

## The Monetary Regime of the Renaissance: Complementary Currencies for Domestic and Foreign Exchange

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### The monetary regime of the Renaissance

The European monetary system had its own Renaissance. At the beginning of the 13<sup>th</sup> century, the leading commercial states started minting large coins of silver and gold, of extreme fineness. The West had ceased to mint gold with the last *solidi aurei* of the late Empire. And these had probably disappeared from circulation when the Sacred Roman Empire issued, at the end of the 9<sup>th</sup> century, the last coins of good silver, in the attempt to provide a unified monetary system for a unified Europe. As the Empire was disrupted, so the coinage was fragmented and deteriorated. By the late 12<sup>th</sup> century, all European states had their own pennies, widely varying in fineness and weight, with only one thing in common: a meager content of silver, averaging 90% less than the Carolinian *denarius*.

However, Charlemagne did leave Europe a 'monetary bequest', by establishing a system of account that survived until very recently. As a measure of value, the penny (*denarius*), together with its multiples, the shilling (*solidus*) of twelve pennies and the pound (*libra*) of twenty shillings, continued to be used throughout the Continent until the introduction of the decimal system by Napoleon, and in England down to 1971. The pound originally corresponded to a pound of silver, and the shilling was incidentally equal to the value of the old Roman *solidus*. However, these units of account soon ceased to correspond either to a given amount of gold or to a given coin, as the penny-coin retained its value of one penny-unit, even as it lost weight and fineness.

The monetary Renaissance began, at the dawn of the 13<sup>th</sup> century, by incorporating in effective coins what the previous, Carolinian renaissance had conceived as pure units of account. First, the shilling appeared in the form of the large silver coins issued almost simultaneously, around 1220, by the great commercial centers of northern Italy: at the date of their first issue,

these *grossi* were evaluated at exactly 12 pennies.<sup>1</sup> Then, in 1252, the pound took the form of the pure gold coins of Florence and Genoa, initially valued at 20 shillings.<sup>2</sup> The sudden identification of each unit of account with a given coin, of a given metal, of a given weight and fineness, might appear to anticipate the principles on which the future metal standard regime was to be based five centuries later (Cipolla 1956)... but it didn't last quite that long.

In fact, the Renaissance retained at least a part of its medieval heritage: the debasement of small coins, that continued to be issued with an ever declining content of pure metal, while preserving their original denomination in the unit of account. As a consequence, the new large coins of gold and silver, fixed in weight and fineness, had to be immediately enhanced in terms of the unit of account, thus decoupling from the pound and shilling.

Hence, the Renaissance shared with the Dark Ages the circulation of 'black money', continuously subject to debasements, while it shared with the Enlightenment the circulation of 'white money' and pure gold coins. However, it was not just a transitional phase. For over five centuries these two distinct monetary circuits operated side by side. What I shall argue in this paper is that this did not occur by fault or chance, but as the result of deliberate decisions within the monetary regime, which was peculiar to this period. The Renaissance had its own monetary system.

*Unit of account/medium of exchange: from conceptual to operational distinction*

The distinction between unit of account and medium of exchange is widely acknowledged as the distinctive feature of pre-modern monetary systems. Throughout the Middle Ages, and for gold and silver coins until the Revolution, coins never bore an inscription of their value (Fournial 1970, p. 27). According to Einaudi (1936), the immaterial unit of account, not inscribed on any coin and in variable relationship to most of them, was the fulcrum of the "system of imaginary money", ruling throughout Europe for a thousand years, from Charlemagne to Napoleon. On the other hand, Spufford (1988) considers 'imaginary money' a misnomer, since he assumes "as axiomatic" that it is always possible to detect the real coin to which each system of account was attached. He regards it as "a system of counting coins, rather than a system of money. A shilling meant a dozen coins, and a pound meant a score of dozens" (pp. 411-3).

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<sup>1</sup> Other European states followed suit, minting large silver coins, of the value of one shilling: These were generally called *grossi*, *grooten*, *groats*, etc., while the small penny coins, that continued to be issued, were thenceforth called *piccoli*, etc.

<sup>2</sup> The diffusion of gold coinage took almost a century to spread throughout the Continent, but was equally extensive (Bloch 1954).

Indeed, until the 13<sup>th</sup> century, the units of account may be regarded as a mere way of counting coins. However, as I mentioned above, shortly after the first issue of large silver and gold coins, they had to be unpegged from the parity with the unit of account, that had been originally set at one shilling and one pound respectively. As a consequence, *the money of account was not a way of counting, but a way of evaluating large coins*. The relationship between unit of account and large coins was not fixed, but variable. Hence, in this case, the distinction between unit of account and medium of exchange was not merely conceptual, but operational.

This doesn't mean that the money of account was merely an 'imaginary' money, at least as long as it continued to be based on coined pennies. On the other hand, since pennies did not have a fixed content of precious metal, the unit of account that they incorporated wasn't even strictly 'material'. It was not a metal standard. And yet, as I intend to show, a standard it was.

A monetary standard is a measure of value. A measure of value is something that remains fixed in its value, in order to allow all other things to change, or to be exchanged, according to their proper value. Throughout the Renaissance, small coins tended to have a fixed relation to the money of account, regardless of their metal content. In this sense, they may be said to have incorporated the money of account. On the other hand, large coins had a variable value in terms of the money of account, in consideration of their (relatively) stable metal content. Hence, we may attempt a first, still rather formal sketch of the double-sided architecture of the Renaissance standard: on one side, a *fixed* relationship between unit and coin (i.e. legally fixed by civil law); on the other, a *stable* relationship between coin and metal (i.e. stabilized in view of the certainty of international settlements); and *never*, on either side, that fixed parity between unit and metal, that would only later prevail as the unique, national and international, gold standard.

