Human Action: A Treatise on Economics

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(1881-1973)

CEE

Part 4, Chapter XVII.
INDIRECT EXCHANGE

1. Media of Exchange and Money

4.XVII.1

INTERPERSONAL exchange is called indirect exchange if, between the commodities and services the reciprocal exchange of which is the ultimate end of exchanging, one or several media of exchange are interposed. The subject matter of the theory of indirect exchange is the study of the ratios of exchange between the media of exchange on the one hand and the goods and services of all orders on the other hand. The statements of the theory of indirect exchange refer to all instances of indirect exchange and to all things which are employed as media of exchange.

4.XVII.2

A medium of exchange which is commonly used as such is called money. The notion of money is vague, as its definition refers to the vague term "commonly used." There are borderline cases in which it cannot be decided whether a medium of exchange is or is not "commonly" used and should be called money. But this vagueness in the denotation of money in no way affects the exactitude and precision required by praxeological theory. For all that is to be predicated of money is valid for every medium of exchange. It is therefore immaterial whether one preserves the traditional term *theory of money* or substitutes for it another term. The theory of money was and is always the theory of indirect exchange and of the media of exchange.[*71]

2. Observations on Some Widespread Errors

4.XVII.3

The fateful errors of popular monetary doctrines which have led astray the monetary policies of almost all governments would hardly have come into existence if many economists had not themselves committed blunders in dealing with monetary issues and did not stubbornly cling to them.

4.XVII.4

There is first of all the spurious idea of the supposed neutrality of money.[*72] An outgrowth of this doctrine was the notion of the "level" of prices that rises or falls proportionately with the increase or decrease in the quantity of money in circulation. It was not realized that changes in the quantity of money can never affect the prices of all goods and services at the same time and to the same extent. Nor was it realized that changes in the purchasing power of the monetary unit are necessarily linked with changes in the mutual relations between those buying and selling. In order to prove the doctrine that the quantity of money and prices rise and fall proportionately, recourse was had in dealing with the theory of money to a procedure entirely different from that modern economics applies in dealing with all its other problems. Instead of starting from the actions of individuals, as catallactics must do without exception, formulas were constructed designed to comprehend the whole of the market economy. Elements of these formulas were: the total supply of money available in the *Volkswirtschaft;* the volume of trade—i.e., the money equivalent of all transfers of commodities and services as effected in the Volkswirtschaft; the average velocity of circulation of the monetary units; the level of prices. These formulas seemingly provided evidence of the correctness of the price level doctrine. In fact, however, this whole mode of reasoning is a typical case of arguing in a circle. For the equation of exchange already involves the level doctrines which it tries to prove. It is essentially nothing but a mathematical expression of the—untenable—doctrine that there is proportionality in the movements of the quantity of money and of prices.

4.XVII.5 In analyzing the equation of exchange one assumes that one of its elements—total supply of money, volume of trade, velocity of circulation—changes, without asking how such changes occur. It is not recognized that changes in these magnitudes do not emerge in the Volkswirtschaft as such, but in the individual actors' conditions, and that it is the interplay of the reactions of these actors that results in alterations of the price structure. The mathematical economists refuse to start from the various individuals' demand for and supply of money. They introduce instead the spurious notion of velocity of circulation fashioned according to the patterns of mechanics.

4.XVII.6 There is at this point of our reasoning no need to deal with the question of whether or not the mathematical economists are right in assuming that the services rendered by money consist wholly or essentially in its turnover, in its circulation. Even if this were true, it would still be faulty to explain the purchasing power—the price—of the monetary unit on the basis of its services. The services rendered by water, whisky, and coffee do not explain the prices paid for these things. What they explain is only why people, as far as they recognize these services, under certain further conditions demand definite quantities of these things. It is always demand that influences the price structure, not the objective value in use.

4.XVII.7 It is true that with regard to money the task of catallactics is broader than with regard to vendible goods. It is not the task of catallactics, but of psychology and physiology, to explain why people are intent on securing the services which the various vendible commodities can render. It *is* a task of catallactics, however, to deal with this question with regard to money. Catallactics alone can tell us what advantages a man expects from holding money. But it is not these expected advantages which determine the purchasing power of money. The eagerness to secure these advantages is only one of the factors in bringing about the demand for money. It is demand, a subjective element whose intensity is entirely determined by value judgments, and not any objective fact, any power to bring about a certain effect, that plays a role in the formation of the market's exchange ratios.

4.XVII.8 The deficiency of the equation of exchange and its basic elements is that they look at market phenomena from a holistic point of view. They are deluded by their prepossession with the Volkswirtschaft notion. But where there is, in the strict sense of the term, a Volkswirtschaft, there is neither a market nor prices and money. On a market there are only individuals or groups of individuals acting in concert. What motivate these actors are their own concerns, not those of the whole market economy. If there is any sense in such notions as volume of trade and velocity of circulation, then they refer to the resultant of the individuals' actions. It is not permissible to resort to these notions in order to explain the actions of the individuals. The first question that catallactics must raise with regard to changes in the total quantity of money available in the market system is how such changes affect the various individuals' conduct. Modern economics does not ask what "iron" or "bread" is worth, but what a definite piece of iron or of bread is worth to an acting individual at a definite date and a definite place. It cannot help proceeding in the same way with regard to money. The equation of exchange is incompatible with the fundamental principles of economic thought. It is a relapse to the thinking of ages in which people failed to comprehend praxeological phenomena because they were committed to holistic notions. It is sterile, as were the speculations of earlier ages concerning the value of "iron" and "bread" in general.

4.XVII.9
The theory of money is an essential part of the catallactic theory. It must be dealt with in the same manner which is applied to all other catallactic problems.

3. Demand for Money and Supply of Money

4.XVII.10
In the marketability of the various commodities and services there prevail considerable differences. There are goods for which it is not difficult to find applicants ready to disburse the highest recompense which, under the given state of affairs, can possibly be obtained, or a recompense only slightly smaller. There are other goods for which it is very hard to find a customer quickly, even if the vendor is ready to be content with a compensation much smaller than he could reap if he could find another aspirant whose demand is more intense. It is these differences in the marketability of the various commodities and services which created indirect exchange. A man who at the instant cannot acquire what he wants to get for the conduct of his own household or business, or who does not yet know what kind of goods he will need in the uncertain future, comes nearer to his ultimate goal if he exchanges a less marketable good he wants to trade against a more marketable one. It may also happen that the physical properties of the merchandise he wants to give away (as, for instance, its perishability or the costs incurred by its storage or similar circumstances) impel him not to wait longer. Sometimes he may be prompted to hurry in giving away the good concerned because he is afraid of a deterioration of its market value. In all such cases he improves his own situation in acquiring a more marketable good, even if this good is not suitable to satisfy directly any of his own needs.

4.XVII.11
A medium of exchange is a good which people acquire neither for their own consumption nor for employment in their own production activities, but with the intention of exchanging it at a later date against those goods which they want to use either for consumption or for production.

4.XVII.12
Money is a medium of exchange. It is the most marketable good which people acquire because they want to offer it in later acts of interpersonal exchange. Money is the thing which serves as the generally accepted and commonly used medium of exchange. This is its only function. All the other functions which people ascribe to money are merely particular aspects of its primary and sole function, that of a medium of exchange.[*73]

4.XVII.13
Media of exchange are economic goods. They are scarce; there is a demand for them. There are on the market people who desire to acquire them and are ready to exchange goods and services against them. Media of exchange have value in exchange. People make sacrifices for their acquisition; they pay "prices" for them. The peculiarity of these prices lies merely in the fact that they cannot be expressed in terms of money. In reference to the vendible goods and services we speak of prices or of money prices. In reference to money we speak of its purchasing power with regard to various vendible goods.

4.XVII.14
There exists a demand for media of exchange because people want to keep a store of them. Every member of a market society wants to have a definite amount of money in his pocket or box, a cash holding or cash balance of a definite height. Sometimes he wants to keep a larger cash holding, sometimes a smaller; in exceptional cases he may even renounce any cash holding. At any rate, the immense majority of people aim not only to own various vendible goods; they want no less to hold money. Their cash holding is not merely a residuum, an unspent margin of their wealth. It is not an unintentional remainder left over after all intentional acts of buying and selling have been consummated. Its

amount is determined by a deliberate demand for cash. And as with all other goods, it is the changes in the relation between demand for and supply of money that bring about changes in the exchange ratio between money and the vendible goods.

4.XVII.15
Every piece of money is owned by one of the members of the market economy. The transfer of money from the control of one actor into that of another is temporally immediate and continuous. There is no fraction of time in between in which the money is not a part of an individual's or a firm's cash holding, but just in "circulation."[*74] It is unsound to distinguish between circulating and idle money. It is no less faulty to distinguish between circulating money and hoarded money. What is called hoarding is a height of cash holding which—according to the personal opinion of an observer—exceeds what is deemed normal and adequate. However, hoarding is cash holding. Hoarded money is still money and it serves in the hoards the same purposes which it serves in cash holdings called normal. He who hoards money believes that some special conditions make it expedient to accumulate a cash holding which exceeds the amount he himself would keep under different conditions, or other people keep, or an economist censuring his action considers appropriate. That he acts in this way influences the configuration of the demand for money in the same way in which every "normal" demand influences it.

4.XVII.16
Many economists avoid applying the terms demand and supply in the sense of demand for and supply of money for cash holding because they fear a confusion with the current terminology as used by the bankers. It is, in fact, customary to call demand for money the demand for short-term loans and supply of money the supply of such loans. Accordingly, one calls the market for short-term loans the money market. One says money is scarce if there prevails a tendency toward a rise in the rate of interest for short-term loans, and one says money is plentiful if the rate of interest for such loans is decreasing. These modes of speech are so firmly entrenched that it is out of the question to venture to discard them. But they have favored the spread of fateful errors. They made people confound the notions of money and of capital and believe that increasing the quantity of money could lower the rate of interest lastingly. But it is precisely the crassness of these errors which makes it unlikely that the terminology suggested could create any misunderstanding. It is hard to assume that economists could err with regard to such fundamental issues.

4.XVII.17
Others maintained that one should not speak of the demand for and supply of money because the aims of those demanding money differ from the aims of those demanding vendible commodities. Commodities, they say, are demanded ultimately for consumption, while money is demanded in order to be given away in further acts of exchange. This objection is no less invalid. The use which people make of a medium of exchange consists eventually in its being given away. But first of all they are eager to accumulate a certain amount of it in order to be ready for the moment in which a purchase may be accomplished. Precisely because people do not want to provide for their own needs right at the instant at which they give away the goods and services they themselves bring to the market, precisely because they want to wait or are forced to wait until propitious conditions for buying appear, they barter not directly but indirectly through the interposition of a medium of exchange. The fact that money is not worn out by the use one makes of it and that it can render its services practically for an unlimited length of time is an important factor in the configuration of its supply. But it does not alter the fact that the appraisement of money is to be explained in the same way as the appraisement of all other goods: by the demand on the part of those who are eager to acquire a definite quantity of it.

4.XVII.18
Economists have tried to enumerate the factors which within the whole economic system may increase or decrease the demand for money. Such factors are: the population figure; the extent to which the individual households provide for their own needs by autarkic production and the extent to which they produce for other people's needs, selling

their products and buying for their own consumption on the market; the distribution of business activity and the settlement of payments over the various seasons of the year; institutions for the settlement of claims and counterclaims by mutual cancellation, such as clearinghouses. All these factors indeed influence the demand for money and the height of the various individuals' and firms' cash holding. But they influence them only indirectly by the role they play in the considerations of people concerning the determination of the amount of cash balances they deem appropriate. What decides the matter is always the value judgments of the men concerned. The various actors make up their minds about what they believe the adequate height of their cash holding should be. They carry out their resolution by renouncing the purchase of commodities, securities, and interest-bearing claims, and by selling such assets or conversely by increasing their purchases. With money, things are not different from what they are with regard to all other goods and services. The demand for money is determined by the conduct of people intent upon acquiring it for their cash holding.

4.XVII.19

Another objection raised against the notion of the demand for money was this: The marginal utility of the money unit decreases much more slowly than that of the other commodities; in fact its decrease is so slow that it can be practically ignored. With regard to money nobody ever says that his demand is satisfied, and nobody ever forsakes an opportunity to acquire more money provided the sacrifice required is not too great. It is therefore impermissible to consider the demand for money as limited. The very notion of an unlimited demand is, however, contradictory. This popular reasoning is entirely fallacious. It confounds the demand for money for cash holding with the desire for more wealth as expressed in terms of money. He who says that his thirst for more money can never be quenched, does not mean to say that his cash holding can never be too large. What he really means is that he can never be rich enough. If additional money flows into his hands, he will not use it for an increase of his cash balance or he will use only a part of it for this purpose. He will expend the surplus either for instantaneous consumption or for investment. Nobody ever keeps more money than he wants to have as cash holding.

4.XVII.20

The insight that the exchange ratio between money on the one hand and the vendible commodities and services on the other is determined, in the same way as the mutual exchange ratios between the various vendible goods, by demand and supply was the essence of the *quantity theory of money.* This theory is essentially an application of the general theory of supply and demand to the special instance of money. Its merit was the endeavor to explain the determination of money's purchasing power by resorting to the same reasoning which is employed for the explanation of all other exchange ratios. Its short-coming was that it resorted to a holistic interpretation. It looked at the total supply of money in the Volkswirtschaft and not at the actions of the individual men and firms. An outgrowth of this erroneous point of view was the idea that there prevails a proportionality in the changes of the—total—quantity of money and of money prices. But the older critics failed in their attempts to explode the errors inherent in the quantity theory and to substitute a more satisfactory theory for it. They did not fight what was wrong in the quantity theory; they attacked, on the contrary, its nucleus of truth. They were intent upon denying that there is a causal relation between the movements of prices and those of the quantity of money. This denial led them into a labyrinth of errors, contradictions, and nonsense. Modern monetary theory takes up the thread of the traditional quantity theory as far as it starts from the cognition that changes in the purchasing power of money must be dealt with according to the principles applied to all other market phenomena and that there exists a connection between the changes in the demand for and supply of money on the one hand and those of purchasing power on the other. In this sense one may call the modern theory of money an improved variety of the quantity theory.

The Epistemological Import of Carl Menger's Theory of the Origin of Money

4.XVII.21

Carl Menger has not only provided an irrefutable praxeological theory of the origin of money. He has also recognized the import of his theory for the elucidation of fundamental principles of praxeology and its methods of research.[*75]

4.XVII.22 There were authors who tried to explain the origin of money by decree or covenant. The authority, the state, or a compact between citizens has purposively and consciously established indirect exchange and money. The main deficiency of this doctrine is not to be seen in the assumption that people of an age unfamiliar with indirect exchange and money could design a plan of a new economic order, entirely different from the real conditions of their own age, and could comprehend the importance of such a plan. Neither is it to be seen in the fact that history does not afford a clue for the support of such statements. There are more substantial reasons for rejecting it.

4.XVII.23 If it is assumed that the conditions of the parties concerned are improved by every step that leads from direct exchange to indirect exchange and subsequently to giving preference for use as a medium of exchange to certain goods distinguished by their especially high marketability, it is difficult to conceive why one should, in dealing with the origin of indirect exchange, resort in addition to authoritarian decree or an explicit compact between citizens. A man who finds it hard to obtain in direct barter what he wants to acquire renders better his chances of acquiring it in later acts of exchange by the procurement of a more marketable good. Under these circumstances there was no need of government interference or of a compact between the citizens. The happy idea of proceeding in this way could strike the shrewdest individuals, and the less resourceful could imitate the former's method. It is certainly more plausible to take for granted that the immediate advantages conferred by indirect exchange were recognized by the acting parties than to assume that the whole image of a society trading by means of money was conceived by a genius and, if we adopt the covenant doctrine, made obvious to the rest of the people by persuasion.

4.XVII.24 If, however, we do not assume that individuals discovered the fact that they fare better through indirect exchange than through waiting for an opportunity for direct exchange, and, for the sake of argument, admit that the authorities or a compact introduced money, further questions are raised. We must ask what kind of measures were applied in order to induce people to adopt a procedure the utility of which they did not comprehend and which was technically more complicated than direct exchange. We may assume that compulsion was practiced. But then we must ask, further, at what time and by what occurrences indirect exchange and the use of money later ceased to be procedures troublesome or at least indifferent to the individuals concerned and became advantageous to them.

4.XVII.25 The praxeological method traces all phenomena back to the actions of individuals. If conditions of interpersonal exchange are such that indirect exchange facilitates the transactions, and if and as far as people realize these advantages, indirect exchange and money come into being. Historical experience shows that these conditions were and are present. How, in the absence of these conditions, people could have adopted indirect exchange and money and clung to these modes of exchanging is inconceivable.

4.XVII.26 The historical question concerning the origin of indirect exchange and money is after all of no concern to praxeology. The only relevant thing is that indirect exchange and money exist because the conditions for their existence were and are present. If this is so, praxeology does not need to resort to the hypothesis that authoritarian decree or a covenant invented these modes of exchanging. The étatists may if they like continue to ascribe the "invention" of money to the state, however unlikely this may be. What matters is that a man acquires a good not in order to consume it or to use it in production, but in order to give it away in a further act of exchange. Such conduct on the part of people makes a good a medium of exchange and, if such conduct becomes common with regard to a certain good, makes it money. All theorems of the catallactic theory of media of exchange and of money refer to the services which a good renders in its capacity as a medium of exchange. Even if it were true that the impulse for the introduction of indirect exchange and money was provided by the authorities or by an agreement between the members of society, the statement remains unshaken that only the conduct of exchanging people can create indirect exchange and money.

4.XVII.27 History may tell us where and when for the first time media of exchange came into use and how, subsequently, the range of goods employed for this purpose was more and more restricted. As the differentiation between the broader notion of a medium of exchange and the narrower notion of money is not sharp, but gradual, no agreement can be reached about the historical transition from simple media of exchange to money. Answering such a question is a matter of historical understanding. But, as has been mentioned, the distinction between direct exchange and indirect exchange is sharp and everything that catallactics establishes with regard to media of exchange refers categorially to all goods which are demanded and acquired as such media.

4.XVII.28 As far as the statement that indirect exchange and money were established by decree or by covenant is meant to be an account of historical events, it is the task of historians to expose its falsity. As far as it is advanced merely as a historical statement, it can in no way affect the catallactic theory of money and its explanation of the evolution of indirect exchange. But if it is designed as a statement about human action and social events, it is useless because it states nothing about action. It is not a statement about human action to declare that one day rulers or citizens assembled in convention were suddenly struck by the inspiration that it would be a good idea to exchange indirectly and through the intermediary of a commonly used medium of exchange. It is merely pushing back the problem involved.

4.XVII.29 It is necessary to comprehend that one does not contribute anything to the scientific conception of human actions and social phenomena if one declares that the state or a charismatic leader or an inspiration which descended upon all the people have created them. Neither do such statements refute the teachings of a theory showing how such phenomena can be acknowledged as "the unintentional outcome, the resultant not deliberately designed and aimed at by specifically individual endeavors of the members of a society."*76

4. The Determination of the Purchasing Power of Money

4.XVII.30 As soon as an economic good is demanded not only by those who want to use it for consumption or production, but also by people who want to keep it as a medium of exchange and to give it away at need in a later act of exchange, the demand for it increases. A new employment for this good has emerged and creates an additional demand for it. As with every other economic good, such an additional demand brings about a rise in its value in exchange, i.e., in the quantity of other goods which are offered for its acquisition. The amount of other goods which can be obtained in giving away a medium of exchange, its "price" as expressed in terms of various goods and services, is in part determined by the demand of those who want to acquire it as a medium of exchange. If people stop using the good in question as a medium of exchange, this additional specific demand disappears and the "price" drops concomitantly.

4.XVII.31 Thus the demand for a medium of exchange is the composite of two partial demands: the demand displayed by the intention to use it in consumption and production and that displayed by the intention to use it as a medium of exchange.*77 With regard to modern metallic money one speaks of the industrial demand and of the monetary demand. The value in exchange (purchasing power) of a medium of exchange is the resultant of the cumulative effect of both partial demands.

