THE COURSE AND CONTROL OF INFLATION

A REVIEW OF MONETARY EXPERIENCE IN EUROPE AFTER WORLD WAR I

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The Course and Control of Inflation

A Review of Monetary Experience in Europe after World War I

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PREFACE

At the present time, when inflationary forces are gathering strength in many countries in the wake of World War II, it seems appropriate to publish a study which will refresh the reader's memory of the monetary disorders that swept over Europe after World War I. Even though conditions today are not the same, there are lessons to be learnt from the earlier experience.

There exist many valuable works of reference dealing with the monetary history of individual countries during the period in question. It is hoped, however, that the present volume will prove useful in that it provides a general review drawing on the experience of practically all European countries.

The study falls into two parts. Part I, which was written by Mr. Ragnar Nurkse, presents an analysis and reinterpretation, in the light of present-day knowledge, of the causal factors in the inflation process and of the way in which the process operated. Special attention is directed to the various types and instruments of policy by which inflation was eventually stopped. Problems of fiscal policy naturally find a prominent place in this part of the study.

Part II is more descriptive in character. Its main object is to give an account of the circumstances in which, and the methods by which, the exchange value of the various currencies was stabilized. While Part I is mostly concerned with countries where the degree of inflation was considerable, Part II covers a wider ground in the sense that it also includes countries whose currencies were not seriously disorganized, but whose stabilization experience is none the less of interest.

Most of the statistical facts on which this study is based are summarized in the diagrams given in Part II.

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June 1946

PART I

ANALYSIS OF INFLATION PROBLEMS AND POLICIES

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ANALYSIS OF INFLATION PROBLEMS AND POLICIES

CHAPTER 1

FINANCING POST-WAR RECONSTRUCTION

The circumstances that led to inflation in Europe after the War of 1914–18 were many and various, but reconstruction requirements certainly occupied an important place among them and should therefore be considered first.

The facts are well known and need only be briefly recalled. In a recent study entitled *Europe's Overseas Needs, 1919–20,*[1] the continent's economic condition at the end of the war was described as follows:

> "All countries in Europe were suffering from a lack of working capital and from a loss through wear and tear or physical destruction of fixed capital. . . . Stocks (of food, raw materials and manufactured goods) had been exhausted during the war. . . . Durable consumers' goods were likewise largely worn out, destroyed or in need of repair. House building and repair in particular had been practically at a standstill during the war, and in the war zones whole towns and villages had been devastated.
>
> "Productive capital was on the whole better maintained outside the battle areas; but part of the new plant was not suitable for civilian use. Much of the machinery had not been replaced and in certain areas machinery had been deliberately destroyed by retreating armies. . . . The mechanism of transportation was particularly affected. Railway rolling stock was in a deplorable condition all over Central and Eastern Europe . . . The state of roadbeds was often inadequate for rapid traffic, and many bridges were in the dangerous state." [2]

In examining the course of Government finances in the early 'twenties, one is struck by the extent to which expenditures on railways contributed to budgetary deficits, especially in Central and Eastern Europe. Apart from repair and reconstruction, the building of new railways was a vital necessity in some of the new states anxious to create a coherent national economy. Thus Czechoslovakia, which emerged from the war with a considerable industrial capacity and had not suffered at all from actual warfare, had to spend large sums to

[1] League of Nations, 1943.
[2] *Op. cit.*, pages 7-9.

construct railways linking up the eastern with the western parts of the country and generally to adapt the railway system to the configuration of the new republic, since the old system had gravitated towards Vienna.[1] The railway problem was even more acute in Poland, a country which had suffered considerable devastation. The railways in Poland had been left in very poor condition by the war; moreover, they were parts of three unrelated systems, and many new lines had to be built to create a coherent network, particularly after the incorporation, in June 1922, of Upper Silesia in the Polish Republic. Consequently the inflation in Poland seems to have been due in large measure to expenditure on railways.[2]

In certain parts of Europe the destruction wrought directly by the war was great. Areas where trench warfare had been waged were almost completely devastated. Such areas were to be found especially in northern France, Belgium and northern Italy. In Eastern Europe, parts of, for example, Latvia, Poland and Roumania had suffered heavily under the flux and reflux of contending armies. All these areas created enormous problems for the particular countries concerned, but, in relation to the European economy as a whole, they were small. For the continent as a whole the need to make good the "disinvestment" of the war years—the wear and tear of plant and equipment and, generally, the failure to maintain and replace the physical capital stock—was undoubtedly the greater part of the task of reconstruction. The degree of disinvestment, however, was not widely different in the various countries involved in the war, and so it was mainly the degree of destruction that determined the differences between the reconstruction needs of individual countries.

The problem of post-war reconstruction, in a physical sense, is essentially a problem of accumulating physical capital at a more rapid rate than is normally achieved in peace-time.[3] This can be done by purely domestic efforts or by external aid. In the former case, assuming that resources are fully utilized, reconstruction necessitates a severe restriction of domestic consumption so as to release productive factors for the restoration of the capital stock. In the latter case, there is a marked excess of commodity imports flowing from external sources into the country affected. Such an excess of imports must be financed by foreign loans, gifts or the sale of gold, real estate and other assets to foreigners.

[1] See A. Rasin, *Financial Policy of Czechoslovakia* (1923), pages 91, 103, 105.
[2] See E. Hilton Young, *Report on Financial Conditions in Poland* (1924), page 6.
[3] See K. E. Boulding, *The Economics of Peace* (1945), Chap. 2, and N. S. Buchanan, *International Investment and Domestic Welfare* (1945), Chaps. 3 and 4.

That the help which European countries received from abroad in the immediate post-war period was pitifully inadequate is brought out in the report, cited above, on *Europe's Overseas Needs, 1919–20.* We shall discuss the external financing of reconstruction, and its bearing on the control of inflation in Chapter 6 below.

Reconstruction by domestic efforts needs to be financed by taxation and/or saving. If the necessary restriction of consumption takes place through the spontaneous saving of individual consumers, there is no financial difficulty. Actually, voluntary saving was entirely inadequate to the needs of reconstruction. On the one hand, these needs were very great and urgent. On the other, the public's willingness to save was in general abnormally low in the early post-war years. It was low, no doubt, partly as a result of inflation, as we shall presently see; but it would almost certainly have been low even if inflation had not occurred.

In theory, of course, taxation could have been increased sufficiently to meet all the needs of reconstruction—that is, to reduce consumption to the required extent, or rather to keep it down at a level consistent with efficient production and with the release of adequate resources for reconstruction. If the rise of inflation is to be satisfactorily explained, the magnitude of reconstruction requirements is only one side of the story. The other side is the failure to increase taxation sufficiently, or otherwise to restrict consumption. It is obviously not possible to explain this failure by saying that consumption had already fallen to so low a level that it could not be lowered further without impairing the efficiency and morale of the population. If the alternative to taxation was inflation, consumption was reduced in any case, but reduced in a haphazard and inequitable manner.

The failure to impose adequate taxation itself needs to be explained. The explanation is in part self-evident, in part obscure. In any event the question is of fundamental importance for understanding the origin and control of inflation, and we shall have to revert to it many a time in the course of this study.

Inflation takes place when reconstruction expenditure, not covered by taxation, increases beyond the point at which a country's productive resources are close to being fully employed. A rise of prices is inevitable in these circumstances, as total production cannot be increased; and so long as prices rise faster than consumers' incomes, the real volume of consumption tends to be restricted.

For reasons indicated, the "voluntary saving" which comes out of the current money income prevailing at the start of the reconstruction process is likely to be insufficient to cover the expenditure in

question. This expenditure is therefore met to a greater or less extent by borrowing from the banks, and so the process is accompanied by an expansion of the money supply. It must not be supposed, however, that the flow of "voluntary saving" coming forward remains unchanged. As prices and total money income increase, the flow of voluntary saving may likewise increase at first and so keep down the need for bank borrowing and check the rate of expansion of the money supply. An increase in saving is a normal reaction to an increase in money income. But "normal" reactions soon loose their force as inflation continues. As people become aware of the one-way character of the general price movement, they accelerate their current purchases and reduce their rate of saving. If the rate of real investment for reconstruction purposes remains the same, the effect of the decline in the rate of saving is to speed up the rate of inflation.

The point at which a country's productive resources come close to being fully employed is important for the study of inflation. Before that point is reached, an increase in total expenditure may call forth an increase in total output accompanied, to an extent depending on the elasticity of supply, by a rise in prices. But once that point is reached, any further increase in spending exhausts itself solely in a rise in prices. It is important to observe, however, that the distribution of productive resources is bound to be highly abnormal in the immediate post-war situation. In such a situation an increase in expenditure is apt to produce inflationary price increases long before a point of reasonably "full" employment has been reached. Many industrial workers in Europe were unemployed during the years 1919–20 because the necessary raw materials were lacking; and no amount of industrial activity would have quickly absorbed the enormous surplus of administrative personnel which gathered in Vienna in those years from all parts of the former Austro-Hungarian empire. In circumstances such as these, it is necessary either to secure the missing complementary resources or, as in the Viennese example, to adapt the existing surplus resources to some other use before anything like "full employment" is possible.

There is no doubt that in the early stages, after the war of 1914–18, inflation made a substantial contribution to the financing of reconstruction by restricting the volume of consumption. But this contribution was made possible only by the fact that people in general were slow to realize what was happening. The success of inflation as an instrument of capital formation depends largely on the degree to which the rise in prices is unforeseen and unexpected. The following statement written in 1923 should not be taken as universally valid

but it is a good account of what actually happened in the early years of post-war inflation:

> "Experience shows that the public generally is very slow to grasp the situation and embrace the remedy. Indeed, at first there may be a change of habit in the wrong direction, which actually facilitates the Government's operations. The public is so much accustomed to thinking of money as the ultimate standard, that, when prices begin to rise, believing that the rise must be temporary, they tend to hoard their money and to postpone purchases, with the result that they hold in monetary form a larger aggregate of real value than before." [1]

When a price rise goes on for some time, however, it tends to create expectations of a further rise. The point at which such expectations come to be firmly and widely held is a crucial one in the process of inflation. From that point onwards the process is entirely changed. People find ways of avoiding the imposition which inflation places upon them. There is an abrupt decline in the willingness to save in monetary form. Indeed, dissaving tends to take the place of saving. The "velocity of circulation" increases owing, first, to the expenditure of hitherto inactive reserve balances and, secondly, to the shortening of payment and income periods leading to a reduction in the amount of working balances required. At this stage, of course, inflation loses its capital forming power; it rather reduces than augments the resources available for reconstruction. The process is cumulative in more senses than one. It is cumulative in the sense already indicated: price increases lead to expectations of rising prices which increase the velocity of circulation and so in turn accentuate the rise in prices and price expectations. It is cumulative also because, if the rate of investment for reconstruction purposes remains unchanged, the fall in the public's propensity to save necessitates increased resort to the inflationary method of financing. It is cumulative finally because inflation, when it enters the runaway phase, destroys the currency's use, not necessarily as a means of payment, but as a unit of account in general and as a unit of account for the assessment and collection of taxes in particular. The fall of the value of money leads to a decline in tax yields in real terms, partly because there is an inevitable time-lag between the imposition or assessment and the actual collection of taxes, and partly also because the depreciation of the currency offers an inducement to all taxpayers to postpone paying their taxes as long as possible. With appropriate modifications in the fiscal system this consequence of inflation might have been avoided.

[1] J. M. Keynes, *A Tract on Monetary Reform* (1924), page 50.

In actual fact, it played an important part in all cases of hyper-inflation in the early 'twenties. As the real value of tax receipts decreased, so budget deficits increased and the inflation became worse. In Germany in 1923 the depreciation of tax revenues reached a point at which, according to one authority, taxes as a whole cost more to collect than they brought in, so that the budgetary deficit, and hence the rate of inflation, would actually have been smaller if the State had discarded the ordinary machinery of taxation and had relied on inflation alone.[1]

In view of this it is natural that a highly effective instrument for stopping inflation should have been the "valorization" of taxes; that is, the fixing of tax rates in terms of gold. As we shall see, this method was adopted, for example, in Latvia in 1921 and in Germany and Poland in 1923.

To sum up: the forced levy which inflation imposes on the community creates at first a net addition to the resources made available through taxation and spontaneous saving. This is the first—the "moderate"—phase of inflation. In the second—the "runaway"—phase, the inflation levy tends not only to plug up the other sources of reconstruction finance (saving and taxation) but also to become less effective itself, as people speed up the rate at which they spend their incomes, and as their incomes are linked up with cost-of-living or other indices reflecting the current, or perhaps even the expected, rise in prices.

The distinction between the two phases is quite clear in most of the countries that suffered from severe inflation in the early 'twenties. In Austria and Russia the second phase seems to have set in relatively early. In Hungary, Poland and even Germany it set in relatively late. The other countries either did not enter the phase of runaway inflation at all or had only a brief spell of it. The point at which inflation passed, if it did pass, from the first to the second phase was determined mainly, as already indicated, by the subjective play of anticipations regarding the movement of prices. These anticipations in turn were of course affected by political conditions, by the general state of "confidence" and sometimes by deliberate government policies. Thus the Austrian currency was affected almost from the start by doubts as to the viability of the new state, while in Russia inflation was officially welcomed for a time as a means of destroying the capitalistic money economy and of instituting a moneyless system of communism. On the whole, however, the first phase, during which

[1] See F. D. Graham, *Exchange, Prices and Production in Hyper-Inflation: Germany, 1920–1923* (1930), page 45.

inflation effectively contributed to the resources needed for reconstruction, lasted surprisingly long. The inflation levy was successful during that time because it was unexpected and people were not aware of it. For well over a century Europe had not experienced any notable case of hyper-inflation; and people's imaginativeness concerning the future is often predominantly influenced, and sometimes limited, by that experience of the past which is within living memory. It is partly for this reason that resort to inflation after the second World War would be so unlikely to serve any constructive purpose; inflation would be liable to pass almost immediately from Phase I to Phase II.

We have discussed the requirements of reconstruction in the main on the implicit assumption that they had to be financed by the central government. We must not, however, ignore the part that was financed by private business. The way in which private investment and private "deficit spending" contributed to the inflationary process in certain countries will be considered in Chapter 4. Meanwhile we shall not go far wrong if we assume that it was government finance that played the decisive role in the genesis of inflation. In the last analysis a country's money supply must always be under the control of the State. Private demands for fresh money can always be rejected; not so the demands of the State itself. "No law, however rigorous, and no bank, however independent, can be strong enough to stand up against a Government that must have funds to cover a deficit. The life of the State may depend on the deficit being met, and it is not a currency law that will be allowed to stand in the way." [1]

So far we have discussed only one aspect of the situation; and if we have created the impression that government deficits in the years following 1918 were solely due to reconstruction needs, we must correct it at once. There is no close correlation at all between the extent of reconstruction needs and the degree of inflation in the different countries. If such a correlation had existed, Latvia, for example, would perhaps have had the worst inflation record, having had much of her equipment removed, her factories blown up and her farms destroyed not only in the fighting between Imperial Germany and Czarist Russia but also in the succeeding civil war within her borders and in her war of liberation against both Soviet Russia and irregular German troops. Yet Latvia, without foreign aid, put a definite stop to inflation in the early summer of 1921 (less than a year after making peace with Russia) and was one of the very first countries to stabilize her currency. By contrast, the territory of the

[1] E. Hilton Young, *op. cit.*, page 21.

new Austrian republic had not suffered at all from physical destruction due to war, and unlike Germany, which also escaped such destruction, Austria paid no reparations.[1] Yet Austria provides one of the worst cases of hyper-inflation in the period under review. Evidently the differences in the "inflation record" of the various countries were due to differences in political conditions, mass psychology, administrative competence, and a host of other factors, as well as reconstruction requirements.

If we leave reconstruction needs aside, it is difficult to generalize about the other forces that contributed to the pressure of inflation. But these other forces were sometimes decisive and cannot be ignored. Their influence on the budgetary position in certain important instances is noted briefly in the following pages (Chapter 2 (a)).

[1] The peace treaty, however, did impose upon Austria an undefined liability for reparations, and this may well have affected confidence.

CHAPTER 2

POLITICAL AND PSYCHOLOGICAL CONDITIONS

The "non-economic" circumstances which so largely determined the course of inflation may be considered under two heads: (a) factors leading to increased government spending and so contributing to the inflation of purchasing power, and (b) factors tending to weaken the means, or even the will, to combat inflation. The distinction is a convenient one although we must remember that there were sometimes forces at work that affected at one and the same time the pressure of the "flood" and the strength of the "dikes." Under either head, we cannot attempt to do more than mention a few important or characteristic examples.

(a) Special Causes of Expenditure

The first point to note is that in many countries military outlay continued at a high level after 1918. Indeed, over a wide area in Eastern Europe, hostilities continued. Thus, for example, it was not until March 1921 that Poland and Russia concluded a treaty of peace, and Greece and Turkey were at war with each other until 1923. But even after the cessation of hostilities military expenditures remained high in all ex-belligerent countries, with the notable exception of Germany and Austria.[1] France's military expenditure in 1920 (10,300 million francs) was not much less than her expenditure on reconstruction in that year (13,000 million francs). In Poland, military expenditure in 1923 slightly exceeded even the net expenditure on railways, and accounted for 33% of total government expenditure or 53% of the deficit. The Brussels Financial Conference in September 1920 showed a full awareness of the facts when it recommended that governments should "rigidly reduce all expenditure on armaments in so far as such reduction is compatible with the preservation of national security."

In Germany, reparations took the place of military outlay as one of the main elements in government expenditure. But they were less important than one might suppose. According to German statistics, reparations accounted for 48% of the government's deficit during

[1] In Hungary, military expenditure still accounted for nearly one-third of total government expenditure in 1920–21.

the three financial years from April 1st, 1920 to March 31st, 1923.[1] In 1923 reparations consisted only of deliveries in kind, which were comparatively insignificant.[2] But it was precisely in 1923 that inflation in Germany degenerated into hyper-inflation. The budget deficit calculated in gold marks had declined by over one-half from 1920 to 1922; in real value (*i.e.*, calculated at 1913 prices) the decline had been continuous and substantial ever since 1919. But in the last three quarters of 1923 alone, the gold value of the deficit shot up again to a level which was greater than any whole year's deficit since the end of the war. If we deduct the sum that corresponded to reparations in kind during the period from April to December 1923 (742 million gold marks), the remainder of the deficit for these nine months (5,796 million gold marks) was almost exactly as large as the total gold value of reparations paid, according to German statistics, during the three years 1920 to 1922. Though this sudden increase in the deficit was partly due to a falling off in the gold value of government revenue, the greater part of it was due to a rise in expenditure. (See table below.)

GERMANY: REVENUE AND EXPENDITURE OF THE REICH [a]

(000,000's omitted)

In gold marks:	Revenue	Expenditure	Deficit [b]	Cost of Reparations
1919–20	2,559	8,560	5,999	... [c]
1920–21	3,178	9,329	6,054	1,851
1921–22	2,927	6,651	3,676	2,810
1922–23	1,488	3,951	2,442	1,137
Apr.–Dec. 1923	519 [d]	5,278 [d]	6,538	742
In gold marks at 1913 prices:				
1919–20	2,891	9,464	6,571	...
1920–21	3,218	8,522	5,212	...
1921–22	3,609	8,184	4,513	...
1922–23	1,756	4,717	2,936	...
Apr.–Dec. 1923	617 [d]	5,685 [d]	6,396	...

[a] Fiscal years from April 1st to March 31st. The figures in the lower part of the table have been obtained by dividing those in the upper part by an index of wholesale prices. The calculation has been done month by month, which explains why in the year 1920–21, for instance, revenue in "real" terms is higher, but expenditure lower, than the unadjusted figures in gold marks.

[b] Increase in floating debt.

[c] The cost of reparations in 1919–20 was insignificant. The Treaty of Versailles went into force only in January 1920.

[d] April–October.

[1] The payment of reparations in cash, though not in kind, was suspended in July 1922. In the financial years 1920–21 and 1921–22, reparations constituted 31% and 76% of the deficit.

[2] They accounted for only about 12% of the government's deficit in the last three quarters of the year.

This rise in expenditure, in turn, was mainly due to the German government's financing of the "passive resistance" to the occupation of the Ruhr by French and Belgian troops. The occupation started in January 1923, and the German government, calling for a stoppage of production in the occupied area, virtually undertook the financial support of the whole Ruhr population. "The economic life of the district was stricken as by paresis and the idle German workers became a charge on the central government. Though this, in itself, would have been an insupportable burden, the Cuno government, through the Reichsbank, put huge credits at the disposal of the Ruhr industrialists." [1] It was this policy that caused the wildest extremes of inflation and the final collapse of the mark. And it is significant that the beginning of monetary stabilization in November 1923 followed closely upon the abandonment of the passive resistance policy by the German government in October.[2] In December 1922 the gold mark was worth 1,800 paper marks and wholesale prices were on the average 1,500 times above their pre-war level. A year later the corresponding figures were 1,000,000,000,000 and 1,300,000,000,000. It is therefore quite clear that the worst part of the German inflation is attributable to the "passive resistance" episode.

In Austria, government expenditure was swollen out of all proportion to the resources of the new republic by the maintenance of the administrative personnel of the Austro-Hungarian empire. The Austrian budget was burdened from the outset not only by the pre-existing administrative apparatus established in Vienna, but also by the influx of officials or former officials from other parts of the former empire. The burden arose from pensions as well as current payrolls. In Hungary, where the same problem existed, pensions were in fact a heavier charge than salaries.

Among other exceptional causes of government expenditure were, for example, settlement of refugees in Greece and Bulgaria, and the agrarian reforms in Eastern Europe, which usually entailed government subsidies or advances to the new settlers.

These last examples might perhaps be classed under "reconstruction expenditure." In fact it is not always easy to draw a clear line between reconstruction expenditure and the expenditure arising from the political circumstances of the post-war period.

(b) Factors Weakening the Resistance to Inflation

War expenditure during the war and reconstruction and other ex-

[1] F. D. Graham, *op. cit.*, page 75. Dr. Cuno was a "big business" man before he became head of the government in 1923.

