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## *Currency Depreciation in Medieval Europe*

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### I

**I**n the long run every monetary unit is subject to a process of progressive depreciation. The extent of this depreciation varies greatly from unit to unit and age to age, but the phenomenon itself is universal. Its unfailing appearance at all times and places has given it the ineluctable character of a physical law. Indeed, historians and economists do often refer to progressive currency depreciation as to a universal 'law'. But why this law should hold and how it operates have never been satisfactorily explained. When it comes to considering the causes of the phenomenon historians display an extraordinary tendency to resolve the problem by recourse to the naïve old tale of 'spendthrift and warlike princes' occasionally acknowledging in passing the phenomenon of 'wearing and clipping', which makes possible a reference to Gresham's law. Economists too, when they find time and opportunity to mention 'historical precedents', rarely get away from the alluring old tale of the spendthrift kings and the mismanagement of state finances.

For the medieval period, when the circulating medium was metallic, the essential aspect presented by the phenomenon which interests us here was the progressive deterioration as to fineness and weight of the coins in circulation. The question of the relation between monetary unit and goods and services was further complicated by the fact that, save for brief periods, the purchasing power of gold and silver went on increasing throughout the Middle Ages.

It is not possible to obtain precise information about all the debasements to which the very numerous monetary units were subjected during the entire course of the Middle Ages. When exact information is available about a specific debasement, its ultimate 'causes' cannot always be traced. However, despite many lacunae, the total amount of information which can be gathered on the subject is truly remarkable. We are certainly much better informed in matters of currency for the whole of the Middle Ages than in matters of production, consumption and investment.

From an analysis of all the cases of debasement which I have been able to study for the Middle Ages, I have compiled a list of the 'causes' which, singly or in various combinations, prove to have been responsible for these same debasements. The list can be broadly formulated as follows:

- (a) the long-term increase in the demand for money, resulting from the long-term growth of population and/or of income and/or of the 'monetization' of the economy;
- (b) the growth of government expenditure and deficits;
- (c) the pressure of social groups in the direction of profit-inflation;
- (d) disequilibrium in the balance of payments;
- (e) the mismanagement of the mints;
- (f) the wear of the existing stock of coins in circulation, occasionally aggravated by the practice of clipping;
- (g) fluctuations in the market rate of exchange between gold and silver.

It is obvious that these various causes were of varying importance in different countries and in different periods. It is also obvious that they could occur in different combinations and in varying strengths. But, all allowances made, it seems possible to lay down as a very general rule that the forces which operated most strongly in the Middle Ages were those indicated under letters (a), (b), (c) and (d). With regard to (b) the point should be made that both the absolute and relative importance of this factor tended to grow continuously throughout the Middle Ages, a growth which reflects the consolidation of the centralized state and, especially from the fourteenth century onwards, the progressive increase in the cost of military operations.

At this stage it is necessary to make another series of distinctions.<sup>1</sup> The circumstances listed under the seven heads above can reasonably be defined as 'causes' only in an *ex-post* sense. *Ex-ante*, they are merely sundry types of problem which a given society may find itself called upon to solve, problems for which the depreciation of the currency is certainly not the only possible solution. For every one of the problems listed there exist several alternative solutions. The society could meet problem (a) by developing new credit techniques and/or by resorting to new forms of money. Or it could allow a new equilibrium to be achieved through a fall of the general level of prices. The society could meet problem (b) by an increase in taxation or reduction in expenditure. As regards problem (c), supposing the government to be controlled by groups interested in a profit-inflation, it is quite conceivable that these groups would seek to achieve their aim by imposing a reduction in wages. As regards problem (d), a new equilibrium could be achieved by means of policies of austerity and/or restrictions on imports and/or an export drive. Problems (e) and (f) could be solved if the state assumed direct control over the mints and itself undertook the task of periodically withdrawing worn and clipped coins. As for problem (g), a new equilibrium could be achieved by allowing the forces of the market