4.XVII.32
Now the extent of that part of the demand for a medium of exchange which is displayed on account of its service as a medium of exchange depends on its value in exchange. This fact raises difficulties which many economists considered insoluble so that they abstained from following farther along this line of reasoning. It is illogical, they said, to explain the purchasing power of money by reference to the demand for money, and the demand for money by reference to its purchasing power.

4.XVII.33
The difficulty is, however, merely apparent. The purchasing power which we explain by referring to the extent of specific demand is not the same purchasing power the height of which determines this specific demand. The problem is to conceive the determination of the purchasing power of the immediate future, of the impending moment. For the solution of this problem we refer to the purchasing power of the immediate past, of the moment just passed. These are two distinct magnitudes. It is erroneous to object to our theorem, which may be called the regression theorem, that it moves in a vicious circle.[*78]

4.XVII.34
But, say the critics, this is tantamount to merely pushing back the problem. For now one must still explain the determination of yesterday's purchasing power. If one explains this in the same way by referring to the purchasing power of the day before yesterday and so on, one slips into a *regressus in infinitum.* This reasoning, they assert, is certainly not a complete and logically satisfactory solution of the problem involved. What these critics fail to see is that the regression does not go back endlessly. It reaches a point at which the explanation is completed and no further question remains unanswered. If we trace the purchasing power of money back step by step, we finally arrive at the point at which the service of the good concerned as a medium of exchange begins. At this point yesterday's exchange value is exclusively determined by the nonmonetary—industrial—demand which is displayed only by those who want to use this good for other employments than that of a medium of exchange.

4.XVII.35
But, the critics continue, this means explaining that part of money's purchasing power which is due to its service as a medium of exchange by its employment for industrial purposes. The very problem, the explanation of the specific monetary component of its exchange value, remains unsolved. Here too the critics are mistaken. That component of money's value which is an outcome of the services it renders as a medium of exchange is entirely explained by reference to these specific monetary services and the demand they create. Two facts are not to be denied and are not denied by anybody. First, that the demand for a medium of exchange is determined by considerations of its exchange value which is an outcome both of the monetary and the industrial services it renders. Second, that the exchange value of a good which has not yet been demanded for service as a medium of exchange is determined solely by a demand on the part of people eager to use it for industrial purposes, i.e., either for consumption or for production. Now, the regression theorem aims at interpreting the first emergence of a monetary demand for a good which previously had been demanded exclusively for industrial purposes as influenced by the exchange value that was ascribed to it at this moment on account of its nonmonetary services only. This certainly does not involve explaining the specific monetary exchange value of a medium of exchange on the ground of its industrial exchange value.

4.XVII.36
Finally it was objected to the regression theorem that its approach is historical, not theoretical. This objection is no less mistaken. To explain an event historically means to show how it was produced by forces and factors operating at a definite date and a definite place. These individual forces and factors are the ultimate elements of the interpretation. They are ultimate data and as such not open to any further analysis and reduction. To explain a phenomenon theoretically means to trace back its appearance to the operation of general rules which are already comprised in the theoretical system. The

regression theorem complies with this requirement. It traces the specific exchange value of a medium of exchange back to its function as such a medium and to the theorems concerning the process of valuing and pricing as developed by the general catallactic theory. It deduces a more special case from the rules of a more universal theory. It shows how the special phenomenon necessarily emerges out of the operation of the rules generally valid for all phenomena. It does not say: This happened at that time and at that place. It says: This always happens when the conditions appear; whenever a good which has not been demanded previously for the employment as a medium of exchange begins to be demanded for this employment, the same effects must appear again; no good can be employed for the function of a medium of exchange which at the very beginning of its use for this purpose did not have exchange value on account of other employments. And all these statements implied in the regression theorem are enounced apodictically as implied in the apriorism of praxeology. It *must* happen this way. Nobody can ever succeed in constructing a hypothetical case in which things were to occur in a different way.

4.XVII.37

The purchasing power of money is determined by demand and supply, as is the case with the prices of all vendible goods and services. As action always aims at a more satisfactory arrangement of future conditions, he who considers acquiring or giving away money is, of course, first of all interested in its future purchasing power and the future structure of prices. But he cannot form a judgment about the future purchasing power of money otherwise than by looking at its configuration in the immediate past. It is this fact that radically distinguishes the determination of the purchasing power of money from the determination of the mutual exchange ratios between the various vendible goods and services. With regard to these latter the actors have nothing else to consider than their importance for future want-satisfaction. If a new commodity unheard of before is offered for sale, as was, for instance, the case with radio sets a few decades ago, the only question that matters for the individual is whether or not the satisfaction that the new gadget will provide is greater than that expected from those goods he would have to renounce in order to buy the new thing. Knowledge about past prices is for the buyer merely a means to reap a consumer's surplus. If he were not intent upon this goal, he could, if need be, arrange his purchases without any familiarity with the market prices of the immediate past, which are popularly called present prices. He could make value judgments without appraisement. As has been mentioned already, the obliteration of the memory of all prices of the past would not prevent the formation of new exchange ratios between the various vendible things. But if knowledge about money's purchasing power were to fade away, the process of developing indirect exchange and media of exchange would have to start anew. It would become necessary to begin again with employing some goods, more marketable than the rest, as media of exchange. The demand for these goods would increase and would add to the amount of exchange value derived from their industrial (nonmonetary) employment a specific component due to their new use as a medium of exchange. A value judgment is, with reference to money, only possible if it can be based on appraisement. The acceptance of a new kind of money presupposes that the thing in question already has previous exchange value on account of the services it can render directly to consumption or production. Neither a buyer nor a seller could judge the value of a monetary unit if he had no information about its exchange value—its purchasing power—in the immediate past.

4.XVII.38

The relation between the demand for money and the supply of money, which may be called the money relation, determines the height of purchasing power. Today's money relation, as it is shaped on the ground of yesterday's purchasing power, determines today's purchasing power. He who wants to increase his cash holding restricts his purchases and increases his sales and thus brings about a tendency toward falling prices. He who wants to reduce his cash holding increases his purchases—either for consumption or for production and investment—and restricts his sales; thus he brings about a tendency toward rising prices.

4.XVII.39

Changes in the supply of money must necessarily alter the disposition of vendible goods as owned by various individuals and firms. The quantity of money available in the whole market system cannot increase or decrease otherwise than by first increasing or decreasing the cash holdings of certain individual members. We may, if we like, assume that every member gets a share of the additional money right at the moment of its inflow into the system, or shares in the reduction of the quantity of money. But whether we assume this or not, the final result of our demonstration will remain the same. This result will be that changes in the structure of prices brought about by changes in the supply of money available in the economic system never affect the prices of the various commodities and services to the same extent and at the same date.

4.XVII.40

Let us assume that the government issues an additional quantity of paper money. The government plans either to buy commodities and services or to repay debts incurred or to pay interest on such debts. However this may be, the treasury enters the market with an additional demand for goods and services; it is now in a position to buy more goods than it could buy before. The prices of the commodities it buys rise. If the government had expended in its purchases money collected by taxation, the taxpayers would have restricted their purchases and, while the prices of goods bought by the government would have risen, those of other goods would have dropped. But this fall in the prices of the goods the taxpayers used to buy does not occur if the government increases the quantity of money at its disposal without reducing the quantity of money in the hands of the public. The prices of some commodities—viz., of those the government buys—rise immediately, while those of the other commodities remain unaltered for the time being. But the process goes on. Those selling the commodities asked for by the government are now themselves in a position to buy more than they used previously. The prices of the things these people are buying in larger quantities therefore rise too. Thus the boom spreads from one group of commodities and services to other groups until all prices and wage rates have risen. The rise in prices is thus not synchronous for the various commodities and services.

4.XVII.41

When eventually, in the further course of the increase in the quantity of money, all prices have risen, the rise does not affect the various commodities and services to the same extent. For the process has affected the material position of various individuals to different degrees. While the process is under way, some people enjoy the benefit of higher prices for the goods or services they sell, while the prices of the things they buy have not yet risen or have not risen to the same extent. On the other hand, there are people who are in the unhappy situation of selling commodities and services whose prices have not yet risen or not in the same degree as the prices of the goods they must buy for their daily consumption. For the former the progressive rise in prices is a boon, for the latter a calamity. Besides, the debtors are favored at the expense of the creditors. When the process once comes to an end, the wealth of various individuals has been affected in different ways and to different degrees. Some are enriched, some impoverished. Conditions are no longer what they were before. The new order of things results in changes in the intensity of demand for various goods. The mutual ratio of the money prices of the vendible goods and services is no longer the same as before. The price structure has changed apart from the fact that all prices in terms of money have risen. The final prices to the establishment of which the market tends after the effects of the increase in the quantity of money have been fully consummated are not equal to the previous final prices multiplied by the same multiplier.

4.XVII.42

The main fault of the old quantity theory as well as the mathematical economists' equation of exchange is that they have ignored this fundamental issue. Changes in the supply of money must bring about changes in other data too. The market system before and after the inflow or outflow of a quantity of money is not merely changed in that the cash holdings of the individuals and prices have increased or decreased. There have been effected also changes in the reciprocal exchange ratios between the various commodities and services which, if one wants to resort to metaphors, are more adequately described by the image of price revolution than by the misleading figure of an elevation or a sinking of the "price level."

4.XVII.43 We may at this point disregard the effects brought about by the influence on the content of all deferred payments as stipulated by contracts. We will deal later with them and with the operation of monetary events on consumption and production, investment in capital goods, and accumulation and consumption of capital. But even in setting aside all these things, we must never forget that changes in the quantity of money affect prices in an uneven way. It depends on the data of each particular case at what moment and to what extent the prices of the various commodities and services are affected. In the course of a monetary expansion (inflation) the first reaction is not only that the prices of some of them rise more quickly and more steeply than others. It may also occur that some fall at first as they are for the most part demanded by those groups whose interests are hurt.

4.XVII.44 Changes in the money relation are not only caused by governments issuing additional paper money. An increase in the production of the precious metals employed as money has the same effects although, of course, other classes of the population may be favored or hurt by it. Prices also rise in the same way if, without a corresponding reduction in the quantity of money available, the demand for money falls because of a general tendency toward a diminution of cash holdings. The money expended additionally by such a "dishoarding" brings about a tendency toward higher prices in the same way as that flowing from the gold mines or from the printing press. Conversely, prices drop when the supply of money falls (e.g., through a withdrawal of paper money) or the demand for money increases (e.g., through a tendency toward "hoarding," the keeping of greater cash balances). The process is always uneven and by steps, disproportionate and asymmetrical.

4.XVII.45 It could be and has been objected that the normal production of the gold mines brought to the market may well entail an increase in the quantity of money, but does not increase the income, still less the wealth, of the owners of the mines. These people earn only their "normal" income and thus their spending of it cannot disarrange market conditions and the prevailing tendencies toward the establishment of final prices and the equilibrium of the evenly rotating economy. For them, the annual output of the mines does not mean an increase in riches and does not impel them to offer higher prices. They will continue to live at the standard at which they used to live before. Their spending within these limits will not revolutionize the market. Thus the normal amount of gold production, although certainly increasing the quantity of money available, cannot put into motion the process of depreciation. It is neutral with regard to prices.

4.XVII.46 As against this reasoning one must first of all observe that within a progressing economy in which population figures are increasing and the division of labor and its corollary, industrial specialization, are perfected, there prevails a tendency toward an increase in the demand for money. Additional people appear on the scene and want to establish cash holdings. The extent of economic self-sufficiency, i.e., of production for the household's own needs, shrinks and people become more dependent upon the market; this will, by and large, impel them to increase their holding of cash. Thus the price-raising tendency emanating from what is called the "normal" gold production encounters a price-cutting tendency emanating from the increased demand for cash holding. However, these two opposite tendencies do not neutralize each other. Both processes take their own course, both result in a disarrangement of existing social conditions, making some people richer, some people poorer. Both affect the prices of various goods at different dates and to a different degree. It is true that the rise in the prices of some commodities caused by one of these processes can finally be compensated by the fall caused by the other process. It may happen that at the end some or many prices come back to their previous height. But this final result is not the outcome of an absence of movements provoked by changes in the money relation. It is rather the outcome of the joint effect of the coincidence of two processes independent of each other, each of which brings about alterations in the market data as well as in the material conditions of various individuals and groups of individuals. The new structure of prices may not differ very much from the previous one. But it is the resultant of two series of changes which have accomplished all inherent social transformations.

4.XVII.47

The fact that the owners of gold mines rely upon steady yearly proceeds from their gold production does not cancel the newly mined gold's impression upon prices. The owners of the mines take from the market, in exchange for the gold produced, the goods and services required for their mining and the goods needed for their consumption and their investments in other lines of production. If they had not produced this amount of gold, prices would not have been affected by it. It is beside the point that they have anticipated the future yield of the mines and capitalized it and that they have adjusted their standard of living to the expectation of steady proceeds from the mining operations. The effects which the newly mined gold exercises on their expenditure and on that of those people whose cash holdings it enters later step by step begin only at the instant this gold is available in the hands of the mine owners. If, in the expectation of future yields, they had expended money at an earlier date and the expected yield failed to appear, conditions would not differ from other cases in which consumption was financed by credit based on expectations not realized by later events.

4.XVII.48

Changes in the extent of the desired cash holding of various people neutralize one another only to the extent that they are regularly recurring and mutually connected by a causal reciprocity. Salaried people and wage earners are not paid daily, but at certain pay days for a period of one or several weeks. They do not plan to keep their cash holding within the period between pay days at the same level; the amount of cash in their pockets declines with the approach of the next pay day. On the other hand, the merchants who supply them with the necessities of life increase their cash holdings concomitantly. The two movements condition each other; there is a causal interdependence between them which harmonizes them both with regard to time and to quantitative amount. Neither the dealer nor his customer lets himself be influenced by these recurrent fluctuations. Their plans concerning cash holding as well as their business operations and their spending for consumption respectively have the whole period in view and take it into account as a whole.

4.XVII.49

It was this phenomenon that led economists to the image of a regular circulation of money and to the neglect of the changes in the individuals' cash holdings. However, we are faced with a concatenation which is limited to a narrow, neatly circumscribed field. Only as far as the increase in the cash holding of one group of people is temporally and quantitatively related to the decrease in the cash holding of another group and as far as these changes are self-liquidating within the course of a period which the members of both groups consider as a whole in planning their cash holding, can the neutralization take place. Beyond this field there is no question of such a neutralization.

5. The Problem of Hume and Mill and the Driving Force of Money

4.XVII.50

Is it possible to think of a state of affairs in which changes in the purchasing power of money occur at the same time and to the same extent with regard to all commodities and services and in proportion to the changes effected in either the demand for or the supply of money? In other words, is it possible to think of neutral money within the frame of an economic system which does not correspond to the imaginary construction of an evenly rotating economy? We may call this pertinent question the problem of Hume and Mill.

4.XVII.51

It is uncontested that neither Hume nor Mill succeeded in finding a positive answer to this question.[*79] Is it possible to answer it categorically in the negative?

4.XVII.52 We imagine two systems of an evenly rotating economy *A* and *B*. The two systems are independent and in no way connected with one another. The two systems differ from one another only in the fact that to each amount of money *m* in *A* there corresponds an amount *n m* in *B, n* being greater or smaller than 1; we assume that there are no deferred payments and that the money used in both systems serves only monetary purposes and does not allow of any nonmonetary use. Consequently the prices in the two systems are in the ratio 1 : *n*. Is it thinkable that conditions in *A* can be altered at one stroke in such a way as to make them entirely equivalent to conditions in *B?*

4.XVII.53 The answer to this question must obviously be in the negative. He who wants to answer it in the positive must assume that a *deus ex machina* approaches every individual at the same instant, increases or decreases his cash holding by multiplying it by *n,* and tells him that henceforth he must multiply by *n* all price data which he employs in his appraisements and calculations. This cannot happen without a miracle.

4.XVII.54 It has been pointed out already that in the imaginary construction of an evenly rotating economy the very notion of money vanishes into an unsubstantial calculation process, self-contradictory and devoid of any meaning.[*80] It is impossible to assign any function to indirect exchange, media of exchange, and money within an imaginary construction the characteristic mark of which is unchangeability and rigidity of conditions.

4.XVII.55 Where there is no uncertainty concerning the future, there is no need for any cash holding. As money must necessarily be kept by people in their cash holdings, there cannot be any money. The use of media of exchange and the keeping of cash holdings are conditioned by the changeability of economic data. Money in itself is an element of change; its existence is incompatible with the idea of a regular flow of events in an evenly rotating economy.

4.XVII.56 Every change in the money relation alters—apart from its effects upon deferred payments—the conditions of the individual members of society. Some become richer, some poorer. It may happen that the effects of a change in the demand for and supply of money encounter the effects of opposite changes occurring by and large at the same time and to the same extent; it may happen that the resultant of the two opposite movements is such that no conspicuous changes in the price structure emerge. But even then the effects on the conditions of the various individuals are not absent. Each change in the money relation takes its own course and produces its own particular effects. If an inflationary movement and a deflationary one occur at the same time or if an inflation is temporally followed by a deflation in such a way that prices finally are not very much changed, the social consequences of each of the two movements do not cancel each other. To the social consequences of an inflation those of a deflation are added. There is no reason to assume that all or even most of those favored by one movement will be hurt by the second one, or vice versa.

4.XVII.57 Money is neither an abstract *numéraire* nor a standard of value or prices. It is necessarily an economic good and as such it is valued and appraised on its own merits, i.e., the services which a man expects from holding cash. On the market there is always change and movement. Only because there are fluctuations is there money. Money is an element of change not because it "circulates," but because it is kept in cash holdings. Only because people expect changes about the kind and extent of which they have no certain knowledge whatsoever, do they keep money.

4.XVII.58 While money can be thought of only in a changing economy, it is in itself an element of further changes. Every change in the economic data sets it in motion and makes it the driving force of new changes. Every shift in the mutual relation of the exchange ratios between the various nonmonetary goods not only brings about changes in production and in what is popularly called distribution, but also provokes changes in the money relation and thus further changes. Nothing can happen in the orbit of vendible goods without affecting the orbit of money, and all that happens in the orbit of money affects the orbit of commodities.

4.XVII.59
The notion of a neutral money is no less contradictory than that of a money of stable purchasing power. Money without a driving force of its own would not, as people assume, be a perfect money; it would not be money at all.

4.XVII.60
It is a popular fallacy to believe that perfect money should be neutral and endowed with unchanging purchasing power, and that the goal of monetary policy should be to realize this perfect money. It is easy to understand this idea as a reaction against the still more popular postulates of the inflationists. But it is an excessive reaction, it is in itself confused and contradictory, and it has worked havoc because it was strengthened by an inveterate error inherent in the thought of many philosophers and economists.

4.XVII.61
These thinkers are misled by the widespread belief that a state of rest is more perfect than one of movement. Their idea of perfection implies that no more perfect state can be thought of and consequently that every change would impair it. The best that can be said of a motion is that it is directed toward the attainment of a state of perfection in which there is rest because every further movement would lead into a less perfect state. Motion is seen as the absence of equilibrium and full satisfaction, as a manifestation of trouble and want. As far as such thoughts merely establish the fact that action aims at the removal of uneasiness and ultimately at the attainment of full satisfaction, they are well founded. But one must not forget that rest and equilibrium are not only present in a state in which perfect contentment has made people perfectly happy, but no less in a state in which, although wanting in many regards, they do not see any means of improving their condition. The absence of action is not only the result of full satisfaction; it can no less be the corollary of the inability to render things more satisfactory. It can mean hopelessness as well as contentment.

4.XVII.62
With the real universe of action and unceasing change, with the economic system which cannot be rigid, neither neutrality of money nor stability of its purchasing power are compatible. A world of the kind which the necessary requirements of neutral and stable money presuppose would be a world without action.

4.XVII.63
It is therefore neither strange nor vicious that in the frame of such a changing world money is neither neutral nor stable in purchasing power. All plans to render money neutral and stable are contradictory. Money is an element of action and consequently of change. Changes in the money relation, i.e., in the relation of the demand for and the supply of money, affect the exchange ratio between money on the one hand and the vendible commodities on the other hand. These changes do not affect at the same time and to the same extent the prices of the various commodities and services. They consequently affect the wealth of the various members of society in a different way.