[2] The Ruhr occupation itself did not end until the autumn of 1924.

ceptional expenditures after the war are essentially alike in that they necessitate a reduction in consumption per head. The problem is in many ways easier to solve during the war when the public is generally in a mood to endure sacrifices in the form of higher taxes, rationing, and other restrictions. The end of the war is apt to bring with it a complete change in the psychological atmosphere, a change that seriously intensifies the danger of inflation. From discipline and abstinence the popular mood is apt to change to selfishness and extravagance. "The war is over; the burden is lifted; people want to come out of the years of toil, darkness and tears, and reap the rewards of their sufferings. Workers press for higher wages and threaten revolution if their demands are not satisfied. The rich make full use of their opportunities for extravagant consumption which the war has denied them." [1] This attitude prevailed very widely in Europe in the years after 1918. Though it is a factor that does not admit of precise analysis or measurement, it must be given its full weight in any explanation of post-war inflation.

Governments could not fail to reflect to some degree the prevailing mood of the people. Furthermore, governments and administrative services in some countries were weakened by party strife [2] and in others were inexperienced because they had come into power as a result of revolutions or the creation of new states. An unstable government or an untrained civil service may naturally find it difficult to collect enough taxes to arrest the progress of inflation.

Consider, for example, the case of Poland. The administrative apparatus of the young Polish Republic was ill prepared to cope with the urgent problem of repairing the damages caused by war. Except in Galicia, persons of Polish origin had formerly been prevented from gaining experience in state administration. After the war the experienced alien officials departed, and the new state was left almost without any machinery of civil administration at a time of exceptional difficulties. The tax system was quite different in the three parts of the country formerly under Russia, Germany and Austria-Hungary. Apart from the building up of a competent staff, therefore, the first task of fiscal policy was to unify the revenue system. But this meant subjecting people to taxes with which they were unfamiliar. Moreover, the population had previously looked upon the tax collector as an agent of alien domination whom it was right and

[1] K. E. Boulding, *op. cit.*, page 25.

[2] On the shifting nature of the political situation in France, see E. L. Dulles, *The French Franc, 1914–1928* (1929), pages 12-13. During 1925 the post of Minister of Finance in France changed hands six times (*ibid.*, page 182).

proper to thwart; and a habit acquired during three or four generations is not easily changed overnight.

Germany, in a different way, offers an even more striking instance in which political and psychological conditions made resistance to inflation very difficult from the start. In the period following the armistice, Germany had a new and inexperienced socialist government which encountered the opposition of the conservative classes and had to fight a constant struggle to establish its authority.[1] After the adoption of the Weimar Constitution a series of laws were passed in 1919 and 1920 in order to create a unified tax system under the control of the Reich in place of the decentralized system formerly managed by the states. "This was the famous fiscal reform linked with the name of Erzberger. But because of the profound change in the fiscal arrangements the assessment of the new taxes proceeded very slowly. . . . Inspired partly by demagogic conceptions—Erzberger had proclaimed that in the future Germany the rich should be no more—the taxes met with lively opposition from the wealthy classes." [2] In sum, the failure to enforce adequate taxation was a consequence "of the wretched functioning of the bureaucratic machinery, of the decadence of State Authority, and of the tenacious opposition of interested parties." [3] Interested parties made their influence felt, for example, in March 1922 when the government was authorized to impose a forced loan of 1,000 million gold marks. "They secured the concession that the loan should be payable in paper marks at the fixed rate of 70 paper marks to one gold mark. Consequently the successive declines in the value of the mark robbed the forced loan of all effect." [4]

The relatively moderate proportion which reparation payments, even according to the German statistics, formed in the total budget deficit was shown above. Yet there were influential sections of opinion in Germany, especially among the wealthy and conservative classes, who attributed the inflation solely to the reparation obligations enforced by the Versailles Treaty, and a growing suspicion developed abroad that they were disposed to let the inflation continue unchecked or even completely to ruin the mark in order to demon-

[1] An example of the difficulties it encountered may be quoted from J. W. Angell, *The Recovery of Germany* (1929), page 36: "The socialist government, which the large aristocratic landowners naturally detested, tried to protect the town dwellers, but to no avail. When it imposed a flat levy of one-tenth of the harvest, after the termination of food control in 1921, the agriculturalists blandly raised the prices of the remaining nine-tenths. . . . The only result was to hurt the consumer, and the levy was soon dropped."

[2] C. Bresciani-Turroni, *The Economics of Inflation* (1937), page 55.

[3] *Ibid.*, page 52.

[4] *Ibid.*, page 59.

strate Germany's incapacity to pay. Undoubtedly the people who were prepared to accept the consequences of the war and to make an honest effort to fulfill the terms of the treaty were also those who favoured stern measures to curb inflation. It was widely felt that the assassination in July 1922 of Walter Rathenau, a leader of the "fulfillment party" and an advocate of financial reform, removed one of the last bulwarks against inflation. In point of fact both the wholesale price index and the value of the dollar in paper marks, which had "only" doubled during the preceding six months, rose by more than twenty times during the six months following Rathenau's death." [1]

"A considerable part of the blame for Germany's failure to stop the inflation before it got beyond all bounds must be placed on the industrial and commercial capitalists of the day. The large industrialists were also the principal beneficiaries from the progressive inflation, and it was to their immediate if not to their ultimate interest that the inflation should continue. Their allegiance to the new State was weak." [2] When we speak of industrialists it is well to remember that the spirit of speculation pervaded industry as well as commerce and finance, and that the most successful profiteers of the inflation period were speculators rather than producers. The central government came more and more under their influence. The head of the government which in 1923 carried on the most reckless inflation through credits to the Ruhr industrialists was himself a man of big business.

So much for the political and social climate in which the German inflation developed. In conclusion, mention may be made of one other influence to which some economists have attached great importance: namely, the fact that the "ideological" soil of German economic thought was favourable to inflation. The quantity theory of money had never gained much ground in Germany. The majority even among the trained economists refused to believe in a chain of causation running from the issue of money to the rise in prices. Most economists attributed the rise in prices to the unfavourable balance of payments and to the consequent fall in the external value of the mark. Helfferich, Minister of Finance in 1923, was a leading proponent of the balance-of-payments theory. Havenstein, President of the Reichsbank, in so far as he had any theoretical notions at all, adhered to a form of the "banking principle" which told him that the rise in prices created a need for money on the part of business men

[1] It may be pointed out once more that cash reparations were suspended in July 1922.

[2] J. W. Angell, *op. cit.*, page 31. The quotation is slightly abbreviated.

as well as the government, a need which it was the Reichsbank's duty to meet, and which it could meet without any harmful effects. As we shall see, there were elements of truth in the balance-of-payments theory of inflation, just as there are no doubt elements of truth in some notions of the banking school. But German economic thought failed to apprehend that the expansion in the money supply was at least an essential *condition* without which the general rise in prices could not have gone far. And this intellectual failure accounts in great part for the weakness of the defences which the spring tide of inflation encountered in Germany.

CHAPTER 3

FISCAL PROBLEMS IN THE INFLATION PROCESS

The prevailing opinion at the Brussels Financial Conference in 1920 was that governments could stop inflation if they would only balance their budgets. The chief recommendation of the Conference was clear and simple: "Governments must limit their expenditure to their revenue." The Conference apparently realized that it was asking too much: having stated this bold resolution, it immediately admitted an exception for "the finance of reconstructing devastated areas." Yet the Brussels doctrine was emphatic in pointing to budget deficits as the cause of inflation.

In the following years a precisely opposite doctrine grew up, according to which budget deficits were a consequence rather than a cause of inflation. The League of Nations reconstruction schemes for Austria and Hungary, in 1922 and 1924 respectively, were based on the belief that it was hopeless to try to balance the budget while inflation was going on and that a foreign loan was required to cover the deficit during a period of transition.[1] In Germany the theory that budget deficits were due to inflation, and not the other way about, came to be widely accepted.[2] The theory rested on two grounds. On the one hand it stated (as we stated in Chapter 1 above) that inflation tended to reduce the real value of tax revenue. On the other, it maintained that the general rise in prices affected the goods and services which were the object of State expenditure and so, inevitably, led to a rise in expenditure.

While the Brussels doctrine must still be regarded as fundamentally correct, there is nevertheless a grain of truth in the opposite view. Conditions of hyper-inflation, such as had not yet developed at the time of the Brussels conference, tended to create peculiar technical difficulties in the way of balancing the budget. We shall find that these difficulties were not insuperable; but they were none the less real, especially on the side of taxation. On the expenditure side the

[1] League of Nations: *The Financial Reconstruction of Austria* (1926), page 75, and *The Financial Reconstruction of Hungary* (1926), page 18.

[2] C. Bresciani-Turroni, *op. cit.*, pages 45 and 54.

theory to which we have referred stands on less solid ground. If it is true that inflation reduces the real value of tax revenue, why does it not do the same for government expenditure? There is no doubt that in the early stage of the German inflation the depreciation of the mark did not affect the size of the budget deficits since it influenced both revenue and expenditure in the same direction.[1] This influence is not apparent in the figures shown on page 12 above, according to which during the three fiscal years 1919–22 the real value of government expenditure in Germany was reduced year by year, while the real value of tax revenue increased year by year as a result, no doubt, of the tax reform of 1920 and the revival of production. From 1921–22 to 1922–23, however, both tax revenue and expenditure showed a steep decline in "real" terms. This did not increase—on the contrary, it reduced—the "real" volume of the deficit. It was only in 1923 that the real value of expenditure increased, while that of revenue continued to drop.

In what ways could inflation affect the expenditure side of government accounts? Different items of expenditure were of course affected in different ways. (1) Expenditure abroad, or expenditure fixed in foreign currency, was influenced predominantly by the movement of foreign exchange rates. This was true, for example, of Germany's reparation payments in cash. The external undervaluation of the currency which was usually observed in the early stages of inflation (see Chapter 6, below) certainly increased the burden of this type of expenditure both in terms of domestic currency and in "real" value.

(2) Certain kinds of expenditure (on goods required, for example, for railway construction, other investments, reparation deliveries in kind) varied in domestic money units roughly in proportion to the wholesale price index.

(3) Expenditure on wages, salaries and pensions was adjusted to the rise in the cost of living more and more frequently as inflation continued. In the last stage of inflation this adjustment became practically automatic and continuous, as the "index system" of wage and salary payments had to be adopted for state officials as well as for industrial workers. In Germany, for example, this system became almost universal in 1923, and it probably accounts to some extent for the rise in the "real" government expenditure in that year. But before this final stage was reached, the money rates of wages and salaries tended to lag persistently behind the rise in the cost of living. This lag was indeed an essential condition of the forced levy which

[1] C. Bresciani-Turroni, *op. cit.*, page 54.

inflation imposed on the public, and there is no doubt that it enabled governments to effect considerable real savings on account of personnel expenditure. It probably accounts in part for the reduction in "real" government expenditure in Germany in the three or four years prior to 1923.

(4) Lastly, there were certain expenditures which remained fixed in domestic currency and which consequently were reduced to almost zero in real value as the price rise went on. Chief among them was the interest service on the public debt. In Germany this item accounted for 10,000 million paper marks out of a total expenditure budget of 17,500 million for the fiscal year 1919–20. A few years later it formed an utterly negligible proportion of total expenditure; the public debt was for practical purposes wiped out.

The weight of the four factors in any given country or at any given time depended on the composition of expenditure and on the particular phase of the inflation. The relief gained under (3) and (4) was certainly important in many countries, especially in those that emerged from the war with a heavy internal debt burden.[1] The burden under (1) tended to diminish if, as was usually the case, the undervaluation was reduced or was replaced by overvaluation in the later phases of inflation. In those later phases, however, the relief gained from the sluggish adjustment of wages and salaries (3) tended to disappear.

All in all, the argument that inflation tended to cause an increase in government expenditure and hence in budget deficits is not remarkably strong. There may have been more substance in the contemporary complaints that inflation, once it had attained a certain speed, made it extraordinarily difficult for any government to set up a proper budget of expenditure. In Germany's case it has been said: "Whatever estimate was made, it was exceeded in a very short time even before the estimate had been approved by the Reichstag. Thus arose the necessity for continual corrections and modifications: they were like a distorting veil which concealed the true financial situation." [2] These difficulties were of an administrative nature. They were serious for a confused and incompetent administration; they

[1] The interest service on the internal debt is a "transfer expenditure" and not a real burden on the national economy. But it is a real enough burden on the government treasury. Treasuries were relieved of this burden as a result of inflation. But they were often saddled with another burden of transfer expenditure: namely, subsidies on essential consumers' goods such as bread and coal. Such subsidies, sometimes paid in the form of goods sold below cost by a Ministry of Supply, were an important element of government expenditures in many countries, including, for example, Austria, Czechoslovakia and Latvia.

[2] C. Bresciani-Turroni, *op. cit.*, page 64.

would have been readily solved by an alert and efficient one. In the last analysis it is the same disparity between the level of administrative competence and the troublesomeness of the fiscal problems created by inflation that lies also at the root of the next point we have to consider: namely, the depreciation of government tax revenue in the course of inflation.

This difficulty did not become serious until inflation reached the "runaway" stage; and that stage was not reached in countries that enforced heavy taxation at the outset. Thus Czechoslovakia after her declaration of independence not only retained all the old taxes but also raised their rates, imposed fresh taxes (on turnover and entertainments, for example) and instituted a number of lucrative state monopolies. After a brief inflationary flurry in the winter of 1919–20 she brought her finances under control.

Germany, as mentioned before, had some difficulty in enforcing the "Erzberger reforms" of her tax structure in 1919–20; but after a while the new taxes increased the government revenue considerably, though expenditure rose even more. Germany's acceptance of the "London Ultimatum" in May 1921 made it necessary greatly to increase the tax burden in order to finance the reparation charges. A bitter political controversy developed on the question whether the additional burden should be in the form of direct or indirect taxes. The conservative parties won their case in substance; the main emphasis was placed on taxes on consumption.[1] In addition to these new taxes the government increased the railway rates and reduced bread subsidies in the early months of 1922; it succeeded for a short while to cover its ordinary expenditure from revenue, and there was a marked slowing-down in the rate of price rise and in the depreciation of the exchange. Rathenau's death and the rejection of Germany's request for a foreign loan were among the factors that caused a new wave of pessimism in the second half of 1922 and a steep fall in both the internal and external value of the mark. It was at that time that the depreciation of tax returns became a serious problem. Yet the Minister of Finance, late in 1922, opposed any system designed to adapt the yield of taxes to the fall in the mark. The steps taken to that end in 1923 were at first entirely inadequate. Thus a law of March 1923 imposed fines of 15% and 30% of the amount of taxes due when payment was delayed for periods up to three months and more than three months respectively; but the average monthly rate of increase in wholesale prices during the first half of 1923 was 200%. Railway rates were adjusted frequently, but not nearly in proportion

[1] J. W. Angell, *op. cit.*, page 31; C. Bresciani-Turroni, *op. cit.*, page 58.

to the general price rise. Customs duties were collected nominally on a gold basis but at rates which were fixed in paper marks, and adjusted to the fall in the exchange only with a lag. Later in 1923 taxes on consumption goods were changed from fixed money rates to rates expressed as percentages of value. It was not till August 1923, eight months after the start of the Ruhr occupation and the "passive resistance" policy, that the government imposed a special tax to contribute to the cost of this policy. In the same month certain business taxes were put on a gold basis; but the rate at which they were payable in paper marks was fixed at weekly intervals; and at that time even a week was enough to allow a tax payment to depreciate in gold value to something between one-fourth and one-sixth. It was only in October 1923 that taxes were made payable in gold value at the rate of the day, and it was only then that tax-payers had an incentive to speed up rather than delay their payments.

So long as taxes were assessed in depreciating paper marks and not in a stable unit of account, it might have been necessary in the case of direct taxation to adopt tax rates of 100% or more of the income on which they were levied, if the state was to obtain a normal or adequate yield at the moment of collection. Such rates sounded inconceivable and may well have been impracticable because of the different speed at which the incomes of different population groups were adjusted. In Germany the flat 10% levy on wages, which was deducted at the source, came nearest to being a "pay-as-you-go" tax; and "the result was that the wage-worker, whose taxes were so levied, paid an ever-increasing share of the total yield of income taxes." [1] Even the wage-tax "remained on the average about a fortnight in the hands of the entrepreneurs before being paid into the Exchequer" and in the hyper-inflation of 1923 this lag became a considerable source of loss to the government.[2]

In Austria and Hungary, though tax rates were increased, there is no evidence of any systematic effort to adjust them to the depreciation of the currency. "Valorization" of taxes, which proved so effective in other cases, was not attempted. In these circumstances currency stabilization naturally presented itself as a prerequisite to fiscal reform and not the other way round. Accordingly the League of Nations reports on these two countries contained the following

[1] F. D. Graham, *op. cit.*, page 45. The opposite was the case in the United Kingdom during the war of 1914–18. According to J. M. Keynes' *How to Pay for the War* (1940), there was, as in Germany, a shift in national income in favour of profits; but the "profiteers" were subject to very high tax rates and so acted in effect as tax-collectors for the government.

[2] C. Bresciani-Turroni, *op. cit.*, page 72.

statements among their main conclusions: "Stabilization of the currency, while simultaneous with a *plan* of budget reform, *preceded* its accomplishment. The resolutions of the Brussels Conference of September 1920 suggested that the way to currency stabilization was through budget equilibrium. But in 1920, European currencies, though depreciated, were not demoralized; and budgets, though in deficit, were not in chaos. With the Austrian crown reduced in August 1922 to about one-fifteen thousandth part of its gold value (and the Hungarian crown reduced in May 1924 to 1/20,000 part of its gold value), and the budget, mainly as a consequence of the currency instability, incapable of calculation, no such order of events was possible. It was impossible to reform the budget while the currency was falling." [1] In both countries budget equilibrium followed, and did not precede the stabilization of the currency. Indeed, once these countries had regained a stable monetary unit of account, the yield of taxation recovered so rapidly that the budget was balanced almost over-night.[2]

The experience of other countries showed that there is nothing inherently impossible in carrying out the necessary fiscal measures as a prerequisite to currency stabilization. In Germany, as we have seen, the two decisive measures that preceded the stabilization of the mark in November 1923 were the "valorization" of taxes and the cessation of "passive resistance" expenditure.

In Latvia a series of fiscal measures, including a war profits tax, a forced loan, various indirect duties and a progressive income tax, were passed in the very first days of the new republic (1918–19). The reason for this vigorous fiscal policy may have been the fact that in these early days Latvia had no currency of her own and made use of Russian rubles and German marks. For a time, the government did not even have a printing press for the manufacture of currency.[3] Taxes and loans from the public were therefore essential for covering state expenditure. Gradually the technical obstacles to inflation were overcome, however, and in March 1920 the Latvian ruble was declared sole legal tender. The new currency was printed in ever-increasing quantities, and in the first half of 1921, the rise in prices was beginning to assume the character of hyper-inflation. But the tax

[1] League of Nations: *The Financial Reconstruction of Austria,* page 75, and *The Financial Reconstruction of Hungary,* page 37.

[2] In Austria, the budget deficit was much reduced in the first year following the stabilization of the currency in the autumn of 1922. In the second year the deficit disappeared altogether, and in 1925 there was a considerable surplus. In Hungary, a budget surplus was secured in the very first fiscal year (July 1st, 1924 to June 30th, 1925) which followed the currency stabilization.

[3] B. Siew, *Lettlands Volks- und Staatswirtschaft* (Riga, 1925), page 16.

machinery which had been set up under the force of circumstances in the earlier years stood the country in good stead. By a variety of fiscal measures, inflation was checked in the early summer of 1921 with complete success and without any external help. Among the measures taken, one of the most decisive was a law of May 1921 according to which all taxes were thenceforth assessed and collected in terms of a new unit, the "lat," equal to one gold franc. The "lat" was at first purely an accounting unit, but it later became the basis of a new Latvian currency. This appears to have been the first case of "tax valorization" in the history of post-war inflation in Europe.

A report on financial conditions in Poland, presented to the Polish Government by a foreign expert early in 1924, described the various difficulties in the way of collecting tax revenue under conditions of inflation. Curiously enough it mentioned the scarcity of currency as one of the difficulties.[1] A shortage of money developed sooner or later in all cases of hyper-inflation. This paradoxical phenomenon was due to the fact that in the later stages of inflation the public's anticipations of further note issues and further depreciation pushed up price quotations far in advance of the actual increase in money supplies. The shortage of money then induced an increase in the velocity of circulation which, together with the increase in money supplies, made transactions possible at the inflated level of "anticipatory" price quotations.[2] In Poland it was found that "the scarcity of currency made taxes difficult to collect." [3] But here again the difficulty seems to have been to a large extent illusory. Had the tax collectors pressed the public hard enough, the effective purchasing power of the public would have been curtailed and the "scarcity of currency" would have been relieved sooner or later through a collapse of speculative price quotations. Actually, the fall in the real value of the Polish mark eased the public's tax burden considerably. "Once their taxes had been assessed in marks, it was in the interest of taxpayers to delay payment pending a further fall. The fines for delay were not, until later in the year (1923), sufficient to make this unprofitable. Further, the collected revenue depreciated while it was in the hands of the State as notes. This effect was aggravated by imperfections in the system of gathering in and paying out the State's cash." [4]

These difficulties, real or imaginary, led the report in question to stress the need for closing the deficit by reducing the expenditure

[1] E. Hilton Young, *Report on Financial Conditions in Poland* (presented to the Prime Minister of Poland on February 10th, 1924), pages 19, 24, 29.

[2] *Cf.* Howard S. Ellis, *German Monetary Theory, 1905–1933*, page 279.

[3] E. Hilton Young, *op. cit.*, page 24.

[4] *Ibid.*, page 23.

rather than attempting to increase the revenue. This point was expressed as follows: "The most readily available and the most effective way of breaking all vicious circles, and getting rid of the deficit, is to reduce expenditure. There is no direct obstacle in the path of this method of reform, save its unpopularity." [1] Yet the report admitted, in a later section, that there was considerable room for an increase in revenue. It showed that the burden of taxation per head of population in Poland amounted to only 5 gold francs in 1920 and 10 gold francs in 1923 compared with 28 gold francs before the war.[2]

The "valorization" (*i.e.*, fixing on a gold basis) of all taxes, duties and other fiscal charges levied by the Polish State went into effect on January 1st, 1924. At the same time, in order to accelerate and centralize the collection and transfer of tax receipts, the government carried out administrative reforms of a kind that proved important also in the case of Hungary in the spring of 1924.[3]

The Polish experience is of general interest in that it shows a remarkably close correlation between the budgetary position on the one hand and the exchange value of the currency on the other. The first striking instance of this correlation occurred late in 1921 and early in 1922. From September 1921 to July 1922 the exchange value of the Polish currency showed a net rise of more than 10%. "This satisfactory result was achieved by the efficient collection of a Capital Levy, which realized 80 million zlotys. The very announcement of this levy, together with the Government's projects of far-reaching economies, confirmed the belief in the rehabilitation of Polish finance and the stabilization of the currency. It became evident, however, as early as June 1922, that the Capital Levy had achieved its purpose by covering State expenditure during the first month of 1922, but that some time would elapse before the programme of cuts and economies would favourably affect the budget, and that the Treasury had no means of continuing their policy." [4] In brief, an improvement in the

[1] *Ibid.*, page 19.