<sup>1</sup> The following considerations were suggested to me in conversation by my friend, George Richardson, of St John's College, Oxford. Obviously, he cannot be held responsible for any errors of formulation into which I may have fallen.

to establish rates of exchange between gold and silver coins appropriate to the new situation, or by increasing the fineness of one coinage rather than reducing that of the other. To sum up, for each of the problems listed there still exist various alternative solutions. The devaluation of the currency is only one among the various possible solutions. However, it is a solution which is valid for all the problems listed. In other words, it is the common alternative solution. Furthermore, it is also the solution likely in general to encounter the least resistance, because it is the most anonymous and takes effect in the most indirect and subtle fashion. The easy way out of a number of difficult situations: this is the formula on which is founded the great law of the ineluctable depreciation of currency.

Looking at things from this point of view, it is clear that the extent of the long-term decline of any monetary unit depends, not only on the gravity of the particular crises which may arise, but also on the special conditions and on the political and social structures prevailing in a given society which encourage that society to choose the easy way out among the various possible alternatives. To use Toynbeeian terminology, it is not only a matter of the challenge, it is also a matter of the response.

In the light of this scheme I think it is possible to clarify some of the most interesting aspects of the monetary history of medieval Europe.

## II

In the course of the eighth century the Carolingians carried to completion in Frankish territory a drastic reform, which eventually put an end to the gold monometallism which had prevailed there in earlier Merovingian times. They introduced as a new and the only monetary unit a silver piece called the *denarius* (penny), of 1.7 grammes weight and of the fineness of about 950/1000.<sup>1</sup> Having defeated the Lombards and conquered part of the Italian peninsula, Charlemagne between 780 and 790 extended the reform already carried out in France to his Italian territories.<sup>2</sup> In England, where silver monometallism already existed, King Ethelbert II of Kent and King Offa spontaneously adopted the Frankish reforms, replacing the local *sceattas* by a new unit (penny) which was clearly a copy of the Frankish *denarius*. Actually the English penny seems to have been slightly lighter than the Continental penny. The first pennies of King Offa varied around 1.3 grammes of silver. Later, however, the weight was raised to 1.5 grammes, bringing the English penny closer to the Continental model from which it derived.<sup>3</sup> As a result of these developments Europe came to form a single large monetary area: the area of the silver penny.

This was the common starting-point. Then the 'law' of monetary depreci-

<sup>1</sup> On the Carolingian monetary reforms and their possible relation with Arab and Byzantine monetary reforms, cf. P. Grierson, 'The monetary reforms of Abd al-Malik', *Journal of Economic and Social History of the Orient*, III (1960), p. 260 ff.

<sup>2</sup> P. Grierson, 'Cronologia delle riforme monetarie di Carlo Magno', *Rivista Italiana di Numismatica*, vol. 2, ser. 5, t. 56 (1954), pp. 65-79.

<sup>3</sup> Cf. C. Oman, *The Coinage of England* (Oxford, 1931), pp. 17-18 and G. C. Brooke, *English coins from the seventh century to the present day* (London, 1932), p. 14.

ation began to operate. Progressively and inexorably the various pennies began to deteriorate, one after the other, both in weight and fineness. And, since the rate of deterioration varied from country to country and from time to time, parity between the various currencies was lost. In Table 1 I have collected the essential data concerning this progressive depreciation of the currency in England, in France and in North and Central Italy.<sup>1</sup> The figures shown give the equivalent in pure silver (1000/1000) of the monetary unit of each country. For greater simplicity and to avoid too many decimals, I have given the silver equivalent of a fixed multiple of the penny, that is of the pound (= 240 pennies), rather than that of the penny itself. To ease the task of anyone who wishes to translate the silver equivalents into gold equivalents, the last column of the table shows the approximate rate of exchange which seems to have prevailed in the Europe of the day. All the figures in the table must be accepted with a degree of caution. But in every case the margin of error is certainly lower than  $\pm 10$  percent. Altogether, the data of Table 1 provide, in outline, a significant index of the secular trend of monetary depreciation in medieval Western Europe. The data show for instance that: (1) the currencies of the states of North and Central Italy were always in the van of the inflationary movement; (2) the English coinage, conversely, was by far the least afflicted by the phenomenon of debasement. Indeed, the English currency offers a marked contrast with Continental currencies, displaying by comparison with them remarkable stability; (3) the French currency (*livre tournois*) depreciated in general less than Italian currencies, but its rate of depreciation was much closer to the Italian than to the English rate.