6. Cash-Induced and Goods-Induced Changes in Purchasing Power

4.XVII.64
Changes in the purchasing power of money, i.e., in the exchange ratio between money and the vendible goods and commodities, can originate either from the side of money or from the side of the vendible goods and commodities. The change in the data which provokes them can either occur in the demand for and supply of money or in the demand for and supply of the other goods and services. We may accordingly distinguish between cash-induced and goods-induced changes in purchasing power.

4.XVII.65
Goods-induced changes in purchasing power can be brought about by changes in the

supply of commodities and services or in the demand for individual commodities and services. A general rise or fall in the demand for all goods and services or the greater part of them can be effected only from the side of money.

4.XVII.66
Let us now scrutinize the social and economic consequences of changes in the purchasing power of money under the following three assumptions: first, that the money in question can only be used as money—i.e., as a medium of exchange—and can serve no other purpose; second, that there is only exchange of present goods and no exchange of present goods against future goods; third, that we disregard the effects of changes in purchasing power on monetary calculation.

4.XVII.67
Under these assumptions all that cash-induced changes in purchasing power bring about are shifts in the disposition of wealth among different individuals. Some get richer, others poorer; some are better supplied, others less; what some people gain is paid for by the loss of others. It would, however, be impermissible to interpret this fact by saying that total satisfaction remained unchanged or that, while no changes have occurred in total supply, the state of total satisfaction or of the sum of happiness has been increased or decreased by changes in the distribution of wealth. The notions of total satisfaction or total happiness are empty. It is impossible to discover a standard for comparing the different degrees of satisfaction or happiness attained by various individuals.

4.XVII.68
Cash-induced changes in purchasing power indirectly generate further changes by favoring either the accumulation of additional capital or the consumption of capital available. Whether and in what direction such secondary effects are brought about depends on the specific data of each case. We shall deal with these important problems at a later point.[*81]

4.XVII.69
Goods-induced changes in purchasing power are sometimes nothing else but consequences of a shift of demand from some goods to others. If they are brought about by an increase or a decrease in the supply of goods they are not merely transfers from some people to other people. They do not mean that Peter gains what Paul has lost. Some people may become richer although nobody is impoverished, and vice versa.

4.XVII.70
We may describe this fact in the following way: Let *A* and *B* be two independent systems which are in no way connected with each other. In both systems the same kind of money is used, a money which cannot be used for any nonmonetary purpose. Now we assume, as case 1, that *A* and *B* differ from each other only in so far as in *B* the total supply of money is *n m, m* being the total supply of money in *A,* and that to every cash holding of *c* and to every claim in terms of money *d* in *A* there corresponds a cash holding of *nc* and a claim of *nd* in *B.* In every other respect *A* equals *B.* Then we assume, as case 2, that *A* and *B* differ from each other only in so far as in *B* the total supply of a certain commodity *r* is *np, p* being the total supply of this commodity in *A,* and that to every stock *v* of this commodity *r* in *A* there corresponds a stock of *nv* in *B.* In both cases *n* is greater than 1. If we ask every individual of *A* whether he is ready to make the slightest sacrifice in order to exchange his position for the corresponding place in *B,* the answer will be unanimously in the negative in case 1. But in case 2 all owners of *r* and all those who do not own any *r,* but are eager to acquire a quantity of it—i.e., at least one individual—will answer in the affirmative.

4.XVII.71
The services money renders are conditioned by the height of its purchasing power. Nobody wants to have in his cash holding a definite number of pieces of money or a definite weight of money; he wants to keep a cash holding of a definite amount of purchasing power. As the operation of the market tends to determine the final state of money's purchasing power at a height at which the supply of and the demand for money coincide, there can never be an excess or a deficiency of money. Each individual and all

individuals together always enjoy fully the advantages which they can derive from indirect exchange and the use of money, no matter whether the total quantity of money is great or small. Changes in money's purchasing power generate changes in the disposition of wealth among the various members of society. From the point of view of people eager to be enriched by such changes, the supply of money may be called insufficient or excessive, and the appetite for such gains may result in policies designed to bring about cash-induced alterations in purchasing power. However, the services which money renders can be neither improved nor repaired by changing the supply of money. There may appear an excess or a deficiency of money in an individual's cash holding. But such a condition can be remedied by increasing or decreasing consumption or investment. (Of course, one must not fall prey to the popular confusion between the demand for money for cash holding and the appetite for more wealth.) The quantity of money available in the whole economy is always sufficient to secure for everybody all that money does and can do.

4.XVII.72

From the point of view of this insight one may call wasteful all expenditures incurred for increasing the quantity of money. The fact that things which could render some other useful services are employed as money and thus withheld from these other employments appears as a superfluous curtailment of limited opportunities for want-satisfaction. It was this idea that led Adam Smith and Ricardo to the opinion that it was very beneficial to reduce the cost of producing money by resorting to the use of paper printed currency. However, things appear in a different light to the students of monetary history. If one looks at the catastrophic consequences of the great paper money inflations, one must admit that the expensiveness of gold production is the minor evil. It would be futile to retort that these catastrophes were brought about by the improper use which the governments made of the powers that credit money and fiat money placed in their hands and that wiser governments would have adopted sounder policies. As money can never be neutral and stable in purchasing power, a government's plans concerning the determination of the quantity of money can never be impartial and fair to all members of society. Whatever a government does in the pursuit of aims to influence the height of purchasing power depends necessarily upon the rulers' personal value judgments. It always furthers the interests of some groups of people at the expense of other groups. It never serves what is called the commonweal or the public welfare. In the field of monetary policies too there is no such thing as a scientific ought.

4.XVII.73

The choice of the good to be employed as a medium of exchange and as money is never indifferent. It determines the course of the cash-induced changes in purchasing power. The question is only who should make the choice: the people buying and selling on the market, or the government? It was the market which in a selective process, going on for ages, finally assigned to the precious metals gold and silver the character of money. For two hundred years the governments have interfered with the market's choice of the money medium. Even the most bigoted étatists do not venture to assert that this interference has proved beneficial.

Inflation and Deflation; Inflationism and Deflationism

4.XVII.74

The notions of inflation and deflation are not praxeological concepts. They were not created by economists, but by the mundane speech of the public and of politicians. They implied the popular fallacy that there is such a thing as neutral money or money of stable purchasing power and that sound money should be neutral and stable in purchasing power. From this point of view the term inflation was applied to signify cash-induced changes resulting in a drop in purchasing power, and the term deflation to signify cash-induced changes resulting in a rise in purchasing power.

4.XVII.75

However, those applying these terms are not aware of the fact that purchasing power never remains unchanged and that consequently there is always either inflation or deflation. They ignore these necessarily perpetual fluctuations as far as they are only small and inconspicuous, and reserve the use of the terms to big changes in purchasing power. Since the question at what point a change in purchasing power begins to deserve being called big depends on personal relevance judgments, it becomes manifest that inflation and deflation are terms lacking the categorial precision required for praxeological, economic, and catallactic concepts. Their application is appropriate for history and politics. Catallactics is free to resort to them only when applying its theorems to the interpretation of events of economic history and of political programs. Moreover, it is very expedient even in rigid catallactic disquisitions to make use of these two terms whenever no misinterpretation can possibly result and pedantic heaviness of expression can be avoided. But it is necessary never to forget that all that catallactics says with regard to inflation and deflation—i.e., *big* cash-induced changes in purchasing power—is valid also with regard to small changes, although, of course, the consequences of smaller changes are less conspicuous than those of big changes.

4.XVII.76

The terms inflationism and deflationism, inflationist and deflationist, signify the political programs aiming at inflation and deflation in the sense of big cash-induced changes in purchasing power.

4.XVII.77

The semantic revolution which is one of the characteristic features of our day has also changed the traditional connotation of the terms inflation and deflation. What many people today call inflation or deflation is no longer the great increase or decrease in the supply of money, but its inexorable consequences, the general tendency toward a rise or a fall in commodity prices and wage rates. This innovation is by no means harmless. It plays an important role in fomenting the popular tendencies toward inflationism.

4.XVII.78

First of all there is no longer any term available to signify what inflation used to signify. It is impossible to fight a policy which you cannot name. Statesmen and writers no longer have the opportunity of resorting to a terminology accepted and understood by the public when they want to question the expediency of issuing huge amounts of additional money. They must enter into a detailed analysis and description of this policy with full particulars and minute accounts whenever they want to refer to it, and they must repeat this bothersome procedure in every sentence in which they deal with the subject. As this policy has no name, it becomes self-understood and a matter of fact. It goes on luxuriantly.

4.XVII.79

The second mischief is that those engaged in futile and hopeless attempts to fight the inevitable consequences of inflation—the rise in prices—are disguising their endeavors as a fight against inflation. While merely fighting symptoms, they pretend to fight the root causes of the evil. Because they do not comprehend the causal relation between the increase in the quantity of money on the one hand and the rise in prices on the other, they practically make things worse. The best example was provided by the subsidies granted in the Second World War on the part of the governments of the United States, Canada, and Great Britain to farmers. Price ceilings reduce the supply of the commodities concerned because production involves a loss for the marginal producers. To prevent this outcome the governments granted subsidies to the farmers producing at the highest costs. These subsidies were financed out of additional increases in the quantity of money. If the consumers had had to pay higher prices for the products concerned, no further inflationary effects would have emerged. The consumers would have had to use for such surplus expenditure only money which had already been issued previously. Thus the confusion of inflation and its consequences in fact can directly bring about more inflation.

4.XVII.80

It is obvious that this new-fangled connotation of the terms inflation and deflation is utterly confusing and misleading and must be unconditionally rejected.

7. Monetary Calculation and Changes in Purchasing Power

4.XVII.81

Monetary calculation reckons with the prices of commodities and services as they were determined or would have been determined or presumably will be determined on the market. It is eager to detect price discrepancies and to draw conclusions from such a detection.

4.XVII.82

Cash-induced changes in purchasing power cannot be taken into account in such calculations. It is possible to put in the place of calculation based on a definite kind of money *a* a mode of calculating based on another kind of money *b.* Then the result of the calculation is made safe against adulteration on the part of changes effected in the purchasing power of *a;* but it can still be adulterated by changes effected in the purchasing power of *b.* There is no means of freeing any mode of economic calculation from the influence of changes in the purchasing power of the definite kind of money on which it is based.

4.XVII.83

All results of economic calculation and all conclusions derived from them are conditioned by the vicissitudes of cash-induced changes in purchasing power. In accordance with the rise or fall in purchasing power there emerge between items reflecting earlier prices and those reflecting later prices specific differences; the calculation shows profits or losses which are merely produced by cash-induced changes effected in the purchasing power of money. If we compare such profits or losses with the result of a calculation accomplished on the basis of a kind of money whose purchasing power had been subject to less vehement changes, we can call them imaginary or apparent only. But one must not forget that such statements are only possible as a result of the comparison of calculations carried out in different kinds of money. As there is no such thing as a money with stable purchasing power, such apparent profits and losses are present with every mode of economic calculation, no matter on what kind of money it may be based. It is impossible to distinguish precisely between genuine profits and losses and merely apparent profits and losses.

4.XVII.84

It is therefore possible to maintain that economic calculation is not perfect. However, nobody can suggest a method which could free economic calculation from these defects or design a monetary system which could remove this source of error entirely.

4.XVII.85

It is an undeniable fact that the free market has succeeded in developing a currency system which well served all the requirements both of indirect exchange and of economic calculation. The aims of monetary calculation are such that they cannot be frustrated by the inaccuracies which stem from slow and comparatively slight movements in purchasing power. Cash-induced changes in purchasing power of the extent to which they occurred in the last two centuries with metallic money, especially with gold money, cannot influence the result of the businessmen's economic calculations so considerably as to render such calculations useless. Historical experience shows that one could, for all practical purposes of the conduct of business, manage very well with these methods of calculation. Theoretical consideration shows that it is impossible to design, still less to realize, a better method. In view of these facts it is vain to call monetary calculation imperfect. Man has not the power to change the categories of human action. He must adjust his conduct to them.

4.XVII.86

Businessmen never deemed it necessary to free economic calculation in terms of gold from its dependence on the fluctuations in purchasing power. The proposals to improve the currency system by adopting a tabular standard based on index numbers or by adopting various methods of commodity standards were not advanced with regard to business transactions and to monetary calculation. Their aim was to provide a less fluctuating standard for long-run loan contracts. Businessmen did not even consider it expedient to modify their accounting methods in those regards in which it would have been easy to narrow down certain errors induced by fluctuations in purchasing power. It would, for instance, have been possible to discard the practice of writing off durable equipment by means of yearly depreciation quotas, invariably fixed as a percentage of the cost of its acquisition. In its place one could resort to the device of laying aside in renewal funds as much as seems necessary to provide the full cost of the replacement at the time when it is required. But business was not eager to adopt such a procedure.

4.XVII.87
All this is valid only with regard to money which is not subject to rapid, big cash-induced changes in purchasing power. But money with which such rapid and big changes occur loses its suitability to serve as a medium of exchange altogether.

8. The Anticipation of Expected Changes in Purchasing Power

4.XVII.88
The deliberations of the individuals which determine their conduct with regard to money are based on their knowledge concerning the prices of the immediate past. If they lacked this knowledge, they would not be in a position to decide what the appropriate height of their cash holdings should be and how much they should spend for the acquisition of various goods. A medium of exchange without a past is unthinkable. Nothing can enter into the function of a medium of exchange which was not already previously an economic good and to which people assigned exchange value already before it was demanded as such a medium.

4.XVII.89
But the purchasing power handed down from the immediate past is modified by today's demand for and supply of money. Human action is always providing for the future, be it sometimes only the future of the impending hour. He who buys, buys for future consumption and production. As far as he believes that the future will differ from the present and the past, he modifies his valuation and appraisement. This is no less true with regard to money than it is with regard to all vendible goods. In this sense we may say that today's exchange value of money is an anticipation of tomorrow's exchange value. The basis of all judgments concerning money is its purchasing power as it was in the immediate past. But as far as cash-induced changes in purchasing power are expected, a second factor enters the scene, the anticipation of these changes.

4.XVII.90
He who believes that the prices of the goods in which he takes an interest will rise, buys more of them than he would have bought in the absence of this belief; accordingly he restricts his cash holding. He who believes that prices will drop, restricts his purchases and thus enlarges his cash holding. As long as such speculative anticipations are limited to some commodities, they do not bring about a general tendency toward changes in cash holding. But it is different if people believe that they are on the eve of big cash-induced changes in purchasing power. When they expect that the money prices of all goods will rise or fall, they expand or restrict their purchases. These attitudes strengthen and accelerate the expected tendencies considerably. This goes on until the point is reached beyond which no further changes in the purchasing power of money are expected. Only then does this inclination to buy or to sell stop and do people begin again to increase or to decrease their cash holdings.

4.XVII.91
But if once public opinion is convinced that the increase in the quantity of money will continue and never come to an end, and that consequently the prices of all commodities and services will not cease to rise, everybody becomes eager to buy as much as possible and to restrict his cash holding to a minimum size. For under these circumstances the regular costs incurred by holding cash are increased by the losses caused by the progressive fall in purchasing power. The advantages of holding cash must be paid for by sacrifices which are deemed unreasonably burdensome. This phenomenon was, in the great European inflations of the 'twenties, called *flight into real goods (Flucht in die*

Sachwerte) or *crack-up boom (Katastrophenhausse).* The mathematical economists are at a loss to comprehend the causal relation between the increase in the quantity of money and what they call "velocity of circulation."

4.XVII.92

The characteristic mark of this phenomenon is that the increase in the quantity of money causes a fall in the demand for money. The tendency toward a fall in purchasing power as generated by the increased supply of money is intensified by the general propensity to restrict cash holdings which it brings about. Eventually a point is reached where the prices at which people would be prepared to part with "real" goods discount to such an extent the expected progress in the fall of purchasing power that nobody has a sufficient amount of cash at hand to pay them. The monetary system breaks down; all transactions in the money concerned cease; a panic makes its purchasing power vanish altogether. People return either to barter or to the use of another kind of money.

4.XVII.93

The course of a progressing inflation is this: At the beginning the inflow of additional money makes the prices of some commodities and services rise; other prices rise later. The price rise affects the various commodities and services, as has been shown, at different dates and to a different extent.

4.XVII.94

This first stage of the inflationary process may last for many years. While it lasts, the prices of many goods and services are not yet adjusted to the altered money relation. There are still people in the country who have not yet become aware of the fact that they are confronted with a price revolution which will finally result in a considerable rise of all prices, although the extent of this rise will not be the same in the various commodities and services. These people still believe that prices one day will drop. Waiting for this day, they restrict their purchases and concomitantly increase their cash holdings. As long as such ideas are still held by public opinion, it is not yet too late for the government to abandon its inflationary policy.

4.XVII.95

But then finally the masses wake up. They become suddenly aware of the fact that inflation is a deliberate policy and will go on endlessly. A breakdown occurs. The crack-up boom appears. Everybody is anxious to swap his money against "real" goods, no matter whether he needs them or not, no matter how much money he has to pay for them. Within a very short time, within a few weeks or even days, the things which were used as money are no longer used as media of exchange. They become scrap paper. Nobody wants to give away anything against them.

4.XVII.96

It was this that happened with the *Continental currency* in America in 1781, with the French *mandats territoriaux* in 1796, and with the German *Mark* in 1923. It will happen again whenever the same conditions appear. If a thing has to be used as a medium of exchange, public opinion must not believe that the quantity of this thing will increase beyond all bounds. Inflation is a policy that cannot last.

9. The Specific Value of Money

4.XVII.97

As far as a good used as money is valued and appraised on account of the services it renders for nonmonetary purposes, no problems are raised which would require special treatment. The task of the theory of money consists merely in dealing with that component in the valuation of money which is conditioned by its function as a medium of exchange.

4.XVII.98

In the course of history various commodities have been employed as media of exchange. A long evolution eliminated the greater part of these commodities from the monetary function. Only two, the precious metals gold and silver, remained. In the second part of the nineteenth century more and more governments deliberately turned toward the demonetization of silver.

4.XVII.99 In all these cases what is employed as money is a commodity which is used also for nonmonetary purposes. Under the gold standard gold is money and money is gold. It is immaterial whether or not the laws assign legal tender quality only to gold coins minted by the government. What counts is that these coins really contain a fixed weight of gold and that every quantity of bullion can be transformed into coins. Under the gold standard the dollar and the pound sterling were merely names for a definite weight of gold, within very narrow margins precisely determined by the laws. We may call such a sort of money *commodity money.*

4.XVII.100 A second sort of money is *credit money.* Credit money evolved out of the use of money-substitutes. It was customary to use claims, payable on demand and absolutely secure, as substitutes for the sum of money to which they gave a claim. (We shall deal with the features and problems of money-substitutes in the next sections.) The market did not stop using such claims when one day their prompt redemption was suspended and thereby doubts about their safety and the solvency of the obligee were raised. As long as these claims had been daily maturing claims against a debtor of undisputed solvency and could be collected without notice and free of expense, their exchange value was equal to their face value; it was this perfect equivalence which assigned to them the character of money-substitutes. Now, as redemption was suspended, the maturity date postponed to an undetermined day, and consequently doubts about the solvency of the debtor or at least about his willingness to pay emerged, they lost a part of the value previously ascribed to them. They were now merely claims, which did not bear interest, against a questionable debtor and falling due on an undefined day. But as they were used as media of exchange, their exchange value did not drop to the level to which it would have dropped if they were merely claims.

4.XVII.101 One can fairly assume that such credit money could remain in use as a medium of exchange even if it were to lose its character as a claim against a bank or a treasury, and thus would become *fiat money.* Fiat money is a money consisting of mere tokens which can neither be employed for any industrial purposes nor convey a claim against anybody.

4.XVII.102 It is not a task of catallactics but of economic history to investigate whether there appeared in the past specimens of fiat money or whether all the sorts of money which were not commodity money were credit money. The only thing that catallactics has to establish is that the possibility of the existence of fiat money must be admitted.

4.XVII.103 The important thing to be remembered is that with every sort of money, demonetization—i.e., the abandonment of its use as a medium of exchange—must result in a serious fall of its exchange value. What this practically means has become manifest when in the last ninety years the use of silver as commodity money has been progressively restricted.