[2] *Ibid.*, page 32.

[3] The Hungarian reforms were described as follows in the League Report on the Financial Reconstruction of Hungary (*op. cit.*, page 28): "The State revenues were concentrated in the National Bank. Thanks to this arrangement, the precise Treasury position could be ascertained at any time, and the amount of revenue received day by day was known within 48 hours of the time of collection. The labyrinthine system under which local branch offices had collected revenue and made payments, remitting only the final balances to the central Treasury, was ended and the new principle of concentration of funds became one of the corner-stones of the whole scheme of financial reconstruction."

[4] G. Zdziechovski, *The Finances of Poland, 1924–1925* (Report of the Chairman of the Parliamentary Budget Committee, published by order of the Polish Government, 1925), page 2.

exchange coincided with a determined effort towards budgetary equilibrium. As soon as that effort—partly as a result of a change of government—was relaxed, the currency depreciated once more in the second half of 1922. The evidence suggests that this depreciation reacted unfavourably on the real yield of government revenue. There ensued a violent and uncontrolled hyper-inflation which lasted throughout the year 1923.

The way in which this hyper-inflation was brought to an end demonstrates again the paramount importance and the efficacy of fiscal policy. In addition to the measures already mentioned (administrative improvements and the "valorization" of taxes), a number of other fiscal measures were carried out in January 1924, including amendments to the land and income taxes. Tax revenue improved very rapidly and after February 1st the government had no recourse to the note issue for budgetary purposes. Early in January 1924, when most of the fiscal reforms were carried out or announced, the gold and foreign exchange reserve at the disposal of the authorities was almost negligible. Yet the exchange value of the Polish mark was successfully stabilized, and during the next few months a new currency unit, the zloty, equal to one gold franc, was introduced to replace the mark at the rate of 1,800,000 marks to the zloty.

A very important fiscal measure during 1924 was the imposition of an exceptional Property Tax, of which the first instalment was levied in the spring of 1924. During the whole year this tax brought in 200 million zlotys, covering more than one-eighth of total government expenditure. "These 200 million . . . became the keystone of financial reforms and the basis of the Budget Balance of 1924." [1]

Altogether it is clear that the chain of causation ran from fiscal reform to exchange stabilization and not the other way round. It should be specially noted that Poland received practically no financial help from abroad in 1924.

The property tax was to be continued for another year. But the 1924 harvest turned out very poor, and for this and other reasons the collection of the tax early in 1925 proved a failure. In Chapter 6 we shall consider Mlynarski's thesis that the difficulty due to the 1924 harvest failure was purely temporary, that it could have been easily met if Poland had possessed an adequate reserve of international liquidity, and that the stabilization of the currency broke down in July 1925 for want of a mere 15 million dollars.[2] In any event the

[1] G. Zdziechowski, *op. cit.*, page 18.

[2] F. Mlynarski, *The International Significance of the Depreciation of the Zloty in 1925* (Warsaw, 1926).

deficiency due to the failure of the property tax in the first half of 1925 was filled by the issue of Treasury notes, and the upshot was the new depreciation of the zloty which started at the end of July 1925.

This depreciation created fears of renewed hyper-inflation, but in fact it proved relatively moderate (see Diagram 5). As the exchange declined, the public, expecting the depreciation to continue, reacted as it had done in 1923 by delaying the payment of taxes, and consequently the budget deficit increased further during the second half of 1925.[1] At the end of the year, however, vigorous measures were initiated to reduce the deficit. These were at first designed mainly to cut down expenditure, but in April 1926 the government took strong action on the revenue side as well, imposing a 10% surcharge on all fiscal levies, introducing certain new taxes and increasing the railway rates. Moreover, the Pilsudski regime which came into power in May 1926 raised the prices of certain goods which were subject to government monopolies. After the fourth quarter of 1925 the budget deficit declined sharply. The exchange value of the zloty improved, and a *de facto* stabilization (at 58% of the former level) was achieved in July 1926. At precisely the same time the budget deficit disappeared.[2] It was not until November 1927 that Poland received a foreign stabilization loan on the occasion of the legal stabilization of the zloty at the new level.

Thus over a period of five years Poland's financial history showed a marked interrelationship between fiscal policy and the value of the currency, and it is obvious that the former, when properly managed, was entirely capable of controlling the latter. It may be mentioned in conclusion that even in Hungary, where currency stabilization in 1924 was regarded as the prerequisite to fiscal reform, there was a notable episode during which fiscal measures arrested the depreciation of the currency. This happened in 1921, when the Hungarian government issued a forced loan and imposed a capital levy at progressive rates covering all forms of wealth. The exchange appreciated during the first half of the year. But the improvement was short-lived. There followed a renewal of inflation and exchange depreciation. As a result, the capital levy itself became rapidly ineffective since its rates were fixed in terms of domestic currency.[3]

[1] V. J. Zbijewski, *La Stabilisation Monétaire en Pologne* (Paris, 1928), pages 54 ff.

[2] *Ibid.*, pages 57-62.

[3] For an account of the Hungarian capital levy see J. R. Hicks, U. K. Hicks and L. Rostas, *The Taxation of War Wealth* (1941), pages 221-223.

CHAPTER 4

PRIVATE BORROWING AND INVESTMENT

Government deficit spending was the principal cause of inflation; but it was not the only cause. Private spending was an important contributory factor. We have already mentioned the increase in consumers' propensity to spend. This may have been to some extent an initiating cause in the immediate post-war period; but it was mainly as a *consequence* of rising prices and price expectations that it played a leading part in the cumulative phase of the inflation process. This advanced phase of inflation was invariably marked by a decline in private thrift and by a desire to spend money as quickly as possible on luxuries as well as on the ordinary objects of consumption.[1] It was largely through the increase in consumers' propensity to spend that the rise in the velocity of circulation, a characteristic feature of "runaway" inflation, came about. There is no need to dwell further on this familiar phenomenon. We are concerned in the present section not so much with consumers' expenditures as with private capital outlay, or "deficit spending" by traders and industrialists.

In a memorandum submitted to the Brussels Conference in 1920, the relation between private finance and the inflation problem was stated as follows: "Credit creation is possible on behalf of private borrowers as well as of government. The price movement and its sequel will be the same, if it takes place at all, irrespective of the parties on whose behalf the creation is made. In normal times all sorts of credit creations, private and Government alike, are limited by the drain on bank reserves which they set up to provide currency to meet the enhanced prices, these drains leading in turn to a rise in the rates asked for money. During the war, however, as a necessary consequence and condition of finance through bank credits, it has every-

[1] Thus A. Rasin, speaking of Czechoslovakia (*op. cit.*, page 74), mentioned "the pursuit of pleasure" among "the phenomena accompanying every inflation." E. Hilton Young found in Poland that "men spend their money on luxuries, of which at ordinary times they would never dream, rather than lose the benefit of it by keeping it in their pockets" (*op. cit.*, page 13). For Belgium it was said that "inflation produced its usual result in the general adoption of a vastly more generous scale of living than prevailed before the war" (H. L. Shepherd, *The Monetary Experience of Belgium, 1914–1936*, page 159).

where been necessary to remove the legal conditions which caused an increase in the amount of currency handed to the public to mean a decrease in the amount available for bank reserves. . . . It pays the banks to lend capital through money at an abnormally low rate relatively to that at which it can be obtained in the capital market; and it pays business men, therefore, to finance themselves through the banks by getting them to create credits rather than by getting the public voluntarily and knowingly to save real things. This state of affairs could not continue for any long period apart from the power to create notes freely. . . . Measures must be taken to stop the indefinite creation of bank credits on private behalf. This may take the form either of the imposition of high bank rates or of a legal prohibition of further manufacture of notes." [1]

The possibility that private borrowing and capital outlay may cause, or contribute to, inflation has been frequently overlooked and sometimes denied, especially by the adherents of the Banking Principle. Thus Dr. Alois Rasin, Czechoslovakia's Minister of Finance, in his book on *Financial Policy of Czechoslovakia* (1923), stated that in the years 1919–21 "the currency had not been increased," [2] although the figures he quotes show a considerable increase in note circulation. What led him to deny the existence of currency inflation was evidently the mere fact that Government borrowing from the note-issuing authority had not increased. Indeed the Government's debt to the note-issuing authority (*i.e.*, the Banking Department of the Ministry of Finance) was reduced during that period by means of an exceptional property tax or capital levy. This was more than offset, however, by a great expansion of discounts and loans to commercial borrowers so that the note circulation steadily increased.[3] Dr. Rasin referred to the commercial credit expansion by saying that it "corresponded to the monetary requirements of trade," [4] a statement entirely in accord with the attitude of the Banking School.

In France, as in Czechoslovakia, private credit and expenditure played an important part. The available data make it clear that "beginning late in 1919 business spending and borrowing became of influence in continuing the inflation process." [5] In later years this influence became even more pronounced. "There is little doubt that in

[1] A. C. Pigou, *Memorandum on Credit, Currency and Exchange Fluctuations* (International Financial Conference, Brussels 1920), page 9.

[2] *Op. cit.*, pages 74, 84.

[3] *Cf.* International Chamber of Commerce, *Progress in Economic Restoration* (1925), page 41.

[4] *Op. cit.*, page 79.

[5] J. H. Rogers, *The Process of Inflation in France, 1914–27* (1929), page 195.

its early stages at any rate the expansion (beginning in late 1922 and continuing until the severe crisis of July 1926) was dominated by business rather than by government spending and that the business expansion in turn, because of the demand on the part of the banks that more and more of their holdings of short-term Treasury paper be paid at maturity, was continually increasing the financial difficulties of the Government." [1] The way in which the private demand for funds reacted on the government's floating debt problem will be indicated in the next chapter.

The problem was somewhat similar in Belgium. There, as in France, difficulties in the way of meeting floating debt obligations led to government borrowing from the Central Bank in 1926. Between 1919 and 1926, however, the State did not resort to Central Bank credit; on the contrary it reduced its debt to the Central Bank by about 10%. Yet the note circulation showed a steady expansion in those years, accompanied by a rise in prices and a depreciation of the exchange (see Diagram 6). The rising note circulation resulted partly from the public's drawing upon their inactive deposit balances with the Central Bank and partly also from an increase in the bank's commercial portfolio. This increase was particularly marked during 1923, which was a boom year for business activity in Belgium.[2]

Speaking generally, it was only in countries where inflation remained comparatively moderate (as in Czechoslovakia, France and Belgium) that private business expenditure was a conspicuous factor in the monetary situation. In countries that suffered hyper-inflation (with the exception of Soviet Russia) this factor was by no means inoperative, but it was more or less completely overshadowed by government deficit spending.

In Germany government expenditure financed by borrowing from the Reichsbank dominated the process of inflation up to the middle of 1922. But from that time onwards commercial borrowing also played an important part. In June 1922 commercial bills represented less than 3% of the total bills held by the Reichsbank (*i.e.*, commercial and Treasury bills combined). In April 1923 the ratio had increased to 32%. During the remaining six months of the period of hyper-inflation the bank's commercial portfolio, though increasing at a tremendous pace in absolute amount, diminished in relative importance, and its share in the total at the end of October, that is, on the

[1] *Ibid.*, page 349.

[2] See L. H. Dupriez, "Les étapes de l'adaptation économique à une inflation soudaine: France et Belgique de 1919 à 1926," in *Economic Essays in Honour of Gustav Cassel* (1933).

eve of stabilization, had receded to 14%.[1] The management of the Reichsbank, as mentioned earlier, followed the old Banking Principle and refused to believe that printing money in favour of business men against genuine commercial bills could have any inflationary effect. The Reichsbank had kept its discount rate unchanged at 5% up to the summer of 1922. Thereafter, it raised the rate by several stages to 90% in September 1923. But even at that rate it was practically giving money away. The fall in the value of the currency was more closely reflected in the market rate on short-term loans, which rose as high as 20% *per diem* or approximately 7300% *per annum*. At the rates maintained by the Reichsbank, the rediscounting of bills made it possible for the commercial banks to extend credits on very favourable terms to business men. For business men, indeed, it became one of the rules of good management to contract as many debts as possible, debts which were later repaid in depreciated money. "Thanks to the aid of the banks, German industry and commerce were given the means to increase their resources in a considerable measure. Industry rapidly recognized that it was economically more advantageous to incur the highest possible debts at the bank rather than to keep large deposits." [2]

The general flight into "real values" led to large-scale and indiscriminate investment expenditure. "In the acutest phase of the inflation Germany offered the grotesque, and at the same time tragic, spectacle of a people which, rather than produce food, clothes, shoes, and milk for its own babies, was exhausting its energies in the manufacture of machines or the building of factories." [3] There is no doubt that Germany's productive equipment was being rapidly restored and in many directions considerably expanded during the inflation period. But all this feverish investment activity was dominated by wholly abnormal incentives and lacked any kind of co-ordination. Much of it proved later to be misdirected and wasteful.

In Austria, similarly, private borrowing and expenditure contributed to the post-war inflation of money and prices. Especially after the end of 1921, commercial borrowing from the note-issuing authority increased rapidly. It appears that the money borrowed was used not so much for investment in fixed capital as for speculative holding of commodity stocks and purchases of foreign exchange. Thus currency inflation for private purposes had a direct and immediate impact on exchange depreciation in a way which we shall exam-

[1] See F. D. Graham, *op. cit.*, page 63, Table VII.
[2] See C. Bresciani-Turroni, *op. cit.*, page 294.
[3] *Ibid.*, page 197.

ine more closely in Chapter 6. In the autumn of 1922 direct restrictions as well as a higher discount rate were imposed on commercial borrowing. Thereafter the proportion of commercial bills held against notes in circulation declined.[1]

For Poland we have an estimate according to which the value, in U.S. dollars, of notes created in favour of private business borrowers from November 1918 to February 1924 amounted to 76 million dollars compared with a total "inflation levy" of 630 million dollars imposed by the State.[2] Thus, while "private inflation" was by no means negligible, government expenditure was clearly the dominant factor in the process of inflation as a whole.

[1] J. W. de Bordes, *The Austrian Crown* (1924), pages 51 ff.
[2] G. Zdziechowski, *op. cit.*, page 5.

CHAPTER 5

THE FLOATING DEBT PROBLEM

In certain countries inflationary developments arose not only from current budget deficits but also, and sometimes mainly, from a public debt structure which exposed the government finances and the national money supply to the erratic influence of changing moods and apprehensions among the public. France affords a noteworthy example of this state of affairs; but we shall also deal with Belgium and Portugal in this connection.

In France the budget deficit was steadily and substantially reduced year by year throughout the period 1919–26, as may be seen from the table below. The increase of taxation during the war had not done more than compensate for the loss of revenue from the invaded areas, and war expenditure had been financed, on balance, exclusively by borrowing. After the war, far from reducing the wartime tax rates, France proceeded to increase taxation considerably. The fiscal reform which was carried out in 1920 was marked by the introduction of a business turnover tax and other indirect taxes, by sharp increases in income tax and inheritance duties, and by improvements in methods of collection. A few years later, in March 1924, an all-round increase of 20% (a "double décime") was imposed on the existing taxes. Largely as a result of these two measures the State revenue showed a three-fold increase from 1919 to 1925.

On the expenditure side, government payments on account of war damages (damages to State and private property, not including personal damages compensated by pension and similar payments) accounted for the great bulk of the annual deficits after 1920. In anticipation of German reparations, which during the period in question did not materialize in anything like the required amounts, the government itself undertook to make payments in compensation for all war damages. To call these payments "reconstruction expenditure" may be somewhat misleading since the indemnities paid by the State to private persons were not necessarily spent on actual reconstruction in the year in which they were made, if ever; a part of them was no doubt "saved" in the form of cash, bank deposits or government

securities, though it is reasonable to assume that over the period as a whole most of the sums in question were actually spent. The nature of the figures should be kept in mind in considering the fact, for example, that during the four years 1920–23 the government's war-damage expenditure was equivalent on the average to about 12% of the national income. The national income figures themselves are rather uncertain estimates. Nevertheless they are shown below so as to provide an approximate standard of comparison.

France: Budget Deficits, Reconstruction Expenditure and National Income

Francs (000,000,000's)

	Budget Deficit	Reconstruction Expenditure [b]	National Income	(2) as percentage of (3)
	(1)	(2)	(3)	(4)
1919	— 42.6	...	...	..
1920	— 38.0	13.0	110	11
1921	— 28.0	17.5	115	15
1922	— 24.7	13.3	119	11
1923	— 18.1	11.5	134	9
1924	— 9.1	7.8	155	5
1925	— 4.7	4.9	172	3
1926	+ 0.2 [a]	5.6	208	3

[a] Surplus. [b] Government expenditure on account of war damages to State and private property, excluding (a) pensions and other payments for personal damages and (b) interest payments on unpaid damage claims. Source: R. M. Haig, *The Public Finances of Post-War France* (1929), pages 302-3. [c] Source: *Revue d'économie politique*, May–June 1935.

For the reason stated, as well as for other reasons, the budget deficit shown in the table does not necessarily reflect expenditure on goods and services in any given year. In the earlier years in particular, it is not unlikely that actual reconstruction expenditure lagged behind the amount of indemnities paid out by the State.

The large deficits in the years 1920–23 must have been financed entirely out of current savings or out of previously inactive cash balances of the public. At all events there was no increase in the note circulation from the beginning of 1920 to the end of 1923; there was even a slight reduction in the government's debt to the Bank of France. The curious fact is that as the budget deficit declined the country's monetary troubles increased; for it was not till after 1923 that the currency situation became serious. It was in 1925 that the inflationary developments which reached their climax in July 1926 (rise in note circulation, prices, and dollar exchange) became acute. But in 1925 the budget deficit had fallen to less than 3% of the national income, and should have been easily met from the country's

current flow of savings. Clearly the budget deficit was not the primary source of the trouble. What was it? It was the floating debt situation of the government, combined with a lack of confidence on the part of the public.

The floating debt with which France emerged from the war was large, and was sensitive to the condition of public confidence in that any adverse opinion as to the future was liable to result in a failure of the public to reinvest in government paper the money received from the redemption of current maturities.[1]

The following table shows the composition of the internal government debt from the end of the war to 1926. The external debt, the amount of which, in terms of French francs, varied largely as a result of changes in the exchange value of the franc, is not shown. It is sufficient to note that the cumulated budget deficit for the years 1919–26 (165,000 million francs) exceeded the increase in the domestic debt (147,000 million) by an amount reflecting, in the main, foreign borrowing.

France: Domestic Public Debt [a]

Francs (000,000,000's)

End of:	Bank of France Advances to Treasury	Other Floating Debt	Total Floating Debt	Short-term Bonds [b]	Long-term Bonds [b]	Total Domestic Debt
1918	17.1	29.4	46.5	0.5	97.2	144.3
1919	25.5	57.5	83.0	0.9	101.7	185.6
1920	26.6	59.0	85.6	0.4	133.2	219.2
1921	24.6	68.1	92.7	10.3	138.4	241.4
1922	23.6	70.0	93.6	26.8	134.0	254.4
1923	23.3	68.2	91.5	40.0	143.8	275.3
1924	22.6	69.8	92.4	46.6	146.5	285.5
1925	35.9	63.0	98.9	39.5	153.2	291.6
1926	36.0	60.1	96.1	38.8	156.8	291.8

[a] Source: R. M. Haig, *op. cit.*, pages 188, 206, 257.

[b] The distinction between floating debt and short-term bonds was somewhat hazy, but it seems that the latter included medium-term securities up to 15 years.

The floating debt, other than that to the Bank of France, consisted mainly of Treasury bills (especially *Bons de la Défense Nationale*) which were widely held by the public as well as commercial banks. As the business expansion got under way in 1923, the government encountered difficulties in the sale of its *bons* since the demand for business funds caused new subscriptions to fall below redemptions. The amount of *bons* outstanding declined during 1923, and the government endeavoured to raise more money through the issue of

[1] See E. L. Dulles, *op. cit.*, pages 183 ff.

medium- and long-term securities in the capital market. But early in 1924 an issue of reconstruction bonds floated by the government proved an almost complete failure, and from that time until the autumn of 1926 the government could make very little use of the capital market. In the elections of May 1924 the *Bloc national* government was defeated and the *Cartel des gauches* which then came into power seemed to favour proposals for either a capital levy or a forced consolidation as a means of dealing with the debt problem. Investors became apprehensive, and were more and more inclined to let their Treasury bills run off and to transfer the proceeds abroad. It is true that the amount of *bons* outstanding, which in 1925–26 became an accepted "index" of public confidence, showed no net reduction during 1924. Nor was there any apparent increase in the government's debt to the Bank of France in that year. But these indications were false. In April 1925 it was officially admitted that for a number of months previously the government had borrowed indirectly from the Bank of France by issuing Treasury bills to certain banks on the understanding that the Bank of France would at once extend its rediscount facilities for the amount of bills thus issued. Similarly, it was admitted that the corresponding increase in note circulation during that time was not allowed to appear in the published returns of the Bank of France.

The debt problem, or the "Treasury problem" as French writers called it in contrast to the "budgetary problem," was aggravated by the fact that a large amount of medium- and long-term government bonds fell due for repayment in 1925. In these circumstances the government was forced to borrow heavily at the Bank of France. From January 1925 to July 1926, direct advances to the Treasury by the Bank of France rose by 16,250 million francs; the note circulation as published increased by 15,500 million; the amount of *Bons de la Défense Nationale* outstanding declined by 10,670 million; the exchange depreciated rapidly, and prices rose (see Diagram 7). The proposals brought up and heatedly debated in the legislature to deal with the floating debt, as already mentioned, as well as to close the budget deficit by higher direct taxation, came practically to nothing. But they made investors nervous and so contributed to the flight of capital abroad, which at times assumed the nature of a panic, especially during the latter part of 1925 and the first seven months of 1926. In this way the attempts to control the money supply, unsuccessful as they were, aggravated the crisis of confidence and thereby produced what was in an obvious sense the opposite result: a rise in the velocity of circulation. This rise in velocity is apparent from the

following figures which show that the note circulation (representing by far the greater part of the total money supply in France) increased much less than exchange rates and commodity prices. Compared with the increase in note circulation there was evidently a much greater rise in the volume of monetary transactions owing not only to the higher prices but also to an expansion in industrial output.

