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Fiat versus Representative Money under Debate, or How Right Keynes Was Once (!)

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Abstract. *The applied economics understands the concept of money nearly exclusively through the quantitative theory, which certainly remains one of the greatest theories in this topic area. On the other hand, the history of money – be it old or contemporary -- finds two other "non-quantitative" theories as more relevant in the respect that they are able to "cover" this history – these are representative and fiat money. Then, there comes the interesting point: this history "covered", meaning a full explaining of facts would be made by the two theories and images of the same money just "together"—which is impossible in basic good sense terms, as money (as anything else) cannot be real and fictitious value in the same time.*

Keywords: fiat money; representative money; seniorage; barter (and its system); commodity money; international monetary system (IMS); macroeconomics; optimum currency area (OCA); economic theory.

JEL Codes: E00, E52.
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I already believe that my last intervention on the issue (Andrei, 2011) skipps an important stake: vis-a-vis the *quantitative* theory of money, which of course remains one of the „largest" economic theories ever, findings of the literature on *qualitative* theories stay so low voices, whereas some of them are at least equally significant. When I say significant, I think about the *money* substance, as identified with: (1) a *fiction of value given by the monetary authority,* see the *fiat money,* versus (2) a *natural valuable substance on market as basing the money value,* see the *representative money.* Moreover, not only the significance of polemics between the two theories interestingly grows larger than the quantitative theory itself, but the last seems even "forced" to get included by the one(1) side. In such a context, things become scientifically serious and require a separate analysis for clearifying.

1. As for the fiat money

Money is a *social convention*(2) and compulsoryly introduced by the *monetary authority* – be it State, government or even a Middle Ages *seignor* for her/his own *fief* (Reynolds, 1994). This is the same for representative money, by the way.

1.1. A huge "white spot" in historical terms

The real problem of the *fiat money*'s argument comes up since this theory so claims that a state authority – just figure out a pre-modern State, as for antiquity and/or Middle Ages – would be able to introduce both its proper *sign of money* and the *price system* of it, as aferrent to. In other words, prices of all goods on the home market would be settled *ab initio* by a skilled enough authority in such a way. The *State* or *segnor* feels pushed to such an undertaking since concomitantly it (or she/he) directly pays its (her/his) own employees for their services – as indirectly, these people then are assumed to find out their own real welfare as translated in marketable goods; households make savings under the same money sign and so on, nearly the same as today. Or, even much later modern economy States, basing of the tremendous experience of their historical predecessors, see themselves out of all capabilities to make it in a free economic environment(3). All the less for pre-modern States, for which *interventionism* yet stayed so far from, as well as even the clear design of a *home market* as basing a unique and distinct *macro-system*(4).

What I breefly and broughtly mean is that the bias for *fiat money* gets automatically responsible for a huge white spot in historical terms, as between the *primitive barter* period and the end of *gold standard* in early thirties of the 20th century. In other words, besides and despite their lack of experience in implementing their primitive money, the antique and Middle Ages States, as monetary authorities asigned, might be here also assumed to reject the market signals regarding transaction value of goods, whereas existent and made available by the much older *barter* market (exchange) system.

1.2. On the contrary, some strenghts

On the other hand, the fiat money theory was well enough so far as basing on its *strenghts* and other specific aspects, here including (economic) history and history of economic thinking. As in the first place, this theory is in "good terms" with a late 19th century neoclassical view about the *barter* type economy, the one which made an impressive career under the respectable name of Sir William Stanley Jevons (Jevons, 1875/1893), the way that all manuals of economics ever-since reduce the barter type economy to either its *primitive* stage, or to its handicaps, as compared to its money alternative, here expected to replace it forever. The author emphasises that (*primitive*, our notation) barter misses its specifically necessary *"double coincidence of wants"*, as the most important. Besides, barter proves unable to make some seasonal goods approach one another for direct transactions and encounters the impossible physical divisibility of some marketable goods.

Later on, when primitive money issued by antique States, the *fiat money* theory better responds to an issue to which the opposite *representative money* theory fails to explain, in its turn, here proving its own historical *white spot.* Contrary to *fiat* money, *representative* money more deeply considers its *barter* precedents(5), as containing not only the *primitive*, but equally the "*upper barter*" of *mediums of exchange* and *commodity money*(6). Or, *commodity* money settled in a market area is certainly either resulted from tradition and routine of the market process, or the best precedent for then money issued, as *represented* this way. However, things might not be so simple in context for *representative* money – meaning that it is not so simple to imagine the same quantity of metal as bar shaped or even in its natural appearence competing on market with the same, as flat money shaped bearing the State's inscription(7). We have to recognise that such a weakness of the *representative* money (as theory) stays much more insignificant than the above mentionned huge historical white spot of *fiat* money whatsoever.