4.XVII.104 There are specimens of credit money and fiat money which are embodied in metallic coins. Such money is printed, as it were, on silver, nickel, or copper. If such a piece of fiat money is demonetized, it still retains exchange value as a piece of metal. But this is only a very small indemnification of the owner. It has no practical importance.

4.XVII.105 The keeping of cash holding requires sacrifices. To the extent that a man keeps money in his pockets or in his balance with a bank, he forsakes the instantaneous acquisition of goods he could consume or employ for production. In the market economy these sacrifices can be precisely determined by calculation. They are equal to the amount of originary interest he would have earned by investing the sum. The fact that a man takes this falling off into account is proof that he prefers the advantages of cash holding to the loss in interest yield.

4.XVII.106 It is possible to specify the advantages which people expect from keeping a definite amount of cash. But it is a delusion to assume that an analysis of these motives could provide us with a theory of the determination of purchasing power which could do without the notions of cash holding and demand for and supply of money.[*82] The advantages and disadvantages derived from cash holding are not objective factors which could directly influence the size of cash holdings. They are put on the scales by each individual and weighed against one another. The result is a subjective judgment of value, colored by the individual's personality. Different people and the same people at different times value the same objective facts in a different way. Just as knowledge of a man's wealth and his physical condition does not tell us how much he would be prepared to spend for food of a certain nutritive power, so knowledge about data concerning a man's material situation does not enable us to make definite assertions with regard to the size of his cash holding.

10. The Import of the Money Relation

4.XVII.107 The money relation, i.e., the relation between demand for and supply of money, uniquely determines the price structure as far as the reciprocal exchange ratio between money and the vendible commodities and services is involved.

4.XVII.108 If the money relation remains unchanged, neither an inflationary (expansionist) nor a deflationary (contractionist) pressure on trade, business, production, consumption, and employment can emerge. The assertions to the contrary reflect the grievances of people reluctant to adjust their activities to the demands of their fellow men as manifested on the market. However, it is not on account of an alleged scarcity of money that prices of agricultural products are too low to secure to the submarginal farmers proceeds of the amount they would like to earn. The cause of these farmers' distress is that other farmers are producing at lower costs.

4.XVII.109 An increase in the quantity of goods produced, other things being unchanged, must bring about an improvement in people's conditions. Its consequence is a fall in the money prices of the goods the production of which has been increased. But such a fall in money prices does not in the least impair the benefits derived from the additional wealth produced. One may consider as unfair the increase in the share of the additional wealth which goes to the creditors, although such criticisms are questionable as far as the rise in purchasing power has been correctly anticipated and adequately taken into account by a negative price premium.[*83] But one must not say that a fall in prices caused by an increase in the production of the goods concerned is the proof of some disequilibrium which cannot be eliminated otherwise than by increasing the quantity of money. Of course, as a rule every increase in production of some or of all commodities requires a new allocation of factors of production to the various branches of business. If the quantity of money remains unchanged, the necessity of such a reallocation becomes visible in the price structure. Some lines of production become more profitable, while in other profits drop or losses appear. Thus the operation of the market tends to eliminate these much discussed disequilibria. It is possible by means of an increase in the quantity of money to delay or to interrupt this process of adjustment. It is impossible either to make it superfluous or less painful for those concerned.

4.XVII.110 If the government-made cash-induced changes in the purchasing power of money resulted only in shifts of wealth from some people to other people, it would not be permissible to condemn them from the point of view of catallactics' scientific neutrality. It is obviously fraudulent to justify them under the pretext of the commonweal or public welfare. But one could still consider them as political measures suitable to promote the interests of some groups of people at the expense of others without further detriment.

However, there are still other things involved.

4.XVII.111 It is not necessary to point out the consequences to which a continued deflationary policy must lead. Nobody advocates such a policy. The favor of the masses and of the writers and politicians eager for applause goes to inflation. With regard to these endeavors we must emphasize three points. First: Inflationary or expansionist policy must result in overconsumption on the one hand and in malinvestment on the other. It thus squanders capital and impairs the future state of want-satisfaction.[*84] Second: The inflationary process does not remove the necessity of adjusting production and reallocating resources. It merely postpones it and thereby makes it more troublesome. Third: Inflation cannot be employed as a permanent policy because it must, when continued, finally result in a breakdown of the monetary system.

4.XVII.112 A retailer or innkeeper can easily fall prey to the illusion that all that is needed to make him and his colleagues more prosperous is more spending on the part of the public. In his eyes the main thing is to impel people to spend more. But it is amazing that this belief could be presented to the world as a new social philosophy. Lord Keynes and his disciples make the lack of the propensity to consume responsible for what they deem unsatisfactory in economic conditions. What is needed, in their eyes, to make men more prosperous is not an increase in production, but an increase in spending. In order to make it possible for people to spend more, an "expansionist" policy is recommended.

4.XVII.113 This doctrine is as old as it is bad. Its analysis and refutation will be undertaken in the chapter dealing with the trade cycle.[*85]

11. The Money-Substitutes

4.XVII.114 Claims to a definite amount of money, payable and redeemable on demand, against a debtor about whose solvency and willingness to pay there does not prevail the slightest doubt, render to the individual all the services money can render, provided that all parties with whom he could possibly transact business are perfectly familiar with these essential qualities of the claims concerned: daily maturity as well as undoubted solvency and willingness to pay on the part of the debtor. We may call such claims *money-substitutes,* as they can fully replace money in an individual's or a firm's cash holding. The technical and legal features of the money-substitutes do not concern catallactics. A money-substitute can be embodied either in a banknote or in a demand deposit with a bank subject to check ("checkbook money" or deposit currency), provided the bank is prepared to exchange the note or the deposit daily free of charge against money proper. Token coins are also money-substitutes, provided the owner is in a position to exchange them at need, free of expense and without delay, against money. To achieve this it is not required that the government be bound by law to redeem them. What counts is the fact that these tokens can be really converted free of expense and without delay. If the total amount of token coins issued is kept within reasonable limits, no special provisions on the part of the government are necessary to keep their exchange value at par with their face value. The demand of the public for small change gives everybody the opportunity to exchange them easily against pieces of money. The main thing is that every owner of a money-substitute is perfectly certain that it can, at every instant and free of expense, be exchanged against money.

4.XVII.115 If the debtor—the government or a bank—keeps against the whole amount of money-substitutes a 100% reserve of money proper, we call the money-substitute a *money-certificate.* The individual money-certificate is—not necessarily in a legal sense, but always in the catallactic sense—a representative of a corresponding amount of money kept in the reserve. The issuing of money-certificates does not increase the quantity of things suitable to satisfy the demand for money for cash holding. Changes in the quantity of money-certificates therefore do not alter the supply of money and the money relation. They do not play any role in the determination of the purchasing power of money.

4.XVII.116
If the money reserve kept by the debtor against the money-substitutes issued is less than the total amount of such substitutes, we call that amount of substitutes which exceeds the reserve *fiduciary media.* As a rule it is not possible to ascertain whether a concrete specimen of money-substitutes is a money-certificate or a fiduciary medium. A part of the total amount of money-substitutes issued is usually covered by a money reserve held. Thus a part of the total amount of money-substitutes issued is money-certificates, the rest fiduciary media. But this fact can only be recognized by those familiar with the bank's balance sheets. The individual banknote, deposit, or token coin does not indicate its catallactic character.

4.XVII.117
The issue of money-certificates does not increase the funds which the bank can employ in the conduct of its lending business. A bank which does not issue fiduciary media can only grant *commodity credit,* i.e., it can only lend its own funds and the amount of money which its customers have entrusted to it. The issue of fiduciary media enlarges the bank's funds available for lending beyond these limits. It can now not only grant commodity credit, but also *circulation credit,* i.e., credit granted out of the issue of fiduciary media.

4.XVII.118
While the quantity of money-certificates is indifferent, the quantity of fiduciary media is not. The fiduciary media affect the market phenomena in the same way as money does. Changes in their quantity influence the determination of money's purchasing power and of prices and—temporarily—also of the rate of interest.

4.XVII.119
Earlier economists applied a different terminology. Many were prepared to call the money-substitutes simply money, as they are fit to render the services money renders. However, this terminology is not expedient. The first purpose of a scientific terminology is to facilitate the analysis of the problems involved. The task of the catallactic theory of money—as differentiated from the legal theory and from the technical disciplines of bank management and accountancy—is the study of the problems of the determination of prices and interest rates. This task requires a sharp distinction between money-certificates and fiduciary media.

4.XVII.120
The term *credit expansion* has often been misinterpreted. It is important to realize that commodity credit cannot be expanded. The only vehicle of credit expansion is circulation credit. But the granting of circulation credit does not always mean credit expansion. If the amount of fiduciary media previously issued has consummated all its effects upon the market, if prices, wage rates, and interest rates have been adjusted to the total supply of money proper plus fiduciary media (supply of money in the broader sense), granting of circulation credit without a further increase in the quantity of fiduciary media is no longer credit expansion. Credit expansion is present only if credit is granted by the issue of an additional amount of fiduciary media, not if banks lend anew fiduciary media paid back to them by the old debtors.

12. The Limitation on the Issuance of Fiduciary Media

4.XVII.121
People deal with money-substitutes as if they were money because they are fully confident that it will be possible to exchange them at any time without delay and without cost against money. We may call those who share in this confidence and are therefore ready to deal with money-substitutes as if they were money, the *clients* of the issuing banker, bank, or authority. It does not matter whether or not this issuing establishment is operated according to the patterns of conduct customary in the banking business. Token coins issued by a country's treasury are money-substitutes too, although the treasury as

a rule does not enter the amount issued into its accounts as a liability and does not consider this amount a part of the national debt. It is no less immaterial whether or not the owner of a money-substitute has an actionable claim to redemption. What counts is whether the money-substitute can really be exchanged against money without delay and cost.[*86]

4.XVII.122 Issuing money-certificates is an expensive venture. The banknotes must be printed, the token coins minted; a complicated accounting system for the deposits must be organized; the reserves must be kept in safety; then there is the risk of being cheated by counterfeit banknotes and checks. Against all these expenses stands only the slight chance that some of the banknotes issued may be destroyed and the still slighter chance that some depositors may forget their deposits. Issuing money-certificates is a ruinous business if not connected with issuing fiduciary media. In the early history of banking there were banks whose only operation consisted in issuing money-certificates. But these banks were indemnified by their clients for the costs incurred. At any rate, catallactics is not interested in the purely technical problems of banks not issuing fiduciary media. The only interest that catallactics takes in money-certificates is the connection between issuing them and the issuing of fiduciary media.

4.XVII.123 While the quantity of money-certificates is catallactically unimportant, an increase or decrease in the quantity of fiduciary media affects the determination of money's purchasing power in the same way as do changes in the quantity of money. Hence the question of whether there are or are not limits to the increase in the quantity of fiduciary media has fundamental importance.

4.XVII.124 If the clientele of the bank includes all members of the market economy, the limit to the issue of fiduciary media is the same as that drawn to the increase in the quantity of money. A bank which is, in an isolated country or in the whole world, the only institution issuing fiduciary media and the clientele of which comprises all individuals and firms, is bound to comply in its conduct of affairs with two rules:

4.XVII.125 First: It must avoid any action which could make the clients—i.e., the public—suspicious. As soon as the clients begin to lose confidence, they will ask for the redemption of the banknotes and withdraw their deposits. How far the bank can go on increasing its issues of fiduciary media without arousing distrust, depends on psychological factors.

4.XVII.126 Second: It must not increase the amount of fiduciary media at such a rate and with such speed that the clients get the conviction that the rise in prices will continue endlessly at an accelerated pace. For if the public believes that this is the case, they will reduce their cash holdings, flee into "real" values, and bring about the crack-up boom. It is impossible to imagine the approach of this catastrophe without assuming that its first manifestation consists in the evanescence of confidence. The public will certainly prefer exchanging the fiduciary media against money to fleeing into real values, i.e., to the indiscriminate buying of various commodities. Then the bank must go bankrupt. If the government interferes by freeing the bank from the obligation of redeeming its banknotes and of paying back the deposits in compliance with the terms of the contract, the fiduciary media become either credit money or fiat money. The suspension of specie payments entirely changes the state of affairs. There is no longer any question of fiduciary media, of money-certificates, and of money-substitutes. The government enters the scene with its government-made legal tender laws. The bank loses its independent existence; it becomes a tool of government policies, a subordinate office of the treasury.

4.XVII.127 The catallactically most important problems of the issuance of fiduciary media on the part of a single bank, or of banks acting in concert, the clientele of which comprehends all individuals, are not those of the limitations drawn to the amount of their issuance. We will deal with them in Chapter XX, devoted to the relations between the quantity of money and the rate of interest.

4.XVII.128 At this point of our investigations we have to scrutinize the problem of the coexistence of a multiplicity of independent banks. Independence means that every bank in issuing fiduciary media follows its own course and does not act in concert with other banks. Coexistence means that every bank has a clientele which does not include all members of the market system. For the sake of simplicity we will assume that no individual or firm is a client of more than one bank. It would not affect the result of our demonstration if we were to assume that there are also people who are clients of more than one bank and people who are not clients of any bank.

4.XVII.129 The question to be raised is not whether or not there are limits to the issuance of fiduciary media on the part of such independently coexisting banks. As there are even limits to the issuance of fiduciary media on the part of a unique bank the clientele of which comprises all people, it is obvious that there are such limits for a multiplicity of independently coexisting banks too. What we want to show is that for such a multiplicity of independently coexisting banks the limits are narrower than those drawn for a single bank with an unlimited clientele.

4.XVII.130 We assume that within a market system several independent banks have been established in the past. While previously only money was in use, these banks have introduced the use of money-substitutes a part of which are fiduciary media. Each bank has a clientele and has issued a certain quantity of fiduciary media which are kept as money-substitutes in the cash holdings of various clients. The total quantity of the fiduciary media as issued by the banks and absorbed by the cash holdings of their clients has altered the structure of prices and the monetary unit's purchasing power. But these effects have already been consummated and at present the market is no longer stirred by any movements generated from this past credit expansion.

4.XVII.131 But now, we assume further, one bank alone embarks upon an additional issue of fiduciary media while the other banks do not follow suit. The clients of the expanding bank—whether its old clients or new ones acquired on account of the expansion—receive additional credits, they expand their business activities, they appear on the market with an additional demand for goods and services, they bid up prices. Those people who are not clients of the expanding bank are not in a position to afford these higher prices; they are forced to restrict their purchases. Thus there prevails on the market a shifting of goods from the nonclients to the clients of the expanding bank. The clients buy more from the nonclients than they sell to them; they have more to pay to the nonclients than they receive from them. But money-substitutes issued by the expanding bank are not suitable for payments to nonclients, as these people do not assign to them the character of money-substitutes. In order to settle the payments due to nonclients, the clients must first exchange the money-substitutes issued by their own—viz., the expanding bank—against money. The expanding bank must redeem its banknotes and pay out its deposits. Its reserve—we suppose that only a part of the money-substitutes it had issued had the character of fiduciary media—dwindles. The instant approaches in which the bank will—after the exhaustion of its money reserve—no longer be in a position to redeem the money-substitutes still current. In order to avoid insolvency it must as soon as possible return to a policy of strengthening its money reserve. It must abandon its expansionist methods.

4.XVII.132 This reaction of the market to a credit expansion on the part of a bank with a limited clientele has been brilliantly described by the Currency School. The special case dealt with by the Currency School referred to the coincidence of credit expansion on the part of one country's privileged central bank or of all banks of one country and of a nonexpansionist policy on the part of the banks of other countries. Our demonstration covers the more general case of the coexistence of a multiplicity of banks with different clientele as well as the most general case of the existence of one bank with a limited clientele in a system in which the rest of the people do not patronize any bank and do not consider any claims as money-substitutes. It does not matter, of course, whether one assumes that the clients of a bank live neatly separated from those of the other banks in a definite district or country or whether they live side by side with those of the other banks. These are merely differences in the data not affecting the catallactic problems involved.

4.XVII.133
A bank can never issue more money-substitutes than its clients can keep in their cash holdings. The individual client can never keep a larger portion of his total cash holding in money-substitutes than that corresponding to the proportion which his turnover with other clients of his bank bears to his total turnover. For considerations of convenience he will, as a rule, remain far below this maximum proportion. Thus a limit is drawn to the issue of fiduciary media. We may admit that everybody is ready to accept in his current transactions indiscriminately banknotes issued by any bank and checks drawn upon any bank. But he deposits without delay with his own bank not only the checks but also the banknotes of banks of which he is not himself a client. In the further course his bank settles its accounts with the bank engaged. Thus the process described above comes into motion.

4.XVII.134
A lot of nonsense has been written about a perverse predilection of the public for banknotes issued by dubious banks. The truth is that, except for small groups of businessmen who were able to distinguish between good and bad banks, banknotes were always looked upon with distrust. It was the special charters which the governments granted to privileged banks that slowly made these suspicions disappear. The often advanced argument that small banknotes come into the hands of poor and ignorant people who cannot distinguish between good and bad notes cannot be taken seriously. The poorer the recipient of a banknote is and the less familiar he is with bank affairs, the more quickly will he spend the note and the more quickly will it return, by way of retail and wholesale trade, to the issuing bank or to people conversant with banking conditions.

4.XVII.135
It is very easy for a bank to increase the number of people who are ready to accept loans granted by credit expansion and paid out in an amount of money-substitutes. But it is very difficult for any bank to enlarge its clientele, that is, the number of people who are ready to consider these claims as money-substitutes and to keep them as such in their cash holdings. To enlarge this clientele is a troublesome and slow process, as is the acquisition of any kind of good will. On the other hand, a bank can lose its clientele very quickly. If it wants to preserve it, it must never permit any doubt about its ability and readiness to discharge all its liabilities in due compliance with the terms of the contract. A reserve must be kept large enough to redeem all banknotes which a holder may submit for redemption. Therefore no bank can content itself with issuing fiduciary media only; it must keep a reserve against the total amount of money-substitutes issued and thus combine issuing fiduciary media and money-certificates.

4.XVII.136
It was a serious blunder to believe that the reserve's task is to provide the means for the redemption of those banknotes the holders of which have lost confidence in the bank. The confidence which a bank and the money-substitutes it has issued enjoy is indivisible. It is either present with all its clients or it vanishes entirely. If some of the clients lose confidence, the rest of them lose it too. No bank issuing fiduciary media and granting circulation credit can fulfill the obligations which it has taken over in issuing money-substitutes if all clients are losing confidence and want to have their banknotes redeemed and their deposits paid back. This is an essential feature or weakness of the business of issuing fiduciary media and granting circulation credit. No system of reserve policy and no reserve requirements as enforced by the laws can remedy it. All that a reserve can do is

to make it possible for the bank to withdraw from the market an excessive amount of fiduciary media issued. If the bank has issued more banknotes than its clients can use in doing business with other clients, it must redeem such an excess.

4.XVII.137
The laws which compelled the banks to keep a reserve in a definite ratio of the total amount of deposits and of banknotes issued were effective in so far as they restricted the increase in the amount of fiduciary media and of circulation credit. They were futile as far as they aimed at safeguarding, in the event of a loss of confidence, the prompt redemption of the banknotes and the prompt payment on deposits.

4.XVII.138
The Banking School failed entirely in dealing with these problems. It was confused by a spurious idea according to which the requirements of business rigidly limit the maximum amount of convertible banknotes that a bank can issue. They did not see that the demand of the public for credit is a magnitude dependent on the banks' readiness to lend, and that banks which do not bother about their own solvency are in a position to expand circulation credit by lowering the rate of interest below the market rate. It is not true that the maximum amount which a bank can lend if it limits its lending to discounting short-term bills of exchange resulting from the sale and purchase of raw materials and half-manufactured goods, is a quantity uniquely determined by the state of business and independent of the bank's policies. This quantity expands or shrinks with the lowering or raising of the rate of discount. Lowering the rate of interest is tantamount to increasing the quantity of what is mistakenly considered as the fair and normal requirements of business.