Percentage Increase from July 1924 to July 1926

Exchange rate, francs per dollar	107
Wholesale prices, general index	74
Wholesale prices of domestic goods	52
Cost of living	47[a]
Note circulation	39
Industrial production	15

[a] Third quarter 1924 to third quarter 1926.

Thus the inflationary process in France may be described largely in terms of "velocity of circulation." Idle funds were set in motion; the money supply as a whole was turned over more rapidly, partly for domestic purchases (which increased the demand for French goods and services directly) but mainly, it seems, for purchases of foreign assets, which depreciated the exchange and hence increased the demand for French goods and services for export. France was not on the gold standard at that time; the transfer of the "capital flight" abroad could not take place in the form of gold; it had to take place in the form of goods and services. The connection between capital flight, exchange depreciation and velocity of circulation will be discussed further in the next chapter. Here it may be noted that even the increase in the money supply was due to essentially the same forces as the rise in the "velocity of circulation." Like the rise in velocity, the increase in the money supply reflected a lack of confidence and resulted, in the main, from the action of the public; that is, from the refusal to reinvest funds in government paper.

The depreciation of both the external and internal value of the franc, as may be seen from the table above, was considerable. Yet it would seem that it did not reach the stage at which it might have had adverse reactions on the current budgetary position in the manner described in Chapter 3. Throughout the post-war years, as already observed, the government revenue increased steadily, while expenditure was reduced year by year from 58,000 million francs in 1920 to 34,200 million in 1925. The budget deficit in 1925 was the smallest since the war, and in the following year there was a surplus.

Just as the inflationary turmoil that preceded it, the recovery of the franc was mainly a result of psychological factors. "That the franc did not take the vertical drop expected by many was due not to any immediate financial measures, but to a change in political front and the grim uncompromising attitude of M. Poincaré (who formed a new government late in July 1926). The result was a sudden and complete change of confidence; with unbelievable suddenness the money and exchange markets returned to their normal condition." [1] The reason for the return of confidence among owners of capital funds is not far to seek. Poincaré's views were well known, and they soon found expression in the measures he took. For one thing, all proposals for "radical" measures such as a capital levy or forced consolidation were immediately and definitely abandoned. The positive measures which Poincaré adopted in the fiscal field were of no great consequence for the budgetary position as a whole, but they followed a line that was pleasing to the owners of capital funds. The highest rate of income tax was halved; the rates of inheritance and estate taxes were cut and made less steeply progressive; taxes on securities were reduced and in part abolished. At the same time the standard rate of income tax was raised, and the burden of indirect taxation almost generally increased. In a word, "the remedy was sought in lightening the burden on rich taxpayers . . . and increasing the levy on those of more moderate means." [2]

In the autumn of 1926 a number of funding loans were issued for the consolidation of a large part of the floating debt. These issues, which carried the relatively high interest rate of 7%, were entirely successful. The administration of the remainder of the floating debt was turned over to a newly established Amortization Fund (*Caisse autonome d'amortissement*), to which were assigned, for both interest and amortization payments, certain important revenues such as the income from the tobacco monopoly and the inheritance and estate taxes. In this way the troublesome problem of the floating debt was solved almost overnight.

In Belgium the mark notes with which the Germans had flooded the country during the occupation were withdrawn in exchange for Belgian francs at the beginning of 1919. This exchange was effected at the pre-war exchange rate. Sums larger than 1,000 marks were credited to deposit accounts at the National Bank. As a result of this operation Belgium started the reconstruction period with an abnormally inflated money supply. At the outset the velocity of circulation

[1] E. L. Dulles, *op. cit.*, page 48.
[2] R. M. Haig, *op. cit.*, page 164.

was so low as to leave considerable room for a rise in prices without any further inflation of currency. An increase in note circulation occurred nevertheless in 1920–22 as the idle deposits at the National Bank were drawn upon for investment in new issues of government securities as well as for business purposes. In 1923, as mentioned earlier, the note circulation expanded mainly because of commercial borrowing, and remained stable during the following two years.

As in France, the Belgian government, expecting Germany to foot the bill, assumed responsibility for all war damage expenditures. As a result budget deficits were large, though they were steadily reduced from 5,656 million francs in 1920 to 1,514 million in 1924 and were covered without resort to borrowing from the central bank. Prices and exchange rates advanced steadily from 1921 to the end of 1923, but, in common with the note circulation, they remained very stable during the two years 1924–25. More suddenly than in France, the "crisis of confidence" in Belgium developed in the first half of 1926, when the note circulation rose by 16%, wholesale prices by 56% and the cost of the dollar by 87%. These developments were, as in France, closely connected with the floating debt situation.

The government's floating debt constituted more than half of the total domestic debt in the early post-war years, as will be seen from the figures below. It must also be pointed out, however, that more than half of the increase in the floating debt between 1918 and 1921 was due to a liability of 5,800 million francs incurred by the government towards the National Bank in respect of the currency conversion in 1919. For the franc notes issued and deposit accounts opened by the Bank in exchange for mark notes were covered by an "advance" of 5,800 million from the Bank to the government and became thus in effect a liability of the State. By 1925 the advance in question had been reduced through gradual repayments by the State to 5,200 million francs.

Belgium: Domestic Public Debt

Francs (000,000,000's)

End of:	Floating	Funded	Total
1918	5.8	3.8	9.6
1921	16.8	11.1	27.9
1923	17.1	14.8	31.9
1925[a]	14.8	17.1	31.9
1927[a]	5.1	22.4	27.5

[a] September 30th.

The government endeavoured without success to convert floating into long-term obligations during the years 1921–23. A reduction was desired not merely in the floating debt held by the public, which was liable to cause embarrassment due to the constant need for refinancing, but also in the floating debt represented by the National Bank advance, a reduction in which would have tended to wipe out some of the excessive money supplies that had come into existence through the exchange of mark notes in 1919. In 1923 the government began to encounter difficulty in selling long-term bonds even for current budgetary needs. At times it was business recovery that drew funds away from the market in government securities, at times it was lack of confidence and flight of capital abroad. Thus "in the course of time, long-term government bonds lost favor with investors; and finally—in the early summer of 1926—redemptions of maturing short-term treasury obligations so far exceeded new subscriptions that it became necessary to call on the National Bank for an advance of 1,500,000,000 francs." [1]

The crisis was associated with the unsuccessful attempt at exchange stabilization in the early months of 1926. The government was anxious to secure a foreign loan for stabilization purposes. After protracted negotiations during the winter of 1925–26 the foreign financiers made the loan project conditional on the simultaneous flotation of a domestic long-term loan. The foreign negotiations broke down when the bankers at home refused their support for the internal bond issue. The reasons for this were partly of a domestic political nature.[2] Also, there were difficulties in balancing the budget. But the floating debt was the main factor which allowed a temporary decline of confidence to affect the monetary situation. As the difficulties of the stabilization scheme became apparent, a flight of capital got under way: Banks and private investors became increasingly reluctant to take up new short-term government securities, and the proceeds of current redemptions went to finance purchases of foreign exchange. The National Bank sold large amounts of gold and foreign assets in an attempt to support the exchange. These sales failed to reduce the domestic money supply, as the government was forced to borrow from the Bank to meet the excess of Treasury maturities over new subscriptions.

In May 1926 a new government came into power. Confidence returned, and a few months later the stabilization of the exchange was

[1] H. L. Shepherd, *The Monetary Experience of Belgium, 1914–1936* (1936), page 29.

[2] See H. L. Shepherd, *op. cit.*, pages 129 ff.

accomplished. The government obtained a foreign long-term loan which, together with the revalution "profit" on the National Bank's gold reserve, was used to extinguish most of its debt to the Bank (including the 1919 as well as the 1926 advance). The major part of the floating debt, namely, that which was held by the public, was drastically reduced through a compulsory funding operation by which investors received shares in the State railways in exchange for their short-term government securities.[1]

Portugal is another country where the existence of a large floating debt rendered monetary conditions sensitive to public confidence and at times magnified the inflationary influences of current deficit expenditure by the government. The Portuguese currency depreciated in both external and internal value during the early twenties under the influence of large budget deficits. Up to the latter part of 1923, however, the inflation did not get out of hand. The government did not have to rely on borrowing from the central bank alone, but was able to cover a substantial part of its needs by borrowing from the public. In the fiscal year 1922–23,[2] for instance, the deficit amounting to 500 million escudos was equal to almost one-half of total government expenditure, while new advances from the central bank (the Bank of Portugal) amounted to little more than 300 million. In the following year (1923–24) the deficit was reduced to 243 million, or one fourth of total expenditure, but the amount of borrowing from the Bank was considerably larger. The reason was that during the first half of 1924 the public lost confidence, failed to renew Treasury bills as they matured, and rushed to convert their funds in foreign currencies. The government was forced to borrow from the Bank to meet the excess of Treasury bill maturities over new subscriptions, and this increased the amount of domestic currency available to the public for the purchase of foreign exchange. There was a 20% fall in the external value of the escudo, accompanied by a rise in commodity prices (see Diagram 8). But the movement was largely speculative. In July 1924 the authorities were able to check the depreciation of the exchange by selling silver stocks abroad and by raising foreign credits. In the second half of the year the process reversed itself completely; confidence revived, funds returned from abroad, the exchange appreciated sharply, government borrowing at the Bank stopped, and sales of Treasury bills to the public increased. In the following years, budget deficits remained large, owing mainly to subsidies to the colonies and, after the *coup d'état* of May 1926, to

[1] For details, see H. L. Shepherd, *op. cit.*, pages 156 ff.
[2] July 1st to June 30th.

increased military expenditures; but they were easily met by borrowing from the public, and the exchange remained stable. In 1927–28, however, the disturbance of 1923–24 repeated itself, though on a minor scale. Despite the fact that the current deficit was reduced in comparison with previous years, there was a loss of confidence, reflected in a 10% depreciation of the exchange, and a fall in the amount of Treasury bills held by the market, which forced the government again to resort to central bank credit. Negotiations for a foreign long-term loan with which to pay off the domestic floating debt broke down. In April 1928, however, a new Minister of Finance (Oliveira Salazar) came into power. Under his administration taxes were increased and expenditure was cut down, so that the fiscal year 1928–29 at last produced a budget surplus, the first of a long series of surpluses. The floating debt was extinguished partly by the use of these surpluses for the repayment of Treasury bills and partly by the issue of domestic long-term funding loans.

In none of the three cases analyzed above (France, Belgium and Portugal) were the disturbances arising from the presence of floating debt, combined with erratic shifts in investors' preferences, very great in quantitative terms, especially if comparison is made with the runaway depreciation caused by the enormous government deficits in the "hyper-inflation" countries. In none of the three cases did "hyper-inflation" in fact develop. But in all three of them the disturbances seemed nevertheless spectacular and attracted a great deal of attention in the contemporary world, partly perhaps because the confidence factor was closely related to domestic political conditions, and partly because these disturbances were usually reflected in violent exchange speculation. The preceding discussion has shown at all events that even in cases of "moderate" inflation the control of the money supply was rendered peculiarly difficult by a public debt structure that was highly sensitive to the play of psychological forces. It has also shown that, with appropriate technical measures and a favourable psychological framework, the problem was entirely capable of effective solution.

CHAPTER 6

EXCHANGE DEPRECIATION AND THE BALANCE OF PAYMENTS [1]

As we saw in Chapter 1, the internal process of inflation exhibited two phases: the "moderate" phase and the "runaway" phase. In a similar manner, depreciation in the external value of the currencies concerned passed through two distinct stages. The distinction between them was determined primarily by the flow of private capital funds. As we shall see under (*a*) below, the flow was "equilibrating" in the first stage, while in the second stage, discussed under (*b*), the flow was "disequilibrating" in regard to the balance of payments. Later in this chapter we shall consider certain factors—other than the domestic policies already discussed—which helped directly, or were intended to help, in arresting the exchange depreciation: namely, (*c*) foreign loans and currency reserves, and (*d*) the demand for exports.

(a) Post-War Import Requirements and the Inflow of Capital

Exchange depreciation in Continental Europe during the three or four years immediately following World War I was partly a consequence of the shortage of working capital caused by the war. Many countries emerged from the war with their commodity stocks exhausted—with no raw materials to feed the productive machine and with no food supplies adequate to restore the health and efficiency of the population. There was an intense need for imports to replenish the physical working capital required to set the processes of production going again. In these circumstances there naturally developed a heavy demand for imports and for the foreign currencies required to pay for foreign goods. This was the main initial cause of exchange depreciation.

But how, it may be asked, could the need for working capital in the form of imported food and raw materials translate itself into effec-

[1] Sections (a) and (b) of this chapter are based to some extent on *International Currency Experience* (League of Nations, 1944), Chapter V, Section 1.

tive monetary demand without prior inflation at home? In most countries some inflation, either for government or for business purposes, was of course going on from the outset. But in view of the intense need for foreign goods it did not take a large initial inflation to feed the demand for foreign currencies and to depress the exchange value of the national currency. The proportion in which any increment in domestic purchasing power was applied to the purchase of imports (in technical parlance, "the marginal propensity to import") was abnormally high. Even if there had been no creation of new money, exchange depreciation could still have occurred as the need for imports was so great that people were prepared to spend out of accumulated money savings and to reduce their cash balances in relation to current incomes.

In so far as the countries concerned were able to meet the demand for imports, and for foreign exchange to pay for imports, by the surrender of such gold reserves and foreign assets as were still available, they were able to relieve the pressure on the exchange. Some part of the post-war import surpluses was financed in this way by some countries. Withdrawal of gold coins, for instance, made some gold available for export.

On the whole, however, this method of financing the import surplus was of minor importance and was open to only a few countries. In general, the heavy demand for imports depressed the exchange. And the distinguishing feature of the first stage of exchange depreciation was that, largely in response to this depreciation itself, capital funds flowed in from abroad and so made it possible to pay for a surplus of imports over current exports.

Apart from foreign government loans and relief credits, what were the motives that caused private funds to move in this equilibrating manner? At that time there was a strong belief that the depreciation of European currencies was a purely temporary phenomenon due to temporary post-war needs and adjustments, and that these currencies would sooner or later return to their pre-war gold parities, to the parities which people still regarded as inherently normal and natural. Given this state of anticipations, any fall in a currency's exchange value created an inducement for foreigners to acquire bank notes, deposits and other assets expressed in that currency. In response to this inducement, foreign funds in fact entered many European countries in considerable volume. The case of the German mark notes acquired by people in England, Sweden, the Netherlands, etc., is a striking and familiar example of a fairly widespread movement.

This movement had a two-fold anti-inflationary effect in the coun-

tries whose exchanges were depreciating. On the one hand, it meant that a part of the money newly created, or released by the public from pre-existing cash balances, came to be held by foreigners and was thus withdrawn from the domestic circulation. The foreign holdings were of course essentially speculative; but so long as they were held, they were inactive.[1] On the other hand, the import surplus which this capital inflow through sales of domestic money to foreigners made it possible to acquire represented an addition to the supply of goods in the war-stricken countries and so tended to retard the rise in prices there.

In a word, money went out and goods came in; other things remaining the same, the effect could scarcely be anything but counter-inflationary.[2] Unhappily, other things did not remain the same. In particular, as exchange rates depreciated, reactions came into play tending to add fuel to the flames of internal inflation. But these tendencies did not become dominant until the second stage of depreciation, which will concern us later. Here we may only add that the capital inflow did not take place exclusively through the sale of money or monetary assets to foreigners. At the depreciated exchange rates foreigners seized the opportunity also to purchase all kinds of real estate, residential as well as industrial. These purchases did not have the effect of withdrawing money from the domestic circulation; but they did make foreign means of payment available for the financing of import requirements.

Thus the exchange depreciation caused by acute and abnormal import demands served a significant function in attracting the funds needed to pay for the materials and foodstuffs imported.[3] The balance of payments was brought into equilibrium by a capital influx after each successive fall in the exchange. (The normal equilibrating effect of exchange depreciation in choking off imports and stimulating exports was hardly operative in the early post-war years, since

[1] Both Gustav Cassel and A. C. Pigou, in their memoranda to the Brussels Financial Conference in 1920, urged that the floating foreign debts in the form of foreign-held bank notes and deposits should be funded by converting them into long-term interest-bearing loans. It was pointed out that otherwise "this foreign-held currency is liable to flood into the country and so to produce the same sort of harmful effect as new issues of it would do" (A. C. Pigou, *op. cit.*, page 10). Eventually, most of the foreign-held currency did in fact return to the countries of origin, adding to the inflationary flood of spending there. But this did not generally happen until the second phase of inflation. By that time the foreign holdings were reduced in real value to a mere fraction, and what might have been a "flood" at the original value, proved a mere ripple on the torrential waves of inflation.

[2] *Cf.* H. S. Ellis, *German Monetary Theory, 1905–1933*, pages 290-1.

[3] For a historical description and theoretical analysis of this phenomenon, see J. J. Polak, "European Exchange Depreciation in the Early Twenties," in *Econometrica*, April 1943.

the demand for imports was very inelastic with respect to price, and exports were limited by the state of productive capacity rather than by the price factor.) But the equilibrium was essentially temporary. The stimulus of depreciation had to be repeated; after a while the exchange had to decline still lower in order to attract the necessary capital imports. In the intervening periods the decline was arrested or slowed down. Indeed, the capital inflow was sometimes large enough to cause a temporary recovery of the exchange rate. Such a recovery occurred in many European countries, including even Germany, for a year or more after the spring of 1920. This particular recovery, however, seems to have been largely due to the steep price fall of staple products on the world market in the course of the depression which developed, mainly in the United States and Great Britain, during 1920/21. The fall in raw-material prices temporarily reduced the foreign exchange requirements of European importing countries, since their demand for imports, as already observed, was inelastic. For the same reason, the exchanges of raw-material producers outside Europe (*e.g.*, the Argentine, Brazil and Chile) depreciated during this period; and the fall in agricultural prices probably accounts at least partly for the fact that the exchanges of eastern European countries, such as Bulgaria and Poland, also showed a decline at that time, instead of recovering temporarily as they did elsewhere in Europe.

After this episode the currencies of Continental Europe, except those of the former neutral countries, continued to depreciate by successive stages. As the process went on, however, the stimulus to capital imports rapidly weakened. A return to pre-war parities came to appear more and more unlikely. Government inflation drove up domestic prices and costs with increasing speed. As people began to realize the one-way character of the movement, anticipations of further depreciation became the dominant influence on the exchange market. At this point exchange depreciation lost its power to attract foreign funds. Instead, it set on foot a cumulative process of capital flight. Thus the second stage of exchange depreciation was reached.

Exchange depreciation in the first stage, though it proved a means of attracting foreign funds needed to pay for essential commodity imports, was a fitful and unreliable means, depending on the play of speculative anticipations. Before long, it completely defeated its purpose as the market came to anticipate continued depreciation instead of a return to "normal." The expectations of a return to "normal," so long as they prevailed in the early post-war years, produced speculation of an equilibrating rather than disequilibrating character. In

the light of subsequent experience, it may seem fantastic that such expectations should have been so widely entertained. They were a product of pre-war psychology, a product of the long period of comparative exchange stability prior to 1914.

(b) Capital Flight and Exchange Depreciation

As we have just observed, the "runaway" phase of exchange depreciation set in when the balance of market opinion swung over from expectations of eventual recovery to expectations of further decline. The precise point at which this swing-over occurred was determined often by psychological and political factors; but once the exchange had depreciated persistently over a considerable period, the change in people's anticipations was almost bound to come sooner or later; and often the change came with dramatic suddenness. At that point foreign balances began to be withdrawn and domestic funds began to move out to seek refuge in more stable currencies abroad. This outflow of capital naturally increased the pressure on the exchange market and speeded up the rate of depreciation. The accelerated fall of the exchange, in its turn, was apt to produce a further loss of confidence in the ultimate future of the currency, and so the motives underlying the flight of capital were still further strengthened. The depreciation of one currency, incidentally, was apt to be taken as a warning of the fate that might befall others; and so the flight from the French franc, for instance, became particularly acute after the collapse of the German mark. Exchange control, where it existed at all, was generally quite ineffective in the period with which we are concerned.

It is clear, then, that the process of capital flight and exchange depreciation was cumulative and, in a sense, self-perpetuating in character. True, the process could not have gone far without some measure of inflation at home. In Chapter 5, where we dealt with the floating debt problem and with the way in which lack of confidence in the future value of the currency made people unwilling to renew their loans to the government, we saw that an expansion of the money supply could be an effect of this process, rather than a causal condition. In the more general case where domestic inflation occurred independently of the process of capital flight and exchange depreciation, this process tended greatly to aggravate the inflationary disturbances. Frequently the fall in the exchange rate became literally the leading factor in the mechanism of inflation, driving up the cost of living and creating an irresistible pressure for wage increases, which in turn

called forth demands for additional currency and credit on the part of the government as well as business men.

The capital flow in the phase of exchange depreciation which we are now considering was obviously disequilibrating rather than equilibrating. It was disequilibrating, in the first place, from the technical balance-of-payments point of view: owing to post-war import requirements, the countries concerned were subject to a strong tendency for deficits to develop on the current account of their balance of payments; and the movement of capital, far from offsetting these deficits, was such as to increase the deficits in the balance of payments as a whole. But the flow was disequilibrating also by the more fundamental test of real capital needs: the transfer of funds from the poor and impoverished countries of central and eastern Europe to the richer countries in the West was of course quite contrary to the requirements of the economic situation.

Aside from the speculative motives just mentioned—the motives arising from the very fact of exchange depreciation—there were sometimes other forces operating in the same direction. One was the desire to evade capital levies, increased income taxes and other fiscal impositions, actual or anticipated. As we have repeatedly observed in earlier chapters, the attempts which governments sometimes made to curb domestic inflation by measures of fiscal policy, however desirable in themselves, were liable to result in capital flight and thus to aggravate the malady indirectly. Another motive for capital flight, though a somewhat peculiar kind of capital flight, arose in cases of hyper-inflation where the domestic currency had to a large extent lost its usefulness as a means of payment and where in consequence there developed a great demand for foreign bank notes to serve as a stable medium of exchange in domestic trade and production. The lack of a stable domestic means of payment was a serious inconvenience in trade and production, and foreign currencies therefore came to be desired not merely as a store of value but actually as a means of domestic payment. This factor was undoubtedly of some importance in accentuating the exchange depreciation of, for example, the German mark and the Polish zloty in 1923. Thus, in advanced inflation, "Gresham's law" was reversed: good money tended to drive out bad, and not the other way round; the reason being the irreducible need for a serviceable medium of exchange in any modern economy based on division of labour and interchange of goods and services.