The *fiat* money might here underline that all authorities, be they antique or contemporary, take so seriously their money issued. Counterfeiting coins and currency has ever been seriously punished. Plus, the antiques had a similar problem of their money being sometimes rejected by citizens in context here including the Roman emperors' example of reshaping money with their portraits, as for political propaganda(8). *Fiat* money better explains not only these minor and "mortel" politicaly based aspects, but more importantly the concept of *segnorage.* Or, the last might be the very aim of both re-shaping the basic metal quantity as flat coin and issuing paper money. And it was both politics and economic terms here. *Segnorage* (Weisbrot, 2005, Horne, 1915), as defined as the "segnor's right" (9) , explains how the flat coins were shrinked as metal quantity despite the explicit value given by the State's inscription, meaning that there were not conterfeitors acting on, but the coins issuer herself. The same *segnorage* acts when paper money replaces metal coins and even becomes a value assessable and accountable concept. Though, its value increase keeps limited by the alternative of *all money issued back to its issuer* on short terms. Moreover, a high segnorage value reduces either the welfare provided by money received by all individuals or the money supply's capacity to extend over their (previously outlined) market area. Despite here failing to explain the market areas enlarging and integrating by money, fiat money drags *segnorage* on its side, whether the last stays valid to all belongings of the money history: from antiquity to modern times and from the metal shrinked antique coins and paper money to the today US $, as (paper again) issued by an individual State for the whole world market and economy.

As for later on, when the modern and international *gold standard* – see another concept claimed rather by the *representative* money position –, *fiat* money selects just the money conceptually meeting credit and banks (Davies, 1994), as specific to the modern financial and economic environment and its practical result of *money multiplier.* It is in the same context that the fiat money theory calls all (old and contemporary) adversaries of the gold standard concept on its side – see, between David Ricardo (Rist, 1938)(10) and hundred years later J.M. Keynes and even later M. Friedman(11). Plus, fiat money rejects the Triffin(1968)'s theory on the *international monetary system (IMS),* despite this author's position rather coping with the same fiat money.

Otherwise, since gold standard overthroned – meaning all metal base for money cancelled, but money still in place – *fiat* money feels "the best" – it looks like even if there had ever been a real "fight" between these theories of money, that would certainly show to the "winner", which was the same fiat money. Representative money, as in the "looser's position" might stay just a "theoretical illusion".

Last, but not least, the "final exam" passed by fiat money might also consist in more contemporary aspects. First, as for facts, the today *international money* seems to have succeded in remaking its order consisting in exchange rates floating tempered since the early eighties(12). Second, the *optimum currency area (OCA)* theory, as between Robert Mundell (1961) and Ronald McKinnon (1993), successfully argues with the previous Triffin (1968)'s *international monetary system (IMS)* theory. Third, the post World War II *banking system* based on central, versus commercial banks (Patat, 1991) and corresponding *monetary policy* play for fully re-designing the home money area in the fiat money way, as compared to the previous gold standard era. So, fourth, the *quantitative theory* gets on the fiat money side, as well basing the same monetary policy. Fifth, the EU's *euro* story keeps on the same side – as well as all presumably similar examples would do. And enumeration might here continue with other aspects[(13)].

1.3. What fiat money fails to explain in today terms?

However, a couple of aspects stay shadowed by such a "success" of fiat money. The one belongs to the same gold metal, as rejected from all money (monetary) dimension by an international law[(14)], but filling the banks' and especially central banks' reserves as previously, under international gold standard and in need for an equally international *Gold Pool* as a matter *not to play with* (Andrei, 2011).

The other seems to skip the gold metal, but not its money functioning principle at the same: see the liquidity *representation,* here including the corresponding liquidity enlargement this way. Previously, under gold standard, the gold metal reserves were *basic money (Mo)* and money supply was *effective money (M1)*, as representative. So, the *representation* type of reports between the two was going further on with all *titles*[(15)], as money denominated and the total liquidity so expanded not only through the money multiplier[(16)]. Today, long after gold standard and when gold is „non-monetary" for good, the *liquidity representation* was not affected in practical and legal terms; on the contrary, it flourished – except for the former basic gold metal representation. Actually, this way the effective money tries to represent a plurality of *assets,* here and there including gold in banking area. Then, money and financial markets feel free to include a liquidity significantly expanded two, three (and so on) fold from a single (effective) money base.

