of TET’s *equivalence axiom*:

$$i_m \equiv p_m$$

Considering that TET shows us the possibility of two types of credits –regular or irregular- and said situation extends also to the case of those credits acquiring the status of currency, we have the following sub-classification of credit-currency:

b-1) Regular-credit-currency contract

If we combine the concepts of regular credit and currency –in that precise order, 1st credit and 2nd currency that does not imply any regression- we have the *regular-credit-currency* contract.

It is the typical case known as the *X exchange standard*, popularly known as the *gold exchange standard*, in which the *regular-credit-currency-contract* expresses the amount and quality of the present economic good (in this case $X = x$ ounces of gold of k karats) with which the debtor will cancel his commitment. The fact that it is on sight does not deny it being credit, since it only has to do with the term, and does not eliminate the uncertainty typical of the future, especially since it is currency in circulation, which implies an indefinite term for its redemption; in other words, if it were not credit it would simply be a deposit certificate (as in the case of the *X standard*).

The well-known crisis of the 1930's shows us this type of *regular-credit-currency-contract* defined by TET: the government of the United States issued *regular-credit-currency-contracts* that established the quality and amount of gold in which the final materialization of each contract would come about, i.e., at the time of the printing of the contract the specific quality and amount of the economic good in which it would be cancelled was stated. This was a simple printed paper that acquired the status of a contract when the creditor (the market) endorsed it; at the precise time when this contract (already signed by the printer-issuer) was “endorsed” (“signed”) by the market, which occurs in the first exchange for a present economic good. This ratifies that the market is also the origin of the *X exchange standard*, because there is no doubt that the exchange through which it received the *X exchange standard* was a credit, you received in exchange for a present economic good (excepting the act that is “considered” a cancelation of a debt with an *X exchange standard*, which for TET is novation of debt, i.e., replacing one debt by another). The market in this case accepts the contract of a loan to the debtor-State, under the condition of receiving in exchange certain quality and amount of gold. We all know how that story ended: the American government at a certain moment said it would not honor the contract it had signed; a breach of contract in economic jargon is called “devaluation”.

b-2) Irregular-credit-currency contract

If we combine the concepts of irregular credit and currency –in this precise order: 1st credit and 2nd currency, that does not imply any regression-, we have the *irregular-credit-currency* contract.

As opposed to the *X exchange standard*, this *irregular-credit-currency-contract* is issued with no reference to the amount or quality of the present economic good it will be cancelled with.

History and the present clearly show us that the typical case is *Paper Currency*. If you have any doubt, we invite you to read the text of any paper currency (dollar, euro, yen...) and try to find where it identifies precisely the economic good with which it will be cancelled, and the quantity. At most you will find texts such as that of the dollar, which virtually says “God will pay”, making gods of the officers of the State. *The arrogance of the officer derives from the essence of the office*, which is tantamount to saying exercise builds up the muscle.

The similitude we see with the *X exchange standard* is that PM is transformed from a simple piece of printed paper into a contract when it is endorsed by the creditor (the market) at the precise time in which said contract (already signed by the printer-issuer) is “endorsed” (“signed”) by the market, at the time of its first exchange for a present economic good. This ratifies that PM also has its origin in the market, because there is no doubt that the exchange by which the PM came into your power was a credit: you delivered a present economic good for that to happen (except for the act considered cancellation of a debt with PM, which for TET is novation of debt, i.e., replacing one debt with another).

There must be no doubt that, both in the case of PM and the *X exchange standard*, we are in the presence of a written-explicit-contract, which is composed of two documents:

- 1) The “printed paper” (PM and *X exchange standard*),
- 2) The pertinent legislation that confers cancellation power (“compulsive-legal” acceptance as a means of payment on sight), an essential element of discordance with the cash and credit exchanges recognized by TET.

In other words, the credit-currency contract (documented by the different versions of “printed paper” + legislative papers) “institutionally” erases the difference between cash and credit exchanges, two completely different entities as TET shows us.

Currency - financial Symmetries and Asymmetries

TET poses the existence of institutions that may or may not concur with science, and we refer to this as *legality-science symmetries* in the first case and *legality-science asymmetries* in the second. We will call them *symmetries* and *asymmetries* for briefness’ sake.

TET proved that asymmetry in the currency-financial world consists of legality not validating the cash and credit exchanges postulated by economic science. The asymmetry between legality and economy derives from granting “cancellation rights” to exchange operations that do not have those rights in economics, because they are credit and not cash exchanges.

It is important to understand the transcendence of symmetries and asymmetries between legality and science, or we will not understand the consequences in daily life. It is like creating laws that validate the “non-existence” of the law of gravity, and standing beneath a piano falling from a tenth floor.

Considering the logical-deductive-theoretical chain that TET is presenting, we can draw up the following table of the symmetries-asymmetries of the world of currency and finances:

Currency symmetry: currency institutions validate the economic categories of currency theory. This is the case of money-currency and regular-credit-currency (*X exchange standard*).

Currency asymmetry: currency institutions do not validate the economic categories of currency theory. This is the case of irregular-credit-currency (PM).

Financial symmetry: financial institutions validate the economic categories of finance theory. This is the case of banks that cover deposits with 100% reserves.

Financial asymmetry: financial institutions do not validate the economic categories of finance theory. This is the case of fractional reserves.

Twin symmetries: currency and financial institutions simultaneously validate currency and financial categories derived from economic theory.

Twin asymmetries: currency and financial institutions do not validate the currency and financial categories derived from economic theory.

Now that, with the theoretical-logical-deductive work presented by TET, we have been able to summarize the whole sphere of currency and financial theory in such simple tools as the symmetries-asymmetries between science and legality, we are in excellent conditions to analyze the currency-financial world, specifically referring to the necessary and recurring currency-financial crises capitalism suffers, according to the *mix of currency-financial symmetries-asymmetries*.

Chapter V

CURRENCY-FINANCIAL CRISES THAT AFFECT CAPITALISM

Introduction

From TET it clearly follows that not all currency-financial systems are of a capitalist essence. And we can say there are systems that belong to the “virtuous circle of capitalism” and others that are foreign to it.

So we must first identify the different types of currency-financial systems defined by TET, and then study how each one of them behaves under capitalism, which we will call “*economic democracy*”, considering that its tenets are those of freedom circumscribed to the economy.

To follow the theoretical-logical-deductive chain we are developing in this work, at this time we only need to remember that the issue at hand must be considered as the combination of two economic entities, currency and financial institutions. Along with the huge importance of differentiating both entities, we need to remember the different types of currency presented by TET, and the different organizational forms presented by the banking system, which we consider synonymous with the financial system for the purposes of this work, in so far as we refer to the entities that act as intermediaries of credit originated in the market (with 100% or fractional reserves).

Before we identify the different forms that currency-financial systems can have, and deduce from there how each one of them relates to *economic democracy* (capitalism), it is necessary in the first place to define the different types of currency-financial crisis.

Types of currency-financial crises

TET allows us to adequately separate the two scenarios or economic entities involved in what is wrongly called *crises of capitalism*, which is better identified as a crisis of currency and/or a crisis of the financial system. In this respect it is necessary to consider that there are the following types of currencies and financial systems.

Types of currency:

1) *Money-currency*

2) *Credit-currency*, which in turn can be:

2-1) Regular-Credit-Currency: ex. “gold exchange standard”

2-2) Irregular-Credit-Currency: ex. “PM”

Types of financial systems:

- 1) *100% reserves*
- 2) *Fractional reserves*

Continuing with the theoretical-logical-deductive chain, we can classify the different types of currency-financial crisis that can occur:

Types of currency-financial crises

- *Currency crisis*: currency crisis without a financial crisis
- *Financial crisis*: financial crisis without a currency crisis
- *Currency-financial crisis*: currency crisis and financial crisis

It is adequate to establish the different possible scenarios, since this enables us to avoid, diagnose, and treat the currency-financial crises that affect *economic democracy*.

Types of currency-financial systems

Considering this classification, we can present the mix of currency-financial systems that can exist:

1) Money-currency

- 1-1) Money-Currency + 100 % reserves
- 1-2) Money-Currency + fractional reserves

2) Credit-Currency

2-1) Regular-Credit-Currency

- 2-1-1) *Regular-Credit-Currency* + 100 % reserves
- 2-1-2) *Regular-Credit-Currency* + fractional reserves

2-2) Irregular-Credit-Currency

- 2-2-1) *Irregular-Credit-Currency* + 100 % reserve
- 2-2-2) *Irregular-Credit-Currency* + fractional reserve

Types of possible crises according to the -financial system

Now we will summarize the characteristics of the crises that appear in each currency-financial system.

In the following table we identify the different currency and financial structures, and the asymmetries and crises that can occur. Dark squares identify the simultaneous presence of crises where there are asymmetries.