#### *Debasement of silver, stability of gold*

Variance has the capacity of striking the mind and marking the memory more vividly than permanence. Thus debasements have attracted the attention of contemporaries and historians as the prevalent feature of medieval money. Why did debasements systematically occur, in such a generalized manner, for over five centuries, shortly after the first minting of large silver coins, at the beginning of the 13<sup>th</sup> century, until the eventual establishment of fixed metal standards in the 18<sup>th</sup> century? This indeed is the principal *explicandum* of this period of monetary history. Was it merely the result of blind forces, blindly wanting for enlightenment, or was it the outcome of deliberate decisions, in view of a less visible, yet not the less clear, principle of stability on which the institutional framework of medieval monetary architecture was based?

Debasement affected, in different degrees, yet without exception, all silver coins of all European states throughout the whole Renaissance. By contrast, gold coins remained remarkably stable, both in weight and in fineness, even over several centuries. The florin, the first gold coin to be minted in the Occident, in 1252, was struck out of pure gold throughout its existence down to the 16<sup>th</sup> century, and suffered only minor adjustments in weight – upwards 1%. The other gold coin, that rivaled with the florin as a medium of international payment, the ducat of Venice, was first minted in 1284, and for over five and a half centuries thereafter, at the constant weight of 3.56 grams, and at the constant fineness of 24 carats.<sup>3</sup> Gold was indeed a standard, well before the establishment of the international gold standard!

In this perspective, debasements may be regarded as an *additional* feature of the monetary system that preceded the gold standard, since the debasement of silver coins clearly did not undermine the soundness of gold coins. This was achieved thanks to the money of account, which allowed the monetary authority of each country to regulate the value of coins in order to reflect their relative metal content. If silver coins were debased, maintaining their nominal value, in terms of the money of account, the nominal value of sound gold coins would be raised accordingly. The secular increase of the value of the florin throughout all major commercial centers of Europe provides a measure, if rough and indirect, of the debasement of their silver coins, corresponding to their respective units of account.

**Table 1. Value of the Florentine florin in local money of account 1252-1500 (index numbers base year 1300=100)**

	1252	1300	1350	1400	1450	1500
Florence	43	100	138	168	206	301
Venice	75	100	100	145	181	194
Castille		100	441	1165	2647	6618
Paris	80	100	250	220	313	388
London	80	100	100	96	121	147
Bruges		100	128	255	373	610
Vienna	90	100	141	225	333	495

Source: extrapolations from Spufford 1988, Table 4.

Thanks to the keystone of Renaissance monetary architecture, namely the legal and hence operative distinction between unit of account and medium of exchange, debasements of petty coinage for local use *could* occur without altering the means for international settlements.<sup>4</sup> This does not, however, explain why they *should* occur at all. The fundamental question, concerning the reason for widespread secular debasement, remains

<sup>3</sup> Spufford, 1988, Table 6, significantly entitled “The florin-ducat standard in the fifteenth century”.

<sup>4</sup> As I have tried to show in Fantacci, 2005.

open. What I intend here to suggest is that a systematic, if mild, debasement of silver coins was required for the very purpose of allowing the stability of gold coins. This is not to deny that debasements could have disruptive effects on economic order, undermining both the equity of distribution and the efficiency of production. On the contrary, it is to suggest the possibility, and perhaps the need, to distinguish between uses and abuses of an instrument of monetary policy, between the interpretation and the violation of a monetary rule. This seems, indeed, to be consistent with a comparative analysis of the occurrence of debasements across Europe.

### *Conjunctural vs. structural debasements*

Table 1 provides a broad picture of long-term monetary alterations in different countries. The indexes measure the variation, with respect to the year 1300, of the value of the Florentine florin in terms of local units of account. Given the stable metal content of this coin over the whole period, an enhancement of the florin corresponded to a reduction in the metal parity of the unit of account, reflecting a debasement of the local coin in which it was incorporated. What strikes most is certainly the great disparity between the English sterling, which lost 32% of its metal parity, and the Castilian maravedis, which suffered a loss of over 98%. However impressive the differences may appear, they must not overshadow the fact that all silver currencies, even the most stable, were subject to a constant process of debasement with respect to the gold coins.<sup>5</sup> Debasement was a general and permanent phenomenon. Not debasement in itself, but its general and permanent character is the fact that demands an explanation.

There is, rather, another difference between the stories of single states, which the Table does not allow to appreciate. Recording only long-term trends, it doesn't show the short-term fluctuations, due to extreme debasements, affecting certain countries at certain periods, normally of conflict or civil war. It is mainly on these episodes that historians have concentrated, to analyze (and criticize) the practice of debasement. Yet, this 'conjunctural' resort to debasement, as a source of extraordinary revenue in case of war, cannot be used to explain the 'structural' nature of the phenomenon. And the structural character of war cannot be invoked as an explanation. The relevance of the distinction between conjunctural and structural debasements may be best illustrated by contrasting the cases of two representative states, France and England.

After the period of sound money established by Saint Louis, French coinage suffered severe and frequent debasements until mid-14<sup>th</sup> century. Philip IV was pictured by Dante in Hell, for having repeatedly used this

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<sup>5</sup> This cannot be attributed to a change in the bimetallic ratio, which varied considerably, but not always in the same direction: it did not continuously increase over the whole period (Kindleberger 1993, 60).

method to finance his wars. In 1296, he managed to raise an extra 20% of income, by debasing the livres parisais. Two years later, a similar operation granted him a proceed that exceeded the annual revenue from other sources. The practice was largely exploited also by Philip VI, during the first phase of the Hundred Years War. Debasements came to an end, at least temporarily, only after Oresme's *Traicte des Monnoies*, which denounced debasements as an abuse of power, was adopted as a guideline of sound policy. In the meantime, the livre had lost over 60% of its metal parity in only fifty years.