I would like to examine these three points in the light of the considerations put forward in the preceding section. Before doing so, however, I think it is necessary to make some observations about the organization and regulation of coining in England, France and Italy as it developed during the Middle Ages.

Contrasting the English with the Continental coinage, Mr Grierson has lucidly written:

When we try to enumerate the features that differentiated Anglo-Saxon and Anglo-Norman coinage from that of the Continent, we find at once that we can make no generalizations regarding type but that we can on organization and to a limited degree on fineness and weight. The coinage of all England was under royal control; though the moneymen were many and coins were struck in every locality of any importance, the types were changed punctually at three-years intervals, the fineness and weight of each issue was regulated by the Crown, and the moneymen procured their dies from agents of the central authority and were answerable to the King for the use that was made of them. None of this was true on the other side of the Channel.

Though individual feudal magnates or individual towns might control their own coinage as strictly as the King of England, the coinage of France, Italy

<sup>1</sup> South Italy always remained outside the area of the 'penny-shilling-pound' system. Cf. C. M. Cipolla, *Studi di storia della moneta* (Pavia, 1948), p. 77 and C. M. Cipolla, *Le avventure della lira* (Milano, 1958), p. 15.

and Germany 'had lost all semblance of unity, so that type, fineness and weight varied from one principality to the next'.<sup>1</sup>

In France, however, among the innumerable local coinages, two predominated over all the others, at least as far as diffusion and use were concerned. These were the *parisis* coinage and the *tournois* coinage. Eventually, the *tournois* coinage got the better of the *parisis*, for which reason I have referred in Table 1 only to the *tournois*.

In North and Central Italy the situation was different. While in France monetary particularism was mitigated by the predominance of one or two coinages, there was virtually no limit to the monetary particularism of Italy. After the tenth century five clearly distinct currency areas emerged in North and Central Italy, and none of the currencies dominant in these areas succeeded in assuming a position of general predominance. So I have calculated in Table 1 the metallic equivalents for four different currencies, the *lira* of Genoa, the *lira di imperiali* of Milan, the *lira di piccioli* of Venice and the *lira di piccioli* of Florence.

### III

Let us turn to the questions which I propounded before the analysis. We have seen that over the long period the currencies of North and Central Italy depreciated at a greater rate than the currencies of France and England. I believe that in trying to define the causes of this phenomenon we ought to concentrate our attention mainly on those problems which, in the scheme proposed in section I, are marked as (a), (b) and (c).

Between the middle of the tenth century and the end of the thirteenth century the Italian population increased from about 5 to 7 or 8 millions. At the same time, especially in the North and the Centre, the growth of the economy became rapid. Income increased considerably over the long period, growing faster than the population. The division of labour became more pronounced, and the country moved from an almost natural economy towards a money economy – in other words, the monetary sector of the economy expanded more than proportionally. We are not in a position to express these trends quantitatively, but that they existed is beyond all doubt. It is also unquestionable that until almost the middle of the thirteenth century these trends in North and Central Italy were much stronger than analogous trends in France and England.

A consequence of these fundamental movements was a decided expansionist tendency in the demand for money. The supply of precious metals proved to be relatively inelastic throughout the whole period, and the growth of the demand for silver for monetary purposes exceeded the supply. In such conditions, if prolonged deflationary pressure and a dangerous downward movement of prices were to be avoided, three solutions were available: (A) to

<sup>1</sup> P. Grierson, 'Sterling', in *Anglo-Saxon Coins*, ed. R. H. M. Dolley (London, 1961), p. 273.

find substitutes for metallic money in the form of 'primitive money'; (B) to find new and more advanced systems and modes of payment; (C) to reduce the fineness of the coinage and increase the number of pieces in circulation.