Currency-financial crises table

Structure		Asymmetry		Crisis	
Currency	Bank reserves	Mon.	Fin.	Mon.	Fin.
Money	100 %				
Money	Fractional				
Regular Cred	100 %				
Regular Cred	Fractional				
Irregular Cred	100 %				
Irregular Cred	Fractional				

Now we will briefly describe and analyze the preceding table:

1) Crises with money-currency:

1-1) Crisis with money-currency + 100% reserve: the presence of currency and financial symmetry at the same time implies that we cannot speak of crises in *economic democracy* and its virtuous circle originated in this types of currency-financial systems. We can see that these conclusions derived from TET contradict the Keynesian idea of a “barbarous relic”.

1-2) Crises with money-currency + fractional reserves: the presence of *currency symmetry* implies the impossibility of currency causing damage to capitalism, but damage can be caused by finances, considering the existence of *financial asymmetry*. The presence of *financial asymmetry* guarantees the occurrence of recurring financial crises inflicted on capitalism.

2) Crises with credit-currency:

2-1) Crises with regular-credit-currency:

2-1-1) Crises with regular-credit-currency + 100% reserves: the presence of *twin symmetries*, i.e., *currency and financial symmetry* at the same time, implies that we cannot speak here of a crisis of capitalism originated in currency-financial systems of this type.

This case, which currency history presents with the name of *X exchange standard (gold)*, differs from the *money currency + 100% reserves* system in that the entity that is the debtor of credit currency can breach the conditions of regular-credit, a situation in which a crisis is inevitable because of its dimensions and the fact that

the debt acquired the status of currency, with all it implies for economic calculus, unit of measure, currency reference for all contracts... etc.

2-1-2) Crisis with regular-credit-currency + fractional reserves: the presence of *currency symmetry* excludes the possibility of currency crises, and the presence of *financial asymmetry* is the cause of financial crises.

History presented this case with *gold exchange standard*, since it generally coexists with a fractional banking system. Different from the previous case, here the unilateral abandoning of currency symmetry by the state *multiplies the consequences*, since all contracts refer to a currency that is no longer regular.

2-2) Crises with irregular-credit-currency:

2-2-1) Crisis with irregular-credit-currency + 100% reserves: the presence of *currency asymmetry* is a cause of currency crises, and the presence of financial symmetry excludes causality of financial crises.

This case is rare, in so far as the State loses control of the “financial business deriving from *financial asymmetry*”.

2-2-2) Crisis with irregular-credit-currency + fractional reserves: the presence of what we called *twin asymmetries* –since we are in the presence of currency and financial asymmetry- is a guaranty that currency and financial will necessarily and recurrently occur and affect *economic democracy*.

Evidently of all the crises that can be imposed on capitalism by currency and financial institutions, this is the worst.

This is what is happening today in the world, the *mix PM + fractional reserves*.

Given the scenario of greater probability of instability of currency-financial crises generated by *twin asymmetries*, we need to summarize the possible combinations that can occur:

- 1) *Insolvency of the currency debtor (the State as debtor of PM):* leads inevitably to financial crisis since there is asymmetry of currency, with everything the institution of currency implies.
- 2) *Insolvency of the financial debtor (fractional banking system):* does not necessarily imply currency crisis, except if there is a political decision to validate and absorb it. A situation in which humans realize how utopian it is to pretend to have independence of the currency authority from political power.
- 3) *Joint insolvency of the currency debtor (the State as debtor of PM) and the financial debtor (fractional banking system):* we are in the presence of the twin asymmetries, operating at their highest destructive power against the *virtuous circle of economic democracy*.

It is important to stress that crises generated from only one asymmetry open the way to the twin asymmetries, and that depends on how those that have political power act. And they are subject to all kinds of pressures, because the economic destiny of many generations is in their hands and, worse, it is in the hands of officials educated in the

theories that gave rise to the current order of things. Though it is very common to hear officials that act as pilots in the storm of currency-financial crises say they will apply “all the necessary technical measures” without tying themselves to any theory. Attitude that ratifies that current theories are unsatisfactory, leading us once again to Hayek, when he manifested his dissatisfaction with the state of currency theory.

Given the legal framework of credit-currency (with or without a fractional system) that establishes a monopoly-State currency system, we observe the presence of an only debtor of credit-currency, the State. We point to this, considering that if there were freedom of the currency market, it is probable that the State would be displaced as the sole provider since the market is more efficient as a supplier of economic goods, because it is not subject to the tragedy of the commons.

We deduce then that the crises that can occur as a result of the presence of a credit-currency currency system (with or without a fractional banking system), derive: 1) from the financial and economic situation of the currency debtor, in this case the State, and 2) from political decisions that benefit specific sectors that are able to profit thanks to their control of the *twin asymmetries*, specifically financial speculation that affects *economic democracy*.

We must not forget the situations of insolvency that each of the debtors participating in the financial system can present; each bank can suffer a crisis as a result of the lack of business skills in its administration, which will affect the whole economy according to its relative weight. This situation appears in any currency system, with money or credit. This is even more important in our era of globalization, considering that a bank exposed to the currency-financial crises of foreign countries can destabilize its country of origin.

Tragedy of the commons and negative (currency-financial) externality of the market

It is important to conclude also that the tragedy of the commons and the negative externalities of the market, in currency and financial spheres, are perfectly typified as follows:

1-1) Money-currency + 100% bank reserves: the tragedy of the commons and currency and financial negative externalities of the market are not feasible

2-1) Money-currency + fractional reserves: the tragedy of the commons and the negative externality of the market in the currency sphere are not feasible, but they are inevitable in the financial sphere.

2-1-1) Regular-credit-currency + 100% reserves: the tragedy of the commons and currency and financial negative externalities of the market are not feasible.

2-1-2) Regular-credit-currency + fractional reserves: the occurrence of the tragedy of the commons and the negative externality of the market in the currency sphere are not feasible, but they are inevitable in the financial sphere.

In this case, along with the occurrence of crises derived from financial asymmetry, the situation becomes explosive if simultaneously or previously a currency crisis is originated when currency symmetry is abandoned (devaluation).

2-2-1) Irregular-credit-currency + 100% reserves: the tragedy of the commons and the negative externality of the market in the currency sphere is inevitable, but not in the financial sphere that will be affected by the currency crisis as a specific sector of the market.

2-2-2) Irregular-credit-currency + fractional reserves: the tragedy of the commons and the negative externality of the market are inevitable both in the currency and financial spheres.

With this simple scheme we are ready to analyze the cases that history presents us as currency-financial crises. Simply referring to a few cases will be enough to show the usefulness of the deductive chain we have established up to this point.

Analysis of historical crises

This section is dedicated to showing how history corroborates the postulates presented here, since it shows crises that appear as currency-financial institutions differ from the systems the market spontaneously chose, in a framework of precise delimitation of property that established the right of exclusion, the validity of Pareto's Optimum, the *virtuous circle of economic democracy*, avoiding negative externalities of the market, the Law of Exchange, etc. Thus the typical scenario of the tragedy of the commons and negative externalities of the market appeared.

- ***Crisis of the 1930's***

As a consequence of a bad administration of business at the hands of inexperienced staff (State officers) the State-Company suffers an economic crisis (deficit) leading to its financial crisis (not being able to honor debts). Debt that was denominated in regular credits was replaced by irregular credits, abandoning the *gold exchange standard*, a situation all countries had explicitly established (decreeing inconvertibility) except for the USA, that formally maintained convertibility. A fact that affected investors that based their analysis on erroneous theories (there is the well-known case of the famous American investor-economist, Irving Fisher).

Things ended as they should, bad business by the State led it to be unable to honor its commitments with present economic goods (gold), and it had to transform the credits that were regular in origin into irregular credits. This means they altered the final materialization of credit (they eliminated the metal, as if they were kings, only they did it at the expiration and not the beginning of their commitments).

We reiterate that the only difference in going from regular-credit-currency to irregular-credit-currency, between USA and other countries, was formal. The USA had already made the change. Did the USA take advantage of the presence of erroneous theories to make people believe it "had not changed its currency regime" and in this way produce a political surprise, "making believe it was its decision to change the currency, and not imposed by the market"? Possibly that move allowed it to appear as the "last serious country" and thus consolidate its leadership role, but there is no doubt that the market (its creditor) "demanded" the currency change, a move equivalent to a unilateral debt reduction.