English money tells a rather different story, although it often served to fight the same wars, and not without success. In England, large silver coins were represented by *groats*, first issued by Edward I in 1279 at the standard sterling rate of 0.925 and a weight of 5.77 g. Fineness remained unaltered, whilst weight declined to 4.67 g. (1351) and down to 3.11 g. (Henry VII), with a debasement of 1/3 over a century. And small coinage didn't go worse: the fineness of *pennies* had been fixed at sterling in 1156, and their weight declined only gradually over the following centuries, from the original 1.46 g. (in 1156) to 1.44 g. (in 1279) to 0.97 g. (1412-1464) to 0.78 g. (1464-1526), corresponding to a debasement of less than 50% over almost four centuries (Spufford 1988, 402-6). Pennies were small coins, but not "black money": they contained well more than half their weight of silver. Black money was put out of circulation in England by the ordinance of York, issued under Edward III, in 1335 (Hughes et al. 1897, 186). For this reason, starting from the XIV century, "£, s. and d. were not perceived as imaginary" (Täuber 1933, 256 n). However, this does not mean that England was virtually already on a metal standard, since the relation between the value of a coin and its pure metal content varied consistently from one coin to another.<sup>6</sup>

Beyond the geographical perspective, highlighting differences between states, what appears from these examples, with respect to time, is the distinction between conjunctural and structural debasements. *Conjunctural debasements* consisted in sharp reductions of weight and/or fineness, often repeated at brief intervals, with the purpose of providing extra revenue to support wars; and, indeed, they appeared occasionally to serve this purpose quite well, as in France in the first half of the 14<sup>th</sup> century, in Flanders in the second half of the 15<sup>th</sup> century, and in Castille throughout. *Structural debasements* consisted in rather milder, and more evenly distributed, debasements, occurring e.g. at the rhythm of approximately one every generation, in Flanders, or even one every two generations, in England (Spufford 1988, 308-318). A possible explanation for this sort of debasement, that was the true permanent and general feature

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<sup>6</sup> It is sufficient to note, in this respect, that the value fixed for groats, equal to 4 sterling, resulted in an overvaluation of groats relative to pennies, with respect to the silver content, which was only 3.2 times larger in the former than in the latter (Spufford, 1988, app. D).

of silver coinage throughout the Renaissance, has been seen in the need to accommodate to the deterioration of coinage in use, offsetting possible losses to the mint. But let us now take a closer look at the operation and meaning of monetary alterations.

## Forms and meaning of monetary alterations

The institutional framework of Renaissance money provided the opportunity for two different kinds of monetary alteration (or mutation). In the jargon of modern finance, we could say that monetary authorities had two levers of monetary policy at their disposal. Through the *mint*, the prince defined the metal content of all different types of coins he issued, by setting their weight and fineness. The first lever controlled, thus, the coin-metal relationship. Through the *tariff*, the prince proclaimed the legal value of those coins in terms of the state's unit of account. Hence, the second lever managed the relationship between money of account and effective money. The structure of these levers should not be too rapidly dismissed as being itself a 'scourge' to medieval economies. As any instrument, these levers were not in themselves the problem, but were liable of being used and misused,<sup>7</sup> according to whether they actually served the purpose for which they were designed.

The operation of the first lever is not intuitive, and deserves closer consideration. Debasements consisted in reducing the metal content of new coins, by reducing their fineness and/or weight. This allowed the mint to strike a greater number of coins from the same quantity of fine metal, and hence to pay a higher price, in terms of new coins, for every mark of precious metal, including that contained in old currency turned in for recoinage. The holders of old (strong) currency, by bringing it to the mint, could therefore receive a higher amount of new (weak) currency in exchange, even while the prince retained part of the metal. This could serve to cover the expenses of coinage (brassage) and, possibly, to provide an extra profit to the prince (seigniorage). These sort of mutations have been the object of general condemnation, by both contemporaries and historians. They were considered a subtle, and hence arbitrary, form of taxation, and a source of inflationary pressures, causing unpredictable and inequitable alterations in the distribution of income and wealth.

The operation of the second lever is straightforward. The tariff was a royal decree, fixing the value at which all coins circulating in a state were to be spent and accepted, in payment for goods and services and in discharge of debts. All prices, contracts, and accounts were denominated in the local unit of account. It was therefore through the tariff, that all coins (and even foreign coins) were made legal tender by the authority, according to a

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<sup>7</sup> 'Properly' and 'improperly' used, according to the terminology used by Amato (2006).

precise measure, that the authority itself was entitled to fix and vary from time to time. An increase of the tariff value was called enhancement, a reduction abatement. These sorts of mutations have been dismissed, almost only retrospectively by historians, as purely nominal variations, that were doomed to be compensated by proportionate changes in prices, while causing disorders in the time-span required for the adjustment.

Monetary mutations have been, therefore, indistinctly condemned. And not only because they produced similar damages, but also because they usually occurred together, debasements (of small coins) being coupled to enhancements (of large coins) and, respectively, reinforcements being coupled to abatements. The interdependence between the two levers was determined by the need to maintain relatively stable the relationship between the unit of account and the quantity of metal, implied by the legal value of each coin, in order to avoid those forms of arbitrage for which monetary historians usually invoke the name of Gresham. The possible misconnection of the two levers apparently caused still further reasons of complaint.