In addition, of course, a further motive for capital flight developed sometimes as a result of disturbed political conditions.

In some instances domestic investors lost confidence in their currency before foreign investors did so. This appears to have been the case in Austria in 1920–21. In such circumstances there was a tendency for domestic funds to move out while foreigners, still counting on an ultimate recovery of the currency in question, were still transferring funds into that currency. To the extent that this occurred, the outflow of domestic capital was offset by the inflow of foreign capital. On the one hand, the foreign capital was not available for the financing of import needs as it had been in the first stage of exchange depreciation. On the other, the outflow of domestic funds did not have to be transferred through a surplus in trade and other current transactions, and did not exert an independent pressure on the exchange under these conditions.

But this cross-movement of funds, where it occurred at all, did not last long. Pessimism spread rapidly. The influx of foreign capital came to a halt or even gave way to a withdrawal, while domestic funds continued to move out. To the extent that foreign capital had come in through the purchase of monetary assets (bank notes, deposits, bonds, etc.) expressed in the currency of the country concerned, its subsequent withdrawal in the second phase of exchange depreciation was a relatively minor influence, since by that time the value of these assets had been very much reduced through the rise in prices and the fall in the exchange. There was no similar factor tending to alleviate the pressure of the flight of domestic capital, since domestic inflation continually added to the supply of funds available for the purchase of foreign currencies.

Once pessimism had become general, private funds—whether domestic or foreign—all moved in the same direction. This outflow of domestic and foreign capital caused the exchange depreciation to which we have referred, a depreciation additional to that which reflected domestic price increases or other factors governing the balance of payments on current account. The economic function of this "additional" depreciation was to discourage imports and to stimulate exports so as to produce a surplus on current account sufficient to make possible the real transfer of the capital outflow.

The important point for the understanding of the inflation mechanism is that this surplus, which (neglecting services and other invisible items on current account) we may simply call "export surplus," had essentially the same income-generating and, under conditions of full employment, inflationary effect as domestic investment or gov-

ernment deficit expenditure.[1] In all three cases money was paid out to income receivers—to people engaged in producing the export surplus, people working on domestic investment projects and people directly or indirectly employed by the government—without any immediate addition being made to the supply of consumers' goods available to meet the demand arising from the additional money incomes. Whether the money was newly created or whether it originated from a reduction in the amount of cash balances people held in relation to monetary transactions (*i.e.*, an increase in velocity of circulation), the resulting upward pressure on prices was the same.

As has been stressed before in this study, runaway inflation could never have occurred if the money supply had not been continually increased. In Chapter 4 it was remarked that in Austria, for example, credit created by the central bank in favour of private borrowers was used by the latter for purchases of foreign exchange, so that the flight of capital was directly financed by inflation of the money supply. Nevertheless it is important to bear in mind that the increase in the velocity of circulation, which was apt to develop once prices had risen persistently for some time past, could enormously magnify the inflationary torrent. It has been estimated that in Germany, for example, the velocity of circulation in 1923 was about ten times greater than normal.[2] The inflationary effect of the export surplus which resulted from, and was necessary for the real transfer of, the flight of capital can readily be traced in terms of "velocity of circulation." As the price of foreign currencies went up (*i.e.*, as the exchange depreciated), people rushed to buy foreign currencies with any cash they could spare for the purpose, reducing in this way the proportion of their money holdings to their income and business transactions. Where did the money so released go? It did not leave the country, and it was not withdrawn from circulation, as it would have been under gold-standard conditions, through the sale of gold by the central bank. In the last analysis, it was paid out as wages, salaries, profits, etc., to the workers and others engaged in producing the ex-

[1] It may seem strange that a *surplus* in one case (in the balance of international payments) should produce the same effect as a *deficit* in the other (in the balance of government receipts and expenditures). The paradox is only an apparent one. What is a deficit for the government is a surplus for the public at large: the public receive more money from the government than they pay to the government for taxes or for goods and services supplied by the government. In the same way, a surplus in the balance of payments means that the nationals of the country are receiving more money for goods and services exported than they are paying for goods and services imported. In both cases, income-receivers have a surplus of money receipts over payments, and their expenditure out of this surplus increases money incomes further and pushes up prices.

[2] F. D. Graham, *op. cit.*, page 103.

port surplus required for the transfer of the capital outflow. Thus the flight of capital abroad, just as the flight of capital into real assets at home (*i.e.*, into durable goods, real estate, industrial shares, etc.), implied an increase in the velocity of circulation.

In this sense exchange depreciation was a leading element in all cases of hyper-inflation (except the Russian case). For the sake of completeness it should be pointed out that the "additional" depreciation we have considered was caused not only by the flight of private funds abroad, but in Germany also by the pressure to secure foreign exchange for reparations payable in cash. But this factor, as already observed, was economically less important than it appeared at the time in the light of the political issues involved. A large proportion of German reparations in the early years consisted of deliveries in kind, which involved no direct pressure on the exchange. As mentioned before, the cash payments on reparation account were suspended in the summer of 1922, whereas the runaway phase of inflation and exchange depreciation was most clearly in evidence during the latter part of 1922 and the first ten months of 1923.

The effect of capital flight and "additional" exchange depreciation on the balance of payments is not easy to verify in precise and concrete terms since balance-of-payments statistics, especially for the early years after World War I, are very deficient or entirely lacking. Some idea of those effects can, however, be derived from the foreign trade figures alone. The following table shows the ratio of exports to imports during the years 1920–24 in four countries which underwent hyper-inflation. The lower part of the table shows, in addition, four countries where things did not go quite so far. As we are leaving aside the invisible items of the current balance of payments, it is obvious that a ratio of less than 100% does not necessarily mean a deficit on the current account of foreign payments as a whole, just as a ratio of more than 100% does not necessarily mean a surplus. It is only the *change* in the ratio that is significant.

Exports as % of Imports [a]

	1920	1921	1922	1923	1924
Austria	55	53	63	58	57
Germany	70	60 [b]	64	99	71
Hungary	39	49	61	80	82
Poland	..	..	77	107	86
France	54	87	88	94	103
Greece	32	55	81	42	44
Roumania	49	68	114	124	106
Yugoslavia	38	60	57	97	116

[a] Source: *Balance of Payments and Foreign Trade Balances, 1910–1924* (League of Nations, 1925). [b] May to December, 1921.

The relatively low export-import ratio in 1920–21 reflects the low export capacity, the abnormal import requirements and the equilibrating capital inflow during those years. In later years the ratio showed a rise which in some cases may well have been due to some extent to the flight of capital and the additional depreciation thereby produced. Among the "hyper-inflation" countries shown at the top of the table, this rise, reflecting the real transfer of the flight capital, was particularly marked in Germany,[1] Hungary and Poland from 1922 to 1923, when the exchanges of these countries were depreciating very rapidly. A sharp rise occurred also in Greece from 1921 to 1922, at a time of rapid exchange depreciation.[2]

The rise of the French export-import ratio in 1923 and 1924 was undoubtedly to a great extent a consequence of the external depreciation of the franc. This depreciation started in the spring of 1922, continued with few interruptions in the following years, and was largely due to the outflow of domestic funds. The transfer of the capital outflow was effected through a surplus in the balance of current payments which developed as a result of the exchange depreciation. On merchandise account alone, France achieved an export surplus in 1924, and if other current receipts and payments (interest, dividends, tourist and other services, but not reparation receipts) are taken into consideration, France's total surplus on current account amounted to about 10,000 million francs in 1924 as against a surplus of 5,500 million in 1922 and a deficit of 20,000 million in 1920. In 1925 the surplus was about 8,500 million, or not much less

[1] The trade statistics for Germany in 1923 are of doubtful value because of the Ruhr occupation and for other reasons. The sharp rise in the German export-import ratio in 1923 is certainly surprising in view of the fact, pointed out by several authors (*e.g.*, F. D. Graham, *op. cit.*), that internal prices rose at least as fast as the exchange depreciated, so that on the basis of relative price movements the undervaluation of the mark appears to have come to an end by 1923. In 1923 wages and other domestic costs and prices in Germany were, to an increasing extent, directly linked to the course of dollar quotations.

[2] The equilibrating adjustment of trade balances in response to exchange depreciation depends on a certain minimum elasticity of demand and supply for imports and exports respectively. By about 1922, after the most urgent reconstruction needs had been met, this elasticity may well have become sufficient to make trade balances respond in the "right" direction to fluctuations of the exchange. In the event of rapid exchange depreciation it may, however, happen that imports from abroad are increased in the expectation of still higher prices having to be paid in the future, and exports held back in the expectation of higher prices to be obtained in the future in terms of domestic currency. As a result of such speculative anticipations on the part of importers and exporters, the exchange depreciation may lead to a deterioration rather than an improvement in the balance of trade. This seems to have occurred in France in the last twelve months of the exchange depreciation that ended in July 1926 (see *International Currency Experience*, League of Nations 1944, page 120).

than in 1924.[1] As explained above, these surpluses tended, in the circumstances described, to have an income-generating and inflationary effect in France, quite comparable to the effect of government loan expenditure. In Chapter 5 we saw that the government deficit in France was steadily reduced, while the pressure of inflation nevertheless increased. In 1924 the budget deficit was 9,000 million francs, or less than the surplus on the current balance of payments; in 1925 it was 4,700 million, or much less than the surplus on the current balance of payments. In those two years, therefore, the foreign balance which resulted mainly or wholly from the flight of capital abroad appears to have been quantitatively a more important inflationary factor than the government's deficit expenditure at home. It is the inflationary influence of capital flight that explains why the general pressure of inflation in France increased during the period 1922–1925 in spite of the steady and considerable reduction in the budget deficit.

It should be noted that the causal connection between exchange fluctuations and the trade balance is a two-way relationship: the former may influence the latter, but the latter quite naturally may also influence the former. In Roumania from 1921 to 1923 and in Yugoslavia from 1922 to 1923 the ratio of exports to imports rose very considerably while the exchange depreciation was checked or even reversed. In these cases the improvement in the balance of trade, due to good harvests and increased foreign demand, was evidently the active causal element to which the exchange adjusted itself; it was evidently not, or not so much, the passive result of a downward movement in the exchange and a pressure to transfer capital abroad.

We have seen that exchange depreciation resulting from capital flight operated, through the balance of trade and other current payments, as an inflationary influence at home in a way essentially similar to government deficit or private investment expenditure. But the inflationary influence of exchange depreciation operated frequently in a more direct fashion, especially in the last stages of depreciation. Wage rates and other domestic costs and prices came to be fixed from day to day in direct relationship with foreign exchange quotations, so that any depreciation of the exchange tended immediately to push up the general level of domestic money incomes and prices. The resulting increase in the volume of monetary transactions was made possible by an increase in either the velocity of circulation or the quantity of money. The latter, especially in the last stages of infla-

[1] These figures are taken from *Balances of Payments, 1938* (League of Nations, 1939), page 53.

tion, was often observed to follow the rise in foreign exchange quotations and domestic prices with a more or less considerable lag.

Whether indirectly through the effects on the trade balance, or directly through the establishment of a fixed relation with domestic prices, exchange depreciation became a leading element in the process of inflation in the manner and for the reasons we have indicated. The factors described certainly appear to have played a significant part in what we have called the "second phase" of exchange depreciation. This being so, there seems to have been an important element of truth in the "balance-of-payments theory" of inflation, to which we referred at the end of Chapter 2, above.

As a result of the progressive depreciation or virtual annihilation of the exchange value of the currencies concerned, the private foreign funds which had come in during the first phase of exchange depreciation proved largely a gift to the countries in question, except to the extent that they were invested not in monetary assets but in physical property. It may be well to point out that, on the other hand, the flight of domestic funds to countries with stable currencies represented an accumulation of foreign monetary reserves, even though the reserves remained in the ownership of private firms and individuals. The capital exported in the second phase of depreciation was not permanently lost. After the stabilization of the currencies in question, it was generally repatriated, and thus, eventually, it became available for the financing of import requirements in excess of current exports.

(c) Foreign Loans and Currency Reserves

As we saw in Chapter 3, the Brussels Financial Conference which met in the autumn of 1920 placed the main emphasis on the balancing of government budgets as a means of controlling inflation. At that time inflation and exchange depreciation were still comparatively moderate. In later years, as the process of "runaway" depreciation got under way, foreign loans for the purpose of exchange stabilization came to be increasingly regarded as the first prerequisite of monetary reform. This, as we have seen, was the view underlying the stabilization schemes initiated by the League of Nations, particularly in Austria in 1922 and in Hungary in 1924. It formed the basis of reform measures undertaken, with or without the assistance of the League of Nations, in a number of other countries as well. Detailed information concerning the foreign loans granted for stabilization purposes will be found in Part II of this study.

In the light of the preceding analysis, including our analysis of the "second phase" of exchange depreciation, the ways in which foreign loans could help in arresting the inflation can readily be seen. In the first place, it is evident that foreign loans were helpful in checking inflation even if they were used for no other purpose than the transfer of flight capital. In that case the "additional" exchange depreciation arising from capital flight was eliminated; the export surplus caused by the "additional" depreciation, and required for the real transfer of the capital outflow, disappeared; and so did the domestic income-generating and inflationary effects of this export surplus. The people who were anxious to transfer their funds abroad obtained, in effect, the desired foreign currencies from the proceeds of foreign loans instead of from a surplus of foreign receipts over payments abroad on current account. When it was the central bank that sold the foreign loan proceeds to people at home who wished to exchange their domestic funds for foreign currencies, domestic money tended to be withdrawn from circulation. This may have been offset by continued domestic deficit expenditure by the government, financed by direct borrowing from the central bank or by the sale to the central bank of the proceeds of foreign loans contracted by the government. In any case, however, the inflationary influence of the capital flight and of the accompanying surplus in the current balance of payments, which was an inflationary influence distinct from that of budget deficits, stopped. Moreover, since at least the "additional" exchange depreciation due to capital flight was removed, speculative anticipations of further depreciation were checked if not reversed as a result of foreign loans; and so at least one of the motives of capital flight weakened or even vanished entirely.

Secondly, the slowing down or stopping of exchange depreciation by means of foreign loans slowed down or stopped the inflation of costs and prices at home, in so far as this inflation was due to fixed relationships having been established between exchange rates and domestic prices in the way described earlier.

Thirdly, foreign loans for currency stabilization had important psychological effects on the general state of confidence and hence on the behaviour of the public. The stabilization of exchange rates tended to remove one important motive for capital flight, and led frequently even to the repatriation of funds from abroad. But that was not all; the change in mass psychology affected the domestic situation similarly. As confidence in the future value of the currency revived, the rush to spend diminished; the public's willingness to save recovered; and even if government deficits continued unabated for a

while, the increased rate of saving tended to offset their inflationary influence.

Fourthly, when foreign loans were available not merely for the transfer of capital flight but also in part—or, after the cessation of capital flight, in whole—for the financing of imports in excess of current exports, their anti-inflationary effect was direct and obvious. On the one hand, the supply of goods in the country was increased. On the other, the supply of money in the country was reduced in so far as the sale of the additional imports to the public, or rather the sale by the central bank of the foreign exchange with which traders paid for the imports, tended to withdraw money from circulation.

Fifthly, foreign loans served an anti-inflationary purpose from the fundamental point of view of capital requirements. Inflation was not, at least in its earlier stages, a wholly senseless and destructive process. As was observed in Chapter 1, the basic rationale of inflation was to secure a restriction of consumption—which it was not possible to enforce in any other way—so as to make domestic resources available for the replenishment of the capital stock. If foreign loans made this restriction of consumption unnecessary, or if they served to meet capital needs directly through imports of capital goods, resort to inflation as a domestic means of capital accumulation became to that extent unnecessary or at any rate avoidable. It is true that in its later phases inflation entirely lost its capital-forming power; but that does not mean that the *endeavour* to restore the capital stock by domestic loan expenditure was not, even then, an important contributory cause of inflation. Whether foreign loans were granted ostensibly for the provision of reserves for exchange stabilization, for covering budget deficits or for financing specific investment projects, they constituted an anti-inflationary factor so long as they were directly or indirectly used for additional imports and so long as the additional imports represented a direct or indirect contribution to real capital requirements.

No doubt, capital requirements could have been met by domestic saving; and where *voluntary* saving was insufficient even after the restoration of confidence and the return to a normal propensity to spend, the necessary saving might conceivably have been extracted by fiscal methods instead of by inflation. In fact, fiscal methods of enforced collective saving played an important role in certain countries. Thus Latvia, for example, received no foreign loans until 1928; but she kept government taxation at a high level and secured large budget surpluses during the six years following the stabilization of her currency in 1922. These surpluses were used to finance investment ex-

penditure by private entrepreneurs as well as government agencies. Most of the savings collected in the form of budget surpluses were deposited with the Bank of Latvia. Government deposits at the Bank of Latvia showed a very remarkable increase in the six years 1923–28, and the counterpart of this was an equally remarkable increase in the Bank's discounts, loans and advances to traders, farmers and industrialists.[1] In short, the central bank served as a reservoir through which the collective saving enforced by the fiscal system was made available for capital outlay throughout the economy. In Poland, it was not so much the central bank as special State Banks which received the budget surpluses realized during and after 1926, and which re-lent the funds in question to private entrepreneurs and government corporations for purposes of investment expenditure. The country which affords the most notable example of collective saving through the fiscal system is of course Soviet Russia, particularly after the inception of the first Five-Year Plan on October 1st, 1928. Thus, in countries with different political ideologies, the system of forced collective capital formation appears to have arisen from basic economic needs which those countries had in common.

Needless to say, the method of collective saving presupposes an adequate apparatus of fiscal as well as general government administration. It presupposes also a reasonably stable monetary unit. In the early years of post-war reconstruction these two prerequisites were in most cases lacking. Even when they were fulfilled, however, the compulsory method of domestic capital formation depended on the degree to which the sacrifices involved could be politically enforced by the government and physically endured by the population. Capital formation with the help of foreign loans has the advantage that it enables a war-ravaged or undeveloped country to restore or increase its productive equipment without so severe a cut in the standard of living as would otherwise be necessary. This is merely one aspect of the general case for the international movement of capital for purposes of productive investment.

While real capital needs were a basic factor in the relationship between monetary stabilization and foreign loans, the primary technical objective of many loans contracted by governments and central banks in the process of currency reform was to provide reserves of foreign exchange and gold as a buffer stock for the maintenance of the exchange rate at the chosen level.[2] It should not be supposed

[1] See B. Schur, *Währungs- und Notenbankpolitik Lettlands,* pages 75 ff.

[2] For the general function of gold and exchange reserves see *International Currency Experience* (League of Nations 1944), pages 212 ff.

that, for a country lacking such reserves, the only way to acquire them was by means of a foreign loan. Reserves of this sort, as well as resources for real capital formation at home, could have been accumulated by domestic saving (voluntary or, if necessary, enforced). An export surplus could have been achieved by restricting domestic consumption, and the gold or foreign currency proceeds of this surplus would have had to be set aside as a liquid reserve available for meeting any temporary discrepancies arising subsequently in the balance of payments at the given exchange rate. If foreign loans were taken up specifically for real investment purposes, more of the country's domestic savings was available for the acquisition of gold or exchange reserves. If, on the other hand, foreign loans were taken up specifically for the constitution of gold or exchange reserves, more of the country's saving was available for real capital formation at home. Thus the specific purpose of a foreign loan is not a matter of primary significance so long as the loan is used for meeting a country's capital needs. Among these needs, the need for an exchange reserve may be counted as one, but only one, and not the most essential.[1] Just as it is desirable to meet the real investment needs of a poor or impoverished country at least partly by foreign loans instead of wholly by domestic saving, so it may be desirable to meet the need for exchange reserves at least partly by foreign loans instead of wholly by domestic saving.

The return flow of private funds also provided such reserves; but, naturally, this flow did not set in before confidence in the future of the exchange rate was restored; and the creation of a central monetary buffer stock through a foreign loan was an effective means of restoring confidence.

Experience showed, however, that the mere existence of a gold or foreign exchange reserve could be of little value without a readiness to use it. The German Reichsbank retained a substantial gold reserve throughout the inflation period, but was very reluctant to use it. In the summer of 1922, under pressure from the government, the bank did make an attempt to support the exchange, but its action was timid and half-hearted, and was soon abandoned. In January 1923 the total German note circulation, amounting to nearly 2,000,000,000,000 marks, was worth about 172 million gold marks at the current exchange rate. At the same time, "the Reichsbank's gold reserve in its own vaults was 954 million gold marks,[2] enough to redeem the total paper circulation at the existing exchange rate more than five times

[1] See *International Currency Experience* (League of Nations 1944), pages 92-94.
[2] Equal to 227 million gold dollars.

over." [1] By that time the public had carried its efforts to economize the use of money to a high degree of inconvenience, and it might have been possible for a determined government to stem the rise of prices by withdrawing money from circulation through the sale of gold for the support of the exchange rate. In fact, during the first quarter of 1923, the Reichsbank made another and more determined attempt to maintain the exchange, but then the policy of passive resistance to the Ruhr occupation opened the floodgates of domestic currency inflation more widely than ever, and under these conditions even the use of all the Reichsbank's gold could not have averted the final collapse. Yet it is worth noting that Germany's gold reserve at the end of 1923 still amounted to over 500 million gold marks.

France had a considerable gold reserve throughout the period of exchange depreciation. But the Bank of France had no right to sell or buy gold except at the legal pre-war parity, and so its gold stock remained inactive and practically unchanged at a level of about 700 million gold dollars during this period. Since for legal reasons the gold reserve was unavailable, the government took up a loan of $100 million from J. P. Morgan and Company in New York in March 1924 for the purpose of countering the speculative flight from the franc. This intervention had the desired effect of steadying the external value of the franc in 1924, but later the exchange rate was again left to itself. The gold reserve remained untouched, and even the Morgan loan was not entirely used up: it was only at the very end of the depreciation process (in July 1926) that the remainder of it was thrown on the market. Caillaux, the Finance Minister in the government which preceded that of Poincaré, urged the need for another foreign loan for the stabilization of the exchange. But Poincaré, who came into power late in July 1926, was opposed to a foreign loan. It was his conservative fiscal policy, and not a foreign stabilization loan, that initiated the necessary reversal of public psychology; and the subsequent repatriation of private balances from abroad, which the Bank of France was now empowered to take over at the current exchange rate, furnished the authorities with a buffer stock more than adequate for the stabilization of the exchange.