These were the “facts” of the “30’s crisis”: originated in the imposition of a “maximum price” on regular credit-currency (in gold) in the USA, through the lowering of interest rates (rate $i_m \equiv p_m$ the price of currency) → relative increase of the price of the same good in Europe (also a regular credit, denominated in gold, because its currencies were convertible to the dollar, which was a regular credit in gold) → world commerce expands (the transference of American dollars to Europe because they had a higher price there, is only a regional-temporal event that the market always balances out in the end) since the instrument that allows it (credit with the promise of payment in “gold”) can be bought cheap → and it will all end as it always does with the establishment of a lid on prices; just like any other distortion of prices, it implies economic inefficiency, i.e., the destruction of wealth. In other words, the expansion of credit granted by the market to the State issuer of PM (US\$), with the trust that it would receive gold, expands both economies: the creditor that increases its sales granting credit, and the debtor that receives the credit to increase its production, consumption, etc.

TET allows us to see that the maximum price imposed in the USA on the currency would last as long as the market accepted it. When the market realized the credit granted to the State-Banking-Stock Market system would not be reimbursed, it contracted credit and started the inverse circuit of destruction of wealth, considering that the destruction of credit affects both parts: the creditor sees its sales decrease because it is granting less credit, and the debtor has to clear its stock (lowering prices) to honor its commitments.

Summarizing TET’s explanation of the 1930’s crisis: the passage from a system with *currency symmetry and financial asymmetry* to a system with *twin asymmetries*. A historical event that also ratifies the inevitable contagion of one asymmetry to the whole system.

- ***How Argentina “underdeveloped”***

In reference to the *2001/02 episode* of the *series* “Argentine recurring monetary-financial crises”, the reader will find a description of those events in the *Appendix A* of the book *Capitalism and Currency*, under the title *Argentine currency-financial crisis 2001/2002*. Here we will simply add that the crisis was a consequence of the existence of the *irregular credit-currency + fractional reserves* system, which we already know presents the most explosive currency and financial mix because of the presence of the *twin asymmetries*.

But the Argentine case deserves a special reference, since it was the only country in the world that “underdeveloped”, the opposite of the effort of underdeveloped countries to reach the status of developed countries. Compared to the beginning of the Twentieth century when it was a “star” country, occupying one of the highest places in world rankings, today it is a third-world country, and a firm candidate to be in the fourth and fifth world, where “frontier” countries are today.

In light of TET it is not difficult to discover the fundamental cause of this unfortunate course, the existence of currency-financial systems with *twin asymmetries*, made worse by the presence of undemocratic institutions; to all effects there is no federalism, no separation of state branches, no free association, excessive taxation, excessive red tape, price controls, customs barriers, etc.

As a result of this, Argentina has a mix of socialist institutions with an also socialist currency-financial regime, i.e., there is no *economic democracy*, as opposed to developed countries that were better able to weather the recurring currency-financial crises of socialist origin derived from the twin asymmetries.

If you are surprised by the simple and blunt explanation of Argentine decadence, it is proof that you have not understood yet the basic tenets of TET referred to the theory of currency, credit, interest, prices, finances... the whole economic time theory and everything derived from it.

Before leaving the Argentine case I must state that having lived through most of it is one of the reasons I am dedicating so much time of my life to the scientific aspect of economics. Few investigators have had the opportunity I had and still have of living in the test laboratory. That is my situation, being able to investigate scientifically in the scenario of the *twin asymmetries*. At the same time it pains me enormously to see my *beloved ARGENTINA* as the scenario of a doleful tragedy with no end in sight. With all my heart I hope to be able to collaborate with the results of my investigations that led me to TET.

The preceding paragraphs allow us to conclude that Argentine decadence cannot be ascribed to capitalism. The aggressiveness of the *twin asymmetries* was such that it destroyed the fragile institutions of *economic democracy*.

In Argentina there was and is no *economic democracy*, ergo decadence.

- ***The current international crisis***

In reference to the “details” of the events related to the current international crisis, we also refer the reader to *Appendix A* of the book *Capitalism and Currency*, under the title *Current world currency-financial crisis*, and several texts under *Application (opinion)* in this site.

Here we will simply add that the same was the consequence of the presence of the *irregular-credit-currency + fractional reserves* system, which we already know presents the most explosive currency financial mix, which we call *twin asymmetries*, that guarantee inevitable and recurring currency-financial crises, as long as economic democracy can survive them.

In short, the world is immerse in recurring and inevitable currency-financial crises that capitalism suffers as a consequence of the *twin asymmetries*. A crisis that expresses once again the damage to economic activity suffered by creditor and debtor countries alike.

- ***The euro crisis***

With the hope that the following quotation will not be considered arrogant, I present as proof of what TET teaches, what we have expressed in the book *the Theory of Economic Relativity – Solution to CURRENCY CRISES – A CRITIQUE OF CURRENT ECONOMIC THEORIES – Austrians, Keynesians, and Quantitativists*, chapter XIX, last paragraph under the subtitle *One Currency*:

Considering the theories presented in this work, one should anticipate serious difficulties in the attempt to unify currencies among states acting according to current theories, i.e. with irregular monetary systems. This is so because, as

we have shown, it is impossible to have central banks really independent from political government in irregular currency systems. In other words, adopting a single currency with irregular currency systems means the countries forming the currency union must have identical political systems. If this reality is not considered, there will be very serious political and economic conflicts among those countries in a very short time, which will be more or less important for each country and the union as a whole according to the relative weight of each country.

This text –that clearly explains political events in Europe in the search for a leading nation- is even more relevant considering it was written between 2004 and 2005, years in which the Euro was considered an exemplary currency, the currency institution of reference. Commentary that does not pretend to ignore the existence of voices opposed to the creation of the Euro, but that evidently could not diagnose with the precision of TET, since they did not know its basic tenets.

It is important to stress that the Euro crisis confirms the idea derived from TET that not all countries can use a currency of the same quality. Just as different types of motors require different lubricants, the same occurs with currencies. A circumstance that ratifies that first you must establish the common characteristics of the motors to use the same lubricant, if not the use of a “common” lubricant will be more painful, because several motors will “break down”, until the right lubricant for each motor is found. Any similarity between motors and countries, and lubricants and currencies, is not a mere coincidence.

The end of *twin crises* (currency-financial) inflicted on capitalism

The term *twin crises* derives from the correlative *twin asymmetries*, in so far as we are referring to currency and financial crises, considering that the presence of one *asymmetry rots a symmetry* (the same as an apple rots another) and that *twin asymmetries* necessarily and recurrently lead to *currency and financial crises*, we refer in this section to the end of *twin crises*.

It is not difficult to imagine the end of the irregular currency-financial systems, the twin asymmetries, since there are only two possible outcomes:

- a) ***Twin asymmetries destroy economic democracy***: i.e. that socialist currency-financial institutions put an end to capitalism, which implies considering the intensity of the “attack” and the strength of the “organism under attack”. In this sense, the Argentine case is a sample of the deterioration of *economic democracy* and therefore the destruction of the virtuous circle emanating from it. Once economic democracy is destroyed at the hands of the socialist currency-financial regime, said currency-financial system no longer has a reason to exist, in so far as the *twin asymmetries* can no longer exist with the disappearance of economic exchange, given that there is only one owner, the State. Remember TET has pointed out that in socialism there are no currency-financial crises. I.e., one way that *twin asymmetries* disappear is through their self-destruction, as a parasite that eliminates its means of sustenance, *economic democracy*.

- b) ***Economic democracy destroys the twin asymmetries***: a circumstance that will come about if the errors implied in the economic theories that sustain current currency-financial systems are seen (a responsibility of science) and politicians let themselves be guided by the new theories presented by TET, or the desire for freedom of individuals leads people to fight for freedom and reject recurring violence against it. A situation that will appear as long as equitable distribution is denied, considering as such not rewarding the merit derived from efficiency in producing wealth for others.

“From each according to his capacity, and to each according to his needs”, as Karl Marx said, not realizing he was presenting the features of *economic democracy*, not socialism as he pretended.

The change from irregular currency-financial systems (asymmetric) to regular systems (symmetric) does not have to be traumatic, as long as there are diagnostics and treatments properly planned following the methodology we have described in *Capitalism and Currency*. With an adequate theory the result of our actions is always more efficient.

This means that one way for the *twin asymmetries* to end is that they be eliminated by *economic democracy*.

As we can observe, with TET as a starting point it is not hard to imagine the end of irregular currency-financial systems, that is, the end of current *twin asymmetries* will come about one way or the other: they will be destroyed by *economic democracy* that sustains them, or by the destruction of *economic democracy*, which is the source of their sustainment.

But as long as the “end of the *twin asymmetries*” and, therefore, the “*end of currency-financial crises*” does not arrive, their recurrent and necessary presence will continue to affect *economic democracy*. Within the current theoretical framework they will continue to be attempts at solving them with austerity measures applied by the State, not realizing that the creditor market always ends up imposing its order: 1) making the State reduce its “deficit”; 2) making banks capitalize and/or refinance its debts; and 3) making the stock market correct the prices of its assets. Yes, as you have just read, banks do not adjust the prices of assets, since it is *always* the market that establishes them; banks limit themselves to “entering the new values in their balance-sheets”, which does not mean that banks (and/or their officials) do not participate in the stock market. But it is no less true that the triad State-Banking System-Stock Market generates “variations of asset prices”, increasing their profits at the expense of the people, that do not understand this game.