4.XVII.139
The Currency School gave a quite correct explanation of the recurring crises as they upset English business conditions in the 'thirties and 'forties of the nineteenth century. There was credit expansion on the part of the Bank of England and the other British banks and bankers, while there was no credit expansion, or at least not to the same degree, in the countries with which Great Britain traded. The external drain occurred as the necessary consequence of this state of affairs. Everything that the Banking School advanced in order to refute this theory was vain. Unfortunately, the Currency School erred in two respects. It never realized that the remedy it suggested, namely strict legal limitation of the amount of banknotes issued beyond the specie reserve, was not the only one. It never gave a thought to the idea of free banking. The second fault of the Currency School was that it failed to recognize that deposits subject to check are money-substitutes and, as far as their amount exceeds the reserve kept, fiduciary media, and consequently no less a vehicle of credit expansion than are banknotes. It was the only merit of the Banking School that it recognized that what is called deposit currency is a money-substitute no less than banknotes. But except for this point, all the doctrines of the Banking School were spurious. It was guided by contradictory ideas concerning money's neutrality; it tried to refute the quantity theory of money by referring to a *deus ex machina,* the much talked about hoards, and it misconstrued entirely the problems of the rate of interest.

4.XVII.140
It must be emphasized that the problem of legal restrictions upon the issuance of fiduciary media could emerge only because governments had granted special privileges to one or several banks and had thus prevented the free evolution of banking. If the governments had never interfered for the benefit of special banks, if they had never released some banks from the obligation, incumbent upon all individuals and firms in the market economy, to settle their liabilities in full compliance with the terms of the contract, no bank problem would have come into being. The limits which are drawn to credit expansion would have worked effectively. Considerations of its own solvency would have forced every bank to cautious restraint in issuing fiduciary media. Those banks which would not have observed these indispensable rules would have gone bankrupt, and the public, warned through damage, would have become doubly suspicious and reserved.

4.XVII.141

The attitudes of the European governments with regard to banking were from the beginning insincere and mendacious. The pretended solicitude for the nation's welfare, for the public in general, and for the poor ignorant masses in particular was a mere blind. The governments wanted inflation and credit expansion, they wanted booms and easy money. Those Americans who twice succeeded in doing away with a central bank were aware of the dangers of such institutions; it was only too bad that they failed to see that the evils they fought were present in every kind of government interference with banking. Today even the most bigoted étatists cannot deny that all the alleged evils of free banking count little when compared with the disastrous effects of the tremendous inflations which the privileged and government-controlled banks have brought about.

4.XVII.142

It is a fable that governments interfered with banking in order to restrict the issue of fiduciary media and to prevent credit expansion. The idea that guided governments was, on the contrary, the lust for inflation and credit expansion. They privileged banks because they wanted to widen the limits that the unhampered market draws to credit expansion or because they were eager to open to the treasury a source of revenue. For the most part both of these considerations motivated the authorities. They were convinced that the fiduciary media are an efficient means of lowering the rate of interest, and asked the banks to expand credit for the benefit of both business and the treasury. Only when the undesired effects of credit expansion became visible, were laws enacted to restrict the issue of banknotes—and sometimes also of deposits—not covered by specie. The establishment of free banking was never seriously considered precisely because it would have been too efficient in restricting credit expansion. For rulers, writers, and the public were unanimous in the belief that business has a fair claim to a "normal" and "necessary" amount of circulation credit and that this amount could not be attained under free banking.[*87]

4.XVII.143

Many governments never looked upon the issuance of fiduciary media from a point of view other than that of fiscal concerns. In their eyes the foremost task of the banks was to lend money to the treasury. The money-substitutes were favorably considered as pacemakers for government-issued paper money. The convertible banknote was merely a first step on the way to the nonredeemable banknote. With the progress of statolatry and the policy of interventionism these ideas have become general and are no longer questioned by anybody. No government is willing today to give any thought to the program of free banking because no government wants to renounce what it considers a handy source of revenue. What is called today financial war preparedness is merely the ability to procure by means of privileged and government-controlled banks all the money a warring nation may need. Radical inflationism, although not admitted explicitly, is an essential feature of the economic ideology of our age.

4.XVII.144

But even at the time liberalism enjoyed its highest prestige and governments were more eager to preserve peace and well-being than to foment war, death, destruction, and misery, people were biased in dealing with the problems of banking. Outside of the Anglo-Saxon countries public opinion was convinced that it is one of the main tasks of good government to lower the rate of interest and that credit expansion is the appropriate means for the attainment of this end.

4.XVII.145

Great Britain was free from these errors when in 1844 it reformed its bank laws. But the two shortcomings of the Currency School vitiated this famous act. On one hand, the system of government interference with banking was preserved. On the other hand, limits were placed only on the issuance of banknotes not covered by specie. The fiduciary media were suppressed only in the shape of banknotes. They could thrive as deposit currency.

4.XVII.146

In carrying the idea implied in the Currency Theory to its full logical conclusion, one could suggest that all banks be forced by law to keep against the total amount of money-substitutes (banknotes plus demand deposits) a 100 per cent money reserve. This is the core of Professor Irving Fisher's 100 per cent plan. But Professor Fisher combined his plan with his proposals concerning the adoption of an index-number standard. It has been pointed out already why such a scheme is illusory and tantamount to open approval of the government's power to manipulate purchasing power according to the appetites of powerful pressure groups. But even if the 100 per cent reserve plan were to be adopted on the basis of the unadulterated gold standard, it would not entirely remove the drawbacks inherent in every kind of government interference with banking. What is needed to prevent any further credit expansion is to place the banking business under the general rules of commercial and civil laws compelling every individual and firm to fulfill all obligations in full compliance with the terms of the contract. If banks are preserved as privileged establishments subject to special legislative provisions, the tool remains that governments can use for fiscal purposes. Then every restriction imposed upon the issuance of fiduciary media depends upon the government's and the parliament's good intentions. They may limit the issuance for periods which are called normal. The restriction will be withdrawn whenever a government deems that an emergency justifies resorting to extraordinary measures. If an administration and the party backing it want to increase expenditure without jeopardizing their popularity through the imposition of higher taxes, they will always be ready to call their impasse an emergency. Recourse to the printing press and to the obsequiousness of bank managers willing to oblige the authorities regulating their conduct of affairs is the foremost means of governments eager to spend money for purposes for which the taxpayers are not ready to pay higher taxes.

4.XVII.147

Free banking is the only method available for the prevention of the dangers inherent in credit expansion. It would, it is true, not hinder a slow credit expansion, kept within very narrow limits, on the part of cautious banks which provide the public with all information required about their financial status. But under free banking it would have been impossible for credit expansion with all its inevitable consequences to have developed into a regular —one is tempted to say normal—feature of the economic system. Only free banking would have rendered the market economy secure against crises and depressions.

4.XVII.148

Looking backward upon the history of the last two centuries, one cannot help realizing that the blunders committed by liberalism in handling the problems of banking were a deadly blow to the market economy. There was no reason whatever to abandon the principle of free enterprise in the field of banking. The majority of liberal politicians simply surrendered to the popular hostility against money-lending and interest taking. They failed to realize that the rate of interest is a market phenomenon which cannot be manipulated *ad libitum* by the authorities or by any other agency. They adopted the superstition that lowering the rate of interest is beneficial and that credit expansion is the right means of attaining such cheap money. Nothing harmed the cause of liberalism more than the almost regular return of feverish booms and of the dramatic breakdown of bull markets followed by lingering slumps. Public opinion has become convinced that such happenings are inevitable in the unhampered market economy. People did not conceive that what they lamented was the necessary outcome of policies directed toward a lowering of the rate of interest by means of credit expansion. They stubbornly kept to these policies and tried in vain to fight their undesired consequences by more and more government interference.

Observations on the Discussions Concerning Free Banking

4.XVII.149

The Banking School taught that an overissuance of banknotes is impossible if the bank limits its business to the granting of short-term loans.[*88] When the loan is paid back at maturity, the banknotes return to the bank and thus disappear from the market. However, this happens only if the bank restricts the amount of credits granted. (But even then it would not undo the effects of its previous credit expansion. It would merely add to it the effects of a later credit contraction.) The regular course of affairs is that the bank replaces the bills expired and paid back by discounting new bills of exchange. Then to the amount of banknotes withdrawn from the market by the repayment of the earlier loan there corresponds an amount of newly issued banknotes.

4.XVII.150 The concatenation which sets a limit to credit expansion under a system of free banking works in a different way. It has no reference whatever to the process which this so-called Principle of Fullarton has in mind. It is brought about by the fact that credit expansion in itself does not expand a bank's clientele, viz., the number of people who assign to the demand-claims against this bank the character of money-substitutes. Since the overissuance of fiduciary media on the part of one bank, as has been shown above, increases the amount to be paid by the expanding bank's clients to other people, it increases concomitantly the demand for the redemption of its money-substitutes. It thus forces the expanding bank back to a restraint.

4.XVII.151 This fact was never questioned with regard to demand deposits subject to check. It is obvious that an expanding bank would very soon find itself in a difficult position in clearing with the other banks. However, people sometimes maintained that things are different as far as banknotes are concerned.

4.XVII.152 In dealing with the problems of money-substitutes, catallactics maintains that the claims in question are dealt with by a number of people like money, that they are, like money, given away and received in transactions and kept in cash holdings. Everything that catallactics asserts with regard to money-substitutes presupposes this state of affairs. But it would be preposterous to believe that every banknote issued by any bank really becomes a money-substitute. What makes a banknote a money-substitute is the special kind of good will of the issuing bank. The slightest doubt concerning the bank's ability or willingness to redeem every banknote without any delay at any time and with no expense to the bearer impairs this special good will and deprives the banknotes of their character as a money-substitute. We may assume that everybody not only is prepared to get such questionable banknotes as a loan but also prefers to receive them as payment instead of waiting longer. But if any doubts exist concerning their prime character, people will hurry to get rid of them as soon as possible. They will keep in their cash holdings money and such money-substitutes as they consider perfectly safe and will dispose of the suspect banknotes. These banknotes will be traded at a discount, and this fact will carry them back to the issuing bank which alone is bound to redeem them at their full face value.

4.XVII.153 The issue can still better be clarified by reviewing banking conditions in continental Europe. Here the commercial banks were free from any limitation concerning the amount of deposits subject to check. They would have been in a position to grant circulation credit and thus expand credit by adopting the methods applied by the banks of the Anglo-Saxon countries. However, the public was not ready to treat such bank deposits as money-substitutes. As a rule a man who received a check cashed it immediately and thereby withdrew the amount from the bank. It was impossible for a commercial bank to lend, except for negligible sums, by crediting the debtor's account. As soon as the debtor wrote out a check, a withdrawal of the amount concerned from the bank resulted. Only big business treated deposits as money-substitutes. Although the Central Banks in most of these countries were not submitted to any legal restrictions with regard to their deposit business, they were prevented from using it as a vehicle of large-scale credit expansion because the clientele for deposit currency was too small. Banknotes were practically the sole instrument of circulation credit and credit expansion.

4.XVII.154 In the 'eighties of the nineteenth century the Austrian Government embarked upon a project of popularizing checkbook money by establishing a checking account department with the Post Office Savings Service. It succeeded to some degree. Balances with this department of the Post Office were treated as money-substitutes by a clientele which was broader than that of the checking account department of the country's Central Bank of Issue. The system was later preserved by the new states which in 1918 succeeded the Habsburg Empire. It has also been adopted by many other European nations, for instance Germany. It is important to realize that this kind of deposit currency was a purely governmental venture and that the circulation credit that the system granted was exclusively lent to the governments. It is characteristic that the name of the Austrian Post Office Savings Institution, and likewise of most of its foreign replicas, was not Savings *Bank,* but Savings *Office (Amt)*. Apart from these demand deposits with the government post system in most of the non-Anglo-Saxon countries, banknotes—and, to a small extent, also deposits with the Government-controlled Central Bank of Issue—are the main vehicles of circulation credit. In speaking of credit expansion with regard to these countries, one refers almost entirely to banknotes.

4.XVII.155

In the United States many employers pay salaries and even wages by writing out checks. As far as the payees immediately cash the checks received and withdraw the whole amount from the bank, the method means merely that the onerous burden of manipulating coins and banknotes is shifted from the employer's cashier to the bank's cashier. It has no catallactic implications. If all citizens were to deal in this way with checks received, the deposits would not be money-substitutes and could not be used as instruments of circulation credit. It is solely the fact that a considerable part of the public looks upon deposits as money-substitutes that makes them what is popularly called checkbook money or deposit currency.

4.XVII.156

It is a mistake to associate with the notion of free banking the image of a state of affairs under which everybody is free to issue banknotes and to cheat the public *ad libitum.* People often refer to the dictum of an anonymous American quoted by Tooke: "Free trade in banking is free trade in swindling." However, freedom in the issuance of banknotes would have narrowed down the use of banknotes considerably if it had not entirely suppressed it. It was this idea which Cernuschi advanced in the hearings of the French Banking Inquiry on October 24, 1865: "I believe that what is called freedom of banking would result in a total suppression of banknotes in France. I want to give everybody the right to issue banknotes so that nobody should take any banknotes any longer."[*89]

4.XVII.157

People may uphold the opinion that banknotes are more handy than coins and that considerations of convenience recommend their use. As far as this is the case, the public would be prepared to pay a premium for the avoidance of the inconveniences involved in carrying a heavy weight of coins in their pockets. Thus in earlier days banknotes issued by banks of unquestionable solvency stood at a slight premium as against metallic currency. Thus travelers' checks are rather popular although the bank issuing them charges a commission for their issuance. But all this has no reference whatever to the problem in question. It does not provide a justification for the policies urging the public to resort to the use of banknotes. Governments did not foster the use of banknotes in order to avoid inconvenience to ladies shopping. Their idea was to lower the rate of interest and to open a source of cheap credit to their treasuries. In their eyes the increase in the quantity of fiduciary media was a means of promoting welfare.

4.XVII.158

Banknotes are not indispensable. All the economic achievements of capitalism would have been accomplished if they had never existed. Besides, deposit currency can do all the things banknotes do. And government interference with the deposits of commercial banks cannot be justified by the hypocritical pretext that poor ignorant wage earners and farmers must be protected against wicked bankers.

4.XVII.159

But, some people may ask, what about a cartel of the commercial banks? Could not the banks collude for the sake of a boundless expansion of their issuance of fiduciary media? The objection is preposterous. As long as the public is not, by government interference, deprived of the right of withdrawing its deposits, no bank can risk its own good will by collusion with banks whose good will is not so high as its own. One must not forget that every bank issuing fiduciary media is in a rather precarious position. Its most valuable asset is its reputation. It must go bankrupt as soon as doubts arise concerning its perfect trustworthiness and solvency. It would be suicidal for a bank of good standing to link its name with that of other banks with a poorer good will. Under free banking a cartel of the banks would destroy the country's whole banking system. It would not serve the interests of any bank.

4.XVII.160
For the most part the banks of good repute are blamed for their conservatism and their reluctance to expand credit. In the eyes of people not deserving of credit such restraint appears as a vice. But it is the first and supreme rule for the conduct of banking operations under free banking.

4.XVII.161
It is extremely difficult for our contemporaries to conceive of the conditions of free banking because they take government interference with banking for granted and as necessary. However, one must remember that this government interference was based on the erroneous assumption that credit expansion is a proper means of lowering the rate of interest permanently and without harm to anybody but the callous capitalists. The governments interfered precisely because they knew that free banking keeps credit expansion within narrow limits.

4.XVII.162
Economists may be right in asserting that the present state of banking makes government interference with banking problems advisable. But this present state of banking is not the outcome of the operation of the unhampered market economy. It is a product of the various governments' attempts to bring about the conditions required for large-scale credit expansion. If the governments had never interfered, the use of banknotes and of deposit currency would be limited to those strata of the population who know very well how to distinguish between solvent and insolvent banks. No large-scale credit expansion would have been possible. The governments alone are responsible for the spread of the superstitious awe with which the common man looks upon every bit of paper upon which the treasury or agencies which it controls have printed the magical words *legal tender.*

4.XVII.163
Government interference with the present state of banking affairs could be justified if its aim were to liquidate the unsatisfactory conditions by preventing or at least seriously restricting any further credit expansion. In fact, the chief objective of present-day government interference is to intensify further credit expansion. This policy is doomed to failure. Sooner or later it must result in a catastrophe.

13. The Size and Composition of Cash Holdings

4.XVII.164
The total amount of money and money-substitutes is kept by individuals and firms in their cash holdings. The share of each is determined by marginal utility. Each is eager to keep a certain portion of his total wealth in cash. He gets rid of an excess of cash by increased purchases and remedies a deficiency of cash by increased sales. The popular terminology confusing the demand for money for cash holding and the demand for wealth and vendible goods must not delude an economist.

4.XVII.165
What is valid with regard to individuals and firms is no less true with regard to every sum of the cash holdings of a number of individuals and firms. The point of view from which we treat a number of such individuals and firms as a totality and sum up their cash holdings is immaterial. The cash holdings of a city, a province, or a country is the sum of the cash holdings of all its residents.

4.XVII.166
Let us assume that the market economy uses only one kind of money and that

money-substitutes are either unknown or used in the whole area by everybody without any difference. There are, for example, gold money and redeemable banknotes, issued by a world bank and treated by everybody as money-substitutes. On these assumptions measures hindering the exchange of commodities and services do not affect the state of monetary affairs and the size of cash holdings. Tariffs, embargoes, and migration barriers affect the tendencies toward an equalization of prices, wages, and interest rates. They do not react directly upon cash holdings.

4.XVII.167
If a government aims at increasing the amount of cash kept by its subjects, it must order them to deposit a certain amount with an office and to leave it there untouched. The necessity of procuring this amount would force everybody to sell more and to buy less; domestic prices would drop; exports would be increased and imports reduced; a quantity of cash would be imported. But if the government were simply to obstruct the importation of goods and the exportation of money, it would fail to attain its goal. If imports drop, other things being equal, exports drop concomitantly.

4.XVII.168
The role money plays in international trade is not different from that which it plays in domestic trade. Money is no less a medium of exchange in foreign trade than it is in domestic trade. Both in domestic trade and in international trade purchases and sales result in a more than passing change in the cash holdings of individuals and firms only if people are purposely intent upon increasing or restricting the size of their cash holdings. A surplus of money flows into a country only when its residents are more eager to increase their cash holdings than are the foreigners. An outflow of money occurs only if the residents are more eager to reduce their cash holdings than are the foreigners. A transfer of money from one country into another country which is not compensated by a transfer in the opposite direction is never the unintended result of international trade transactions. It is always the outcome of intended changes in the cash holdings of the residents. Just as wheat is exported only if a country's residents want to export a surplus of wheat, so money is exported only if the residents want to export a sum of money which they consider as a surplus.

4.XVII.169
If a country turns to the employment of money-substitutes which are not employed abroad, such a surplus emerges. The appearance of these money-substitutes is tantamount to an increase in the country's supply of money in the broader sense, i.e., supply of money plus fiduciary media; it brings about a surplus in the supply of money in the broader sense. The residents are eager to get rid of their share in the surplus by increasing their purchases either of domestic or of foreign goods. In the first case exports drop and in the second case imports increase. In both cases the surplus of money goes abroad. As, according to our assumption, money-substitutes cannot be exported, only money proper flows out. The result is that within the domestic supply of money in the broader sense (money + fiduciary media) the portion of money drops and the portion of fiduciary media increases. The domestic stock of money in the narrower sense is now smaller than it was previously.

4.XVII.170
Now, we assume further, the domestic money-substitutes cease to be money-substitutes. The bank which issued them no longer redeems them in money. These former money-substitutes are now claims against a bank which does not fulfill its obligations, a bank whose ability and willingness to pay its debts is questionable. Nobody knows whether and when they will ever be redeemed. But it may be that these claims are used by the public as credit money. As money-substitutes they had been considered as equivalents of the sum of money to which they gave a claim payable at any moment. As credit money they are now traded at a discount.

4.XVII.171
At this point the government may interfere. It decrees that these pieces of credit money are legal tender at their face value.[*90] Every creditor is bound to accept them in payment at their face value. No trader is free to discriminate against them. The decree

tries to force the public to treat things of different exchange value as if they had the same exchange value. It interferes with the structure of prices as determined by the market. It fixes minimum prices for the credit money and maximum prices for the commodity money (gold) and foreign exchange. The result is not what the government aimed at. The difference in exchange value between credit money and gold does not disappear. As it is forbidden to employ the coins according to their market price, people no longer employ them in buying and selling and in paying debts. They keep them or they export them. The commodity money disappears from the domestic market. Bad money, says Gresham's Law, drives good money out of the country. It would be more correct to say that the money which the government's decree has undervalued disappears from the market and the money which the decree has overvalued remains.