The experience of Belgium, as we have noted before, was not very different from that of France. But Francqui, the Belgian Finance Minister who carried out the final reform in 1926, "determined that a foreign loan was essential to successful stabilization." [2] The loan,

[1] F. D. Graham, *op. cit.*, page 85.
[2] H. L. Shepherd, *op. cit.*, page 186.

which was issued in October 1926, carried interest at 7% on a nominal amount of $100 million. Taking into account the price of issue, which was 94, and the expenses incident to the flotation, the net proceeds of the loan were no more than $90 million. "The terms of the loan were nothing if not onerous; and it is open to question that a loan of such size was indeed necessary." [1] As events turned out, the gold reserve of the National Bank of Belgium, which was not a negligible quantity even before the loan ($53 million at the end of 1925), subsequently increased beyond what was needed for the normal "buffer" purposes of exchange stabilization. And for meeting real capital requirements, no one would have held that a large foreign loan was needed by Belgium in 1926.

What even a small reserve can achieve, if properly used, was shown in Poland at the beginning of 1924, when stabilization was effected by the country's own unaided effort. On January 8th, 1924, the Polish authorities decided to use their whole foreign exchange reserve, the net amount of which was only $2.5 million, in an effort to arrest the exchange depreciation. The Finance Minister stated afterwards: "We had to take the plunge, for although 2½ million dollars is very little indeed, and it is less even than we had at our disposal at various other periods, . . . yet on January 8 we decided to employ the whole of this minute reserve in order to combat the depreciation of the mark. There was no other way out." [2] The action was entirely successful. The depreciation was stopped, confidence revived, and the flight of capital was reversed. In consequence, "the National Exchequer lost nothing by offering its dollars to the public; on the contrary, the reserve of foreign currencies began to grow, and shortly afterwards exceeded a sum equivalent to 100 million gold francs" (20 million dollars).[3] The success of this operation was due largely to the courageous fiscal measures adopted at that time, which we have already discussed.

Nevertheless, Poland's margin of international liquidity remained precarious. The trade balance deteriorated as the result mainly of a harvest failure in 1924. An American dollar loan which was expected to bring in $50 million in the spring of 1925, yielded only $24 million. The Bank of Poland, having lost practically all of its exchange reserve, had to withdraw its support from the exchange market in July 1925, and the zloty depreciated. Many observers, especially abroad, attributed this unfavourable turn of events to excessive issues of

[1] *Ibid.*
[2] See G. Zdziechowski, *op. cit.*, page 15.
[3] *Ibid.*

currency notes by the government in the first half of 1925. It is true that the property tax introduced in 1924 failed to bring in the expected amount in 1925, and that the consequent note issues of the government offset the deflationary effect which the sale of foreign exchange by the central bank would otherwise have had, an effect which, in turn, would have tended to correct the disequilibrium in the balance of payments. Yet, having regard to the fact that the principal cause of the disequilibrium—namely, the harvest failure of 1924—was a temporary one, it is plausible to argue, as F. Mlynarski did,[1] that exchange stability could have been maintained if Poland had possessed a monetary reserve adequate to bring a transitory gap of this sort. "On the eve of a bountiful grain crop and of an equilibrium in the Polish foreign trade balance, the Bank of Poland was at an end of its forces." [2] Based on an analysis of the actual amounts involved, Mlynarski's conclusion was that the stability of the zloty exchange in July 1925 broke down merely "because of a lack of 15 million dollars." [3] The depreciation was comparatively moderate; the trade balance recovered; and in 1926 exchange stability was restored. In November 1927, when the legal stabilization was effected, Poland obtained a stabilization loan of $72 million, bearing interest at 7%, issued at a price of 92 and repayable in twenty years at 103. This at last provided an adequate reserve to buttress the external stability of the zloty.

It is true that the purchase of gold and foreign exchange reserves by the central banks tended frequently to increase the note circulation or at any rate the domestic credit base; and this was, on the face of it, an inflationary influence. This influence was absent when the central bank took over the proceeds of a foreign loan contracted by the government and, as in Belgium in 1926, cancelled in return its claims on the state arising from past government borrowing from the bank. But when the loan was used for domestic investment expenditure or for meeting a current budget deficit,[4] then the increase in the central

[1] F. Mlynarski, *The International Significance of the Depreciation of the Zloty* (Warsaw 1926).

[2] *Ibid.*, page 50.

[3] *Ibid.*, page 62.

[4] The Austrian and Hungarian stabilization loans of 1923 and 1924 were intended mainly to cover budget deficits. But once the exchange was stabilized, there was a rapid revival of confidence and a renewed willingness by the public to hold domestic money. The currency became once more serviceable as a means of exchange, as a store of value and, last but not least, as a unit of account for the assessment and collection of taxes. As was observed in Chapter 3, the tax revenue in these circumstances increased rapidly and the budget was soon balanced. In consequence, only a small part of the stabilization loans was actually needed for covering budget deficits.

bank's exchange reserve entailed an expansion of the domestic money supply, at any rate so long as the additional exchange reserves were not used for additional imports. The effect was similar when the exchange reserves were acquired by the central bank from nationals wishing to repatriate their funds from abroad.

Thus the quantitative influence of additional exchange reserves appears to have been inflationary. But the appearance is superficial. The important fact is that the stabilization of the exchange tended to increase the public's demand for the domestic currency not only as a means of payment but also as a store of value. People replenished their cash balances to something like the normal level in relation to income and other monetary transactions. In other words, the velocity of circulation diminished. In so far as this was the case, the increase in note issues which was often observed in periods immediately following exchange stabilization had no inflationary effect, regardless of whether the increase resulted from purchases of foreign exchange by the central bank or from continued government borrowing at the bank.

In Austria, for instance, where exchange depreciation and the rise in prices were suddenly arrested in August-September 1922 as a result of the initiation of the League of Nations reform scheme, the note circulation almost trebled during the remainder of that year, owing partly to continued government borrowing and partly to foreign exchange purchases. During 1923 the note circulation increased by 76%, or by an absolute amount nearly equal to the increase in the National Bank's exchange reserve. Prices and exchange rates, on the other hand, remained constant, on the whole, throughout the period from September 1922 to the end of 1923. Similar developments may be found in Yugoslavia during 1923, in Poland during 1924, and in many other cases of monetary stabilization.

Once the value of the monetary unit offered a reasonable prospect of stability, the public's demand for cash was apt to recover rapidly. It was this recovery in the demand for money that explains, incidentally, the success of Germany's rentenmark experiment late in 1923. The rentenmark was merely another paper currency and one-half of it was issued, moreover, for covering a continued deficit in the government's budget. But the government promised to keep the issue within a strictly limited amount (2,400 million rentenmarks). The public had pushed their attempts to economize the use of the depreciated mark currency to such a pitch of inconvenience in everyday transactions that the mere promise of stability for the new rentenmark notes was sufficient to create a great demand for them, a de-

mand which effectively ensured their internal and external value. It should be noted that this happened almost a year before Germany received the "Dawes Loan" for the replenishment of her gold reserve. In the meantime, prices and exchange rates remained constant in spite of a very considerable increase in note circulation in terms of the new monetary unit. Under the Dawes scheme this unit was replaced in the autumn of 1924 by the reichsmark, equal in value to the rentenmark as well as to the pre-war gold mark.

(d) Demand for Exports

Reference must finally be made to the foreign demand for a country's exports and its influence on the exchange, in addition to the influence of domestic price movements, international capital transfers and foreign exchange reserves.

Currency stabilization appears to have been facilitated in many countries, especially in Eastern Europe, by favourable conditions of demand for the exports of those countries. The international slump of raw-material prices in 1920–21, while it temporarily benefited industrial consuming countries such as France and Germany, had in general an adverse effect on the currencies of Eastern European countries. But even during that slump, there were some commodities, notably timber and flax, the demand for which kept up relatively well. Timber was in good demand for post-war construction and reconstruction; and Russia had virtually dropped out, for the time being, as an exporter not only of timber and flax but also of grain. The relatively high price of flax in Western European markets accounts partly for Latvia's and Lithuania's early success in currency stabilization. After 1921, the general recovery in prices of primary products gave support to the exchanges of practically all Eastern European countries. A more detailed account of this development will be found in Part II, Chapter 4, Section (c).

In some countries, including Czechoslovakia and Latvia, the government set up state monopolies for the most important articles of export, and in these circumstances the improvement in prices abroad helped at the same time to balance the government's budget and to support the exchange value of the currency.

Under a régime a fixed exchange rates, an increase in foreign demand is, strictly speaking, an inflationary influence: the increased incomes earned in the export industries give rise to increased expenditure on the domestic market, which, together with the consequent increase in money incomes in the home-market industries, tends to

expand the total volume of money expenditure in the country concerned. Under the conditions of freely fluctuating exchanges which prevailed prior to exchange stabilization, this influence did not arise. The improvement in foreign demand reflected itself simply in an appreciation (or a slower depreciation) of the currency. This tended to reduce the domestic prices of imported goods. It also tended to raise the domestic prices of exported goods, though this did not increase producers' incomes when it was a government monopoly that effected the exports and retained the difference between prices abroad and at home. In any case, the effect was not a general increase in money income in the country concerned, but a tendency for the exchange to appreciate. And a tendency of this sort was apt to call forth a reversal of capital plight, providing the wherewithal to finance a larger volume of imports, and checking the inflation at home by alleviating the shortage consumption goods, raw materials and capital equipment. From the fundamental point of view of the commodity supply, a relative increase in export prices alone meant an improvement in the real terms of trade, which improved the situation by virtue of the fact that for any given physical volume of exports the country obtained a larger physical volume of imports.

CHAPTER 7

CONSIDERATIONS OF POLICY

(a) The General Course of Inflation

In the state of collective poverty into which the greater part of Europe had lapsed as a result of the First World War, it was obviously necessary, in the years immediately following, to allocate a maximum of economic resources to the task of reconstructing and re-equipping the productive apparatus of society. Without assistance from abroad on a large enough scale, this could only be done if, for a time, consumption were kept at a low level. This effect might have been achieved by a policy of high taxation, savings campaigns and selective import controls, in conjunction with a reconstruction plan giving preference to the production of capital goods or of exportable commodities (which could be used to purchase capital goods abroad) over the production and importation of unessential commodities. But such a policy, consciously recognizing and assuming the burden of reconstruction, was rarely followed.[1] Neither the elation of victory nor the disorder and disappointment brought by defeat was conducive to the outright acceptance of the necessity of submitting for some time longer to sacrifices.

The easiest policy was for governments to resort to inflationary spending and so to impose the inevitable sacrifices in a roundabout way. Governments in many countries were weak, inexperienced or disorganized; and inflation is the form of taxation which even the weakest government can enforce, when it can enforce nothing else. Up to a point this policy achieved a measure of success. The rise in prices, so long as it was not immediately accompanied by a similar rise in the money income and expenditure of consumers, effectively restricted production. It made productive resources available for public works and other objects of government expenditure. It shifted income and purchasing power from the workers and lower middle classes to the entrepreneurial class and so provided the latter with the

[1] Czechoslovakia was one of the few countries that made considerable achievements in this direction in the immediate post-war years.

means of financing the production or importation of capital goods. In this way the rehabilitation of the capital structure was facilitated at the expense of the production of consumers' goods.

Inflation was thus an indirect way of solving problems for which no direct and more systematic cure was developed. But it had obvious disadvantages even where it reached only relatively moderate dimensions. As a method of taxation it was unscientific, and was regressive rather than progressive. As a method of financing private investment it was haphazard and uncertain in its effect, since the resources transferred to the entrepreneurial class could be, and to some extent always were, used for unessential consumption as well as for investment. In this way the reduction in consumption which inflation imposed on those with low incomes was in part offset by a wasteful increase in the consumption of "profiteers." Moreover, such investment as did result from the transfer of resources was guided by wholly abnormal price and profit conditions; was uncoordinated, unbalanced and fitful; and was in part directed into socially undesirable and unproductive channels. Even in the moderate phase where it contributed in some measure to post-war reconstruction, inflation thus tended to create a reconstruction problem of its own, quite apart from the social and political disturbances which it was apt to provoke. The experience which we have reviewed leaves no doubt, therefore, that inflation is a poor substitute for a more systematic economic policy in the reconstruction period.

The fact that inflation in the moderate phase was able to contribute what it did to solving the post-war reconstruction problem was due to specific historical conditions which are unlikely to repeat themselves. The main conditions were: (1) that the adjustment of wage rates lagged behind the rise in commodity prices; (2) that people were willing to save part of their incomes and to keep their cash balances in a more or less normal proportion to the monetary turnover; (3) that the majority of those operating in the foreign exchange market believed exchange depreciation to be a temporary phenomenon and were, up to a point, willing to hold more of the depreciated currencies the lower their exchange value declined.

The fulfillment of each of these conditions was dependent on one and the same factor: ignorance of inflation and what it meant. As long as the "money illusion" was maintained, the real income of workers could be kept down by the rise in prices. Just that long shopkeepers still believed that they were making a profit when they sold commodities for more than they had bought them for, even though this price was lower than the replacement cost. Just that long, too,

people would think that they could provide for their old age or retirement by saving an amount of money which increased by say 5% interest per year and fell by 10%, 20% or more in purchasing power. Likewise, so long as the pre-war gold parities were regarded as the normal and natural parities to which the exchanges would sooner or later return, speculators could be induced to acquire balances in depreciated currencies because they seemed so cheap.

These illusions were possible in Europe after 1918 because there had been no experience of a great inflation for more than a century. Their existence made it possible for inflation to proceed at a relatively moderate pace for several years, and it was only in such circumstances that the process of inflation and exchange depreciation could facilitate the task of reconstruction. As soon as they passed away, and the repercussions of their passing caused the inflation to get out of control, inflation and exchange depreciation did not ease but aggravated the problem of reconstruction. With the memories of hyper-inflation fresh in the minds of people still living, inflation at the present time (1946) is liable to call forth, from the very outset, the rapid and violent reactions which render it useless as an aid to reconstruction.

These reactions appeared very clearly in the runaway phase of inflation in the early 'twenties. As inflation went on, the public began to realize what was happening. Acting individually or in groups, people endeavoured desperately to make themselves immune against the scourge of inflation; and by doing so, they threw the monetary mechanism of society into still greater disorder or into final ruin. The reactions just referred to fell into three classes, corresponding to the three conditions which assured the "success" of inflation in the earlier stages.

(1) The lag between money incomes and prices was eliminated by the adoption of the "index system" under which wages and salaries came to be paid on the basis of an index number of the cost of living, wholesale prices or exchange rates. This created an automatic and immediate adjustment of money incomes to the rise in prices. In Germany, a state was eventually reached where wages were paid on the basis of the *expected* prices of next week.[1] The same was true of Poland in the phase of hyper-inflation. The wage-earner had found a defence against depreciation through a continuous adjustment of money wages to the current, and later even the anticipated, price or exchange index, so that real wages actually rose in the latter half of 1923. It is clear that the index system, even where it did not go so

[1] C. Bresciani-Turroni, *op. cit.*, page 310.

far as to anticipate future price rises, effectively barred that transfer of resources (to government uses of private investment) which was based on the lag of wages behind prices.

(2) Saving in a monetary form gave way to dissaving. People spent their currency holdings and bank deposits, reduced their cash balances to the absolute minimum and passed on their money receipts as quickly as possible. Even with the index system in force, governments could still have obtained resources through inflation if people had saved (that is, abstained from consumption) in order to build up their cash balances to the extent that would have been required to maintain the normal ratio of money holdings to money incomes. The obnormal rise in the velocity of circulation effectively barred the transfer of resources which such "induced saving" would have rendered possible. Not only did it make government inflation ineffective; it even became an independent inflationary force. Dissaving was, in a sense, produced by the rise in prices once people became aware of the trend of events; and dissaving itself tended to produce a further rise in prices.

(3) The inflow of capital which occurred in the early stages of exchange depreciation gave way to capital flight as soon as the market came to anticipate further depreciation rather than a return to par. Capital flight speeded up not only the exchange depreciation, but also the monetary circulation and the rise in prices at home, in the way which we examined in Chapter 6, Section (b).

(b) Control by Domestic Measures

Since government deficits were the primary cause of inflation, any appraisal of policies for combating inflation must center around the possible methods of reducing such deficits. These methods are obvious enough in theory; but the very existence of inflation created, as we have seen, peculiar difficulties in the way of their application.

Even if it is granted that reconstruction needs and political conditions may have set the level of many types of government expenditure inalterably beyond the control of fiscal policy, the importance of economy in government spending needs to be emphasized none the less. The presence of "irreducible" items in the expenditure budget made it all the more essential to cut down the items that could be reduced. To be sure, inflation tended constantly to increase the money volume of government expenditure as a whole. In Chapter 3 we analyzed the way in which various classes of expenditure reacted to

the movement of prices or exchange rates. The link between expenditure and the rise in prices became particularly close as soon as the index system of wage and salary payments was extended to government employees. Such an extension of the system may have been unavoidable for social and political reasons. But at that point it became more imperative than ever to apply the index principle to the revenue side as well.

The lag of tax yields behind the rise in prices was the most troublesome problem of fiscal policy under conditions of inflation. It tended constantly to reduce the government's revenue in real terms. Attempts were made, as we saw in Chapter 3, to remedy the situation by levying fines or graduated surcharges so as to offset the inducement which the rise in prices offered to taxpayers to delay their payments as long as possible. This method, however, proved inadequate in cases of severe inflation. It was cumbersome and complicated; it could not be made sufficiently automatic. When the rate of depreciation passed a certain point, nothing could make the currency serviceable as a unit of account for the assessment and collection of taxes. At that stage, two courses were open: either to stabilize the national currency by some means other than fiscal policy and so to achieve a monetary unit on the basis of which fiscal policy could then be rendered effective; or to abandon, in effect, the national currency for fiscal accounting and to enforce taxation in terms of gold or some other commodity or foreign currency.

The first course was adopted by Austria and Hungary. The initial stabilization of the national currencies was achieved by a return of confidence due to the inception of the financial reconstruction schemes of the League of Nations, even before the foreign loans provided under those schemes were issued and before the government budgets were balanced. The initial currency stabilization restored the effectiveness of fiscal policy, and was quickly followed by an increase in tax revenue by enough or more than enough to close the budget deficit.

The second course was followed by Germany and Poland through the "valorization" of taxes. This meant that taxes were assessed in terms of gold and collected in national currency at the rate of the day. The "index system," the public's propensity to dissave, the rise in the velocity of circulation and the flight of capital had rendered the inflationary method of government financing entirely ineffective. The sequence of measures applied in Austria and Hungary was not practicable. The only thing to do was to put the government revenue

also on an index basis and to obtain the resources required by the state through the normal method of taxation instead of through inflation.

The index in this case was the price of gold in domestic currency, which meant the same thing as the price of foreign currencies based on gold. It might have been more scientific to impose taxation on the basis of some index number of domestic prices or wage rates. The price of any single commodity is likely to be a less equitable index for tax purposes than the price of a representative collection of goods and services on which the calculation of price index numbers is based. The price of gold had the advantage of being a simple, definite and easily ascertainable index. The price of some important domestic produce such as wheat or coal would have had the same advantage. And from the assessment of taxes in terms of some domestic commodity it would have been only a short step to the actual collection of taxes in kind (a method adopted, for instance, in China in 1942). Just as taxation in kind represents a reversion to a moneyless barter economy, so the various possible index systems of taxation reflect the breakdown of the national currency for fiscal as well as other purposes. But, in the circumstances indicated, some such method is essential as a means of securing the necessary resources for the state and as a prerequisite for the restoration of an orderly monetary system.

The use of gold as a basis of taxation raises special problems. Since the price of gold reflected the external exchange value of a currency, its use as an index for tax purposes led to different results according as the currency was undervalued or overvalued. In the former case it increased and in the latter it reduced the relative yield of taxation in terms of domestic prices and incomes. In the last stages of inflation, when the rise in domestic prices was so rapid that the currency tended to become over- rather than undervalued, the price of gold was not as good an index for "tax valorization" as some index of the currency's internal purchasing power would have been. But this disadvantage was probably of minor importance, and could always have been corrected by an appropriate increase of tax rates expressed in gold. The price of gold was a simple index; it enjoyed considerable prestige; the general public was inclined to accept it unquestionably as a fair and proper standard; and it was an index that could be observed or ascertained at any moment without elaborate calculations.

This index, however, presupposes a free market for gold and foreign exchange. Had exchange control been in force, there would have

been no place, or only a restricted place, for a legal private market for gold with a freely fluctuating price. Domestic inflation could have gone on at an artificially constant legal parity. There would have been an inevitable "black" market for gold and foreign exchange; but the black market rates could scarcely have been adopted as an official index for tax valorization. It is true that exchange control does not necessarily imply a constant legal parity for the currency's gold or exchange value. The parity could have been altered from time to time. But these alterations would almost inevitably have lagged behind the rise in internal prices.

Thus exchange control would probably have made gold an unsuitable basis of taxation. On the other hand, exchange control might have been used to arrest the flight of capital. As we have seen, capital flight exercised an important inflationary influence on domestic prices and money incomes. Exchange control for the prevention of capital flight might therefore have been a useful instrument of policy for the control of inflation. This conclusion, however, is far less certain than it appears. There is no guarantee whatever that the "hot money," barred by exchange control from the purchase of foreign currencies, would have gone to sleep. Stopping the flight of capital abroad might only have increased the flight into goods, shares and other "real assets" at home, in which case the result—an inflationary rise in the velocity of circulation—would have been the same.