The preceding paragraph ratifies the structure of investigation that is common to all sciences, in so far as it is man that produces science based on logical-deductive reasoning. And this is so from the moment we have shown that in the economy:

The organism destroys the parasite, the parasite destroys everything, or the organism suffers due to the parasite as long as it survives.

Once again, people that love freedom will have a lot to say on the survival of *economic democracy*: if they wish to go on suffering on account of the parasite, if they wish to have a better quality of life or if they allow everything to be destroyed.

This order of things explained by TET clearly explains why countries that were underdeveloped start on the road to development when they adopt economic democracy, but see themselves involved in the crises generated by international twin asymmetries. On the other hand, the developed world seems to tend to abandon economic democracy, believing it is a crisis of capitalism, not realizing that including two thirds of the world's inhabitants in international economic democracy must originate a new framework of competition to satisfy others.

Economic and political democracy (introduction)

This section only has the goal of establishing the framework for a future work referring to the possible scenarios of coexistence of economic and political democracy.

According to the dictionary democracy is: 1) a political doctrine in favor of the intervention of people in government, and 2) preeminence of the people in the political government of the State. Thought there can be different definitions, there is no doubt that this is the essence of the concept of democracy.

Following the basic tenets of the definition of political democracy we can define *economic democracy* thus: 1) economic doctrine in favor of the intervention of the people in the economy and 2) preeminence of the people in the economic government of a country.

Considering the central idea of both concepts of democracy, it is evident that the aspects referred to the institutional organization of a country will define the degree of democracy that is reached. That is to say the quality and continuity of the exercise of power by individuals in political and economic matters is essential. Let us see how individual rights are exercised in each democracy at all times:

- a) *Political democracy: the individual chooses **indirectly and periodically** by means of his vote.* There are two very serious obstacles to really exercising the rights of individuals to govern: 1) the people exercise their political right *indirectly* (through their representatives), and 2) the people exercise their political right *periodically* (periodic vote).
- b) *Economic democracy: the individual chooses **directly and permanently** by means of prices.*

From this derives that the conditions for *economic democracy* (direct and permanent) have greater (or similar?) relevance to political conditions, to the point that we cannot consider political democracy without economic democracy, but economic democracy depends on political decision making. Ergo, the only alternative for the coexistence of both democracies is educating the people to impose States that guarantee both.

We end this section-introduction stating that history (ancient and contemporary alike) have given proof of the enormous relevance of *economic democracy*, to the point that it is the central factor on the road to political democracy in Chile, China,... the West? On the other hand, forgetting *economic democracy* devastated political democracies (my beloved Argentina).

We reiterate this is a mere introduction to the subject, a synthesis of the basic tenets (presented by TET) that we must consider for the analysis of the huge relation between *economic democracy* and *political democracy*, to reach DEMOCRACY.

Evidently a text on the subject must focus on the fact that citizens should exercise their right to not being indebted without their consent (which occurs today because of the existence of twin asymmetries based on erroneous theories). They must not be excluded from the decision that indebts them and includes them in the obligation to pay; this can be solved transforming the *twin asymmetries* into *twin symmetries*, a situation in which everything is transparent.

Appendix A

THEORETICAL CONSEQUENCES OF THE CURRENCY THEOREM AND ITS AXIOMS

Now, a brief synthesis of the implications of the currency theory derived from TET for developments that belong to the paradigm of current currency theory.

The method will be to mention the postulate and analyze it under the currency theory expressed here, very summarily since we only pretend to mention each item.

- **Interest theory:** according to Keynesians-quantitativists interest is the price of currency, according to the Austrians it is the price of credit, ergo, when currency is credit their theories of interest have the same basis, the Bawerkian-Wicksellian dichotomies. On the other hand, if currency is money, their theories do not explain interest.
- **Equilibrium solution:** a scheme that pretends to balance the real world and the virtual or currency world individually or globally, not realizing there is only one world and it is currency. This explains the efforts by Central Banks to make i_m and p_m equal, not realizing the existence of the axioms of equality and equivalence.
- **Gibson's paradox:** a theory that cannot explain the correlation prices-interest rates, based on the theoretical error of assimilating money and credit, a concept that is related with *Keynes' asymmetry*, *Keynes' paradox*, the *inverted Keynes paradox*, and the *currency demand paradox*. It is evident that the equality and equivalence axioms mean that this paradox is meaningless.
- **Keynes' paradox:** a theory that pretends to solve a problem that does not exist: how can money that is progressively scarce in relative terms become cheaper? We are in the same sphere as the concept of the *Keynes' asymmetry*, the *inverted Keynes paradox*, and *Gibson's paradox* (that Keynes pretended to have solved), all due to the underlying confusion of assimilating money and credit.
- **The inverted Keynes paradox:** the pretension of solving *Keynes' paradox* replacing interest with prices in the Keynesian model.
- **Keynes' asymmetry:** a concept with which Keynes explained the passage from a high cost of money (his "barbarous relic") to money with zero value or even "negative" value ("liquidity trap").
- **Interest paradox:** theories that sustain the need to increase the price of a good to make it scarcer. The "paradox" is in the incongruence of pretending to solve the economic problem of shortage promoting more shortage, the equivalent of trying to

put out a fire adding fuel. The reference to “interest” is because it is most commonly applied to interest. Given the axioms in TET, the sterility of the function of currency authorities is evident, making the officers ghost hunters.

- **Mercantile-financial economic reductionism:** an epistemology that tends to explain all economic phenomena by the conduct of only one entity, in this case currency. In the history of economic thought this order of things is attributed to mercantilism, TET at the beginning of the Twenty-first century attributes it to “financialism”.
- **Phillips curve:** for a detailed analysis of this we refer to chapter XVI of the book the *Theory of Economic Relativity*.
- **IS-LM curves:** for a detailed analysis of this we refer to chapter XVI of the book the *Theory of Economic Relativity*.
- **Price dichotomies:** concept of the current paradigm that refers to the existence of “conflict” between currency (absolute) prices and real (relative) prices. According to TET these dichotomies does not exist in so far as: a) by definition there are only relative prices, and b) there is one currency world, that is real. A more extensive and in depth analysis of the subject can be found in the *Theory of Interest* in TET. In this manner, theoretical debates between Keynesians, quantitativists, and Austrians (if you consider the cartelists as different you can include them in the list), referred to relative versus absolute prices are absolutely void, since there is no such thing as absolute prices.
- **Endogenous and exogenous currency:** concepts of the current paradigm that differentiates currency originated in the economy (endogenous) from currency not originated in the economy (exogenous). TET does not consider these categories because currency (a broader concept than money), being an economic good, cannot be neuter in economics.
- **Neutrality of currency:** a category debated in the current theoretical paradigm that has no theoretical entity in TET, since no economic good can be neutral in economics. It would be like considering the possibility of an economic good with a zero price, i.e., it is contrary to the *positivity of prices axiom* ($p > 0$).⁽¹⁴⁾ TET does not consider even the possibility of opposing the short *versus* the long term to justify this supposed “neutrality”, an issue that has no theoretical significance in its framework.
- **Economy without money:** referring to the loss of weight of money relative to the compositions of currency in developed economies. As an economy progresses, credit replaces money as currency. The error of believing that the economy of the main countries could function without money derived from the theoretical conflict of assimilating the concepts of money and currency. TET established that there can be no human economy in society without currency, but money can cease to exist.