Plus, in another development, the above mentioned *OCA theory* keeps the representativity type report between *nominal anchor* and the rest of currencies and the appropriate area, as internationally[(17)].

2. As for the representative money

Money is admitted to be a social convention, as introduced by a political authority, as well. However, market is assumed to be much older than this authority the way the authority is basically assumed to play by the market's rules. Money so might be also supposed to previously be a matter of symbol, and not playing directly on market, whereas market is for a quite longer time working on its own.

2.1. Report between money and barter stays equally significant

So, money issued – as well as the issuer authority – complies with the already existing market, and the last belonged to the barter system when the first money issue arrived and was assumed to do the same for a significant while afterwards. And when arguing about the barter's rules of the game, the sequence starts by the so-called "*Turgot axiom*" (Jinga, 1981), which claims that *all exchanges exclussively belong to really valuable matters" –*, in other words, how could a *social convention* (see a "*fictitious"* value as fiat money is) be part of exchanges?! As a response, *money* might be denied as such, but it can remain *representative* for naturally *valuable* substance. On the contrary, barter, as for all its phases, complies with such a general rule.

Then, barter can be at least imagined for a long historical sequence of phases, broadly for a *primitive* barter – all goods try to meat each other and so settle value (price) ratios between; the problem of missing the "*double coincidence of wants*" here locates and remains forever –, folowed by the *advanced* barter – the one of *mediums of exchange* and *commodity money* (see the Box). The rule of *goods directly meeting each other* for transactions and so settling value ratios between stays unchanged in this second advanced historical phase, whereas the last throughs out both the "*double coincidence of wants*" problem and the primitive barter's attachement to the specific *Neolitic* type community (Andrei, 2011). Then, the *advanced barter* clears the way for *money*, as issued on its aferrent market area and so shakens the Jevons' type "barter-money" incompatibility. But, moreover, the *advanced barter* gets fully opposite to its precedent by breaking the market areas' borders, whereas the primitive barter had stayed aferrent to small human communities(18) and so equally remains the single image of *perfectly closed market space* for the economic history.

Basics of the barter economic system(19)

The starting point of our the debate about barter is the *Walrasian theory*(20) *of prices* (Guitton, Bramoulé, 1987). This theory might be shortly described by two contexts. Firstly, whenever the capital letters A, B and C individually identify three market *goods* and the following equalities do exist:

$P_A=P_B$;

$P_B=P_C$,

where P_A,P_B and P_C are the corresponding *good market prices*, there automatically results that:

$P_A=P_C$,

as taking into account the unique restriction called the *rational economy* developing. As a corollary, when *inequalities*, instead of equalities:

$P_A > P_B$;
$P_B > P_C$,
there also automatically results that:
$P_A > P_C$,
of which, the above restriction remains the same and lonely one.

The *Walrasian* thinking about market prices of goods inspires our below analysis directly since we note at the same: A, B, C, …, M, N the totality of goods marketable in the considered area. Corresponding notations as: a, b, c, ,…, m, n will associate to the previous capital letters, as for quantities of denominated goods, all making a *unique exchangeable value* throughout the multiple equality:

(I) $aA \Leftrightarrow bB \Leftrightarrow cC \Leftrightarrow ... \Leftrightarrow mM \Leftrightarrow nN$

In which $\Leftrightarrow$ is proper to this model only. Let us explain that, primary, this is something more than the usual "=" sign for the basic *Walrasian* model. More than an equality or value *equivalence,* this sign indicates the *double sense* of the barter (direct) transactions between (at least) two corresponding goods, as for realising *two utilities* for the two users imagined behind each of the two sides of the transaction.

Then, just notice that our model prefers to replace the above *Walrasian* notations of *prices (P),* by here identifying what is more apearent in (and appropriate to) the barter type transaction, namely the *quantities* of goods – or, this makes the distinction between this analysis and the basic Walrasian model. In a way, talking about prices directly in the barter type economy isn't quite confortable, since no *value standard* (or, at least, *medium of exchange*) available. In another way, *prices*, in our model, their behaviour is the very objective of the below study – in other words, prices are realised throughout the model's functionning.