Now, let us consider more accurately these three forms of monetary alteration—debasement, enhancement, and disproportion—, to see whether they were not liable of an appropriate use, from which of course it was always possible to depart in direction of a misuse, or an outright abuse, producing the disorders thus rightly deplored. I will consider them in succession, in the attempt to show how they could oscillate between these two possibilities.

*Debasement: subtle taxation, or properly the cost of money institution*

In monetary historiography, the unfamiliar concept of debasement is often associated with the (purportedly) more straightforward notion of inflation. I believe that, in the case of monetary alterations as in many others, the endeavor of understanding the old in the light of the new may well be rather a source of misunderstanding. In view of appreciating the proper meaning of debasements, a couple of distinctions are in place.

Debasement is not an old-fashioned version of inflation. The two words indicate two different phenomena, the immediate effects of which are, in one respect, diametrically opposite. Inflation implies a tax on the holders of monetary assets. On the contrary, through debasement, the holders of coins reap a gain, at least in the short term. Indeed, when they turn in their old coins, they receive an amount of new ones, which, although weaker than the old, have a higher value. And the higher value corresponds to a higher purchasing power, at least until prices have increased more than proportionally. Hence, *no one loses what the prince gains* through debasement. The loss only comes if and when prices eventually rise.<sup>8</sup>

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<sup>8</sup> And, in this case, the loss of some always corresponds to the gain of others.

This brings us to another reason why debasement and inflation are often associated. It is frequently assumed that “prices always tended to rise in periods of debasement” (Spufford 1988, 303). And indeed many primary sources may be found, lamenting a rise in prices following debasement.<sup>9</sup> However, the correlation between debasement and inflation is not a law of general validity, but ought to be perhaps doubly restricted: when debasement affects (silver) coinage for local use, prices may sometimes be found to respond in the short-run, but seldom in the long-run (Fischer 1996, 286)<sup>10</sup>; on the other hand, inflation and debasement rates may follow the same long-term trend, when it is the (gold) coins for international trade that are being debased (Sussman 1993, 62).

I believe that these distinctions should at least serve as hypotheses, for the interpretation of available evidence and for further empirical investigation. They are, indeed, consistent with the dual structure of pre-modern monetary regimes. In the domestic economy, small coins are used as a means of payment and the imaginary money serves as a measure of value for both goods and coins, regardless of their metal content. In international trade, large coins are used as a means of payment, on the foot of their intrinsic value. It is only with the establishment of the universal metal standard, that what counts, even within the domestic economy, among the people who use small coins, is the metal content – and hence that money of account doesn’t account for anything, and might as well be disregarded (and eventually cancelled by enlightened reformers, and relegated to appendixes of learned treatises). But until then, the maintenance of the money of account as a stable reference unit within an exchange community, in the long-term, and for the stability of its long-term relationships, need not be disturbed by short-lived, however extreme, debasements.<sup>11</sup>

It is conjunctural debasements, therefore, that deserve to be regarded as an abuse. Not as a matter of condemning war finance as such, but of recognizing that the foreign policy of a state may be financed by other means, more direct, more equitable and more appropriate. For instance, in England, war was financed through taxation approved by Parliament.

What about structural debasements? What was the purpose they were intended to serve, and how did they serve it? As I anticipated, a common explanation refers to the need to accommodate the wear of currency through use. The consumption of currency due to use has been estimated at less than 50% over 200 years (Spufford 1988, 345). Yet, debasement of English silver coins was less than 50% over four centuries (see Table 1). Hence, debasement was not sufficient to compensate the mint for the costs of

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<sup>9</sup> See the example for 13<sup>th</sup> century England quoted by Prestwich (1969, 411).

<sup>10</sup> For example, between 1300 and 1470, whilst the sterling was debased by over 20%, prices didn’t rise at all, but even slightly declined (see also Mayhew, 1995, Table 1).

<sup>11</sup> On the contrary, as I will show in the next paragraph, monetary alterations might well be a *condition for* long-term price stability.

issuing a better currency than that used in circulation. And, in any case, these costs must not have represented a significant part of the prince's expenditures.<sup>12</sup>

On the other hand, minting costs could be compensated by charging explicit mintage fees, in order to carry out recoinage without loss, or even at a considerable profit, even without debasement (Prestwich 1969, 407). However, this would imply a cost to those who took the old money to the mint, to be recoinced, corresponding to the fee. Perhaps, then, debasements could be seen as the opportunity for repairing the currency, "without any apparent loss to the holder or the state" (Hughes et al. 1897, 188). In other words, debasements could be a way of distributing, among the users, the costs of issuing and maintaining a sound currency within the state. This would lead to the startling conclusion, that a money ought to be debased in order to be sound, that *the only sound currency was a debased currency!*

How are we to understand this apparent paradox? Is it possible that it provides the true explanation for debasements? In what sense is a debased currency a sound currency? Recoinage provides the opportunity for repairing old coins, worn by use. A recoinage, carried out with a moderate debasement, gives back to the coins the original precision of the engraving, the original clarity of the symbol, if not the original quantity of metal. This is perhaps a hint of what truly makes 'black money' money. *The debasement restores coins in their essence.* What the holders lose is what they may not have, as money: a quantity of metal.

Hence, structural debasements were not just a way of financing recoinage, but a way of reminding the people, one generation after the other, that the money required maintenance, and that this implied a cost: that money had to be first taken, in order for money to be given. And, responding to the calling in of money at the mint, the people would discover that, although a little metal was taken from their coins, nothing was taken from their money, since the new coins had the same value of the old. For small coins maintained their value, regardless of the metal content. Or, better, they were themselves the true measure of value, *mensura rerum venalium* (Täuber 1933, 252-254).