- **“Locke’s problem”**: for a detailed analysis of this we refer to chapter XVI of the book the *Theory of Economic Relativity*.
- **Garrison’s Graphics**: another element that shows the difference between TET’s economic theories and the Austrian school is the construction of George Garrison’s graphics, derived from his attempt to compare the Keynesian model with Hayek’s “triangles”. TET rejects these graphics, since they place the different coordinates, a i and p , similarly to all current econometric Keynesian-quantitativists models.
- **Negative interest**: very common in the Twentieth century, with no theoretical significance in TET considering that: interest is a price and prices are axiomatically positive. In the special case of the price entity *interest* we refer to the *permanent positivity of interest* axiom ($i > 0$).⁽¹⁵⁾
- **Real (relative) versus currency (absolute) interest**: a symbol of Böhm-Bawerkian and Wicksellian dichotomies that are the basis for all Twentieth century theoretical economic developments, rejected by TET based on that prices are by definition relative, and forgetting this has been nefarious for science.
- **Gresham’s law**: very popular, adopted by the current paradigm (Hayek with the proviso of legal tender, that TET rejects) according to which bad currency displaces good currency from circulation. A law that is considered unnecessary in TET, since it can be applied to any exchanged economic good, given that no one will use a good with greater value if he can get the same thing for something of lesser value. Gresham’s law is rendered unnecessary by the *Law of exchange*.
- **Economic models**: the economic models derived from Twentieth century economic theories have no mathematical basis since they consider i_m and p_m as independent variables.
- **Currency purchasing power**: a singularity of currency in current currency theories, assimilating the price of currency to its purchasing power. A singularity rejected by TET, since this is true for all economic goods that are exchanged; therefore, it is a concept that is synonymous with (potential?) price.
- **Impossibility of calculus in socialism**: TET states the same as Mises, but referred to capitalism with the current socialist currency-financial systems.
- **Money substitutes**: a term with which everything that has the function of money is assimilated to money. TET states that Twentieth century theories pretended to derive currency theory from money theory. This leads to inconsistencies in Twentieth century theories.
- **Regression theorem**: Hayek considers it to be at the center of Mises’ currency theory, since it is the theoretical tool that defined currency as an economic good. In

TET this theorem is evidently unnecessary, since currency is an economic good with the same characteristics as all other economic goods. We can say this difference between TET and Menger's Austrian disciples can be considered a symbol of the fact that TET's *currency* theory has its origin in Menger, but creating a simpler and broader theory, in harmony with the spirit of the Austrian School as a whole.

- **Intrinsic contradiction between the Regression Theorem and monetary substitutes (...fiat-money):** I must confess that this was one of the most surprising contradictions I found in my first investigations of the huge work by Ludwig von Mises, from where I derived my observations. I say first because I cannot remember how many times I have read his great work. I believe that if I count the quantity of notes I have made in his books, I may be able to say precisely how many times I have read them in depth –such a great author merits it- unequaled pleasure of reading his texts and not through interpreters, though I do not wish to underestimate their work.

Evidently it is not possible to say:

- a) Money must be an economic good (money regression theorem) and then say that a non-present economic good can have the function of money (in reference to money substitutes)
- b) That something is not money and has the function of money: the status of his unfortunate *money substitutes*, which he had to include ad hoc, adding something that had no reason to be there.

All this intricate path can be avoided simply saying currency can be money or credit, something he was unable to do because he did not perceive TET, the Theorem of Currency with its axioms, the adequate theory of interest, etc.

I must confess that only when I had developed TET did I understand why I had to “reread” Mises so many times, apart from my own limitations.

- **Quantitative theory:** unfortunate technicality that pretended the status of a theory. More on this in the Theory of Interest in TET.
- **Unknown debtor syndrome:** a situation that appears because of the existence of a credit that is irregular because it does not identify precisely the economic agent that must honor the commitment. It is the typical situation in irregular financial systems with fractional reserves that appears with recurring currency-financial crises, when the debtor cannot be identified and the State, the banks, and the justice system are simultaneously blamed for this... not realizing that the first error is in the theory. The people perceive a crime and that is why they protest, but the theories are the main culprits.
- **Pareto's Optimum:** it cannot be applied because the role of each part in exchange is inverted, a situation occurring with the institutions we denounce here, since the law assigns different roles from those established by an adequate economic theory.

From TET we clearly derive that any exchange in which PM and “bank entries” intervene cannot comply with Pareto’s Optimum, which ratifies the inconsistency of saying that currency-financial crises originate in “market failures”.

Evidently the existence of the *twin asymmetries* (or one of them) implies the theoretical and factual impossibility of Pareto’s Optimum, a basic component of *economic democracy*.

The impossibility of Pareto’s Optimum in any exchange with the presence of PM-“bank entries” is proven by the simple fact that we are in the presence of an unnecessary participant in market exchanges. I.e., the market is confronted with a transaction cost that is foreign to the essence and the needs of its exchanges.

- **Exchange rate:** an entity that expresses the price of a currency relative to another. Evidently this concept is included in the definition of price (of any economic good). The need for its ad hoc presence has its origin in current economic theories influenced by the Bawerkian-Wicksellian dichotomies.
- **Balance of payments:** appearing as a consequence of currency financial systems, a reflection of their totalitarian nature, in so far as the international commerce of citizens of a country has to go through the hands of the State. A situation that validates the negative externality nature of any intervention foreign to the market. The reader that wishes to study the subject in more depth will find further developments in the book *Theory of Economic Relativity*, and other writings related to TET.
- **Liquidity trap.** A state in which the amount of currency no longer affects the interest rate, i.e., the state cannot lower i_m injecting more PM and/or “bank entries” (Wicksell). In TET there is evidently no room for this “trap”, since interest is the price of economic time, not the price of currency. And though it is the price of currency when it has the form of credit, the only thing a price close to zero tells us is that PM and “bank entries” have lost all “credibility”. In short, the trap is not in the “facts”, but in the theories that accept its existence.
- **Common origin of current theories:** it is useless to debate the differences between Austrian theories (that “now” seem to discover that PM is credit, with the concept of fiat-money, not realizing the rest of their theoretical structure implies denying this situation) and cartelists (a pretension of being a modern currency theory, with the originality of using the term “fiat-currency” instead of its synonym “fiat-money”). (Could TET possibly be influencing the decision to consider currency as a broader concept than money?)
In other words, offering currency theories within the same theoretical framework as the theories of interest, time, credit, currency and current prices, implies offering the same “explanation” for problems that cannot be explained with that theoretical framework. They all have the same origin in Böhm-Bawerk’s and Knut Wicksell’s dichotomies.

- **Currency demand paradox:** TET explains what it calls the *currency demand paradox: a decrease of currency demand with the fall of its price*. This is a situation that is related to the supply and demand of credit, which implies the presence of a paradox if it is considered to be money (a present economic good), which was the case until the arrival of TET

TET shows that the problem is in not realizing the currency is credit instead of money, which is the only case in which the paradox could appear, but here we are referring to demand of a credit that is believed to be non-performing and so the market rejects it. In other words, the *currency demand paradox* is another clear demonstration of the inconsistency of current theories that develop currency theory based on money theory.

The inconsistent tenets of current theories –inevitable since they are based on the Bawerkian-Wicksellian dichotomies- led them to attach “special characteristics” to money and/or currency. They do not realize that *it is economic time that has special characteristics and that it transmits them to credit and currency if it is credit*, an order of things that can only be grasped by TET.

In short, the *currency demand paradox* could be assimilated to the *value of diamonds paradox*, and TET to the subjective value theory that solved it.

- **Barbarous relic:** a term with which Keynes pretended to undermine money, since it did not allow the “multiplication of exchanges” given the rigidity of supply. In light of TET it is evident that this Keynesian idea can only appear in the framework of the Bawerkian-Wicksellian dichotomies, that are the basis for all Twentieth century theories.
- **The origin of currency in the state and of credit in the banking system:** an idea derived from current theories, opposed to TET that established the theoretical (factual) origin of currency and credit in the market, without which there is no exchange since the market is the place where exchanges occur. There is a market without the State, but there can be no *economic democracy* without the market.
- **Transaction costs (Coase):** Martin Krause says: “... *Contacts also are a cost that must be considered in exchanges. These costs owe their name to Ronald Coase, that called them ‘transaction costs’*”. We already referred to the central relevance of honoring contracts and the importance of identifying the role of the different parts when currency is credit, a central defect of current currency–financial institutions, as a consequence of the error of the theories that are based on the *twin asymmetries*. It is also very adequate to analyze the consequences of currency systems of a totalitarian nature, denounced here, under the context of the *Theorem of Coase* – related to the *economic good-owner* axiom and *Pareto’s Optimum*- that stresses the definition of property rights that allows the most valuable use of economic goods, and if this is not so the tragedy of the commons occurs, as is the case when currency or financial symmetries are replaced by asymmetries.
- **Adam Smith’s invisible hand:** evidently the *indirect materialization* of economic time implies that this good cannot be perceived directly –which is made even more

relevant by the fact that it is present in all interpersonal exchanges carried out with credit-currency- and this could be the best proof of the existence of the invisible hand that Adam Smith referred to. It was based essentially on the “markets”, with no pre-determined mandate, by itself it oriented economic activity, an aspect that the subject value theory and spontaneous order corroborate.

Evidently TET ratifies the importance of the invisible hand, especially if we consider that invisible credit-currency can exist precisely in the sphere of the market, the space Adam Smith referred to. This quote has special relevance also since it ratifies that any intervention from outside the market in things pertaining to the invisible hand of credit-currency inevitably generates negative externalities.