Back to the $\Leftrightarrow$ sign, there is to explain that it replaces, in our model, either the price notation (P) or the *rational economy* assumption. Our sign relates to the *multiple equality* of the model on the *short* and *long* terms, as distinctly. On the *short term*, the *no-coincidence of wants* is assumed, the way that the owner of good A (utility) looks for good N, the owner of B looks for A, the one of C looks for B, and so on... the way that the A utility realised implies the full range of successive transactions among the available goods up to N. And the same is occuring for goods, B, C, ..., M, N.

On the *long term*, either such a chain of transactions repeats and strenghtens the stability of the unique value realised throughout the basic (I) equality, or the order of preference of each good owner for the other goods might change the way that the $\Leftrightarrow$ sign *reveals that all items on its left have (at least) once meat the ones of the right hand side, and vice-versa.* As consequently, the lenght of the transactions chain, plus its repetability on longer terms work out the *rational economy,* instead of the last's presumable basic assumption.

Let us also have the other context::

$P_{B/C} = P_{B/A} / P_{C/A}$

in which $P_{B/C}$, $P_{B/A}$ and $P_{C/A}$ are the corresponding *price ratios* among the same three goods. This last above equality means that every good can operate on the same market as a *price standard* (medium of exchange) for the rest of goods.

To be noticed that the authors make clear a *universal* truth, meaning that these both are valid for all markets, from the most primitive to the modern market economy context ones; actually, from the *barter exchange* to the *money base* ones. This is equally significant that both postulates contain the prerequisites of *individual property* on every market *good* and *free option* of every owner about goods owned (to sell them or not on the same market).

Then, our (II) model comes to be the one in which one of the goods in the transaction range of (I) takes over the role of *medium of exchange* – refers to the upper stage of barter – we will call it the *advanced barter*. There will be the *complementary model:*

(II) aA ⇔ nN
bB ⇔ nN
cC ⇔ nN
(..........)
mM⇔nN

in which, actually, one marketable good item will chage status into a *medium of exchange* for the other good items, and the result is an essential change: there is no longer the *horizontal* chain of transactions, but a *vertical* range.

2.2. Strenghts of the theory

Then, the *representative money* theory gets able to explain that there was not the money's "force" to make the previous cell markets extend to the *national-international market* structure of the modern economy of the 19th and 20th centuries, but this "force" belongs to barter, once more: (1) the contrediction between the two, see the (a) natural and (b) artificial (artrificially given, as related to helping market exchanges among the other marketable goods) *utilities* results into (2) the *artificial selection* among mediums of exchanges, and so, concomitantly, (3) extending market areas as integrated by mediums of exchange selected. This is the way the *gold standard* historical "phenomenon" gets much better explained than in the fiat money case, as the ending selection among all mediums of exchange – it might be the end of barter, but there is no doubt of gold standard belonging to barter previously than founding its modern *monetary system*.

On the contrary, the *non-modern money*, as born of the advanced barter system (and not incompatible with), was not only unable to replace barter system, but rather a real brake of individual markets' extension. As for instance, re-multiplying mediums of exchange and so creating parallel price systems, as superposing on the same market areas. Plus, lower valuable mediums of exchange as chosen for basing the money issued[21]. Plus, the *segnorage*, as affecting the market extension once more.

Money becomes *modern* throughout, at least, two performings. The one is meeting *banks* – and this belongs to *money* itself – and the other is *extending markets* to the *national-international* – see the *Ricardian* and *post-Ricardian* – structures and this belongs not to money, but still to the barter system, and results into the modern gold standard of the late 19^{th} and early 20^{th} centuries. The gold metal was the "winner" of the long artificial selection among mediums of exchange and extending-unifying market areas (Andrei, 2011), but not only. It was previously *barter*[(22)], then *monetary system*, competed with the silver metal throughout the 18th and 19th centuries[(23)], its specific (and famous) price stability claims its origin in the barter system as well, plus the monetary order that it engendered on both national and international markets founded all monetary systems ever-since.

It was *gold* replacing, as really and finally, barter by money – as written in todays manuals – actually this was changing its own status this way. This changement even goes to gold standard embracing some *fiat money behaviour*, as well – see *money multiplier*. However, the *representative* money theory stays strong on the international market area as much as *fiat* money, on the contrary, better explains phenomena and behaviours on the today home markets.