All three solutions were tried in practice. As regards solutions of type A we know that in these centuries, especially in the greater mercantile centres, pepper and other goods were used as substitutes for metallic money. As regards solutions of type B we know that very quickly new banking and credit practices evolved, which were destined to develop enormously in the process of time. But, in the end, the methods of type A which were devised were seen to be inconvenient and against the tendency of the times, and those of type B inadequate. Essentially, Italian society was compelled to fall back on solution C. The *denarius* was therefore progressively sacrificed.

These trends were particularly strong in the period between the beginning of the eleventh century and the middle of the twelfth century.<sup>1</sup> In Venice at the beginning of the thirteenth century the penny was so debased in weight and fineness that it was regarded as inadequate and inconvenient for the majority of transactions. It was then that the authorities of the Republic decided to coin a multiple of the penny (which was to be called *grosso*); and it is significant that, in determining the precious metal content of the new coin, the Venetian authorities took as their standard of fineness that of the English penny, which up to that time had remained unadulterated.<sup>2</sup> The approximate parity between English and Italian currency that had once existed had been destroyed, had been so completely destroyed that the amount of silver which was equivalent to a penny in England now corresponded to a high multiple of the local penny in Venice.

From the middle of the twelfth century to the middle of the thirteenth century the downward movement of Italian currency was markedly slower. It became more rapid between the middle of the thirteenth century and the beginning of the fourteenth century, then slowed down again in the course of the fourteenth century – among other things, the drastic fall in population as a result of the Black Death must have contributed greatly to reduce the demand for money. With the fifteenth century, however, the downward movement was resumed and continued strongly throughout the century.

Among the forces which operated continuously to debase the coinage must always be counted a relatively inelastic supply of precious metals, which did not expand proportionately to the increase in the demand for money. During the whole fifteenth century the purchasing power of gold and silver in bars continued to grow. If prices expressed in the current monetary units did not in the long run fall, that was only because the monetary units were constantly and progressively reduced in fineness.

It must be recognized, however, that from the middle of the fourteenth century onwards state budgetary deficits held an increasingly important place among the causes of monetary depreciation in Italy. In particular, a notable

<sup>1</sup> Cipolla, *Le avventure della lira*, pp. 49–51.

<sup>2</sup> R. Cessi, *Problemi monetari veneziani fino a tutto il sec. XIV* (Padova, 1937), pp. XVIII–XXI.

part of the blame for budgetary deficits after the mid-fourteenth century must be ascribed to the evergrowing cost of war.<sup>1</sup>

The different elasticities of the demand for money and its supply on the one hand, and the expansion of state expenditure on the other, undoubtedly had a pronounced effect on the weight and fineness of Italian coinages. But it was not only these factors which contributed to monetary depreciation. Account must also be taken of the fact that from the eleventh century onwards the governments of the Italian states were practically always controlled by the merchant class. This class obviously had everything to lose from a prolonged deflation, and everything to gain from prolonged inflationary pressure. As between an increase in taxation and a weakening of the currency, the merchant class was also obviously inclined to favour the latter solution.<sup>2</sup>

It should be added that, after the introduction of bi-metallism in 1252, the merchant class found means to guarantee itself inflationary profits by insisting that its credits should be paid in gold coin (which remained unadulterated) and its debits (especially salaries and taxes) in progressively depreciating silver coin. I have described in detail elsewhere the complicated mechanism which favoured this game.<sup>3</sup> Here it need only be mentioned as a concrete instance of the link between the dominance of the merchant class and the high rate of currency depreciation.