So TET with the discovery of the special characteristics of the economic good *time* (indirect materialization, both of the essence of the good *time* and the price of interest and its necessary presence in the formation of all prices) has been proven to be a more complex case (ancient mysticism and scientific virtualism, until the arrival of TET) than the distribution of electromagnetic wavelengths –the origin of Coase’s proposal of auctioning them- and any similar case presented by the avalanche of inventions of the contemporary age. In other words, Ronald Coase’s interest in proving the existence of Adam Smith’s invisible hand was corroborated by TET, clearly proving that the brilliant Scotsman was right, since *economic time cannot be seen by itself*, it can only be seen through other economic goods in which it acquires economic existence. This situation becomes more complex when time has the function of currency, which tells us that the economic good that has the greatest incidence in our daily life, the *invisible currency*, cannot be seen. This means there is no virtualism, nor currency as a special economic good, based on the dichotomies denounced by TET. It simply occurs that man can use economic time as currency, which does not have a life of its own, “*it is the invisible hand that is present in all economic matters*”.

In short, the *twin (or individual) asymmetries* threaten the invisible hand underlying *economic democracy*, i.e., against the basic tenets of economic freedom.

- **Prices ($i_m \equiv p_m$):** in the economy the people deliberate and govern through prices, of which the central information is the price of currency (p_m), and this gives rise to the information web implied by the prices of all economic goods expressed in the unit of calculus. Free prices are equivalent to direct democracy, being the *people’s voice in economic democracy*, which implies that the valuation of the individual degrades to the extreme of maximum slavery when he cannot “vote” in the common space that is the market. On the other hand, the market always establishes prices, since exchange implies price and market at the same time; therefore, the State can affect prices but can never establish them, as we are led to believe (for example, that the state determines the interest rate).

Valuation is voice in the economy, materialized in prices, especially in the price that has the function of currency in the status of PM, that implies four preferential scenarios:

- a) Present in most interpersonal exchanges
- b) Being the unit of measure for economic calculus

- c) Necessarily present in the formation of all prices
- d) The condition of irregularity (currency asymmetry)

The equivalence axiom $i_m \equiv p_m$, pertinent in the case of PM, allows us to refer to the institutional (and theoretical) incidence.

- The equivalence axiom establishes the price of credit-currency (because it is economic time) as a necessary element in the formation of all prices. In other words, p_m participates in the formation of the prices of all other economic goods. Therefore, manipulating, controlling, establishing maximum or minimum prices of the currency (with the pretension to control i_m and/or p_m) implies altering the complete system of prices. The relation currency-prices-interest is direct. The axiom of equivalence shows that it is not theoretically pertinent to refer to any indirect transmission mechanism.
- Currency is a unit of measure used for calculus considering its preferential condition of *being* used massively in interpersonal exchanges.
- The information of prices is essential, prices must be generated spontaneously in the market, prices must be “discovered” in the real world. From this we can deduce the huge obstacle (tragedy of the commons, negative currency-financial externality to the markets, the impediment to Pareto’s Optimum, unnecessary transaction costs, etc.) that derives from influencing the price “ i ” that is present in all others. It is not scientifically pertinent to blame the market for “currency-financial failure”, since currency-financial systems are not based on free institutions, but on anti-market institutions, such as the *twin asymmetries*.
- The costs of the search for information (demanders and suppliers) are part of Coase’s transaction costs, and if the source of information is inadequate (irregular currency prices) the transaction costs are more so, a statistical fact that would not be hard to prove based on the postulates of TET. We could call this unfortunate incidence of PM and the fractional banking system (“bank entries”) *currency and financial asymmetry coefficient, or currency and financial uncertainty coefficient*.
- The control of the prices of all economic goods, since we are speaking of a necessary element in the formation of all of them, directly implies the impossibility of calculus in currency systems of these characteristics. This is similar to the analysis of the impossibility of economic calculus in socialism described by Mises (considering here the theoretical observations made by TET). That the Austrian school did not denounce this situation and participated in the sterile and unfounded debate of relative *versus* absolute prices, is also proof that it did not understand TET.
- If the axiom of equivalence is not taken into consideration it is not theoretically possible to see the control of the prices of all economic goods, or its causality (the necessary presence of interest). It is important to consider TET’s decisive chain of causal deductive reasoning, different from all other theories. In other words, TET presents scientific arguments that are directly opposed to current theories.

- The axiom of equivalence clearly shows that the diagnosis that must be made, confronted with the recurring currency-financial crises, corresponds in the first place to the health of the price system, which orients the analysis, diagnosis and treatment to the issue of currency previous to the financial issue. It is evident that if the axiom of equivalence is not taken into account, any attempt to overcome crises is purely empirical, and there are as many diagnosis and treatments as people that offer their opinions. Immediately after that it must be seen that the currency financial system works as a manufacturer (the State) and its distributors (Banks). Crises give greater visibility to the “monopoly-state-totalitarian” action of currency-financial institutions.
- **Currency-financial tragedy of the commons:** with the knowledge that a common good presents the problem of being treated inefficiently, due to the lack of incentives and adequate conservation, it is very appropriate to reiterate the case of PM that transformed the sphere of exchanges with money –a spontaneous order established by the market with clear delimitation of property- into a case of the tragedy of the commons.

It is important to stress that we are also referring to a financial tragedy, in so far as the fractional system multiplies the effects of PM, along with the circumstance of inverting roles, since it is erroneously supposed that banks, through the fractional system, are generators of credit, a similar situation to that of erroneously attributing roles to PM.

Given the presence of the *twin* (currency-financial) *asymmetries* we can observe:

- The incidence of the State in currency and financial activities, that led to institutions that are unnecessary for the market: currency-financial authorities (in so far as the State is “issuer of currency” and “conductor of the financial-banking system”), “balance of payments” this being the current account of foreign trade, etc.
- The eminently political role of the economic activity of the State –with its “economic basis” in current theories- assigns the currency-financial issue a common good interest, blurring the limits of property to apply the right of exclusion. Therefore the only reason to turn a private space into a public space is of an eminent political nature. This aspect allows us to foresee the final destination of currency financial systems we have defined in the text.
- The completely discretionary use by officials of everything concerning currency financial activities, based on the theories that make us think we are in the presence of a common space and that this space is “virtual”, with no economic consequences. This is why TET stresses essentially the theoretical aspect, as a guide for the legal reorientation that must take place. If not, state officials will continue to *play* with the life of a *virtual patient*. And will only see reality through the social manifestations of *real* men. The seriousness of the situation derives from the fact that officials change and the institutions remain. The official is a simple messenger. The problem derives from the institutions. And when we have the double scenario of inconsistent institutions and officials, crises become extreme (recurring Argentina).

Finally it is important to stress or reiterate from another perspective that current theories could not see this tragic change, from property with the right of exclusion to tragedy of the commons, represented by the change from money to paper currency, since they did not have a theory of interest (price of time) and currency with the adequate concepts.

- **Negative financial-currency externality to the market:** the new “paradigm” presented by TET allows us to analyze the change from the sphere of currency and finance to that of the tragedy of the commons as a negative externality to the market. This means that TET sees events totally different (another Copernican case) from what we are used to hearing, in the sense that currency-financial crises derive from “market failures”. The correct point of view is to see the historical change from a system with *twin symmetries* to a system with *twin asymmetries* as a ***negative externality to the market generated by the State and the fractional bank system.***

Under the framework of TET it would not be difficult to carry out a statistical study to ratify the cost of the negative externality of changing from private goods to common goods implied by replacing money with PM, and we can add the study of the fractional banking system. This could be considered an extension of the statistical-investigative work done by Reinhart and Rogoff, ⁽¹⁶⁾ which would consist of including the basic tenets of TET and so include what we have called *currency financial asymmetries coefficients*.

The same can be done with the study of the “solutions” to the recurring currency financial crises, and with TET we could see the damage originated in each case according to the way the tragedy of the commons has been “solved”, i.e., how States meet the recurring crisis originated by the institutions that “guarantee” that they happen.

Another aspect that can be verified, derived from the new currency-financial paradigm proposed by TET, is the correlation of the “rise and fall” of countries, with the increase-decrease of credit granted the State through PM, be it strictly in the national sphere (in the case of underdeveloped countries with currencies that are not considered currency “reserve” by the rest of the countries), or in the case of a country with a PM with currency “reserve” status in other countries, which implies giving the “country that is debtor of PM” a credit, and as we know any expansion-contraction of credit expands-contracts production. In the book *Capitalism and Currency* we establish the framework for the study we propose here.