In actual fact, exchange control in the early 1920's, where it existed at all, was in practice quite ineffective. And this is not in the least surprising. There is no reason to expect that a state administration which is incapable of controlling inflation at home is capable enough to enforce a rigid system of exchange control. It is true that the control of capital flight might be made easier and more effective with the cooperation of foreign countries. If foreign countries had imposed restrictions of their own against the inflow of flight capital, or if they had agreed to furnish detailed reports on the funds seeking refuge in their currencies, the prevention of capital flight would have made smaller demands on the administrative apparatus of the inflation-ridden countries. Such cooperation, instances of which occurred in the 1930's,[1] did not exist in the early years after World War I. Besides, as just observed, there is no certainty that the control of capital flight, by whatever means, can provide even a partial solution to the problem of inflation.

There is certainty, on the other hand, that fiscal policy through its

[1] See *International Currency Experience* (League of Nations, 1944), pages 164-5 and 188-9.

effects on the domestic monetary circulation can provide a solution. The way in which taxation can be made effective under conditions of inflation has just been indicated. The case of Poland, which we analyzed in Chapter 3, is a good example of the efficacy of fiscal policy for combating inflation. Poland started with a completely disorganized administrative machinery. Yet three times within five years (1921–26) she succeeded in stemming the rise of prices and the depreciation of the exchange, by her own unaided endeavours. The first attempt broke down because the fiscal effort was too soon relaxed; the second, which was marked by the valorization of taxes on a gold basis, broke down partly for the same but more largely for other reasons; and it was only after the third attempt had succeeded that she received a substantial stabilization loan from abroad.

So far we have dealt with two of the reactions which made inflation get out of hand: the index system of automatic adjustments in money incomes, and the flight of capital abroad. The former can be countered by putting the government revenue also on an index basis. The latter can be countered by exchange control, though whether this will do any good in the end is quite uncertain.

There remains the problem of dissaving. Can anything be done to keep up the normal rate of saving among the population? More particularly, can anything be done to prevent people from spending the savings accumulated in the past in the form of currency, bank deposits and other monetary assets? When individuals rushed to spend their monetary reserves and, by shortening their income and expenditure periods, reduced the amount of working balances needed for current transactions, this did not by any means reduce the total amount of money in the system; but it pushed up the level of prices and money incomes and so reduced the proportion of cash balances to the volume of transactions. This expenditure of cash balances was prompted mainly by the prospect of future depreciation in the real value of money. Anything that tended to reverse this prospect in people's minds tended to lessen the urge to dissave. That is why the "confidence" factor was so important. It was important; but it was a matter of mass psychology, unpredictable, erratic, and hardly susceptible of precise economic analysis. A mere change in government; the announcement of a foreign loan or stabilization scheme; the issue of a new currency within a maximum amount fixed by law; the abatement of political disturbances; a plan of budgetary reform;—any of these things, as we have seen, was capable of affecting people's expectations favourably, making them revert to a more normal behaviour in monetary matters and restoring to some extent their will-

ingness to save in monetary form. None of these things was enough by itself to ensure lasting stability; but any of them could, for a time, allay the fear of further depreciation and so create the conditions in which, during that time, the necessary fiscal and other technical measures could be put into actual operation with a fair chance of success or, at all events, with less danger of their effect being nullified by a rise in the velocity of circulation.

Apart from factors affecting "confidence," there are various technical measures that might conceivably be adopted for the prevention of dissaving. As a provisional hypothesis, we may suppose that there is a minimum below which people cannot reduce their cash balances in proportion to income without great inconvenience in everyday transactions. If all disposable funds above that minimum were blocked, taxed away or otherwise immobilized, the means of dissaving would be eliminated and the rise in prices due to dissaving prevented. There are various ways of mopping up "loose cash": the blocking of bank deposits above certain minimum amounts; the compulsory stamping or exchange of bank notes and the removal into blocked accounts of all individual note holdings above a certain minimum; the compulsory investment of the "surplus" funds in government securities,[1] the money thus withdrawn being held inactive or wiped out through repayment of government debt to the banks; the imposition of a capital levy. Blocking is in the nature of a temporary stopgap measure, and may in fact be preparatory to more durable measures. A capital levy, on the other hand, would permanently extinguish monetary assets available for dissaving. A capital levy may be devised for various purposes: social (*e.g.,* to correct the inequality of wealth), fiscal (*e.g.,* to reduce the internal debt burden), as well as monetary. From the monetary point of view with which we are concerned, the total amount of the levy should equal the surplus cash in existence. To impose the levy solely on monetary assets or, as in Greece in 1922, solely on bank notes, would be unfair; all kinds of property would have to be subjected to the levy. Shares, bonds and other assets surrendered in payment of the levy could then be resold by the government on the market so as to mop up such surplus cash as is not mopped up directly by the levy. The proceeds of the levy could be used to redeem a part of the public debt (especially the part held by banks), and the operation would thus serve a fiscal as well as a monetary purpose. There is no doubt, however, that a capital levy is a complex and difficult measure. Blocking or forced loans are

[1] These securities might be made non-marketable or marketable only by special permission.

likely to be preferred, especially if the emergency appears to be merely temporary.

The purpose underlying all these measures is to reduce the leeway for a rise in the velocity of circulation resulting from the public's tendency to dissave. But it should be remembered that this tendency was not the original cause of any major inflation in the period following the end of World War I. It was a reaction to a rise in prices already under way. All measures designed to curb it in the manner just described would not have prevented the inflation due to the current deficit expenditures of governments. These were the principal cause of inflation. Their effects were certainly magnified by the behaviour of the public, but not to a degree that made a very great difference to the total amount of inflation. And without government deficit expenditures, the behaviour of the public alone would scarcely have created any serious inflationary disturbance.

It is true that in most countries the expansion of the money supply during World War I was greater than the rise in prices. At the end of the war, therefore, the proportion of cash balances to the money volume of transactions was generally above normal. (For the special reasons noted in Chapter 5, this was true, for example, of Belgium.) But the disparity was not great in comparison with that which prevailed particularly in the Western European countries that emerged from German occupation at the end of World War II. During the first war, the growth of money supplies was largely "absorbed" by a rise in prices. The war was financed to a considerable extent through the forced saving imposed by price inflation. The surplus of cash above normal requirements at the inflated post-war price level was not great. Accordingly the need for mopping-up measures of the kind described was likewise not particularly great, especially in comparison with the need for control over current government deficit financing.

During the second war, on the other hand, particularly in Germany and German-occupied Western Europe, rationing and price controls were enforced far more extensively and systematically. War production and occupation costs were financed largely by the creation of additional money supplies; but the increased money incomes thus generated proved unspendable because of rationing, price and production controls. The additional incomes were largely "saved" by the public because there was little or nothing on which they could be spent. This saving was also, in a sense, forced saving. But it was obviously quite different from the forced saving which arose from inflation during and after the first war. The forced saving resulting from rising prices left no pent-up purchasing power behind; on the

contrary, it destroyed the purchasing power of past savings. The forced saving resulting from rationing, on the other hand, created an enormous backlog of deferred, pent-up money demand which, if released, was liable to cause a sharp and general rise in prices through the expenditure of accumulated money savings by the public. Even taking into consideration the inevitable growth of black markets in a controlled and rationed system of this sort, it is true to say that the inflation of money far outstripped the inflation of prices. The disparity between money inflation and price inflation was far greater at the end of the second than at the end of the first world war. In these circumstances there was a far stronger case for the blocking or removal of excess purchasing power through some measures such as we have indicated. The first measures of this sort were adopted in Belgium in October 1944.[1] The Netherlands, Denmark, Norway and Czechoslovakia followed the same line of policy in 1945.[2]

The general object of this policy was to bring cash balances down to a more normal relationship with money incomes and commodity supplies; to narrow the margin available for monetary dissaving by the public; and thus to prevent the inflation of prices and money incomes which, unless the rigid wartime controls were continued, was likely to result from such dissaving. This absorption or sterilization of excess purchasing power is a deflationary policy in appearance, but only in appearance. Its purpose is simply to eliminate the material for future price inflation; in other words, to remove the inflation potential which has been created but which has not yet worked itself out in a rise of prices. Recalling the distinction between currency inflation and price inflation, we may say that the policy, though it may be termed deflationary in regard to the money supply, is no more than anti-inflationary in regard to the price level. The evils of price inflation cannot be cured by a deflation of prices. The aim of inflation control is to stop a general and rapid rise of prices which has been taking place, or to prevent one from occurring in the future. Any attempt to force down the level of costs and prices to some "pre-war," "normal" or "peacetime" standard would in general be harmful and senseless.

The mopping-up policy we have discussed is no doubt a useful means of control, especially under the conditions which developed in

[1] See *World Economic Survey 1942/44* (League of Nations, 1945), pages 36 and 209.

[2] In eastern and southeastern Europe rationing and other controls were very weak, and the inflation which developed there during World War II was more of the "orthodox" type which most parts of Europe experienced during and after World War I.

many countries during World War II. But too much reliance should not be placed on it. The main threat of inflation arises from a current excess of government expenditure over government revenue. Unless this factor is brought under control, the prevention of dissaving by the public will not remove the threat. The absorption of "loose cash" can therefore be only a supplementary and not the principal line of attack in the fight against inflation. It is even doubtful to what extent the policy can be effective for the prevention of monetary dissaving. There is, in truth, no fixed point below which people will not or cannot reduce their cash balances in relation to money income and other transactions. If their cash balances are brought down to a "normal" relationship, people may, by dissaving, reduce the ratio further. This will cause them increasing inconvenience; but the inconvenience will be weighed against the constant loss which the holding of money implies when prices are rapidly rising. The only fixed point is the extreme one where people reduce their relative cash balances to practically zero and where accordingly the price level in terms of the national currency rises to practically infinity. That, of course, is the point of complete collapse, the point at which, as in Germany in 1923, resort is had to primitive barter or to the use of foreign bank notes, municipal token coins and other substitutes for the national currency.

Up to now we have discussed solely the monetary aspects of domestic measures for combating inflation. Inflation is a monetary phenomenon; and it is with monetary experiences in a period of post-war reconstruction that the present study is concerned. But we have not been able in this study to ignore the broader economic setting, and mention must now be made of some of the broader economic policies which the control of inflation may require. For no satisfactory reform of monetary affairs alone may be attainable without a solution of more fundamental problems relating to production, trade and economic organization.

The importance, in the first place, of increasing domestic production to the highest possible level is self-evident. In any programme of post-war reconstruction it is essential for this purpose to correct as rapidly as possible the abnormal distribution of productive resources which inevitably develops in a war economy. If this is not done, there will be large pools of idle resources in some sectors of the economy, while in others at the same time the means of production will be in short supply, with acute bottlenecks developing in consequence. As we emphasized in Chapter 1, this state of affairs rendered many countries in Europe extremely vulnerable to the impact of inflationary forces after World War I. For in such circumstances any

increase in private or public spending tends to call forth inflationary price rises at a point far below a general state of reasonably "full employment." That point must be raised as high as possible through appropriate redistribution of manpower and other resources. At no time is the mobility of labour and the readaptation of plant and entrepreneurial enterprise more essential than in a period of post-war reconstruction; and it is for the government to lay down the general directions in which the readaptation is to proceed, since price incentives cannot in the social interest be relied upon under such abnormal conditions.

Thus a redistribution of resources designed to make "full employment" possible widens the margin within which public and private spending can take place without inflationary consequences. On the other hand, a level of full production and employment, once attained, is a good safeguard against inflation since the volume of current voluntary saving forthcoming at that level is likely to be greater (not only in absolute amount, but possibly also in proportion to the national income) than at a low level of production and employment. And with a large volume of current voluntary saving there is room for a corresonding amount of government deficit spending, business investment and private dissaving without inflationary consequences, so long as the total volume of national money income and outlay is not increased beyond the full employment level.

The distribution of resources appropriate to a state of full production is a vital condition in the fight against inflation. But there is little that can be said about it in general terms. In concrete terms the problem naturally varies according to the special circumstances of time and place. In many European countries after World War I, it was the lack of coal, even more than the lack of imported raw materials, that was the bottleneck which kept production at a low level. Measures to increase productivity and the labour force in the coal mining industry would probably have helped a great deal to keep inflation in check. A general factor which in many individual countries tended to create serious shortages in coal and other vital materials was the growth of trade restrictions after the war. Particularly among the Succession States in eastern Europe, international trade was hampered on all sides by national barriers of various kinds. Import restrictions were put into force to keep out "luxuries" or commodities which it was thought the country could produce itself. Possibly even more serious were the export restrictions and prohibitions which many countries imposed in order to preserve vital materials for the home market, to keep their domestic prices down, or simply to

furnish a bargaining weapon in relations with other countries. Each country, in the struggle for survival, adopted unneighbourly policies whose result was to keep the volume of production in the Continent as a whole below the level which it would have attained if the exchange of goods had been free or if it had been directed in the general interest according to mutually agreed plans.

It must by now be sufficiently obvious that the problem of inflation can be attacked along many different lines. No single measure is likely to be adequate; a judicious combination of the various policies is required, and the precise "dosage" to be applied must vary from country to country. The general requirement is to prevent money income and outlay in the aggregate from rising above the level corresponding to full production. The total of deficit spending, investment and dissaving must be kept within the amount which the public is willing to save out of current income. The restoration of the most essential public utilities and services is likely to be largely or wholly a government responsibility; and if the government budget deficit cannot be sufficiently reduced by higher taxation, quantitative restrictions on private consumption and investment expenditure will be required. Rationing of consumers' goods proceeds inevitably on the basis of some explicit or implicit scheme of social priority, so that the cut in total consumption falls on "unessential" items rather than daily necessities. In the same way, the restrictions that may have to be imposed on private investment must be based on a social priority scale; and it is a government responsibility to lay down such a scale in the general plan of reconstruction.

The accumulation of stocks ("inventories") of raw materials and finished goods is one form of private investment which may need to be curbed. Such investment is apt to occur for speculative motives, and to pass beyond the level of minimum normal working stocks, whenever there is an actual tendency for prices to rise or even a mere expectation of a rise in the future. This behaviour of traders and industrialists is likely to accentuate the rise in prices through the artificial shortages it creates, or to produce the very rise which was expected. Thus it promotes inflation; and from the social point of view the locking-up of resources in idle commodity stocks is a wasteful form of investment which, more than at any other time, should be avoided in a period of post-war scarcity.

The reactions which inflation or the threat of inflation tends to produce among traders and industrialists come into play among farmers as well. When farmers expect the price of their products to rise, and especially also when they can find little or no manufactured

goods on which to spend the money they would receive, they naturally tend to withhold their crops from the market. They rather store them, feed them to livestock or consume them at home. By so doing they intensify the food shortage in the cities and the upward pressure on prices. This difficulty, which has almost invariably appeared in the circumstances under consideration, is troublesome in any case, but it is particularly troublesome in a community of small peasant holdings; for it may be practically impossible for governments to enforce effective controls for the collection of agricultural produce from millions of scattered farms. The peasant has many ways of evading such controls. Compulsion alone is not likely to be an effective means of solving the problem. The better way is to offer the farmer an economic inducement to produce and deliver his crops, and this inducement may have to take the form of supplying him with at least a minimum ration of the manufactured goods (clothing, tools, etc.) which he requires.

(c) Foreign Assistance

Given a strong and competent administration, there is no doubt that inflation can be controlled by domestic measures alone. Reliance on foreign help may undermine a country's determination to set its house in order. Some combination of the various possible domestic policies, which we have discussed at length, can always provide a remedy if there is a will to adopt them.

Yet it cannot be denied that foreign loans can help.[1] The various ways in which they can help were considered in Chapter 6, Section (c), pages 55-58, above. Here we may distinguish between two broad aspects of the matter. Foreign loans may help, firstly, in a technical way in checking the monetary mechanism of inflation; and they may help, secondly, in a more fundamental way by meeting the real capital needs of reconstruction and so relieving the underlying conditions which give rise to inflation.

The "technical" effects, as we have seen, may operate through the provision of funds for the transfer of capital flight (though this is not likely to be the avowed subject for which foreign loans will be granted); through the slowing down or stopping of exchange depreciation, which may check the rise in domestic prices and monetary circulation; through favourable reactions on the public's "confidence"

[1] Gifts or grants, which, at the time they are made, have essentially the same effects as loans, are likely to be confined to exceptional cases and can be left out of account.

and willingness to save; through the sale of the foreign loan proceeds by the central bank and the consequent withdrawal of domestic money from circulation.

The "fundamental" benefit of foreign loans consists in their contribution to capital requirements. The more fully these requirements are met by foreign assistance, the less need there is for the inflationary method of forced saving, a method which, as we have seen, becomes quite ineffective as soon as the public learns how to protect itself against it. There are other methods of domestic capital accumulation; there is, in particular, the method of collective saving which a government can enforce through the fiscal system, and which we discussed in Chapter 6, Section (c). All such domestic methods of forced capital formation involve, however, disproportionate sacrifices for a backward or war-ravaged country. The case for international lending rests on the elementary economic ground that a more even distribution of the world's capital equipment in relation to labour and natural resources tends to benefit the productivity and living standards, not only of the poor or impoverished debtor countries, but of the advanced creditor nations as well.

One of the capital requirements which a foreign loan may be designed to meet is the need for a gold or exchange reserve to act as a buffer for short-term discrepancies in the balance of payments. If such a monetary buffer stock is used solely for the purpose intended, then it should remain intact in the long run, since short-term fluctuations in the balance of payments may be expected to cancel out. In the long run, therefore, it should give the country no direct real benefit in the form of a net import of commodities. Yet the indirect benefit in the form of the exchange stability which it renders possible may fully justify a foreign loan for this purpose. A foreign exchange reserve could be accumulated through domestic saving; if it is provided by a foreign loan, that much domestic saving becomes available for real capital formation at home.

The provision of such monetary buffer facilities by foreign help should be linked up with some international consultation and agreement to ensure that the exchange rates maintained with the aid of these facilities are consistent in the long run with equilibrium in the balance of payments. This is one of the principal objects of the International Monetary Fund established by the Bretton Woods Conference of 1944. After World War I, this object was largely overlooked. "An exchange rate by definition concerns more currencies than one. Yet exchange stabilization was carried out as an act of national sovereignty in one country after another with little or no

regard to the resulting interrelationship of currency values in comparison with cost and price levels. This was so even where help was received from financial centres abroad . . . Naturally the outcome of this process was not a stable and workable system of international exchange rates. The rates at which exchanges were fixed had been reached frequently under the influence of abnormal short-term capital movements with the result that some currencies were overvalued and others undervalued. A network of exchange rates set up by simultaneous and coordinated international action would have a better chance of avoiding major initial strains and would serve as a better starting-point from which, in case of need, moderate readjustments could be made from time to time." [1]

We indicated in Chapter 6 the general way in which foreign loans for the reconstruction of real capital equipment may help to relieve the underlying conditions which make for inflation. The difficulty is, however, to ensure that the loans are actually used to achieve a net increase in productive investment. It is wise, no doubt, to earmark such loans for specific productive purposes; and it may be wise for the foreign lender or lending agency to exercise close control over the use of the loans for such specific purposes. But even this is not a complete solution. For even if foreign loans are used for specific productive purposes, it may be that the country receiving the loans is thereby led to relax its domestic rate of individual or collective saving. Foreign borrowing would then merely replace a certain amount of domestic saving, and the total rate of investment in the country would not increase at all or would increase by less than the amount of foreign borrowing. The conclusion from this is obvious. Foreign loans must be fitted into an over-all reconstruction programme so designed as to ensure the maximum utilization of domestic resources, as well as the resources received from abroad, for the restoration of the country's productive equipment.

This conclusion, however, should not be too rigidly interpreted. It was not only the material equipment of Europe that was run down after the war. The resources of human strength and vitality were likewise depleted. In such circumstances there may be no sharp line of demarcation between "productive" and "wasteful" uses of foreign loans, particularly if such factors as the restoration of national health and the maintenance of morale are taken into consideration. There is a point at which a general reduction in domestic consumption, though numerically increasing the labour force available for capital reconstruction, is offset by an all-round decline in the productive efficiency

[1] *International Currency Experience* (League of Nations 1944), pages 116-117.

of the working population. This point is partly determined by the prevailing psychological atmosphere. While the restoration of health is an essential object of post-war reconstruction, the public should not be led to expect an immediate and complete release from wartime austerity. The need to postpone for a time the return to anything like normal living standards must be clearly and forcefully explained in any post-war reconstruction scheme. Foreign loans are certainly wasted when they lead to an increase in consumption beyond what is necessary for health and strength.

Foreign loans for currency stabilization and capital reconstruction alike give rise to the problem of interest service and amortization. This problem, however, arises in international investment generally and requires no special treatment in the present context. Briefly, there are two main conditions that must be met. The first condition implies either that the loans are used for directly productive purposes which increase the national income of the debtor country and provide a return in domestic currency out of which the debt service can be financed; or, if they are socially but not commercially remunerative, that the sums in question are raised by taxation. The second condition involves the creation of an export surplus out of which the foreign exchange will be available to service the loans; and this is a matter which depends on the creditor no less than the debtor countries. The creditor countries, when the time for a net return flow comes, must assume some responsibility for maintaining their national income and demand at a high enough level to induce the import surplus necessary for the transfer of interest and amortization. Unless they do this, the transfer of the debt service is likely not only to affect their domestic employment situation adversely, but also to place a strain on the exchanges of the debtor countries. Since such difficulties cannot always be avoided, it is desirable to make the debt service flexible to some extent, permitting a temporary suspension of transfer at a time, for example, when the creditor country experiences a depression at home and a decline occurs in consequence in its demand for imports. It was because these conditions were not met that the stabilization and reconstruction loans of the 'twenties gave rise to so much trouble afterwards.

The rôle of foreign loans and credits in the process of monetary stabilization and reconstruction after World War I is described in Part II of this study. For a more detailed account of the foreign assistance granted under the auspices of the League, reference should be made to a report entitled *The League of Nations Reconstruction*

Schemes in the Inter-War Period.[1] Here only a brief summary is needed.