#### IV

It has long been known that the English currency, although progressively depreciated, displayed throughout the Middle Ages a remarkable degree of relative stability, in striking contrast to the rapid depreciation of Continental currencies. In 1871 C. J. Schive wrote that 'in England they went more honestly to work than elsewhere, and the coins kept their proper weight'.<sup>4</sup> More recently R. G. Hawtrey reaffirmed that 'of all countries England was (during the Middle Ages) the freest from illegitimate debasements'.<sup>5</sup> The use of such words as 'honestly' and 'illegitimate' appears to indicate that, at least in the opinion of some scholars, the question of monetary debasement in the Middle Ages was one of moral standards and that the varying rate of depreciation of the various currencies was a function of the degree of morality and thriftiness of the various rulers. It cannot be denied, indeed, that at least in the first part of the history of the English penny a certain tradition of stability was introduced by a deliberate policy of orderly administration. After the frequent but temporary alterations in the reign of Edward the Confessor (in particular in the coinage of the third issue),<sup>6</sup> the weight of the English penny was stabilized. 'This stabilization . . . was apparently an act of deliberate policy, contrasting

<sup>1</sup> Cipolla, *Le avventure della lira*, p. 56.

<sup>2</sup> For Florence cf. N. Rodolico, *I Ciompi* (Firenze, 1948); for Venice, cf. Cipolla, *op. cit.* p. 55, n. 35.

<sup>3</sup> C. M. Cipolla, *Money, Prices and Civilization* (Princeton, 1957), chapter 3.

<sup>4</sup> C. J. Schive, 'Some account of the weight of English and Northern Coins in the Xth and XIth centuries', *Numismatic Chronicle*, N.S. 11 (1871), p. 47, n. 9.

<sup>5</sup> R. G. Hawtrey, *Currency and Credit* (London, 1923), pp. 287-8.

<sup>6</sup> Oman, *op. cit.* p. 77.

with the frequent changes of Anglo-Saxon times, and the Norman kings compensated themselves for any financial loss it might involve by levying a general tax, the *monetagium commune*, which we know from the coronation charter of Henry I to have been collected *per civitates et comitatus* and to have been an innovation of William I.<sup>1</sup>

Nevertheless, if the English currency in the long run depreciated at a relatively very low rate, this could be due to a concatenation of favourable circumstances.

To begin with, the long-term demand for money, at least up to the middle of the thirteenth century, must have grown relatively slowly, and certainly more slowly than in Italy, for the simple reason that the economic development of the country was less rapid than in North and Central Italy. On the supply side too, the situation was much easier throughout the Middle Ages. England benefited from the fact that she had a surplus of the most sought-after raw material of the day, wool. When in the course of time England developed a manufacturing industry on the basis of this raw material, she found an ample market on the Continent of Europe for her own cloths. Italy too exported cloth in great quantities, but she was forced to import the raw material. All things considered, it is beyond doubt that England enjoyed throughout the Middle Ages a particularly favourable balance of payments which ensured a constant and abundant influx of precious metals. From the warden's accounts it appears that the silver used in the English mint during the decade 1290-1300 was mainly silver of Ghent, Bruges and Brussels, silver of Tours and Limoges, and silver generally described as foreign silver. Only small quantities came from the Devonshire mines and a small quantity derived from silver plate melted down.<sup>2</sup> For a later period, we know that foreign visitors – among them, Erasmus – were impressed by the abundance of silver and silver plate that they found in England.<sup>3</sup>

The English situation therefore was in sharp contrast with the Italian: on the one side an economy – the Italian – characterized from an early period by rapid growth, hampered by an unsatisfactory supply of precious metals; on the other hand an economy – the English – whose growth began later and was more gradual, which at the same time disposed of an ample and elastic supply of precious metal. Nor was this the whole difference. In Italy, as has been seen, the government was controlled throughout the Middle Ages by a class with an interest in currency depreciation. In England the coinage was always under the control of the central power, that is of the King, and there is no doubt that at least from the fourteenth century onwards the King was often tempted to meet the needs of the Treasury by debasing the coinage. But every step of this kind on the part of the King encountered the effective opposition of the English baronage, which had a strong interest in the stability of the currency and which always constituted a pressure-group capable of making its views

<sup>1</sup> P. Grierson, *Sterling*, pp. 274-5.