*Enhancement: to cause inflation, or properly to avoid deflation*

Money of account is often considered merely as a "common denominator", used to express and compare the value of coins struck at different fineness or weight or even from different metals, and to trace the variation of that value over time (Spufford 1988, app. II). What is commonly overlooked is that money of account did not determine the relative values of different coins, but their absolute values, and hence the overall value of money. An

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<sup>12</sup> On the contrary, at the height of the bullion-famine, between 1457 and 1464, princes were prepared to mint black money at a loss (Spufford, 1988, 361).

abatement of circulating money, as the “devaluation” of old base coin in England in the summer of 1551, instantly decreased the nominal quantity of money.<sup>13</sup> What occurred in England perhaps once in four centuries corresponded to a normal regulatory procedure in other European kingdoms, where the value of coins could vary even several times in a month.<sup>14</sup>

Thus, the true purpose of enhancements might have been to regulate the quantity of money according to the needs of domestic trade<sup>15</sup>. Of course, the increase of the quantity of money through enhancement is only in nominal terms. This, however, does not necessarily imply inflation. It might as well be intended to contrast a possible deflation, ensuing from the structural shortage of bullion, throughout the commercial revolution.

Yet, it is not merely a question of quantity, of promptly balancing an increase in the volume of transactions with an adequate increase of the quantity of money, in order to avoid a decrease of prices, along the lines of the classical quantitative theory. By establishing the value of currency through the tariff, the monetary authorities of the Renaissance did not simply have an instrument for regulating the quantity of money in order to counterbalance market pressures on its purchasing power.<sup>16</sup> By being entrusted of setting the legal value of coins, the prince was not committed primarily to provide a response to external market forces, but to fulfil the institutional task of providing a true measure, i.e. a trustable measure.

Money of account was not a ‘common denominator’, but a measure. As some economists were still willing to recognize in the 18<sup>th</sup> century, ‘imaginary money appraises but is not itself appraised’ (Broggia 1743, 99). Indeed, money of account is a pure name: it is that, in the name of which exchanges are carried out within a state or community. Accordingly, enhancement was a truly nominal operation; despite this, or rather for this very reason, it was not without practical effect, as I will try to show in the next paragraph.

#### *Disproportion: Gresham’s law, or properly the prince’s rule*

The problems associated with managing bimetallism (Munro 1983) seem to suggest the existence of a tradeoff between internal and external balance,

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<sup>13</sup> Thus boosting circuit velocity, or rather curtailing hoards (see Mayhew, 1995, 250).

<sup>14</sup> As testified e.g. for Piedmont, over four centuries, by the tariffs reproduced in Saraceno (1782).

<sup>15</sup> As assumed, yet in explicit terms curiously only in the abstract, by Angela Redish (1993), in an interesting article that compares the medieval “commodity-based money”, with the post-Bretton Woods fiat money, underlining that, even in the former, “the anchor [on money supply] was put in place not by fundamental natural forces but by decisions of human monetary authorities” (p. 778).

<sup>16</sup> And for that, quite a more direct and efficient instrument than the very loose levers, through which modern central banks can only *indirectly* influence the quantity of money, by bank rate changes and open market operations.

even prior to the establishment of the metal standard. But this is not the case.

Under the gold standard, a balance of payment deficit implies an outflow of gold, and hence a reduction of the domestic money supply, inducing deflation (Hume 1752). The relatively stable supply of gold sets a limit to the growth of international trade, and the competition for the distribution of the limited stock of gold sets national interests against one another (Keynes 1936).

Within the system of imaginary money, the international constraint only concerns the bimetallic ratio. National authorities are forced to align their tariffs to the relative price of metals prevailing on international markets, if they do not wish to suffer a loss of one metal (it is to be noted, always in favor of another). The whole debate concerning the operation of Gresham's Law (and its presumed previous detection by Oresme and Copernicus<sup>17</sup>) turns around this aspect: that monetary authorities have to respect the relative value of metals implied by market prices, while setting the legal value of coins. However, what is normally overlooked is that they remain free to set the relationship between all metal coins and the unit of account at the level that best suits their needs of domestic circulation, in order to maintain the stability of prices within the country.

Subsidiary coins were spent on the foot of their legal value, fixed in terms of the unit of account (Kindleberger 1991, 154). Hence there was always the possibility for monetary authorities to provide a sufficient quantity of small change, or "subsidiary coinage", by reducing its metal content or crying up its value. Metal shortage didn't necessarily imply deflation. Throughout the Middle Ages, the volume of monetary transactions, especially within domestic economies, was never determined by a mere fluctuation of bullion (Postan 1944, 128). Lacking silver for subsidiary coinage, it could be 'subsidized' by copper, and copper by lead or iron, and small coins by jettons and other token coins.

In all these cases, the degree of freedom for monetary policy was based on the difference between the material, of which the coins were made (their metal content), and the unit of account, by which they were evaluated (their legal value). And the goal, to which this freedom ought to respond, lied in setting the relationship between the two at the level most appropriate to domestic trade, without having to renounce to sound money for use in international settlements.

The degree of freedom may be intended literally in algebraic terms: the market only sets relative values, in this case between different metals. Even abiding by the *relative* values prevailing on the market, the monetary authority remains free to set the *absolute* value of one metal in terms of the unit of account. The existence of an abstract money of account, not

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<sup>17</sup> Reiss and Hinderliter 1979.

materialized in a quantity of metal, literally absolves the prince from the laws of the international market, in setting the legal value of coins, for use within his state. It makes no sense to lament, as a violation of the laws of the market, the decree that fixes for a coin of a given metal a “nominal” value different from the “actual” value. Any nominal value may be the right value, as long as the same proportion is maintained, between the legal value and the metal content of each coin. In the Renaissance, it is the prince, who fixes that proportion between unit of account and weight of pure metal, which in the 19<sup>th</sup> century gold standard was deemed to be immutably set by a supposed law of nature.