4.XVII.172
The outflow of commodity money is thus not the effect of an unfavorable balance of payments, but the effect of a government interference with the price structure.

14. Balances of Payments

4.XVII.173
The confrontation of the money equivalent of all incomings and outgoings of an individual or a group of individuals during any particular period of time is called the balance of payments. The credit side and the debit side are always equal. The balance is always in balance.

4.XVII.174
If we want to know an individual's position in the frame of the market economy, we must look at his balance of payments. It tells us everything about the role he plays in the system of the social division of labor. It shows what he gives to his fellow men and what he receives or takes from them. It shows whether he is a self-supporting decent citizen or a thief or an almsman. It shows whether he consumes all his proceeds or whether he saves a part of them. There are many human things which are not reflected in the sheets of the ledger; there are virtues and achievements, vices and crimes that do not leave any traces in the accounts. But as far as a man is integrated into social life and activities, as far as he contributes to the joint effort of society and his contributions are appreciated by his fellow men, and as far as he consumes what is or could be sold and bought on the market, the information conveyed is complete.

4.XVII.175
If we combine the balances of payments of a definite number of individuals and leave out of account the items referring to transactions between the members of this group, we draw up the group's balance of payment. This balance tells us how the members of the group, considered as an integrated complex of people, are connected with the rest of the market society. Thus we can draw up the balance of payments of the members of the New York Bar, of the Belgian farmers, of the residents of Paris, or of those of the Swiss Canton of Bern. Statisticians are mostly interested in establishing the balance of payments of the residents of the various countries which are organized as independent nations.

4.XVII.176
While an individual's balance of payments conveys exhaustive information about his social position, a group's balance discloses much less. It says nothing about the mutual relations between the members of the group. The greater the group is and the less homogeneous its members are, the more defective is the information vouchsafed by the balance of payments. The balance of payments of Denmark tells more about the conditions of the Danes than the United States balance of payments about the conditions of the Americans. If one wants to describe a country's social and economic condition, one does not need to deal with every single inhabitant's personal balance of payments. But one must not form other groups than such as are composed of members who are by and large homogeneous in their social standing and their economic activities.

4.XVII.177

Reading balances of payments is thus very instructive. However, to guard against popular fallacies, one must know how to interpret them.

4.XVII.178

It is customary to list separately the monetary and the nonmonetary items of a country's balance of payments. One calls the balance favorable if there is a surplus of the imports of money and bullion over the exports of money and bullion. One calls the balance unfavorable if the exports of money and bullion exceed the imports. This terminology stems from inveterate Mercantilist errors unfortunately still surviving in spite of the devastating criticism of the economists. The imports and exports of money and bullion are viewed as the unintentional outcome of the configuration of the nonmonetary items of the balance of payments. This opinion is utterly fallacious. An excess in the exports of money and bullion is not the product of an unhappy concatenation of circumstances that befalls a nation like an act of God. It is the result of the fact that the residents of the country concerned are intent upon reducing the amount of money held and upon buying goods instead. This is why the balance of payments of the gold-producing countries is as a rule "unfavorable"; this is why the balance of payments of a country substituting fiduciary media for a part of its money stock is "unfavorable" as long as this process goes on.

4.XVII.179

No provident action on the part of a paternal authority is required lest a country lose its whole money stock by an unfavorable balance of payments. Things are in this regard not different between the personal balances of payments of individuals and those of groups. Neither are they different between the balances of payments of a city or a district and those of a sovereign nation. No government interference is needed to prevent the residents of New York from spending all their money in dealings with the other forty-nine states of the Union. As long as any American attaches any weight to the keeping of cash, he will spontaneously take charge of the matter. Thus he will contribute his share to the maintenance of an adequate supply of money in his country. But if no American were interested in keeping any cash holding, no government measure concerning foreign trade and the settlement of international payments could prevent an outflow of America's total monetary stock. A rigidly enforced embargo upon the exportation of money and bullion would be required.

15. Interlocal Exchange Rates

4.XVII.180

Let us first assume that there is only one kind of money. Then with regard to money's purchasing power at various places the same is valid as with regard to commodity prices. The final price of cotton in Liverpool cannot exceed the final price in Houston, Texas, by more than the cost of transportation. As soon as the price in Liverpool rises to a higher point, merchants will ship cotton to Liverpool and thus will bring about a tendency toward a return to the final price. In the absence of institutional obstacles, the price of an order for the payment of a definite amount of guilders in Amsterdam cannot rise in New York above the amount determined by the costs involved by reminting the coins, shipment, insurance, and the interest during the period required for all these manipulations. As soon as the difference rises above this point—the gold export point—it becomes profitable to ship gold from New York to Amsterdam. Such shipments force the guilder exchange rate in New York down below the gold export point. A difference between the configuration of interlocal exchange rates for commodities and those for money is brought about by the fact that as a rule commodities move only in one direction, namely, from the places of surplus production to those of surplus consumption. Cotton is shipped from Houston to Liverpool and not from Liverpool to Houston. Its price is lower in Houston than in Liverpool by the amount of shipping costs. But money is shipped now this way, now that.

4.XVII.181

The error of those who try to interpret the fluctuations of the interlocal exchange rates and the interlocal shipments of money as determined by the configuration of the nonmonetary items of the balance of payments is that they assign to money an exceptional position. They do not see that with regard to interlocal exchange rates there is no difference between money and commodities. If cotton trade between Houston and Liverpool is possible at all, the cotton prices at these two places cannot differ by more than the total amount of costs required for shipment. In the same way in which there is a flow of cotton from the southern parts of the United States to Europe, gold flows from the gold-producing countries like South Africa to Europe.

4.XVII.182
Let us disregard triangular trade and the case of the gold-producing countries and let us assume that the individuals and firms trading with one another on the basis of the gold standard do not have the intention of changing the size of their cash holdings. From their purchases and sales, claims are generated which necessitate interlocal payments. But according to our assumption these interlocal payments are equal in amount. The amount that the residents of *A* have to pay to the residents of *B* is equal to the amount that the residents of *B* have to pay to the residents of *A*. It is therefore possible to save the costs of shipping gold from *A* to *B* and from *B* to *A*. Claims and debts can be settled by a sort of interlocal clearing. It is merely a technical problem whether this evening up is effected by an interlocal clearinghouse organization or by the turnovers of a special market for foreign exchange. At any rate, the price which a resident of *A* (or of *B*) has to pay for a payment due in *B* (or in *A*) is kept within the margins determined by the shipment costs. It cannot rise above the par value by more than the shipment costs (gold export point) and cannot fall below the shipment costs (gold import point).

4.XVII.183
It may happen that—all our other assumptions remaining unaltered—there is a temporal discrepancy between the payments due from *A* to *B* and those from *B* to *A*. Then an interlocal shipment of gold can only be avoided by the interposition of a credit transaction. If the importer who today has to pay from *A* to *B* can buy at the market of foreign exchange claims against residents of *B* as fall due in ninety days, he can save the costs of shipping gold by borrowing the sum concerned in *B* for a period of ninety days. The dealers in foreign exchange will resort to this makeshift if the costs of borrowing in *B* do not exceed the costs of borrowing in *A* by more than double the costs of shipping gold. If the cost of shipping gold is 1/8 per cent, they will be ready to pay for a three months' loan in *B* up to 1 per cent (pro anno) more as interest than corresponds to the state of the money-market interest rate at which, in the absence of such requirements for interlocal payments, credit transactions between *A* and *B* would be effected.

4.XVII.184
It is permissible to express these facts by contending that the daily state of the balance of payments between *A* and *B* determines the point at which, within the margins drawn by the gold export point and the gold import point, the foreign exchange rates are fixed. But one must not forget to add that this happens only if the residents of *A* and of *B* do not intend to change the size of their cash holdings. Only because this is the case does it become possible to avoid the transfer of gold altogether and to keep foreign exchange rates within the limits drawn by the two gold points. If the residents of *A* want to reduce their cash holdings and those of *B* want to increase theirs, gold must be shipped from *A* to *B* and the rate for cable transfer *B* reaches in *A* the gold export point. Then gold is sent from *A* to *B* in the same way in which cotton is regularly sent from the United States to Europe. The rate of cable transfer *B* reaches the gold export point because the residents of *A* are selling gold to those of *B,* not because their balance of payments is unfavorable.

4.XVII.185
All this is valid with regard to any payments to be transacted between various places. It makes no difference whether the cities concerned belong to the same sovereign nation or to different sovereign nations. However, government interference has considerably changed the conditions. All governments have created institutions which make it possible for the residents of their countries to make interlocal domestic payments at par. The costs involved in shipment of currency from one place to another are borne either by the treasury or by the country's central bank system or by another government bank such as the postal savings banks of various European countries. Thus there is no longer any

market for domestic interlocal exchange. The public is not charged more for an interlocal order to pay than for a local one or, if the charge is slightly different, it no longer has any reference to the fluctuations of the interlocal movements of currency within the country. It is this government interference which has sharpened the difference between domestic payment and payment abroad. Domestic payments are transacted at par, while with regard to foreign payments fluctuations occur within the limits drawn by the gold points.

4.XVII.186
If more than one kind of money is used as medium of exchange, the mutual exchange ratio between them is determined by their purchasing power. The final prices of the various commodities, as expressed in each of the two or several kinds of money, are in proportion to each other. The final exchange ratio between the various kinds of money reflects their purchasing power with regard to the commodities. If any discrepancy appears, opportunity for profitable transactions presents itself and the endeavors of businessmen eager to take advantage of this opportunity tend to make it disappear again. The purchasing-power parity theory of foreign exchange is merely the application of the general theorems concerning the determination of prices to the special case of the coexistence of various kinds of money.

4.XVII.187
It does not matter whether the various kinds of money coexist in the same territory or whether their use is limited to distinct areas. In any case the mutual exchange ratio between them tends to a final state at which it no longer makes any difference whether one buys and sells against this or that kind of money. As far as costs of interlocal transfer come into play, these costs must be added or deducted.

4.XVII.188
The changes in purchasing power do not occur at the same time with regard to all commodities and services. Let us consider again the practically very important instance of an inflation in one country only. The increase in the quantity of domestic credit money or fiat money affects at first only the prices of some commodities and services. The prices of the other commodities remain for some time still at their previous stand. The exchange ratio between the domestic currency and the foreign currencies is determined on the bourse, a market organized and managed according to the pattern and the commercial customs of the stock exchange. The dealers on this special market are quicker than the rest of the people in anticipating future changes. Consequently the price structure of the market for foreign exchange reflects the new money relation sooner than the prices of many commodities and services. As soon as the domestic inflation begins to affect the prices of some commodities, at any rate long before it has exhausted all its effects upon the greater part of the prices of commodities and services, the price of foreign exchange tends to rise to the point corresponding to the final state of domestic prices and wage rates.

4.XVII.189
This fact has been entirely misinterpreted. People failed to realize that the rise in foreign exchange rates merely anticipates the movement of domestic commodity prices. They explained the boom in foreign exchange as an outcome of an unfavorable balance of payments. The demand for foreign exchange, they maintained, has been increased by a deterioration of the balance of trade or of other items of the balance of payments, or simply by sinister machinations on the part of unpatriotic speculators. The higher prices to be paid for foreign exchange cause the domestic prices of imported goods to rise. The prices of the domestic products must follow suit because otherwise their low state would encourage business to withhold them from domestic consumption and to sell them abroad at a premium.

4.XVII.190
The fallacies involved in this popular doctrine can easily be shown. If the nominal income of the domestic public had not been increased by the inflation, they would be forced to restrict their consumption either of imported or of domestic products. In the first case imports would drop and in the second case exports would increase. Thus the balance of trade would again be brought back to what the Mercantilists call a favorable

state.

4.XVII.191 Pressed hard, the Mercantilists cannot help admitting the cogency of this reasoning. But, they say, it applies only to normal trade conditions. It does not take into account the state of affairs in countries which are under the necessity of importing vital commodities such as food and essential raw materials. The importation of such goods cannot be curtailed below a certain minimum. They are imported no matter what prices must be paid for them. If the foreign exchange required for importing them cannot be procured by an adequate amount of exports, the balance of trade becomes unfavorable and the foreign exchange rates must rise more and more.

4.XVII.192 This is no less illusory than all other Mercantilist ideas. However urgent and vital an individual's or a group of individuals' demand for some goods may be, they can satisfy it on the market only by paying the market price. If an Austrian wants to buy Canadian wheat, he must pay the market price in Canadian dollars. He must procure these Canadian dollars by exporting goods either directly to Canada or to some other country. He does not increase the amount of Canadian dollars available by paying higher prices (in schillings, the Austrian domestic currency) for Canadian dollars. Moreover, he cannot afford to pay such higher prices (in schillings) for imported wheat if his income (in schillings) remains unchanged. Only if the Austrian Government embarks upon an inflationary policy and thus increases the number of schillings in the pockets of its citizens, are the Austrians in a position to continue to buy the quantities of Canadian wheat they used to buy without curtailing other expenditures. If there were no domestic inflation, any rise in the price of imported goods would result either in a drop in their consumption or in a restriction in the consumption of other goods. Thus the process of readjustment as described above would have come into motion.

4.XVII.193 If a man lacks the money to buy bread from his neighbor, the village baker, the cause is not to be seen in an alleged scarcity of money. The cause is that this man did not succeed in earning the amount of money needed either by selling goods or by rendering services for which people are prepared to pay. The same is true with regard to international trade. A country may be distressed on account of the fact that it is at a loss to sell abroad as many commodities as it would have to sell in order to buy all the food its citizens want. But this does not mean that foreign exchange is scarce. It means that the residents are poor. And domestic inflation is certainly not an appropriate means to remove this poverty.

4.XVII.194 Neither has speculation any reference to the determination of foreign exchange rates. The speculators merely anticipate the expected alterations. If they err, if their opinion that an inflation is in progress is wrong, the structure of prices and foreign exchange rates will not correspond to their anticipations and they will have to pay for their mistakes by losses.

4.XVII.195 The doctrine according to which foreign exchange rates are determined by the balance of payments is based upon an illicit generalization of a special case. If two places, *A* and *B,* use the same kind of money and if the residents do not want to make any changes in the size of their cash holdings, over a given period of time the amount of money paid from the residents of *A* to those of *B* equals the amount paid from the residents of *B* to those of *A* and all payments can be settled without shipping money from *A* to *B* or from *B* to *A*. Then the rate of cable transfer *B* in *A* cannot rise above a point slightly below the gold export point and cannot drop below a point slightly above the gold import point, and vice versa. Within this margin the daily state of the balance of payments determines the daily state of the foreign exchange rate. This is the case only because neither the residents of *A* nor those of *B* want to alter the amount of their cash holdings. If the residents of *A* want to decrease their cash holdings and those of *B* to increase theirs, money is shipped from *A* to *B* and the cable rate *B* reaches in *A* the gold export point. But money is not shipped because *A*'s balance of payments has become unfavorable. What is called by the Mercantilists an unfavorable balance of payments is the effect of a deliberate restriction of cash holdings on the part of the citizens of *A* and a deliberate increase in cash holdings on the part of the citizens of *B*. If no resident of *A* were ready to reduce his cash holding, such an outflow of money from *A* could never materialize.

4.XVII.196
The difference between the trade in money and that in the vendible commodities is this: As a rule commodities move on a one-way road, viz., from the places of surplus production to those of surplus consumption. Consequently the price of a certain commodity in the places of surplus production is as a rule lower by the amount of shipping costs than in the places of surplus consumption. Things are different with money if we do not take into account the conditions of the gold-mining countries and of those countries whose residents deliberately aim at altering the size of their cash holdings. Money moves now this way, now that. At one time a country exports money, at another time it imports money. Every exporting country very soon becomes an importing country precisely on account of its previous exports. For this reason alone it is possible to save the costs of shipping money by the interplay of the market for foreign exchange.

16. Interest Rates and the Money Relation

4.XVII.197
Money plays in credit transaction the same role it plays in all other business transactions. As a rule loans are granted in money, and interest and principal are paid in money. The payments resulting from such dealings influence the size of cash holding only temporarily. The recipients of loans, interest, and principal spend the sums received either for consumption or for investment. They increase their cash holdings only if definite considerations, independent of the inflow of the money received, motivate them to act in this way.

4.XVII.198
The final state of the market rate of interest is the same for all loans of the same character. Differences in the rate of interest are caused either by differences in the soundness and trustworthiness of the debtor or by differences in the terms of the contract.[*91] Differences in interest rates which are not brought about by these differences in conditions tend to disappear. The applicants for credits approach the lenders who ask a lower rate of interest. The lenders are eager to cater to people who are ready to pay higher interest rates. Things on the money market are the same as on all other markets.

4.XVII.199
With regard to interlocal credit transactions the interlocal exchange rates are to be taken into account as well as differences in the monetary standard if there are any. Let us contemplate the case of two countries, *A* and *B*. *A* is under the gold standard, *B* under the silver standard. The lender who considers lending money from *A* to *B* must first sell gold against silver and later, at the termination of the loan, silver against gold. If at that later date the price of silver has dropped as against gold, the principal repaid by the debtor (in silver) will buy a smaller amount of gold than that expended by the creditor when he previously embarked upon the transaction. He will therefore only venture lending in *B* if the difference in the market rate of interest between *A* and *B* is large enough to cover an expected fall in the price of silver as against gold. The tendency toward an equalization of the market rate of interest for short-term loans which prevails if *A* and *B* are both under the same monetary standard is seriously impaired under a diversity of standards.

4.XVII.200
If *A* and *B* are both under the same standard, it is impossible for the banks of *A* to expand credit if those of *B* do not espouse the same policy. Credit expansion in *A* makes prices rise, and short-term interest rates temporarily drop in *A*,f while prices and interest

rates in *B* remain unchanged. Consequently exports from *A* drop and imports to *A* increase. In addition, the money lenders of *A* become eager to lend on the short-term loan market of *B*. The result is an external drain from *A* which makes the money reserves of *A*'s banks dwindle. If the banks of *A* do not abandon their expansionist policy, they will become insolvent.

4.XVII.201

This process has been entirely misinterpreted. People speak of an important and vital function which a country's central bank has to fulfill on behalf of the nation. It is, they say, the central bank's sacred duty to preserve the stability of foreign exchange rates and to protect the nation's gold reserve against attacks on the part of foreign speculators and their domestic abettors. The truth is that all that a central bank does lest its gold reserve evaporate is done for the sake of the preservation of its own solvency. It has jeopardized its financial position by embarking upon credit expansion and must now undo its previous action in order to avoid its disastrous consequences. Its expansionist policy has encountered the obstacles limiting the issuance of fiduciary media.

4.XVII.202

The use of the terminology of warfare is inappropriate in dealing with monetary matters, as it is in the treatment of all other catallactic problems. There is no such thing as a "war" between the central banks. No sinister forces are "attacking" a bank's position and threatening the stability of foreign exchange rates. No "defender" is needed to "protect" a nation's currency system. It is, moreover, not true that what prevent a nation's central bank or its private banks from lowering the domestic market rate of interest are considerations of the preservation of the gold standard and of foreign exchange stability and of frustrating the machinations of an international combine of capitalistic moneylenders. The market rate of interest cannot be lowered by a credit expansion except for a short time, and even then it brings about all those effects which the theory of the trade cycle describes.

4.XVII.203

When the Bank of England redeemed a banknote issued according to the terms of the contract, it did not render unselfishly a vital service to the British people. It simply did what every housewife does in paying the grocer's bill. The idea that there is some special merit in a central bank's fulfillment of its voluntarily assumed responsibilities could originate only because again and again governments granted to these banks the privilege of denying of their clients the payments to which they had a legal title. In fact, the central banks became more and more subordinate offices of the treasuries, mere tools for the performance of credit expansion and inflation. It does not make any difference practically whether they are or are not owned by the government and directly managed by government officials. In effect the banks granting circulation credit are in every country today only affiliates of the treasuries.