<sup>2</sup> C. G. Crump and A. Hughes, 'The English Currency under Edward I', *Economic Journal*, V (1895), p. 58.

<sup>3</sup> J. Clapham, *A concise economic history of Great Britain from the earliest times to 1750* (Cambridge, 1951), p. 173.



felt by the Crown. 'Nul Rei de cete reaume ne puet changer sa moneye, ne mepeirer, ne amender, ne autre moneie fere que d'argent sanz l'assent de touz ces counties.'<sup>1</sup> The evidence of the *Mirror of Justices* is always suspect, but on this point there is the corroboration of a clause in the Statute of Purveyors of 1352 making it illegal for the weight of the coins to be reduced any further without the consent of the Parliament.<sup>2</sup>

## V

At first sight it might seem strange that the French currency followed the Italian more closely than the English. While it is true that France did not enjoy England's privileged position in regard to the balance of payments and the availability of precious metals, it is also true that in France coining remained under the control of the King and of the baronage, which one might suppose would have an interest in the stability of the currency in so far as its income was in the form of fixed money payments. But it must be pointed out that, as was said earlier, while the coinage of all England remained under royal control and the fineness and weight of each issue was regulated by the Crown and the profits arising from coining and debasement were monopolized by the Crown, in France feudal magnates – lay as well as ecclesiastical – controlled their own coinage as strictly as did the Crown, arrogating to themselves the profits arising from coining rights. These feudal magnates initiated the practice of debasing the coinage quite early, on their own account. Often they were impelled to do so by a shortage in the supply of silver. In any event they soon learned that the operation of devaluation could yield good profits. As Monsieur H. J. L  gier has observed, it is necessary to go back a long way in time to find the origin of 'la vieille pratique des mutations f  odales, bien ant  rieures aux mutations royales... Le d  but des mutations royales n'est donc pas une date capitale dans l'histoire du monnayage (fran  ais)'.<sup>3</sup> When the French kings, under pressure of deficits and of ever-increasing war costs, began to have recourse more and more frequently, especially from the end of the thirteenth century onwards, to the expedient of debasement in order to augment their liquid assets, the French baronage, instead of opposing like the English baronage, hastened to imitate them, devaluing its own currencies in order to procure the same advantages as the Crown procured. For this was the common preoccupation of all the *barons monnayeurs*: '  viter que le roi tire seul profit d'un empirement ou d'un renforcement'.<sup>4</sup>

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<sup>1</sup> *Mirror of Justices*, ed. W. J. Whittaker (London, 1895), p. 11.

<sup>2</sup> A. E. Feaveryear, *The Pound Sterling* (Oxford, 1931), p. 30.

<sup>3</sup> H. J. L  gier, 'R  alit  s mon  taires, r  alit  s   conomiques, r  alit  s historiques', *Annales E.S.C.* XIV (1959), pp. 539-40.

<sup>4</sup> *Ibid.* p. 540.

Table 1

Grammes of pure silver corresponding to a pound-tale (240 pennies)

Year	England	France ( <i>livre tournois</i> )	Genoa	Milan	Venice	Florence	Market ratio between gold and silver
ca. 800	ca. 330	ca. 390		ca. 390	ca. 390		ca. 1 : 10-12
„ 1250	„ 324	„ 80	ca. 70	„ 70	„ 20	ca. 35	„ 1 : 10
„ 1500	„ 172	„ 22	„ 13	„ 9	„ 6	„ 6	„ 1 : 11

Sources: R. Ruding, *Annals of the coinage of Great Britain and its dependencies*, London, 1840; C. Oman, *The coinage of England*, Oxford, 1931; G. C. Brooke, *English coins*, London, 1932; R. Sedillot, *Le franc*, Paris, 1953; C. M. Cipolla, *Le avventure della lira*, Milan, 1958.