So the recurring currency-financial crises that history presents are not market *failures*, they are *failures of the theories* that presented the opposite theoretical framework: market failures are caused by the *twin asymmetries* as negative externalities. A situation that is only seen by TET, not even the economists legitimately worried about prices –such as Mises, that was close to discovering TET (with expressions such as “interest is not a price in itself”, and “the impossibility of calculus in socialism”)- saw the failures in the theories. Nevertheless, we still pay homage to Hayek that expressed his displeasure with the state of currency theory, *though he believed that things were on the right path*. It was only TET at the

beginning of the Twentieth century that would show the road Hayek was seeking, adequately initiated by Karl Menger at the end of the Nineteenth century, but abandoned all through the Twentieth century with Eugene von Böhm-Bawerk's and Knut Wicksell's dichotomies.⁽¹⁷⁾

- **The Case of Somalia:** here we make reference to the case presented by *William J. Luther* and *Lawrence H. White*, un the title *Positively Valued Money after the Sovereign Disappears: The Case of Somalia*, of the George Mason University – Department of Economics- Paper N° 11-14. In this work the authors pretend to refute the theories that assign the origin of PM to the State. Evidently in the framework of TET, specifically in that of the *currency theorem* presented here, it can be considered a case study, and nothing more. It is not pertinent to present it as the basis to reach the goal of the authors, *justifying and/or exposing* fiat-money as credit. In other words the facts corroborate theories, the inverse process is not scientifically pertinent, or we will have erroneous interpretations as were the unfortunate developments by Böhm-Bawerk and Mises, who believed they were interpreting Carl Menger. In other words, the case of the currency of Somalia can be simply explained as included in the “dependence of the road” (the authors call it inertia), but to our humble understanding it does merit a theoretical debate. Some expressions pretend to present a kind of modern currency theory, but it is no more than a defective simplification of the whole currency theoretical development of the Twentieth century, since the only change we can see is that fiat-money is replaced by the term fiat-currency –a defective simplification because we believe the efforts of great thinkers of the Twentieth century do not deserve to be “abridged” in this manner- as we said in the text. There is a positive alert that currency is a broader concept than money, the rest is more of the same Bawerkian-Wicksellian dichotomies.
- **The law of exchange, its violation:** the same as distribution of labor brought the benefit of specialization, and exchange, and individual and collective progress in peace replaced the previous state of war, the interruption of exchange produces the opposite, bringing social conflict, which is the reason there are crises when currency deteriorates. TET shows that the problem is not the currency but the interruption of commerce. Not seeing things in this manner means blaming the messenger. From this derives that:
 - a) It is the creditor that announces to the debtor that he is bankrupt (always the last to know), a voice that can be heard in the street and in political turbulences, since the interruption of credit implies the interruption of exchanges, commonly identified as sales and purchases.
 - b) The first thing that has to be restored after a crisis is the health of the currency.

And so everything leads to the deductive chain of TET, States must “intervene more” in the world of finance and adjusting accounts, something that appears as a “novelty” because the current paradigm does not allow them to see that they are

involved by definition, and not because of the decisions of government officials at the time. Again, the institution defines the functionary the same as exercise determines the muscle, a type of mutation of the “dependence of the “road determined by the institutions”.

- **Currency without backing:** another serious mistake of current theories is attributing crises to the lack of backing of the currency, as if it were possible for there to be a currency that *is not* an economic good. Evidently this is another demonstration of the common origin of all theories based on Bawerkian-Wicksellian dichotomies, virtuality that did not allow the *currency* theorem to be conceived and much less the axioms of equivalence and equality.

TET clearly states that currency must be an economic good, with the status of money or currency, and in this last case, it is necessary that “printed paper” should become PM with the first exchange for a present economic good in the market. In other words, there is no scientific sense in speaking of a currency with no backing, since: a) if the idea is to refer to the concept of *X standard (gold)*, we would be speaking of money, and the “note” a simple deposit certificate, and b) if it is not money, it is credit (regular as in the case of the X exchange standard, or irregular as in the case of PM), which always requires a present economic good for it to become currency.

In other words, the indirect initial materialization of the credit is the necessary and sufficient “backing”. The debtor then may or may not honor his commitment, and for this we do not need a theory different from the rules of the world of finance.

Appendix B

JOURNALISM AND CURRENCY

Introduction

There is also the need for the new paradigm to reach the sphere of specialized economics journalism, especially in the levels of the highest international prestige. Just as we have referred to popular manifestations based on current theories, now we will refer to journalistic expressions with the same basis, considering the huge role of specialized journalism in *economic democracy*.

With this object we will comment the excellent article by John Gapper of the prestigious Financial Times, and reproduced by El Cronista (Argentina), under the title *The crisis of capitalism* (Originally published by the Financial Times under the title, *Promises that proved ultimately empty*). A very meaningful title to analyze from the perspective of TET.

Said object has two relevant aspects we need to stress:

- 1) The excellent content of said article, since it presents synthetically the current reality of the banking system, more specifically the crossroads it confronts in the current crisis. Which leads us to anticipate that, though it makes no specific reference to the issue of currency, it refers to banking, given the knowledge we already have of TET it will suffice to refer to the issues mentioned by the journalist.
- 2) We will have the same attitude as the journalist, that is to say, analyze the issues he correctly proposes, but from the point of view of the currency financial paradigm of TET, and not from the traditional point of view from which John Gapper analyzes the subject in the Financial Times piece.

Having clarified this, we now assume the role of “journalist”, with no pretension to emulate the professional journalistic qualification of John Gapper, or the Financial Times or El Cronista.

A specific case as a reference

Story in the Financial Times, *Promises that proved ultimately empty* by John Gapper, January 9th, 2012.

The method will be to present the original text between inverted comas and present our “journalistic” comment in italics, from the point of view of TET.

- 1) “The crisis of legitimacy in capitalism has meanwhile spread since 2008”. *We can clearly observe the Copernican distance with TET’s point of view, that shows precisely the opposite: capitalism is subject to inevitable and recurring crises*

originated by the anti-capitalist currency-financial institutions, based on current theories because they validate the “twin asymmetries”. In other words, TET showed the crisis of legitimacy was in economic theory, the basis for the institutions that suffer the crises.

- 2) *“In the 1990s and 2000s, banks became a leading force in western economies”. The difference with TET is evident in that it says credit is always generated in the market, which implies circumscribing the banking function to intermediation (be it fractional or not). Judging by the rest of the article that is not what the author refers to, instead he expresses what current theories say, in the sense that the banking system generates credits.*
- 3) *“Today, they are resented for holding taxpayers hostage by having become ‘too big to fail’”. He evidently ratifies the public nature of the banks, which determines that they cannot fail, subject to the laws of the market. It is as if a big distributor had to be salvaged because otherwise the factory would fail... a systemic order derived from current theories that TET condemns.*
- 4) *“Many argue that banks have drifted from their basic social function – to encourage growth by making loans”. Again the contradiction with TET we have already mentioned: it is the market that issues credits, therefore it is social as long as it is in the hands of the market, the current institutional order (derived from the theories that support it) subverted this spontaneous natural social order, generating what TET calls “the currency-financial tragedy of the commons” and the “currency financial negative externalities to the market”, in the “twin asymmetries regime”.*
- 5) *“...Paying investment bankers and traders large bonuses...” The remuneration of banking officials is by nature the same as that of public functionaries, in so far as they belong to the sphere of the State, considering the institutional order of a socialist nature of the current currency-financial systems (the State produces PM and the banks distribute it).*
- 6) *“‘There is a deep question of legitimacy that banks need to face up to’, says Ranu Dayal, senior partner at Boston Consulting Group. ‘The underlying level of dislike of banks is compounded... Unless they can find a way to demonstrate their usefulness clearly...’ Evidently they will not be able to do it, as long as they are a negative externality to the market and the “twin asymmetries” subsist.*
- 7) *“For a long time, banks coasted on a wave of growth in credit markets... This turned out to be, as Andrew Haldane, an executive director of the Bank of England, concluded, ‘as much mirage as miracle’”. The process is really the opposite, the current currency-financial system infiltrates in the markets, becoming an unnecessary “rightful” participant in the market. Here we must remember TET’s postulate: there is no currency without backing, there are debtors that are more or less solvent.*
- 8) *“It was all egged on by governments who listened to investment bankers and appointed them to high positions. They were told that all they had to do was to get out of the way.” A ratification of the totalitarian essence of the current currency-financial system, in so far as the distributing banks in charge of sales controlled the business of the manufacturer (The State, issuer of PM and regulator of the chain of distribution to the public, the banks). Then, when the crisis appears, the manufacturer is co-responsible.*