### Purposes of monetary alteration

The modern dogma of monetary uniformity has often induced even historians to assume that a major challenge of monetary history was “to learn how to keep coins of different denominations and coins of different metals in concurrent circulation” (Mitchell 1944, 63). However, “concurrency” does not necessarily mean “confluence”. Different coins may well be designed for the very purpose of flowing in separate, yet communicating streams (Kuroda 2006). The coexistence of different coins need not be in the form of a competition or of a substitutability between them (Amato 2006).

This brief overview has offered several elements to question the idea of a natural tendency of monetary systems to evolve towards a progressive homogenization, suggesting the possibility that different currencies remain side by side, even for centuries.<sup>18</sup> In this concluding section, I shall argue that this was not a defect of an old-fashioned system, due to the hindsight of our ancestors. My thesis is that the monetary regime of the Renaissance was a true complementary currency system, based on the distinction between unit of account and medium of exchange, and preserved by deliberate management of alterations, according to a peculiar criterion of economic equilibrium. In this section, I shall outline the main features of this system and the principles to which they were intended to respond. This amounts to providing an explanation of the true purposes of the monetary alterations, that I have described in the preceding section.

#### *To allow bimetallism, alias the dual currency system*

The return of gold and silver in the European monetary system was not merely a matter of metals. As we have seen, different metals were used to make different coins. The three different metals principally used in

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<sup>18</sup> A broad research project on this topic, entitled “Complementary Currencies in Historical Perspective”, was coordinated by Massimo Amato at Bocconi University.

coinage—gold, silver, and copper—corresponded, indeed, to three different kinds of coins. And each kind corresponded to a different purpose.

Small change, also denominated ‘black money’, consisted in coinage where silver represented only a minor part of the alloy, always less than 0.500, the greater part being of base metal, usually copper. These coins were used for retail payments, usually involving a direct transaction between producer and consumer, within rural or urban markets. Small change was often lacking, due to the high minting costs, in proportion to their value. Until the 17<sup>th</sup> century, the general problem was the lack of subsidiary coin, and not its abundance. The lack of billon in the 14<sup>th</sup> century contrasts with the overflow in the 16<sup>th</sup> (Spufford 1988, 371 and 335). The possibility of supplying purely copper money took some time to be acknowledged and carried out.<sup>19</sup> Token coins were issued as a further subsidy to lacking subsidiary coins.<sup>20</sup> The shortage of silver may have well been a further cause of the systematic debasement of small coins. As we have seen, small coins were subject to a progressive loss of weight and/or fineness in all European states throughout the whole Renaissance, while they maintained a fixed evaluation in terms of money of account.

Gold coins were first struck by the great commercial cities of Italy, with the purpose of providing a means of payment for long-distance trade throughout Europe and beyond. And they served this purpose well, for over five centuries. The large silver coins were also known as ‘white money’, thanks to their high content of pure silver. They were also used for international settlements, in concurrence with gold coins, but intervened as well in large domestic transactions, especially for the payment of wholesale purchases between merchants and for the collection of taxation by the state. Both gold and silver coins had a relatively stable content of pure metal, while their legal value was subject to adjustments, according to the debasement of small coins, to the fluctuations of the bimetallic ration on international markets, and even to peculiar requirements of a specific coin for balance of payment settlements.

Hence, although the types of coins were three with respect to the metal, they were two with respect to the functions and functioning: the internal money, represented by small change used by the people for daily transactions within the narrow circuit of community livelihood; and the

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<sup>19</sup> The first official steps in this direction seem to have been taken only during the straits of the great bullion-famine of the mid-15<sup>th</sup> century (Spufford 1988, 362). The first copper coins, however, were minted in Naples, in 1472; not out of necessity, but because it was not convenient to counterfeit them. It took almost two centuries for this practice to spread throughout Europe, up to England, where copper coins did not gain significant use until 1660 (ibid. 371-2).

<sup>20</sup> Thus lead coins in XV century Egypt (according to Shoshan, quoted in Munro 1983, 296) and in XIV century England (according to Mate, *ibid.*, 297; see also Spufford 1988, 331-2 and Courtenay 1972). Under Edward III, the exchequer became a clearing house for tallies, a wooden money, representing a claim on the government (Hughes et al. 1897, 187).

external money, represented by large coins of gold and silver used by merchants for large payments within the broader circuit of international trade. The small coins had a fixed legal value (extrinsic value) and a variable metal content; the large coins had a stable metal content (intrinsic value) and a variable legal value. As I will show more accurately in the next paragraph, it is the peculiar form of stability, that determines the function of the coinage. Silver coins can be ascribed to one type or the other, according to which standard of value (extrinsic or intrinsic) they maintain. The fact that all coins maintain either one or the other, confirms the significance of the criterion of distinction represented by the double standard.

Before turning to the meaning of the two standards, it is worth mentioning a further confirmation of the dual character of the system: the frequent lack of the intermediate element. In fact, the value of the smallest large coin and that of the largest small coin were often very far from one another. This occurred especially in Italy, where the middle range of silver coins was absent, because it was minted in small quantities, as in Florence, or because it was used to pay for imports from the East, as in Venice. The exchange of quattrini to the florin reached 225 at the end of the 14<sup>th</sup> century, providing an impressive measure of the distance between the economic circuits in which the different currencies circulated – and of the tension between the interests of those who used them, eventually leading to the Ciompi revolt. Another index of the distance between different monetary circuits is provided by the fees set by the money-changers to bridge the gap.<sup>21</sup> In any case, it is evident, then, that “gold coins were no substitutes” for silver coins (Spufford 1988, 344),<sup>22</sup> especially not for small silver coins. It is worth asking, however: was it merely a question of quantity (the lack of silver), that caused existing coins to circulate in separate circuits, without direct exchanges between them?