2.3. The significant weakness of the theory

But the most significant weakness of *representative* money is – as contrary to a so coherent explanation about gold standard and its earlier history – failing to explain the non-metal based money afterwards.

3. The other part of debate

As given all of the above, can we ask who's right and who's wrong in this argument? Something like money here cannot be both a real value and its opposite in the same time. However, this question might appear rational and legitimate only to whom ignores what economics is. It does not result as a construction of postulates completing each-other, as in the exact sciences cases, but mostly resulting from theories in debate. Each of these theories contains scientific truths, otherwise individual theory gets off any genuine argument. Plus, despite the debate expected all over, any individual theory never limits to contredicting another one in use when struggling for itself, as a solid argument.

Or, this is the way of seeing this above argument between *fiat* and *representative* money, as theories in a common dispute. Plus, other theories get dragged into debate: *segnorage, gold standard, IMS* and *OCA*. Each of the two opposite arguments priory tries to stay consistent with itself – that is why each becomes partly strong, partly week argument. In such a complexity order of each theory, there is no any "right" or "wrong" argument, as entirely, except for deliberate folowers, versus adversaries of theories. In other words, there cannot be asserted that one of the two positions are right or wrong, but that argument is more or less substantial for each of the theories here and there. Other aspects, in our view, get enough more significant that answering the above false (right or wrong...) question in context.

In the first place, this above debate ought to be recognised as really strong and comprehensive. The two positions are so substantial as sometimes shadowing the theoretical debate by the illusion of talking about "two different moneys" – one can really conclude that representative money would be born in antiquity and ends together with the gold standard, whereas fiat money would become, on the contrary, the one which belongs to present (a false understanding for this issue, of course).

Besides, the more the theories are actually struggling for themselves, the more the appearence of their full opposition between strenghtens. This aspect actually results from another (let us say) "positive" one: fiat and representative money theories succeed to complete each-other on each component the way that the whole history of money seems to hide behind them, in a kind of "tandem" – or, the last stays impossible since nothing can be both a *real value* and a *fiction* of it in the same time. So, none of these theories succeeds to knock down (and out) the other, on the contrary, it succeeds to complete the other's view on facts.

The same debate stays strong equally when they further succeed to transcend another large today theoretical debate: the one between *liberal* (see classics and all neoclassics) and *mixed* (see Keynes and followers) economies. There becomes rather clear that non-liberal economists obviously belong to fiat money position, whereas for liberals things are more complex in historical terms: the old liberals liked the gold standard with its free economy, as unaltered by any intervention, at that time, whereas the later neo-liberals dislike gold standard for its "*liquidity constraint*" – and Milton Friedman (1953, 1986) here remains the real emblem of the last liberals with his "gold standard-aversion".

And whereas liberal and non-liberal economists' groupes do not separate one-another's arguments on this issue, a clear-cut argument distinction moves in another way: accepting *inflation* (see *fiat* money), versus not (*representative* money). Here, not only the former head of the American Federal Reserve, Alan Greenspan (1966), once displayed an interesting individual intellectual evolution towards followers of gold standard, but such a turning point in the today thinking actually comes back on a points previously thought as already settled. The 1929-1933 big financial and economic crisis pulled out gold standard and taught us about an economy which needs intervention. Eichengreen (1992) even accused gold standard for having been a main cause of this crisis just by its substance of non-intervention. J.M. Keynes, the schollar "required" by the post-crisis era, called the gold standard an "absurd fetish" and "primitive robot" of the monetary system. New money theorists argue that "only out of gold, money becomes *real money"* (Guitton, Bramoulé, 1987). The way that money gets ruled (here including constrained) by gold is seen as *naturist* – that meaning a "so modern" economy and technological society that lets itself "submitted to nature" in the most primitive and so anachronical way etc.

Despite this precedent turning point in the post-crisis thinking, once again, debate continues today, meaning that partisans of gold standard refresh their lines, instead of giving up(24). Fiat money means accepting – together with the authority's intervention – *inflation,* as part of *monetary policies,* despite that inflation harms the consumer first; on the contrary, the gold based money protects consumer from any inflation, here including harmful monetary policies(25). Unlike the primitive and inflexible gold standard's acting, the money authority is *subjective* factor and might also by wrong in its acting any time. And even an "extreme" anti-gold standard position, like the one of the Freedman's School(26), finally points to a "new" liquidity constraint and no monetary policy.