- 9) “The investment banking industry has drifted from its original focus, which was raising capital for industry and providing advisory services,” *Once the totalitarian system is established, the goals are no longer in the sphere of the economy, instead they become political...*
- 10) “Instead of the intensified use of information technology increasing efficiency, as it did in retailing, banks simply got bigger”. *The typical conduct of bureaucrats that are not guided by the rules of the market, because they belong to the public sphere where the tragedy of the commons originates, a situation that cannot be perceived without TET.*
- 11) “...Central bankers did not want to admit that any single institution was too big to fail (...) The 2007-08 crisis destroyed that delicate balance, not only making European governments rescue large banks but leading to the US Federal Reserve extending the protection of its discount window to Goldman Sachs and Morgan Stanley. The old ambiguity disappeared and the protected club of “systemically important financial institutions” widened”. *The use of the concept “systematically” is very commendable, but it would be more correct to say “essentially”. But the term “essentially” cannot be used if it is not clear that everything is based on theories that shelter the totalitarian currency-financial infiltration in capitalism, to the point of using the title “the crisis of capitalism”. In other words, everything is presented as a conspiracy of State-banking functionaries that built a system taking advantage of current institutions, not realizing that these institutions are a consequence of the theories that are the basis for this “systemic order”, and that is why it is more adequate to say essence and not system. Here we see the adequate use of the term “financialism” provided by TET, in a kind of modern mercantilism or finance-mercantilism that validates the due State (King) – financiers (merchants).*
- 12) “But just because a bank is systemically important (...) that does not make it economically vital”. *Again the political instead of the economic essence, that cannot be perceived because it is analyzed with the same theories of those that “systemically” build... Nevertheless, the underlying concept of the financial system as “infiltrated” in the market (an unnecessary participant according to TET) is commendable.*
- 13) “The most important function of banks is also their least glamorous – taking deposits and making loans”. *Again the analysis is based on the same theories that sustain the institutions that are being analyzed, the use of the terms deposit and makings loans proves it, in so far as there is not perception that the origin of the loans is the market, not the financial system. A situation TET showed by analyzing the consolidated financial statements of the society where these financial institutions operate. The idea of the financial system as a “simple intermediary” of the credits generated by the market underlie this too, though obviously without TET’s theoretical basis.*
- 14) “...Banks have fought regulations (...) ‘The regulatory agenda was too modest to start with, and the banks’ political power is incredible,’ says Simon Johnson, a professor at MIT Sloan School”. *Again the analysis is based on the same theories that sustain the entities being analyzed, while the situation is the opposite, the system is public with banking distributors. And only someone analyzing with*

erroneous theories (such as the current ones) can be surprised by the “political power of the banks”, which shows ignorance of the “political essence” of the “system” of current institutions, ratifying that it is utopian to believe in the independence of a central bank relative to official politics. In short, this is part of the struggle for control of the business between the State-manufacturer and the banks-distributors.

- 15) *“A prolonged fight to keep doing the same thing while fighting regulation will do nothing for banks’ legitimacy...” An excellent conclusion but with the wrong arguments, since they derive from the same theories underlying the “systemic” institutional order being analyzed, since it refers to a simple organizational issue of the system. This is typical of powerful individuals that try to confuse the people, saying the opposite of what they are really trying to do (rejecting more regulations)... “...And little for the economies in which they operate”. Again the analysis from the same point of view as what is being analyzed. What is not perceived is that in essence current “systemic” institutions are a negative externality to the market. Any “small change” leaves things the same, allowing the few to benefit from the efficiency of many others.*
- 16) *“Banks might be able to argue and delay their way out of their current troubles and wait for memories to fade. But that outcome is by no means assured, and would not be the best one for society as a whole. A healthy banking system – both in size and scope – is vital to a sound economy“. A wrong diagnosis. What is needed is a healthy (non fractional) banking system within a healthy (regular currency) currency system. A system with twin asymmetries cannot be expected to be healthy, its totalitarian essence is the cause of the recurring crises that destabilize capitalism.*
- 17) **“Reduced returns.** *Despite the regulatory pushback, central bankers are imposing higher capital and liquidity requirements, preventing them from using leverage as aggressively as before”. Evidently the “manufacturer” demands more guarantees from its “distributors”, the banks, a typical situation in crises where the “factory” is endangered.*
- 18) *“This industry is run by entirely the wrong people now’, says Prof Hahn. ‘It is not that they are idiots but, for three decades with only small intervals, you succeeded by growing your business and piling on risk. The new regime is about efficiency and cost and none of them knows about that’.” Evidently professor Hahn uses the same theories as the functionaries of the “systemic” institutions being judged, and does not perceive the essence of the public official, and that these are not “necessarily idiots”, or “necessarily honest”. A situation that can only be clearly perceived with TET’s new paradigm.*
- 19) *“The question is whether banks can and will transform themselves”. Though the piece points toward the reconversion of banking business, we must say once again the problem begins with currency and derives to the banks, which does not deny the possibility that the banks could generate crises with a regular currency if the fractional system survived. In other words, the situation cannot be altered with simple organizational changes. Adequate strategic planning requires first the “compass” (theories), then the “organization” (institutions). The main thing is to*

identify the presence of currency-financial asymmetries that affect the “compass” of economic democracy that generates the virtuous circle of capitalism.

We believe this section is extremely useful because it clearly shows that journalism, the same as politicians, carry out their mission based on current theories. From this once again we deduce that the problem of recurring currency-financial crises is not to be found in capitalism, but in the economic theories that do not perceive the totalitarian essence of current currency-financial systems.

We believe we have clarified that:

- **What confronts us is not a “*Crisis of capitalism*”,** the title of the piece we have analyzed.
- **We are in the presence of the “Crisis of currency-financial theories”,** that is the second title of this text.
- **It is wrong to seek a solution to currency-financial crises of a totalitarian origin, with more totalitarianism (controls),** which is like pretending to help a patient giving vitamins to the parasite.

NOTES

⁽¹⁾ TET's axiom *economic good-owner* states that: *there is no economic good without an owner nor any owner without an economic good.*

⁽²⁾ Based on this simple argument TET postulates the axiom $S \neq I$, which derives in the "permanent disequilibrium" of the economy, another Copernican difference of TET relative to current theories that postulate $S = I$.

⁽³⁾ The TET axiom on the relation *economic good-price* states that: *there is no economic good without a price or a price that does not refer to an economic good.*

⁽⁴⁾ Considering the *tragedy of the commons* to be the economic inefficiency derived from the presence of an economic good (product or service) with no duly identified owner, which leads to the absence of conservation and improvement incentives. This is the typical case of public goods.

⁽⁵⁾ If you are interested in getting to know the basics of the new theory of interest (and economic time) we recommend you read *The Theory of Interest*. After reading it you will have a complete knowledge of the history of the theory of interest, from the Greeks to our times.

⁽⁶⁾ In the Theory of Interest you will find a broad and precise development of the role of Eugene von Böhm-Bawerk and Knut Wicksell in currency, interest, and price theory.

⁽⁷⁾ You can agree with socialism or capitalism, but what you cannot do is consider as capitalist the current socialist currency-financial systems and the theories that originated them, or ascribe their recurring crises to capitalism.

⁽⁸⁾ A demonstration found in the book *Theory of Economic Relativity, Third Part: Corroboration of the economic theory.*

⁽⁹⁾ The corroboration mentioned in note ⁽⁸⁾ is a demonstration of the indirect materialization of economic time, manifested in the credit exchanges implied by PM and the fractional banking system of "Wicksell's banking entries".

⁽¹⁰⁾ The preceding notes ⁽⁸⁾ and ⁽⁹⁾.

⁽¹¹⁾ Concept developed in *Capitalism and Currency*, chapter II... Its potential is based on this simple deductive chain: capital goods increase production of economic goods; production of those capital goods requires labor; but capital goods free labour; and freed labour is destined to the production of new capital goods. This simple deductive chain could be defined as the *virtuous circle of capitalism*...

⁽¹²⁾ Martin Krause, from his book *Economía, instituciones y políticas públicas –Buenos Aires – Editorial La Ley, Chapter 1: Mercados e Instituciones*, in the section: *Individualismo metodológico.*

⁽¹³⁾ Martin Krause, same section: *Los contratos.*

⁽¹⁴⁾ TET's *positivity of prices* axiom states that: prices are positive by definition.

⁽¹⁵⁾ TET's *permanent positivity of interest* axiom states: given that interest is the *price*, of the economic good *time –permanent necessary participant* in the production of all economic goods- and given *the positivity of prices*, then interest is permanently positive by axiom.

⁽¹⁶⁾ Carmen M. Reinhart and Kenneth S. Rogoff. *This time is different –Eight Centuries of Financial Folly* – Princeton University Press – 2009.

⁽¹⁷⁾ We can refer here to a reflection by Schumpeter –Joseph A. Schumpeter, *History of economic thought*, in not 36 of chapter 5- with his text in italic with our commentary between brackets:

... because Menger, far from greeting that theory as a development of his own suggestions, condemned it severely from the start. In his grandiloquent style he said to me once "the time will come (TET's development?) in which people (TET?) will realize that Böhm-Bawerk's theory "is one of the greatest errors ever committed".

Could the conclusion of this work have been the same as Menger's in his commentary to Schumpeter? I cannot say if TET confirms Menger's posture transcribed here, but there is no doubt that the basic tenets of TET are in line with Menger –as se have stressed in this text- and not with Böhm-Bawerk.