4.XVII.204

There is but one means of keeping a local and national currency permanently at par with gold and foreign exchange: unconditional redemption. The central bank has to buy at the parity rate any amount of gold and foreign exchange offered against domestic banknotes and deposit currency; on the other hand it has to sell, without discrimination, any amount of gold and foreign exchange asked for by people ready to pay the parity price in domestic banknotes, coins, or deposit currency. Such was the policy of central banks under the gold standard. Such was also the policy of those governments and central banks which had adopted the currency system commonly known under the name of the gold exchange standard. The only difference between the "orthodox" or classical gold standard as it existed in Great Britain from the early 'twenties of the nineteenth century until the outbreak of the first World War and in other countries on the one hand, and the gold exchange standard on the other, concerned the use of gold coins on the domestic market. Under the classical gold standard a part of the cash holdings of the citizens consisted in gold coins and the rest in money-substitutes. Under the gold exchange standard the cash holdings consisted entirely in money-substitutes.

4.XVII.205

Pegging a certain rate of foreign exchange is tantamount to redemption at this rate.

4.XVII.206
A foreign exchange equalization account, too, can succeed in its operations only as far as it clings to the same methods.

4.XVII.207
The reasons why in the last decades European governments have preferred foreign exchange equalization accounts to the operation of central banks are obvious. Central bank legislation was an achievement of liberal governments or of governments which did not dare to challenge openly, at least in the conduct of financial policies, public opinion of the liberal countries. The operations of central banks were therefore adjusted to economic freedom. For that reason they were considered unsatisfactory in this age of rising totalitarianism. The main characteristics of the operation of a foreign exchange equalization account as distinguished from central bank policy are:

4.XVII.208
1. The authorities keep the transactions of the account secret. The laws have obliged the central banks to publicize their actual status at short intervals, as a rule every week. But the status of the foreign exchange equalization accounts is known only to the initiated. Officialdom renders a report to the public only after a lapse of time when the figures are of interest to historians alone and of no use whatever to the businessman.

4.XVII.209
2. This secrecy makes it possible to discriminate against people not in great favor with the authorities. In many continental countries of Europe it resulted in scandalous corruption. Other governments used the power to discriminate to the detriment of businessmen belonging to linguistic or religious minorities or supporting opposition parties.

4.XVII.210
3. A parity is no longer fixed by a law duly promulgated by parliament and therefore known to every citizen. The determination depends upon the arbitrariness of bureaucrats. From time to time the newspapers reported: The Ruritanian currency is weak. A more correct description would have been: The Ruritanian authorities have decided to raise the price of foreign exchange.[*92]

4.XVII.211
A foreign exchange equalization account is not a magic wand for remedying the evils of inflation. It cannot apply any means other than those available to "orthodox" central banks. And it must, like the central banks, fail in the endeavors to keep foreign exchange rates at par if there is domestic inflation and credit expansion.

4.XVII.212
It has been asserted that the "orthodox" methods of fighting an external drain by using the rate of discount no longer work because nations are no longer prepared to comply with "the rules of the game." Now, the gold standard is not a game, but a social institution. Its working does not depend on the preparedness of any people to observe some arbitrary rules. It is controlled by the operation of inexorable economic law.

4.XVII.213
The critics give point to their objection by citing the fact that in the interwar period a rise in the rate of discount failed to stop the external drain, i.e., the outflow of specie and the transfer of deposits into foreign countries. But this phenomenon was caused by the governments' anti-gold and pro-inflation policies. If a man expects that he will lose 40 per cent of his balance by an impending devaluation, he will try to transfer his deposit into another country and will not change his mind if the bank rate in the country planning a devaluation rises 1 or 2 per cent. Such a rise in the rate of discount is obviously not a compensation for a loss ten or twenty or even forty times greater. Of course, the gold standard cannot work if governments are eager to sabotage its operations.

17. Secondary Media of Exchange

4.XVII.214

The use of money does not remove the differences which exist between the various nonmonetary goods with regard to their marketability. In the money economy there is a very substantial difference between the marketability of money and that of the vendible goods. But there remain differences between the various specimens of this latter group. For some of them it is easier to find without delay a buyer ready to pay the highest price which, under the state of the market, can possibly be attained. With others it is more difficult. A first-class bond is more marketable than a house in a city's main street, and an old fur coat is more marketable than an autograph of an eighteenth-century statesman. One no longer compares the marketability of the various vendible goods with the perfect marketability of money. One merely compares the degree of marketability of the various commodities. One may speak of the secondary marketability of the vendible goods.

4.XVII.215
He who owns a stock of goods of a high degree of secondary marketability is in a position to restrict his cash holding. He can expect that when one day it is necessary for him to increase his cash holding he will be in a position to sell these goods of a high degree of secondary marketability without delay at the highest price attainable at the market. Thus the size of a man's or a firm's cash holding is influenced by whether or not he owns a stock of goods with a high degree of secondary marketability. The size of cash holding and the expense incurred in keeping it can be reduced if income-producing goods of a high degree of secondary marketability are available.

4.XVII.216
Consequently there emerges a specific demand for such goods on the part of people eager to keep them in order to reduce the costs of cash holding. The prices of these goods are partly determined by this specific demand; they would be lower in its absence. These goods are secondary media of exchange, as it were, and their exchange value is the resultant of two kinds of demand: the demand related to their services as secondary media of exchange, and the demand related to the other services they render.

4.XVII.217
The costs incurred by holding cash are equal to the amount of interest which the sum concerned would have borne when invested. The cost incurred by holding a stock of secondary media of exchange consists in the difference between the interest yield of the securities employed for this purpose and the higher yield of other securities which differ from the former only in regard to their lower marketability and are therefore not suited for the role of secondary media of exchange.

4.XVII.218
From time immemorial jewels have been used as secondary media of exchange. Today the secondary media of exchange commonly used are:

4.XVII.219
1. Claims against banks, bankers, and savings banks which—although not money-substitutes[*93]—are daily maturing or can be withdrawn on short notice.

4.XVII.220
2. Bonds whose volume and popularity are so great that it is, as a rule, possible to sell moderate quantities of them without depressing the market.

4.XVII.221
3. Finally, sometimes even certain especially marketable stocks or even commodities.

4.XVII.222
Of course, the advantages to be expected from lowering the costs of holding cash must be confronted with certain hazards incurred. The sale of securities and still more that of commodities may only be feasible with a loss. This danger is not present with bank balances and the hazard of the bank's insolvency is usually negligible. Therefore interest-bearing claims against banks and bankers, which can be withdrawn at short notice, are the most popular secondary media of exchange.

4.XVII.223
One must not confuse secondary media of exchange with money-substitutes. Money-

substitutes are in the settlement of payments given away and received like money. But the secondary media of exchange must first be exchanged against money or money-substitutes if one wants to use them—in a roundabout way—for paying or for increasing cash holdings.

4.XVII.224 Claims employed as secondary media of exchange have, because of this employment, a broader market and a higher price. The outcome of this is that they yield lower interest than claims of the same kind which are not fit to serve as secondary media of exchange. Government bonds and treasury bills which can be used as secondary media of exchange can be floated on conditions more favorable to the debtor than loans not suitable for this purpose. The debtors concerned are therefore eager to organize the market for their certificates of indebtedness in such a way as to make them attractive for those in search of secondary media of exchange. They are intent upon making it possible for every holder of such securities to sell them or to use them as collateral in borrowing under the most reasonable terms. In advertising their bond issues to the public they stress these opportunities as a special boon.

4.XVII.225 In the same way banks and bankers are intent upon attracting demand for secondary media of exchange. They offer convenient terms to their customers. They try to outdo one another by shortening the time allowed for notice. Sometimes they pay interest even for money maturing without notice. In this rivalry some banks have gone too far and endangered their solvency.

4.XVII.226 Political conditions of the last decades have given to bank balances which can be used as secondary media of exchange an increased importance. The governments of almost all countries are engaged in a campaign against the capitalists. They are intent upon expropriating them by means of taxation and monetary measures. The capitalists are eager to protect their property by keeping a part of their funds liquid in order to evade confiscatory measures in time. They keep balances with the banks of those countries in which the danger of confiscation or currency devaluation is for the moment less than in other countries. As soon as the prospects change, they transfer their balances into countries which temporarily seem to offer more security. It is these funds which people have in mind when speaking of "hot money."

4.XVII.227 The significance of hot money for the constellation of monetary affairs is the outcome of the one-reserve system. In order to make it easier for the central banks to embark upon credit expansion, the European governments aimed long ago at a concentration of their countries' gold reserves with the central banks. The other banks (the private banks, i.e., those not endowed with special privileges and not entitled to issue banknotes) restrict their cash holdings to the requirements of their daily transactions. They no longer keep a reserve against their daily maturing liabilities. They do not consider it necessary to balance the maturity dates of their liabilities and their assets in such a way as to be any day ready to comply unaided with their obligations to their creditors. They rely upon the central bank. When the creditors want to withdraw more than the "normal" amount, the private banks borrow the funds needed from the central bank. A private bank considers itself liquid if it owns a sufficient amount either of collateral against which the central bank will lend or of bills of exchange which the central bank will rediscount.[*94]

4.XVII.228 When the inflow of hot money began, the private banks of the countries in which it was temporarily deposited saw nothing wrong in treating these funds in the usual way. They employed the additional funds entrusted to them in increasing their loans to business. They did not worry about the consequences, although they knew that these funds would be withdrawn as soon as any doubts about their country's fiscal or monetary policy emerged. The illiquidity of the status of these banks was manifest: on the one hand large sums which the customers had the right to withdraw at short notice, and on the other hand loans to business which could be recovered only at a later date. The only cautious method of dealing with hot money would have been to keep a reserve of gold and foreign exchange big enough to pay back the whole amount in case of a sudden withdrawal. Of course, this method would have required the banks to charge the customers a commission for keeping their funds safe.

4.XVII.229
The showdown came for the Swiss banks on the day in September, 1936, on which France devalued the French franc. The depositors of hot money became frightened; they feared that Switzerland might follow the French example. It was to be expected that they would all try to transfer their funds immediately to London or New York, or even to Paris, which for the immediate coming weeks seemed to offer a smaller hazard of currency depreciation. But the Swiss commercial banks were not in a position to pay back these funds without the aid of the National Bank. They had lent them to business—a great part to business in countries which, by foreign exchange control, had blocked their balances. The only way out would have been for them to borrow from the National Bank. Then they would have maintained their own solvency. But the depositors paid would have immediately asked the National Bank for the redemption, in gold or foreign exchange, of the banknotes received. If the National Bank were not to comply with this request, it would thereby have actually abandoned the gold standard and devalued the Swiss franc. If, on the other hand, the Bank had redeemed the notes, it would have lost the greater part of its reserve. A panic would have resulted. The Swiss themselves would have tried to procure as much gold and foreign exchange as possible. The whole monetary system of the country would have collapsed.

4.XVII.230
The only alternative for the Swiss National Bank would have been not to assist the private banks at all. But this would have been equivalent to the insolvency of the country's most important credit institutions.

4.XVII.231
Thus for the Swiss Government no choice was left. It had only one means to prevent an economic catastrophe: to follow suit forthwith and to devalue the Swiss franc. The matter did not brook delay.

4.XVII.232
By and large, Great Britain, at the outbreak of the war in September, 1939, had to face similar conditions. The City of London was once the world's banking center. It has long since lost this function. But foreigners and citizens of the Dominions still kept, on the eve of the war, considerable short-term balances in the British banks. Besides, there were the large deposits due to the central banks in the "sterling area." If the British Government had not frozen all these balances by means of foreign exchange restrictions, the insolvency of the British banks would have become manifest. Foreign exchange control was a disguised moratorium for the banks. It relieved them from the plight of having to confess publicly their inability to fulfill their obligations.

18. The Inflationist View of History

4.XVII.233
A very popular doctrine maintains that progressive lowering of the monetary unit's purchasing power played a decisive role in historical evolution. It is asserted that mankind would not have reached its present state of well-being if the supply of money had not increased to a greater extent than the demand for money. The resulting fall in purchasing power, it is said, was a necessary condition of economic progress. The intensification of the division of labor and the continuous growth of capital accumulation, which have centupled the productivity of labor, could ensue only in a world of progressive price rises. Inflation creates prosperity and wealth; deflation distress and economic decay.[*95] A survey of political literature and of the ideas that guided for centuries the monetary and credit policies of the nations reveals that this opinion is almost generally accepted. In spite of all warnings on the part of economists it is still today the core of the layman's economic philosophy. It is no less the essence of the teachings of Lord Keynes and his

disciples in both hemispheres.

4.XVII.234 The popularity of inflationism is in great part due to deep-rooted hatred of creditors. Inflation is considered just because it favors debtors at the expense of creditors. However, the inflationist view of history which we have to deal with in this section is only loosely related to this anticreditor argument. Its assertion that "expansionism" is the driving force of economic progress and that "restrictionism" is the worst of all evils is mainly based on other arguments.

4.XVII.235 It is obvious that the problems raised by the inflationist doctrine cannot be solved by a recourse to the teachings of historical experience. It is beyond doubt that the history of prices shows, by and large, a continuous, although sometimes for short periods interrupted, upward trend. It is of course impossible to establish this fact otherwise than by historical understanding. Catallactic precision cannot be applied to historical problems. The endeavors of some historians and statisticians to trace back the changes in the purchasing power of the precious metals for centuries, and to measure them, are futile. It has been shown already that all attempts to measure economic magnitudes are based on entirely fallacious assumptions and display ignorance of the fundamental principles both of economics and of history. But what history by means of its specific methods can tell us in this field is enough to justify the assertion that the purchasing power of money has for centuries shown a tendency to fall. With regard to this point all people agree.

4.XVII.236 But this is not the problem to be elucidated. The question is whether the fall in purchasing power was or was not an indispensable factor in the evolution which led from the poverty of ages gone by to the more satisfactory conditions of modern Western capitalism. This question must be answered without reference to the historical experience, which can be and always is interpreted in different ways, and to which supporters and adversaries of every theory and of every explanation of history refer as a proof of their mutually contradictory and incompatible statements. What is needed is a clarification of the effects of changes in purchasing power on the division of labor, the accumulation of capital, and technological improvement.

4.XVII.237 In dealing with this problem one cannot satisfy oneself with the refutation of the arguments advanced by the inflationists in support of their thesis. The absurdity of these arguments is so manifest that their refutation and exposure is easy indeed. From its very beginnings economics has shown again and again that assertions concerning the alleged blessings of an abundance of money and the alleged disasters of a scarcity of money are the outcome of crass errors in reasoning. The endeavors of the apostles of inflationism and expansionism to refute the correctness of the economists' teachings have failed utterly.

4.XVII.238 The only relevant question is this: Is it possible or not to lower the rate of interest lastingly by means of credit expansion? This problem will be treated exhaustively in the chapter dealing with the interconnection between the money relation and the rate of interest. There it will be shown what the consequences of booms created by credit expansion must be.

4.XVII.239 But we must ask ourselves at this point of our inquiries whether it is not possible that there are other reasons which could be advanced in favor of the inflationary interpretation of history. Is it not possible that the champions of inflationism have neglected to resort to some valid arguments which could support their stand? It is certainly necessary to approach the issue from every possible avenue.

4.XVII.240 Let us think of a world in which the quantity of money is rigid. At an early stage of history the inhabitants of this world have produced the whole quantity of the commodity employed for the monetary service which can possibly be produced. A further increase in the quantity of money is out of the question. Fiduciary media are unknown. All money-substitutes—the subsidiary coins included—are money-certificates.

4.XVII.241 On these assumptions the intensification of the division of labor, the evolution from the economic self-sufficiency of households, villages, districts, and countries to the world-embracing market system of the nineteenth century, the progressive accumulation of capital, and the improvement of technological methods of production would have resulted in a continuous trend toward falling prices. Would such a rise in the purchasing power of the monetary unit have stopped the evolution of capitalism?

4.XVII.242 The average businessman will answer this question in the affirmative. Living and acting in an environment in which a slow but continuous fall in the monetary unit's purchasing power is deemed normal, necessary, and beneficial, he simply cannot comprehend a different state of affairs. He associates the notions of rising prices and profits on the one hand and of falling prices and losses on the other. The fact that there are bear operations too and that great fortunes have been made by bears does not shake his dogmatism. These are, he says, merely speculative transactions of people eager to profit from the fall in the prices of goods already produced and available. Creative innovations, new investments, and the application of improved technological methods require the inducement brought about by the expectation of price rises. Economic progress is possible only in a world of rising prices.

4.XVII.243 This opinion is untenable. In a world of a rising purchasing power of the monetary unit everybody's mode of thinking would have adjusted itself to this state of affairs, just as in our actual world it has adjusted itself to a falling purchasing power of the monetary unit. Today everybody is prepared to consider a rise in his nominal or monetary income as an improvement of his material well-being. People's attention is directed more toward the rise in nominal wage rates and the money equivalent of wealth than to the increase in the supply of commodities. In a world of rising purchasing power for the monetary unit they would concern themselves more with the fall in living costs. This would bring into clearer relief the fact that economic progress consists primarily in making the amenities of life more easily accessible.

4.XVII.244 In the conduct of business, reflections concerning the secular trend of prices do not play any role whatever. Entrepreneurs and investors do not bother about secular trends. What guides their actions is their opinion about the movement of prices in the coming weeks, months, or at most years. They do not heed the general movement of all prices. What matters for them is the existence of discrepancies between the prices of the complementary factors of production and the anticipated prices of the products. No businessman embarks upon a definite production project because he believes that *the prices,* i.e., the prices of all goods and services, will rise. He engages himself if he believes that he can profit from a difference between the prices of goods of various orders. In a world with a secular tendency toward falling prices, such opportunities for earning profit will appear in the same way in which they appear in a world with a secular trend toward rising prices. The expectation of a *general* progressive upward movement of *all* prices does not bring about intensified production and improvement in well-being. It results in the "flight to real values," in the crack-up boom and the complete breakdown of the monetary system.

4.XVII.245 If the opinion that the prices of all commodities will drop becomes general, the short-term market rate of interest is lowered by the amount of the negative price premium.[*96] Thus the entrepreneur employing borrowed funds is secured against the consequences of such a drop in prices to the same extent to which, under conditions of rising prices, the lender is secured through the price premium against the consequences of falling purchasing power.

4.XVII.246 A secular tendency toward a rise in the monetary unit's purchasing power would require rules of thumb on the part of businessmen and investors other than those developed under the secular tendency toward a fall in its purchasing power. But it would certainly not influence substantially the course of economic affairs. It would not remove the urge of people to improve their material well-being as far as possible by an appropriate arrangement of production. It would not deprive the economic system of the factors making for material improvement, namely, the striving of enterprising promoters after profit and the readiness of the public to buy those commodities which are apt to provide them the greatest satisfaction at the lowest costs.

4.XVII.247
Such observations are certainly not a plea for a policy of deflation. They imply merely a refutation of the ineradicable inflationist fables. They unmask the illusiveness of Lord Keyne's doctrine that the source of poverty and distress, of depression of trade, and of unemployment is to be seen in a "contractionist pressure." It is not true that "a deflationary pressure... would have... prevented the development of modern industry." It is not true that credit expansion brings about the "miracle... of turning a stone into bread."*97

4.XVII.248
Economics recommends neither inflationary nor deflationary policy. It does not urge the governments to tamper with the market's choice of a medium of exchange. It establishes only the following truths:

4.XVII.249
1. By committing itself to an inflationary or deflationary policy a government does not promote the public welfare, the commonweal, or the interests of the whole nation. It merely favors one or several groups of the population at the expense of other groups.

4.XVII.250
2. It is impossible to know in advance which group will be favored by a definite inflationary or deflationary measure and to what extent. These effects depend on the whole complex of the market data involved. They also depend largely on the speed of the inflationary or deflationary movements and may be completely reversed with the progress of these movements.

4.XVII.251
3. At any rate, a monetary expansion results in misinvestment of capital and overconsumption. It leaves the nation as a whole poorer, not richer. These problems are dealt with in Chapter XX.

4.XVII.252
4. Continued inflation must finally end in the crack-up boom, the complete breakdown of the currency system.

4.XVII.253
5. Deflationary policy is costly for the treasury and unpopular with the masses. But inflationary policy is a boon for the treasury and very popular with the ignorant. Practically, the danger of deflation is but slight and the danger of inflation tremendous.