Broadly speaking, the same money dilemma reiterates in this early 21st century, instead of seeing itself settled for good since the early thirties: is the *subjective* authority really better than the primitive and *"naturist"* metal in managing *money supply*, as always crucial for economy and the human civilization(27)?

4. As ultimately

There is even one more aspect revealed as obvious in the above debate: that is about the "career" made by the W.S. Jevons' argument for such an impressive long time, as regarding handicaps of barter, as facing the later money alternative. Or, note that in this case – and this is not single –, despite the *debate* environment in the economics topic area, sometimes economist schollars become some kind of priests or "fathers" preeching for their followers' crouds. It is not the "great truth" that theorists express more "important" than the fame of the one who expressed – e.g., verifying whether the basic economics idea that production developed feeds the nation's welfare on the ground stays even today less significant than the fact that such a thesis belongs to father Adam Smith; and who's the one arguing with the first ever author of a treaty of economics?!... Keeping the proportions' sense of the topic, the is very similar to the W.S. Jevons' case, as related above.

That also reminds me of a J.M. Keynes' quip, expressing like: "...the economists' ideas are more powerful than their appearance..." do search for them in all public and/or political discourse today to see that "these ideas are never quite new..." Of course, this irony is British style that Keynes ever belongs to. Plus, as „strong" as it is, this irony starts by being a self-irony: this schollar was the one succeeding to fight and reverse many prejudices of economics at his time. He keeps aware of this and such events do not happen so often. Though, concomitantly the author of "*The General Theory...*" and "*Macromodel*" here worns that even his ideas might not be brand new all over. This is economics...

Notes

(1) Of the two, see the *fiat money.*

(2) If not, even an experiment (ibidem).

(3) Whereas here including the maximal interventionism of the totalitarian economies does not worth any consideration, in our view.

(4) The nation-wide macro-system and home market are assumed to belong to the modern economy, as let us say since the late 18^{th} century or so.

(5) See the below 2. paragraph for details.

(6) See: O'Sullivan&Sheffrin (2003), Radford (2009/1945), O'Connor (2007).

(7) Note that such an alternative forces the authority to support the currency production costs, so with or without the authority sign the same quantity of metal to have the same value.

(8) Here see the extreme example of the Roman emperor Caracalla, cited with an act condemning the whole population of Tracia for not accepting his money sign (Zarlenga, 2000).

(9) That term indicating its Middle Ages origin, despite that it belongs to antiquity first.

(10) As cited by the author for having participated to a project of replacing the gold metal standard of money at his time by a so-called *"general price index"*.

(11) Milton Freedman had previously been a student of John Maynard Keynes, then rejecting his master's thinking in general terms. Freedman has preferred the contemporary neoclassics' position on the economic principles, see the free initiative and especially the macro-system's self regulating capacity. He was the head of the "monetarist" school, liberal thinker by excellence, but as a "new" liberal he rejected the gold standard as much as his old master.

(12) See the "La Platza-Louvre" international agreement (1985), Corden (1994) and Wolf (1994).

(13) Let us here add the theoretical example of the *exchange rate,* as *price of money.* This last definition stays valid just under the fiat money theory, whereas under gold standard the metal parity base for the exchange rate would not be included in the *price* category. In reality, exchange rate as both price and money reference when the money value stays the monetary authority's fabrication remains a debatable idea on the fiat money side.

(14) See the IMF's new Status (Gold, 1979).

(15) See value papers like: bonds, securities and credit titles.

(16) The qualitative difference between the specific results of money multiplier and liquidity representation is that the previous acts on effective money – see the highest degree of liquidity –, whereas the latter expands money and financial instruments on the expense of the liquidity degree so decreasing.

(17) Meaning on regional scale and expressing the exchange rates, as direct ratios.

(18) See the "cell market" expression (Andrei, 2011).

(19) See Andrei (2010, 2011).

(20) Léon Walras is an economist of the nineteenth century, belonging to the Swiss marginalist school of thinking.

(21) See examples in the antique Greece and Northern European countries (Finley, 1985/1999).

(22) The up-final phase of barter.

(23) See also *bimetallism,* as a significant moment of such a process (Andrei, 2011).

(24) Meanwhile, the financial and economic crisis came back and this recent crisis might equally contribute to such a debate the way that enough writing would be here expected in the very near future.

(25) See: Rolnick and Weber (1997, p. 1317), Bordo, Kydland (1995), Johnston, Williamson (2005).

(26) The "Monetarist" School of the Chicago University.

(27) See also White (1999).

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