#### *To balance domestic and foreign balance*

The distinction between internal and external money didn't depend on the location of the mint that issued the currency. A florin was external money even for Florence, since it was issued for the purpose of foreign trade. The definition concerns the destination, not the origin. It is to be understood in the light of the distinction between tradable and non-tradable goods. Indeed, internal and external money were intended to serve the needs of the two separate, yet communicating, circuits represented respectively by domestic and foreign trade. And the purpose of monetary alterations was to regulate

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<sup>21</sup> E.g. 2% was paid by the papal collector to change silver into gold at Le Puy, in 1386 (Spufford 1988, 393).

<sup>22</sup> In historical perspective, gold coinage reappeared and spread throughout Europe rather as a substitute for the silver ingots that had been hitherto used as a medium of international payment (ibid. 379).

the relationship between internal and external money, in order to assure the balance of both, according to different principles.

The principle of equilibrium within the domestic economic was autarky. Not in the strict sense of a closed economy. On the contrary, the very articulation between internal and external money provided a regulated interconnection between domestic and foreign trade. Hence, autarky is rather to be intended in the original Greek sense, as the fulfillment of natural abundance, by virtue of an equitable trade, within and without the community.

Black money was the coin of urban autarky. Subsidiary coinage served the purpose of distribution. Perhaps this is the reason why it is called *moneta divisionale* in Italian and *Scheidemünze* in German.<sup>23</sup> Small change was used for everyday purchases, starting from bread. In Florence, in the 15<sup>th</sup> century, one *quattrino* corresponded to the standard price of a loaf of bread. And the size of the loaf, as elsewhere, increased or diminished in inverse proportion to the price of grain. Another use of black money was alms-giving. In France, the denier parisis was consequently nick-named 'denier de l'aumosnerie' (Spufford 1988, 330-1). All these uses hint to the distributive nature of small coins, and provide a further explanation of the irrelevance of its content in precious metal. It was not made to be kept, but to circulate; hence, it was not indispensable for it to be precious, but to be dispensable. In transactions among members of the same community, the part reserved to each was to be determined with reference to the community as a whole, according to the principle of distributive justice. The labor earned its penny, and the penny earned its loaf of bread; and there was no assurance that it would be of the same weight as last year, since this depended on the abundance of the harvest. An important part of distribution involved, hence, the relationships with the country-side

The little money that the peasants used was large money. It was the large silver coins that served the purpose of large payments for the seasonal exchanges between town and country. The only money needed by the rural population was external money: their autarky required hardly any money. In the country-side money was true money: a mere intermediary, passing from hand to hand, received and spent, and then disappearing, when its work was done, from the sum of the people's wealth (Keynes 1923, 124). Indeed, money appeared in the country-side, at the harvesting of the crops, and it rapidly disappeared again, as it was used to purchase goods from the city, and to pay taxes and rents. Except for limited rural areas around the great cities of northern Italy and southern Netherlands, there was hardly any money circulating in the country throughout the year, except around

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<sup>23</sup> "Scheidemünze, f. kleine münze, geldsorte, die den zweck hat, käufer und verkäufer in kleinigkeiten zu scheiden, zur verständigung zu bringen" (*Deutsches Wörterbuch* von Jacob Grimm und Wilhelm Grimm. 16 Bde. [in 32 Teilbänden]. Leipzig: S. Hirzel 1854-1960).

Michaelmas. This changed only gradually, starting from the 15<sup>th</sup> century (Spufford 382-6).

White money was external money for the city, which used it for exchanges with other cities of the same 'region' and for seasonal exchanges with the countryside. In the broader perspective of the monetary 'region', normally coextensive to the borders of the state, white money was internal money. And gold coin provided the medium of payment for inter-regional long-distance trade, even beyond the frontiers of Christendom (Spufford 1988, 386-7). In this case, the intrinsic value *was* important, since it was the only warrant for the equity of the transaction. In transactions among merchants, that by definition did not belong to the same community, the parties had to exchange goods of equal value, according to the principle of commutative justice. The gold and silver of large coins, of established weight and fineness, provided the necessary counterpart for dispatching an order of precious merchandise. However, even in this case, money was not meant to be kept, but only to favor the circulation of goods. A confirmation of this is given by the peculiar form of money that the Renaissance merchant-bankers adopted since the 12<sup>th</sup> century: the bill of exchange. These were letters of credit, issued in payment for a transaction, and then circulated among merchants, thanks to their greater convenience and security compared to specie transfers—yet not indefinitely. All bills of exchange were either compensated or paid out, once every three months, at the seasonal clearing fairs. It was expressly prohibited to carry over credits or debts from one fair to the other, until the end of the 16<sup>th</sup> century (Boyer-Xambeau et al. 1986). The principle of balance of international trade, enacted in the mechanism of Lyon fairs, required each merchant, and hence each state, to clear their accounts.

Thus, each exchange circuit had not only its proper form of money, but also its proper form of clearing system, from rural mutual credit to fairs. Beyond the differences, all types of money had one thing in common: they were made, and managed, in order not to count. And it was the function of the money of account, the true arbiter of the system, to evaluate all types of currencies, in view of their peculiar disappearance.