19. The Gold Standard

4.XVII.254
Men have chosen the precious metals gold and silver for the money service on account of their mineralogical, physical, and chemical features. The use of money in a market economy is a praxeologically necessary fact. That gold—and not something else—is used as money is merely a historical fact and as such cannot be conceived by catallactics. In monetary history too, as in all other branches of history, one must resort to historical understanding. If one takes pleasure in calling the gold standard a "barbarous relic,"*98 one cannot object to the application of the same term to every historically determined institution. Then the fact that the British speak English—and not Danish, German, or French—is a barbarous relic too, and every Briton who opposes the

substitution of Esperanto for English is no less dogmatic and orthodox than those who do not wax rapturous about the plans for a managed currency.

4.XVII.255

The demonetization of silver and the establishment of gold monometallism was the outcome of deliberate government interference with monetary matters. It is pointless to raise the question concerning what would have happened in the absence of these policies. But it must not be forgotten that it was not the intention of the governments to establish the gold standard. What the governments aimed at was the double standard. They wanted to substitute a rigid, government-decreed exchange ratio between gold and silver for the fluctuating market ratios between the independently coexistent gold and silver coins. The monetary doctrines underlying these endeavors misconstrued the market phenomena in that complete way in which only bureaucrats can misconstrue them. The attempts to create a double standard of both metals, gold and silver, failed lamentably. It was this failure which generated the gold standard. The emergence of the gold standard was the manifestation of a crushing defeat of the governments and their cherished doctrines.

4.XVII.256

In the seventeenth century the rates at which the English government tariffed the coins overvalued the guinea with regard to silver and thus made the silver coins disappear. Only those silver coins which were much worn by usage or in any other way defaced or reduced in weight remained in current use; it did not pay to export and to sell them on the bullion market. Thus England got the gold standard against the intention of its government. Only much later the laws made the *de facto* gold standard a *de jure* standard. The government abandoned further fruitless attempts to pump silver standard coins into the market and minted silver only as subsidiary coins with a limited legal tender power. These subsidiary coins were not money, but money-substitutes. Their exchange value depended not on their silver content, but on the fact that they could be exchanged at every instant, without delay and without cost, at their full face value against gold. They were *de facto* silver printed notes, claims against a definite amount of gold.

4.XVII.257

Later in the course of the nineteenth century the double standard resulted in a similar way in France and in the other countries of the Latin Monetary Union in the emergence of *de facto* gold monometallism. When the drop in the price of silver in the later 'seventies would automatically have effected the replacement of the *de facto* gold standard by the *de facto* silver standard, these governments suspended the coinage of silver in order to preserve the gold standard. In the United States the price structure on the bullion market had already, before the outbreak of the Civil War, transformed the legal bimetallism into *de facto* gold monometallism. After the greenback period there ensued a struggle between the friends of the gold standard on the one hand and those of silver on the other hand. The result was a victory for the gold standard. Once the economically most advanced nations had adopted the gold standard, all other nations followed suit. After the great inflationary adventures of the first World War most countries hastened to return to the gold standard or the gold exchange standard.

4.XVII.258

The gold standard was the world standard of the age of capitalism, increasing welfare, liberty, and democracy, both political and economic. In the eyes of the free traders its main eminence was precisely the fact that it was an international standard as required by international trade and the transactions of the international money and capital market.[*99] It was the medium of exchange by means of which Western industrialism and Western capital had borne Western civilization into the remotest parts of the earth's surface, everywhere destroying the fetters of age-old prejudices and superstitions, sowing the seeds of new life and new well-being, freeing minds and souls, and creating riches unheard of before. It accompanied the triumphal unprecedented progress of Western liberalism ready to unite all nations into a community of free nations peacefully cooperating with one another.

4.XVII.259

It is easy to understand why people viewed the gold standard as the symbol of this greatest and most beneficial of all historical changes. All those intent upon sabotaging the evolution toward welfare, peace, freedom, and democracy loathed the gold standard, and not only on account of its economic significance. In their eyes the gold standard was the labarum, the symbol, of all those doctrines and policies they wanted to destroy. In the struggle against the gold standard much more was at stake than commodity prices and foreign exchange rates.

4.XVII.260 The nationalists are fighting the gold standard because they want to sever their countries from the world market and to establish national autarky as far as possible. Interventionist governments and pressure groups are fighting the gold standard because they consider it the most serious obstacle to their endeavors to manipulate prices and wage rates. But the most fanatical attacks against gold are made by those intent upon credit expansion. With them credit expansion is the panacea for all economic ills. It could lower or even entirely abolish interest rates, raise wages and prices for the benefit of all except the parasitic capitalists and the exploiting employers, free the state from the necessity of balancing its budget—in short, make all decent people prosperous and happy. Only the gold standard, that devilish contrivance of the wicked and stupid "orthodox" economists, prevents mankind from attaining everlasting prosperity.

4.XVII.261 The gold standard is certainly not a perfect or ideal standard. There is no such thing as perfection in human things. But nobody is in a position to tell us how something more satisfactory could be put in place of the gold standard. The purchasing power of gold is not stable. But the very notions of stability and unchangeability of purchasing power are absurd. In a living and changing world there cannot be any such thing as stability of purchasing power. In the imaginary construction of an evenly rotating economy there is no room left for a medium of exchange. It is an essential feature of money that its purchasing power is changing. In fact, the adversaries of the gold standard do not want to make money's purchasing power stable. They want rather to give to the governments the power to manipulate purchasing power without being hindered by an "external" factor, namely, the money relation of the gold standard.

4.XVII.262 The main objection raised against the gold standard is that it makes operative in the determination of prices a factor which no government can control—the vicissitudes of gold production. Thus an "external" or "automatic" force restrains a national government's power to make its subjects as prosperous as it would like to make them. The international capitalists dictate and the nation's sovereignty becomes a sham.

4.XVII.263 However, the futility of interventionist policies has nothing at all to do with monetary matters. It will be shown later why all isolated measures of government interference with market phenomena must fail to attain the ends sought. If the interventionist government wants to remedy the shortcomings of its first interferences by going further and further, it finally converts its country's economic system into socialism of the German pattern. Then it abolishes the domestic market altogether, and with it money and all monetary problems, even though it may retain some of the terms and labels of the market economy.[*100] In both cases it is not the gold standard that frustrates the good intentions of the benevolent authority.

4.XVII.264 The significance of the fact that the gold standard makes the increase in the supply of gold depend upon the profitability of producing gold is, of course, that it limits the government's power to resort to inflation. The gold standard makes the determination of money's purchasing power independent of the changing ambitions and doctrines of political parties and pressure groups. This is not a defect of the gold standard; it is its main excellence. Every method of manipulating purchasing power is by necessity arbitrary. All methods recommended for the discovery of an allegedly objective and "scientific" yardstick for monetary manipulation are based on the illusion that changes in purchasing power can be "measured." The gold standard removes the determination of cash-induced changes in purchasing power from the political arena. Its general acceptance requires the acknowledgment of the truth that one cannot make all people richer by printing money. The abhorrence of the gold standard is inspired by the superstition that omnipotent governments can create wealth out of little scraps of paper.

4.XVII.265

It has been asserted that the gold standard too is a manipulated standard. The governments may influence the height of gold's purchasing power either by credit expansion, even if it is kept within the limits drawn by considerations of preserving the redeemability of the money-substitutes, or indirectly by furthering measures which induce people to restrict the size of their cash holdings. This is true. It cannot be denied that the rise in commodity prices which occurred between 1896 and 1914 was to a great extent provoked by such government policies. But the main thing is that the gold standard keeps all such endeavors toward lowering money's purchasing power within narrow limits. The inflationists are fighting the gold standard precisely because they consider these limits a serious obstacle to the realization of their plans.

4.XVII.266

What the expansionists call the defects of the gold standard are indeed its very eminence and usefulness. It checks large-scale inflationary ventures on the part of governments. The gold standard did not fail. The governments were eager to destroy it, because they were committed to the fallacies that credit expansion is an appropriate means of lowering the rate of interest and of "improving" the balance of trade.

4.XVII.267

No government is, however, powerful enough to abolish the gold standard. Gold is the money of international trade and of the supernational economic community of mankind. It cannot be affected by measures of governments whose sovereignty is limited to definite countries. As long as a country is not economically self-sufficient in the strict sense of the term, as long as there are still some loopholes left in the walls by which national governments try to isolate their countries from the rest of the world, gold is still used as money. It does not matter that governments confiscate the gold coins and bullion they can seize and punish those holding gold as felons. The language of bilateral clearing agreements by means of which governments are intent upon eliminating gold from international trade, avoids any reference to gold. But the turnovers performed on the ground of those agreements are calculated on gold prices. He who buys or sells on a foreign market calculates the advantages and disadvantages of such transactions in gold. In spite of the fact that a country has severed its local currency from any link with gold, its domestic structure of prices remains closely connected with gold and the gold prices of the world market. If a government wants to sever its domestic price structure from that of the world market, it must resort to other measures, such as prohibitive import and export duties and embargoes. Nationalization of foreign trade, whether effected openly or directly by foreign exchange control, does not eliminate gold. The governments qua traders are trading by the use of gold as a medium of exchange.

4.XVII.268

The struggle against gold which is one of the main concerns of all contemporary governments must not be looked upon as an isolated phenomenon. It is but one item in the gigantic process of destruction which is the mark of our time. People fight the gold standard because they want to substitute national autarky for free trade, war for peace, totalitarian government omnipotence for liberty.

4.XVII.269

It may happen one day that technology will discover a method of enlarging the supply of gold at such a low cost that gold will become useless for the monetary service. Then people will have to replace the gold standard by another standard. It is futile to bother today about the way in which this problem will be solved. We do not know anything about the conditions under which the decision will have to be made.

International Monetary Cooperation

4.XVII.270 The international gold standard works without any action on the part of governments. It is effective real cooperation of all members of the world-embracing market economy. There is no need for any government to interfere in order to make the gold standard work as an international standard.

4.XVII.271 What governments call international monetary cooperation is concerted action for the sake of credit expansion. They have learned that credit expansion, when limited to one country only, results in an external drain. They believe that it is only the external drain that frustrates their plans of lowering the rate of interest and thus of creating an everlasting boom. If all governments were to cooperate in their expansionist policies, they think, they could remove this obstacle. What is required is an international bank issuing fiduciary media which are dealt with as money-substitutes by all people in all countries.

4.XVII.272 There is no need to stress again here the point that what makes it impossible to lower the rate of interest by means of credit expansion is not merely the external drain. This fundamental issue is dealt with exhaustively in other chapters and sections of this book.[*101]

4.XVII.273 But there is another important question to be raised.

4.XVII.274 Let us assume that there exists an international bank issuing fiduciary media the clientele of which is the world's whole population. It does not matter whether these money-substitutes go directly into the cash holdings of the individuals and firms, or are only kept by the various nations' central banks as reserves against the issuance of national money-substitutes. The deciding point is that there is a uniform world currency. The national banknotes and checkbook money are redeemable in money-substitutes issued by the international bank. The necessity of keeping its national currency at par with the international currency limits the power of every nation's central banking system to expand credit. But the world bank is restrained only by those factors which limit credit expansion on the part of a single bank operating in an isolated economic system or in the whole world.

4.XVII.275 We may as well assume that the international bank is not a bank issuing money-substitutes a part of which are fiduciary media, but a world authority issuing international fiat money. Gold has been entirely demonetized. The only money in use is that created by the international authority. The international authority is free to increase the quantity of this money provided it does not go so far as to bring about the crack-up boom and the breakdown of the currency.

4.XVII.276 Then the ideal of the Keynesians is realized. There is an institution operating which can exercise an "expansionist pressure on world trade."

4.XVII.277 However, the champions of such plans have neglected a fundamental problem, namely, that of the distribution of the additional quantities of this credit money or of this paper money.

4.XVII.278 Let us assume that the international authority increases the amount of its issuance by a definite sum, all of which goes to one country, Ruritania. The final result of this inflationary action will be a rise in prices of commodities and services all over the world. But while this process is going on, the conditions of the citizens of various countries are affected in a different way. The Ruritanians are the first group blessed by the additional manna. They have more money in their pockets while the rest of the world's inhabitants have not yet got a share of the new money. They can bid higher prices, while the others cannot. Therefore the Ruritanians withdraw more goods from the world market than they did before. The non-Ruritanians are forced to restrict their consumption because they cannot compete with the higher prices paid by the Ruritanians. While the process of adjusting prices to the altered money relation is still in progress, the Ruritanians are in an advantageous position against the non-Ruritanians. When the process finally comes to an end, the Ruritanians have been enriched at the expense of the non-Ruritanians.

4.XVII.279
The main problem in such expansionist ventures is the proportion according to which the additional money is to be allotted to the various nations. Each nation will be eager to advocate a mode of distribution which will give it the greatest possible share in the additional currency. The industrially backward nations of the East will, for instance, probably recommend equal distribution per capita of population, a mode which would obviously favor them at the expense of the industrially advanced nations. Whatever mode may be adopted, all nations would be dissatisfied and would complain of unfair treatment. Serious conflicts would ensue and would disrupt the whole scheme.

4.XVII.280
It would be irrelevant to object that this problem did not play an important role in the negotiations which preceded the establishment of the International Monetary Fund and that it was easy to reach an agreement concerning the use of the Fund's resources. The Bretton Woods Conference was held under very particular circumstances. Most of the participating nations were at that time entirely dependent on the benevolence of the United States. They would have been doomed if the United States had stopped fighting for their freedom and aiding them materially by lend-lease. The government of the United States, on the other hand, looked upon the monetary agreement as a scheme for a disguised continuation of lend-lease after the cessation of hostilities. The United States was ready to give and the other participants—especially those of the European countries, most of them at that time still occupied by the German armies, and those of the Asiatic countries—were ready to take whatever was offered to them. The problems involved will become discernible once the delusive attitude of the United States toward financial and trade matters is replaced by a more realistic mentality.

4.XVII.281
The International Monetary Fund did not achieve what its sponsors had expected. At the annual meetings of the Fund there is a good deal of discussion, and occasionally pertinent observations and criticisms concerning the monetary and credit policies of governments and central banks are brought forward. The Fund itself engages in lending and borrowing transactions with various governments and central banks. It considers its main function to be that of assisting governments to maintain an unrealistic exchange rate for their overexpanded national currency. The methods it resorts to in these endeavors do not differ essentially from those always applied for this purpose. Monetary affairs in the world are going on as if no Bretton Woods Agreement and no International Monetary Fund existed.

4.XVII.282
The constellation of the world's political and economic affairs enabled the American government to keep its promise of letting foreign governments and central banks get an ounce of gold by paying thirty-five dollars. But the continuation and intensification of the American "expansionist" policy has considerably increased the withdrawal of gold and makes people worry about the future of monetary conditions. They are frightened by the spectre of a farther increase in the demand for gold that may exhaust the gold funds of the United States and force it to abandon its present methods of dealing with gold.

4.XVII.283
The characteristic feature of the public discussion of the problems involved is that it carefully avoids mentioning the facts that are causing the extension of the demand for gold. No reference is made to the policies of deficit spending and credit expansion. Instead, complaints are raised about something called "insufficient liquidity" and a shortage of "reserves." The remedy suggested is more liquidity, to be achieved by "creating" new additional "reserves." This means it is proposed to cure the effects of inflation by more inflation.

4.XVII.284 There is need to remember that the policies of the American government and the Bank of England of maintaining on the London gold market a price of 35 dollars for an ounce of gold is the only measure that today prevents the Western nations from embarking upon boundless inflation. These policies are not immediately affected by the size of the various nations' "reserves." The plans for new "reserves" seem therefore not to concern directly the problem of the relation of gold to the dollar. They concern it indirectly as they try to divert the public's attention from the real problem, inflation. For the rest, the official doctrine relies upon the long since discredited balance-of-payments interpretation of monetary troubles.

Notes for this chapter

71. The theory of monetary calculation does not belong to the theory of indirect exchange. It is a part of the general theory of praxeology.
72. Cf. above, p. 202. Important contributions to the history and terminology of this doctrine are provided by Hayek, *Prices and Production* (rev. ed. London, 1935), pp. 1 ff., 129 ff.
73. Cf. Mises, *The Theory of Money and Credit,* trans. by H. E. Batson (London and New York, 1934), pp. 34-37.
74. Money can be in the process of transportation, it can travel in trains, ships, or planes from one place to another. But it is in this case, too, always subject to somebody's control, is somebody's property.
75. Cf. Carl Menger's books *Grundsätze der Volkswirtschaftslehre* (Vienna, 1871), pp. 250 ff.; *ibid.* (2d ed. Vienna, 1923), pp. 241 ff.; *Untersuchungen über die Methode der Sozialwissenschaften* (Leipzig, 1883), p. 171 ff.
76. Cf. Menger, *Untersuchungen,* l.c., p. 178.
77. The problems of money exclusively dedicated to the service of a medium of exchange and not fit to render any other services on account of which it would be demanded are dealt with below in section 9.
78. The present writer first developed this regression theorem of purchasing power in the first edition of his book *Theory of Money and Credit,* published in 1912 (pp. 97-123 of the English-language translation). His theorem has been criticized from various points of view. Some of the objections raised, especially those by B. M. Anderson in his thoughtful book *The Value of Money,* first published in 1917 (cf. pp. 100 ff. of the 1936 edition), deserve a very careful examination. The importance of the problems involved makes it necessary to weigh also the objections of H. Ellis (*German Monetary Theory 1905-1933* [Cambridge, 1934], pp. 77 ff.). In the text above, all objections raised are particularized and critically examined.
79. Cf. Mises, *Theory of Money and Credit,* pp. 140-142.
80. Cf. above, p. 249.
81. Cf. below, Chapter XX.
82. Such an attempt was made by Greidanus, *The Value of Money* (London, 1932), pp. 197 ff.
83. About the relations of the market rate of interest and changes in purchasing power, cf. below, Chapter XX.
84. Cf. below, pp. 564-565.
85. Cf. below, pp. 548-565.
86. It is furthermore immaterial whether or not the laws assign to the money-substitutes legal tender quality. If these things are really dealt with by people as money-

substitutes and are therefore money-substitutes and equal in purchasing power to the respective amount of money, the only effect of the legal tender quality is to prevent malicious people from resorting to chicanery for the mere sake of annoying their fellow men. If, however, the things concerned are not money-substitutes and are traded at a discount below their face value, the assignment of legal tender quality is tantamount to an authoritarian price ceiling, the fixing of a maximum price for gold and foreign exchange and of a minimum price for the things which are no longer money-substitutes but either credit money or fiat money. Then the effects appear which Gresham's Law describes.

87. The notion of "normal" credit expansion is absurd. Issuance of additional fiduciary media, no matter what its quantity may be, always sets in motion those changes in the price structure the description of which is the task of the theory of the trade cycle. Of course, if the additional amount issued is not large, neither are the inevitable effects of the expansion.
88. See above, pp. 439-440.
89. Cf. Cernuschi, *Contre le billet de banque* (Paris, 1866), p. 55.
90. Very often the legal tender quality had been given to those banknotes at a time when they still were money-substitutes and as such equal to money in their exchange value. At that time the decree had no catallactic importance. Now it becomes important because the market no longer considers them money-substitutes.
91. For a more elaborate analysis, see below, pp. 539-548.
92. See below, pp. 786-789.
93. For instance, demand deposits not subject to check.
94. All this refers to European conditions. American conditions differ only technically, but not economically.
95. Cf. the critical study of Marianne von Herzfeld, "Die Geschichte als Funktion der Geldbewegung," *Archiv fuer Sozialwissenschaft,* LVI, 654-686, and the writings quoted in this study.
96. Cf. below, pp. 541-545.
97. Quoted from: *International Clearing Union, Text of a Paper Containing Proposals by British Experts for an International Clearing Union, April 8, 1943* (published by British Information Services, an Agency of the British Government), p. 12.
98. Lord Keynes in the speech delivered before the House of Lords, May 23, 1944.
99. T. E. Gregory, *The Gold Standard and Its Future* (1d ed. London, 1934), pp. 22 ff.
100. Cf. below, Chapters XXVII-XXXI.
101. Cf. above, pp. 441-442, and below, pp. 550-586.

Part 4, Chapters XVIII-XXIV.

End of Notes

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