#### *To ensure disinterest on money*

Precious metal is liable of being hoarded without suffering decay. According to an established view, it was this special property of precious metals that made them appropriate for making money. The establishment of this view (to which Locke contributed with a passage of his second *Treatise on Government*), was contemporary to the establishment of money as a store of value, in the form of the metal standard, with the Great Recoinage of 1696 (to which Locke contributed through his controversy with Lowndes). However, before this crucial turn in monetary history, which put an end to

the regime of the Renaissance, money did not have the function of a store of value.

Of course, there were treasures and Treasuries. Yet, precious metals appeared in their vaults predominantly in the form of ingots or plate. And even when it was gold or silver coins that were stored away, what was actually guarded was the metal, not the money. If hoarded metal, in coin or specie, was ever to return in circulation, it had to be turned back into money, by passing through the institutional standards of monetary authority: the mint and/or the tariff. Plate had to be melted, recoined, and evaluated. But even coins, previously hoarded, could only be reintroduced in circulation at the value fixed by the tariff currently enforced. What was stored, in either case, was the metal, not its value. And the value, being fixed by authority, was liable of changing. Hence, metal, either coined or not coined, could not be a store of value.

Specularly, by altering the tariff, the prince varied the metal equivalent of all credits and debts. An enhancement would cause, simultaneously, an increase in the value of all metal hoards and a proportionate decrease in the metal equivalent of all credits and debts. This was the reason why the receivers of rents (such as the nobility supported by Oresme) were fiercely opposed to enhancements. Vested interests have often constituted a hindrance to the appreciation of the institutional feature of money, represented by the distinction between unit of account and medium of exchange.

In the monetary regime of the Renaissance, effective money, of any kind, existed only in relation to the money of account. Money of account was the measure, in which all debts and contracts were denominated. Effective monies were the means, by which those debts and contracts were to be legally discharged. The relation between effective monies and the money of account was established by authority, through the tariff. It was the task of the authority, not only to enforce the payment of debts and contracts, but also to determine what and in what measure was to be delivered as a lawful discharge.<sup>24</sup> In this way, the authority was entrusted with the magistracy of making debts payable, avoiding the accumulation of monetary assets, that didn't correspond to true wealth.

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<sup>24</sup> See Keynes, 1930, 3.

- Amato, Massimo, *Notes on the (im)proper use of money. From an openly hidden tradition of money-thinking*, paper for the IEHC, Helsinki, 2006
- Bloch, Marc, *Esquisse d'une histoire monétaire de l'Europe*, A. Colin, Paris, 1954
- Boyer-Xambeu, M.-T., G. Deleplace, L. Gillard, *Monnaie privée et pouvoir des princes: L'économie des relations monétaires à la Renaissance*, Paris, 1986
- Broggia, Carlantonio, *Trattato delle monete*, Napoli, 1743, reprinted in *Scrittori classici italiani d'economia politica*, Milano, 1801
- Cipolla, Carlo Maria, *Money, prices, and civilization in the Mediterranean world: fifth to seventeenth century*, Princeton University Press, Princeton, 1956
- Courtenay, William J., "Token coinage and the administration of Poor Relief during the late Middle Ages", *Journal of Interdisciplinary History*, III, 1972
- Einaudi, Luigi, "Teoria della moneta immaginaria nel tempo da Carlomagno a Napoleone", *Rivista di Storia Economica*, 1, 1936
- Fantacci, Luca, "Complementary Currencies: a Prospect on Money from a Retrospect on Premodern Practices", *Financial History Review*, 1, April 2005
- Fischer, David H., *The Great Wave. Price Revolutions and the Rhythm of History*, Oxford University Press, Oxford, 1996
- Fournial, Etienne, *Histoire monétaire de l'Occident medieval*, Fernand Nathan, Paris, 1970
- Hughes, A., C. G. Crump and C. Johnson, "The Debasement of the Coinage Under Edward III", *The Economic Journal*, 7, June 1897
- Hume, *On the Balance of Trade*, London, 1752
- Keynes, J. M., *The General Theory of Employment, Interest and Money*, Macmillan, London, 1936
- Keynes, J. M., *A Treatise on Money*, Macmillan, London, 1930
- Keynes, J. M., *Tract on Monetary Reform*, Macmillan, London, 1923
- Kindleberger, Charles P., *A Financial History of Western Europe*, Oxford University Press, Oxford, 1993
- Kindleberger, Charles P., "The Economic Crisis of 1619 to 1623", *The Journal of Economic History*, 51, March 1991
- Kuroda, Akinobu, *Complementarity Non-Integral among Monies in History: Nature of Currency as Viscous, Non-Uniform, and Separable Stream*, paper for the IEHC, Helsinki, 2006
- Mayhew, N. J., "Population, Money Supply, and the Velocity of Circulation in England, 1300-1700", *The Economic History Review, New Series*, 48, May 1995
- Mitchell, Wesley, "The Role of Money in Economic History", *The Journal of Economic History*, 4, December 1944
- Munro, John H., "Medieval Monetary Problems: Bimetallism and Bullionism", *The Journal of Economic History*, 43, March 1983
- Postan, M. M., "The Rise of a Money Economy", *The Economic History Review*, 14, 1944

- Prestwich, Micheal, "Edward I's Monetary Policies and Their Consequences", *The Economic History Review, New Series*, 22, December 1969
- Redish, Angela, "Anchors Aweigh: The Transition from Commodity Money to Fiat Money in Western Economies", *The Canadian Journal of Economics*, 26, November 1993
- Spufford, Peter, *Money and its use in medieval Europe*, Cambridge University Press, London, 1988
- Sussman, Nathan, "Debasements, Royal Revenues, and Inflation in France during the Hundred Years' War", *The Journal of Economic History*, 53, 1, March 1993
- Täuber, Walter, *Geld und Kredit im Mittelalter*, Heymanns Verlag, Berlin, 1933