In 1919, the first year after the war, food relief was the only form of foreign assistance. In all other respects, the problem of Europe's economic and financial rehabilitation was left to find its own solution. In 1920, almost two years after the Armistice, an International Financial Conference met at Brussels. It enunciated in forceful language the basic principles of financial orthodoxy, but did not offer any direct assistance to the governments of the inflation-ridden countries. The only practical outcome of the conference was an International Credits Scheme (called the "ter Meulen Plan," after its author), which set up a central committee of bankers and business men to consider applications for commercial import credits secured by government bonds and by assigned public revenues for the service of these bonds. The use of the credits, as well as the domestic financial policy of the borrowing countries, was to be subject in some measure to the committee's control. Attempts to apply the scheme in practice encountered many obstacles (reparation claims, in particular) and were finally abandoned in 1922. In short, nothing was accomplished by this scheme.[2]

Instead of an over-all plan, the policy then adopted was to deal with individual countries one by one. The League scheme for Austria, after many troublesome negotiations, was formally adopted in the autumn of 1922, though the long-term loan which it envisaged was not issued till the summer of 1923. This scheme was the first international action to deal with the post-war economic problem in a given country. In effect, though not in form, it recognized the interdependence of reconstruction, currency stabilization, capital requirements and budgetary equilibrium, and found a workable solution to the problem as a whole. This remedy was first applied in the most difficult case, where a newly created state was virtually disintegrating owing to the desperate disorganization of its economy. Yet it was successful. So were similar international schemes applied in the following years in Germany (1924), Hungary (1924), Poland (1927) and a number of other countries. They involved a certain measure of control over the fiscal and monetary policies of the borrowing countries. Such control was no doubt inevitable and, if wisely exercised, desirable. But it would probably have been difficult to make foreign

[1] League of Nations, 1945.

[2] For a detailed account see *The League of Nations Reconstruction Schemes, op. cit.*, Part I, Section B.

financial control acceptable to the borrowing countries before the currency situation had become desperate. This is one factor which explains the delay in the application of international measures; but the delay was none the less regrettable.

It was indeed a grave defect of all these reconstruction schemes that they came too late, after the problem had been greatly complicated and much harm created by inflation and exchange depreciation. International financial assistance would have been much more effective, and would in the end have cost much less, had it been given in 1919 instead of, say, 1924. Only under the pressure of desperate necessity was it given at the later date. The reluctance of the borrowing countries to accept foreign control may have been partly due to the fact that such control was almost entirely negative in character and financial in scope. The primary function of the controller was to keep the Ministry of Finance in check. It might have been preferable to send "reconstruction missions" to the needy countries in 1919 or 1920 for the purpose of advising positively on the economic and administrative problems underlying the monetary disorder. Had financial assistance been granted under such conditions, international reconstruction schemes would have encountered less friction and achieved better results.

PART II

SURVEY OF EUROPEAN CURRENCY STABILIZATIONS

CHAPTER 1

THE EXTENT OF INFLATION IN THE EARLY POST-WAR YEARS

In all European countries, whether belligerent or neutral, inflation began to develop during the course of World War I, though its existence was generally denied by governments and central banks. The rising prices were attributed to a variety of non-monetary factors, and the view was widely held that prices would "correct themselves" more or less automatically with the expected return of normal conditions. In fact this happened in a few countries, but in the great majority inflation continued and became more violent after the war. In some countries it went so far as to cause the annihilation of the national currency.

During the war the note circulation expanded everywhere.[1] The expansion continued almost everywhere for some two years after the Armistice. There were only two countries, the Netherlands and Sweden, in which the currency inflation was effectively checked by the end of 1919. In most of the countries of western and northern Europe the inflation had, however, come to a halt by the end of 1920 or beginning of 1921. The halt was final in the United Kingdom, Denmark, Norway and Switzerland. It was almost complete also in Finland, Italy and Spain. In France and Belgium, on the other hand, it proved to be only temporary. In all the "new" countries as well as in Bulgaria, Germany, Greece and Portugal, the currency expansion continued without interruption for several years after 1920, and in five countries (Austria, Germany, Hungary, Poland and Russia) it degenerated into hyper-inflation.

How far the inflation had gone by 1918 and again by 1920 in those countries which permit of comparison with 1913 may be seen from Table I. Comparable figures for Austria, Hungary and Russia cannot, unfortunately, be given.

[1] Some part of the expansion compensated for metallic currency withdrawn, but the total expansion was far in excess of what was needed for this purpose.

TABLE I

Relative Increase in Currency and Prices

End of Year Data. Base: 1913/14 [a] = 100.

Countries	Currency Circulation			Wholesale Prices			Cost of Living		
	1918	1919	1920	1918	1919	1920	1918	1919	1920
United Kingdom	248	274	294	246	297	264	230	236	278
Switzerland	248	263	268	...	...	...	211	245	243
Netherlands	309	295	309	...	286	235	184	205	222
Sweden	348	323	330	335	317	267	238	263	271
Norway	351	374	386	345	322	377	264	291	335
Denmark	250	271	310	292	340	341	196	242	264
Spain	173	200	224	213	204	214	...	...	...
Portugal	264	377	613	...	...	...	...	...	902
France	433 [b]	533 [b]	541 [b]	355	432	444	248	285	424
Belgium	420	473	534	...	...	...	...	390	468
Italy	486	649	769	296	416	596	260 [c]	323 [c]	455 [c]
Finland	882	858	1024	660	958	1173	588	819	1103
Bulgaria	1262 [d]	1670 [d]	1550 [d]	...	...	...	1234 [e]	1858 [e]	1919 [e]
Germany	503	760	1230	260 [f]	803 [f]	1440 [f]	...	...	1158

[a] Wholesale prices: 1913 twelve months' average = 100; cost of living: mostly July 1914 = 100.

[b] The basic figure for 1913 (= 100) includes silver coins but excludes gold coins most of which were not in active circulation. If the latter were added to the 1913 figure, the indices for 1918–1920 would work out at 316, 389 and 394 respectively. But these figures probably understate the effective changes in the volume to a far greater degree than those in the table overstate them.

[c] Average of two indices of retail prices of food in Rome and Milan.

[d] End of June of following year.

[e] July of following year.

[f] The end-of-year price indices for imported goods in 1918–1920 were 289, 1508 and 2023; those for domestic products alone were 250, 633 and 1323.

It will be observed that by the end of 1918 or 1919 the rise in prices had scarcely assumed "unmanageable" proportions in any country included in the table with the possible exception of Bulgaria. In most countries the price rise lagged behind the rise in the volume of currency. This is partly explained by the fact that many commodities, especially in the retail trade, were still subject to official maximum prices which were necessarily used in calculating the indices. As higher prices were not infrequently charged for such commodities in the black market, the indices may somewhat understate the true rise in the general level of prices. Moreover, for some time after the war, a certain inertia of those prices which were expected to revert fairly

soon to "normal" seems to have prevailed even in countries where the currency inflation was considerable.

Under the impact of the post-war price slump which spread from the raw material producing regions overseas, the rise in wholesale prices in all the European countries for which monthly indices are available came to a halt between April and November 1920. As will be seen from the diagrams given below for most of these countries individually, the wholesale-price indices show a decline from the peak in 1920 to the trough in 1922 [1] of some 25% in Italy, Spain and Finland, 48% in France and Norway, 53-54% in the United Kingdom and the Netherlands, and 56-57% in Denmark and Sweden.[2] The currency expansion continued for a few months after wholesale prices reached their highest point, and nowhere was the subsequent currency contraction (if any) as great as the drop in prices. This fact indicates a drop in the velocity of circulation of the currency outstanding—a characteristic depression phenomenon.

In Sweden, the United Kingdom, the Netherlands and Finland, prices subsequently remained comparatively stable until exchange stabilization was effected. In Denmark and Norway, on the other hand, as well as in Belgium, France, Italy and Spain, another wave of rising wholesale prices (accompanied in the four last-mentioned countries by renewed currency expansion) set in during the latter part of 1922 or the beginning of 1923 and reached a peak early in 1925 in Denmark, Norway and Spain and by the middle of 1926 in Belgium, France and Italy. In all of these countries, except Belgium, the currency circulation and the price level, and along with them the cost of the dollar, were forced down by more or less deliberate deflation [3] before exchange stabilization was ultimately attempted.[4]

Among the "new" countries in central and eastern Europe, Czechoslovakia stopped expanding her currency circulation at the end of 1921, Latvia at the beginning of 1922, Estonia early in 1923, Yugoslavia towards the end of that year, and Lithuania at the beginning of 1925.[5] Czechoslovakia is the only one among them which attempted to deflate (between late 1921 and late 1922).

[1] 1921 in Italy and 1923 in the Netherlands and Finland.

[2] In Belgium, for which country no monthly index of wholesale prices is available prior to the autumn of 1921, the drop in retail prices from the peak in October 1920 to the trough in May 1922 was about 25%.

[3] In the case of Denmark and Norway, as will be explained below, the deflation was in part due to external influences.

[4] Spain never achieved exchange stabilization.

[5] Most of the notes issued by the Bank of Lithuania up to the end of 1924 simply served to replace the foreign notes which gradually disappeared from circulation after the creation of the Bank in the autumn of 1922.

Bulgaria stopped expanding her currency circulation in the spring of 1924. In Roumania, Greece and Portugal the currency circulation grew continuously up to 1926–27, interrupted in the case of Greece by two cuts (in March 1922 and January 1926) more nominal than real in the amount of notes outstanding, cuts which had scarcely any effect either on the dollar value of the drachma, or, apparently, on the movement of prices.

CHAPTER 2

STABILIZATION DATES AND LEVELS

The stabilization of exchange rates in Europe was achieved piecemeal, country by country. There was no attempt to stabilize all the currencies, or groups of them, simultaneously in accordance with a systematic plan. Most countries followed independent policies, although a few linked their currencies to those of others. Thus, for example, the new currencies of Lithuania and Danzig were created on the basis of, and were even expressed as fractions of, the dollar and the pound sterling, respectively. Similarly the preliminary stabilization in Hungary was effected on the basis of sterling, and the currencies of Denmark, Norway and Portugal were fairly closely tied to the pound for some part of the period before they were finally stabilized in terms of gold. The movements of the Belgian franc followed the French franc up to 1925, although the Belgian monetary authorities pursued no deliberate policy towards that end.

For most countries the halting of domestic inflation was the first prerequisite for achieving a balance of payments sufficiently stable to permit the maintenance of their currencies at a fixed gold value. Some countries, however, though they stopped inflating at an early stage, did not stabilize their exchanges until much later. This was true of most of the countries that made it a point of policy to return to the old pre-war parity, an objective which necessitated a substantial measure of deflation. Thus it did not follow that the countries which inflated most, and whose currencies had consequently depreciated furthest, were the last to stabilize. Austria, for example, whose currency had depreciated further than the currencies of all but four other European countries, was one of the first to stabilize.[1] On the other hand, the United Kingdom, which stabilized at the old parity, did so at a relatively late date, and Norway, which likewise returned to the old parity, was one of the latest of all.

The sequence, year by year, of the *de facto* stabilizations is shown in Table II.

[1] Austria, it is true, received foreign assistance in connection with this stabilization. The latter, however, was effected several months in advance of the actual receipt of the loan which had previously been guaranteed by certain governments.

TABLE II

Dates of "de facto" Stabilization

The dates of the *de jure* stabilization, where they are not the same as those of *de facto* stabilization, are shown in parentheses.

1922 or earlier	Albania	Sweden *	Latvia	Lithuania	Austria
1923	Germany (1924)	Finland	Danzig [a]	Czechoslovakia *	
1924	Hungary	Bulgaria * (1928)	Netherlands	Switzerland	Estonia (1927)
1925	United Kingdom	Yugoslavia (1931)			
1926	Denmark	Belgium	Poland [b] (1927)	France (1928)	
1927	Italy	Rumania (1929)			
1928	Norway	Greece			
1929	Portugal [c]				

* There were some subsequent minor fluctuations in the dollar rate.

[a] Prior to its stabilization in terms of gold, consequent upon the return of the pound sterling to the old gold parity, the Danzig Gulden had been kept stable in terms of the pound since its creation in the autumn of 1923.

[b] Poland stabilized the gold value of her currency in 1924, but had to abandon it in 1925.

[c] The escudo had been kept practically stable for three years, between January 1925 and January 1928, at about 1/20 of its pre-war gold value.

The levels at which the various countries stabilized in relation to the pre-war gold values of their currencies is shown in Table III.

Of the six countries which ultimately stabilized their currencies at the pre-war gold parity, five, namely Sweden, Norway, Denmark, the Netherlands and Switzerland, had been neutral during the war and had been spared such fundamental dislocations of their national economies and finances as were experienced by most of the belligerent countries.[1] All of them, including the United Kingdom, were countries whose currencies had not depreciated by more than one-half in relation to the dollar. Therefore, it was not impossible for them, as it would undoubtedly have been for the other countries considered, to deflate sufficiently to bring their prices approximately in line with United States prices. The balance of payments situation of some of them was, moreover, strengthened by their international creditor position. The United Kingdom, the Netherlands and Switzerland were net creditors at the end of the war and remained so throughout the

[1] Spain, the only other ex-neutral, could doubtless have brought her currency back to par had she chosen to do so at the cost of another 10% deflation in 1927. Whether she would have been well advised in attempting such a course, however, is another question.

TABLE III

Levels at which Currencies were Stabilized

Pre-war gold value of currency restored	Sweden	United Kingdom	Netherlands	Switzerland	Denmark	Norway
New national currency introduced to replace foreign currencies [a]	Albania	Lithuania	Danzig			
Stabilization between 1/4 and 1/8 of pre-war gold value	Italy (1/4)	France (1/5)	Belgium (1/7)		Czechoslovakia (1/7)	Finland (1/8)
Stabilization between 1/11 and 1/33 of pre-war gold value	Yugoslavia (1/11)	Greece (1/15)	Portugal (1/22)	Bulgaria (1/27)		Roumania (1/33)
Stabilization near 1/100 of pre-war gold value	Estonia (1/90)	Latvia (1/125)				
New currency introduced after hyper-inflation	Austria	Hungary	Poland	Germany	Russia	

[a] Lithuania had no currency of her own until the introduction of the lit (equivalent to one-tenth of a dollar) in the late autumn of 1922. Previously only foreign currencies outside her control, *e.g.*, ost-mark and U.S. dollar notes, were circulating in the country. Similarly Danzig was using German marks as legal tender until the creation of the gulden (equivalent to 1/25 of a pound sterling) in the autumn of 1923. In Albania, on the other hand, where a national currency was introduced for the first time during the latter part of the 'twenties, foreign gold coins had remained in effective circulation, even during the war. Foreign silver coins and bank notes were also used as means of payment, but were only accepted at rates corresponding roughly to the gold value of the currencies in which they were expressed. Albania was indeed the only European country which remained effectively on the gold standard throughout the war and the post-war period under review.

period under review. Sweden entered the group of creditor countries in 1922–23, or about the same time as she achieved currency stabilization.[1] Norway and Denmark remained debtor countries during the greater part of the 'twenties. France and Belgium, on the other hand, despite the fact that they were important creditor countries, experi-

[1] At the end of the war Sweden held large balances in dollars and, in addition, large claims in German marks, mainly in the form of bank notes. The latter, however, proved later to be practically valueless and the dollar balances were heavily drawn upon to pay for large import surpluses in 1919 and 1920.

enced heavy and protracted currency depreciation. Thus neither the levels nor the dates of stabilization were primarily determined by the creditor or debtor position of the different countries. Indeed, a number of typical debtor countries in the Baltic region (Estonia, Finland, Latvia and Lithuania) and in the Balkans (Bulgaria and Yugoslavia) proved capable of stabilizing at comparatively early dates and without foreign government financial assistance. As will be shown below, however, these countries had at their disposal certain export products which happened to be in active demand abroad.

In the group of five countries (Germany, Austria, Hungary, Poland and Russia) which underwent hyper-inflation, the old currencies had been rendered practically valueless and were replaced, when stabilization was achieved, by new legal currency units. This was also done in Latvia and Estonia, whose currencies had depreciated to roughly 1% of their nominal value, and in Lithuania, Danzig and Albania, which previously had no currencies of their own.

The other countries stabilized at levels varying between 3% and 25% of the old pre-war gold parities, as is shown in Table III above. In some cases they were able to reach these levels only after substantial price deflation.

CHAPTER 3

THE ROLE OF FOREIGN LOANS AND CREDITS

It has been widely believed that, after the war of 1914–1918, most countries were able to stabilize their currencies only with the help of foreign stabilization loans or credits. It may be useful, therefore, to recall which countries did and which did not receive such assistance from abroad, and at what stage of the process of stabilization it was received. A synoptic summary is given below. Distinction is made whenever possible between the preliminary (*de facto*) stabilization and the final (*de jure*) stabilization. From the point of view of this particular study the former is generally the more important, for we are concerned with the factors rendering a cessation of exchange depreciation possible, rather than with the dates at which stability was formally enacted by legislation.

The final reform was preceded by preliminary stabilization in all countries under consideration except Lithuania and the United Kingdom, where the gold value of the currency was fixed by law and immediately applied in external exchange relations without any previous period of probation. The preliminary stabilization varied in duration from a few months up to several years. In so far, however, as the stabilization was effective, its duration was of secondary importance.

Only in five out of the twenty-four countries covered by the synopsis, namely Austria, Belgium, Danzig, Hungary, and Poland [1] was the *de facto* stabilization effected with the aid of specific loans, credits obtained in anticipation of such loans, or reconstruction schemes holding forth the promise of foreign loans or credits. In the case of Belgium and Poland, however, it is by no means certain that these credits and the subsequent loans were essential to the success of the currency stabilizations. In seven countries (Denmark, Greece, Italy, Norway, Portugal, Switzerland and the United Kingdom) other forms of temporary credits were arranged, though not necessarily utilized for the purpose. No less than twelve countries, of which nine (Bulgaria, Czechoslovakia, Estonia, Finland, Germany, Latvia, Rou-

[1] Second stabilization (1927).

mania and Yugoslavia) were debtor countries and three (France, the Netherlands and Sweden) creditors, effected the preliminary stabilization [1] without loan or specific credit arrangements of any kind. This fact suggests that, whatever the degree of currency depreciation, countries, whether debtor or creditor, could stabilize without foreign financial assistance.[2]

Among the twelve countries which did not have recourse to loans or credits for the purpose of preliminary stabilization, four (France, the Netherlands, Latvia and Lithuania) effected also their final stabilization without any such assistance. Another three (Czechoslovakia, Finland and Sweden) arranged temporary credits when stabilizing *de jure,* while the remaining five (Belgium, Estonia, Germany, Roumania and Yugoslavia) arranged long-term loans.

There were nine countries, as shown in Table IV, which arranged temporary credits (mostly so-called revolving credits) to help in the final stabilization. In most cases, however, these credits were never utilized. This does not of course mean that they served no useful purpose: on the contrary, they may well have prevented currency speculation and have thus assured exchange stability during the transition period.

The eleven countries indicated in Column 2(B) of Table IV effected their final stabilization and currency reform with the aid of foreign loans. In four of these countries (Bulgaria, Estonia, Roumania and Yugoslavia), the reform was not effected until from two-and-a-half to five years after the initial stabilization, and during the whole of this period the exchanges were kept stable.

None of the eleven loans generally known as stabilization loans were raised for that purpose alone. Therefore it is difficult to determine in each case what proportion of the funds was actually used, or deemed necessary, for the currency reform and stabilization proper. But, whatever the purpose, the foreign currencies became available to assist the balance of payments either immediately when spent on imports or subsequently when allocated to monetary reserves.

[1] United Kingdom and Lithuania, instantaneous *de jure* stabilization.

[2] With the possible exception of Austria, owing to the psychological conditions prevailing in that country after the war.

TABLE IV

	1. Successful Preliminary Stabilization			2. Final Stabilization and Currency Reform		
	(A)		(B)	(A)		(B)
	Without aid of specific loan		With aid of credits obtained in anticipation of specific loan	Without aid of specific loan		With aid of specific loan
	Without specific credit arrangements	With temporary credits arranged in view of stabilization		Without specific credit arrangements	With temporary credits arranged in view of stabilization	
Austria			x			x
Belgium*			x			x
Bulgaria	x					x
Czechoslovakia[a]	x				x	
Danzig			x			x
Denmark[b]		x			x	
Estonia	x					x
Finland	x				x	
France	x			x		
Germany	x					x
Greece		x				x
Hungary			x			x
Italy		x			x	
Latvia	x			x		
Lithuania	x[c]			x		
Netherlands	x			x		
Norway		x			x	
Poland*			x			x
Portugal		x			x	
Roumania	x					x
Sweden	x				x	
Switzerland[d]		x			x	
United Kingdom		x[c]			x	
Yugoslavia	x					x

* Second stabilization (first attempt proved unsuccessful).

[a] The Central Bank was authorized by the stabilization law of 1925 to raise a foreign loan to help in maintaining value of currency. Instead of a loan, foreign revolving credits were arranged, but only in 1926.

[b] Foreign revolving credits arranged 1½ years prior to stabilization were never used.

[c] Instantaneous *de jure* stabilization.

[d] Prior to stabilization, a loan of $30 million was contracted in the United States by the Swiss Government in March 1924 for purposes of (a) repaying its debt to the Central Bank, (b) providing dollar exchange for purchase of cereals and (c) for the service of American debts. Though not specifically a currency reform loan, it helped in strengthening the exchange reserves of the Bank and thus contributed to the subsequent stabilization.

The dates, interest rates, issue prices, nominal values and net amounts in terms of dollars of the loans in question are shown in Table V below.

TABLE V

Stabilization and Reconstruction Loans

Country	Year of issue	Rate of interest[a] %	Price of issue[a] (% of par)	Nominal value	Net amount received $(000,000's)
(1)	(2)	(3)	(4)	(5)	(6)
Austria	1923	6–7	78–93	156	124
Belgium	1926	7	94	100	90
Bulgaria	1928	7.5	92–97	20	18[b]
Danzig	1925	7	90	7.5	6
Estonia	1927	7	94.5	7.5	7
Germany	1924	7[c]	92	229	192
Greece	1928	6	91	32	27[c]
Hungary	1924	7.5–8	88–92	62	51
Poland	1927	7	92	72	61
Roumania	1929	7	81	101	82[b]
Yugoslavia	1931	7	..	40	34[d]
Total				827	692

[a] The conditions of the loans varied in some cases according to the centres in which the various *tranches* were issued. Hence the range of figures shown in some cases.

[b] Derived from data in columns (4) and (5).

[c] Based on information concerning American *tranche*.

[d] In the absence of precise information, this figure is assumed to be 16% less than that in column (5), 16% being the difference between columns (5) and (6) for all the other loans combined.

It will be observed that the total net amount actually received ($692 million) was 16% less than the nominal value of the loans ($827 million). The difference reflected commissions and other expenses, as well as the difference between the price of issue and the nominal face value at which the loans were redeemable.[1] The interest rate averaged about 7%. But since interest was payable on the nominal amount, the interest charge calculated on the basis of the amount received was over 8%. The actual charge was even higher if account is taken of the fact that the capital sum to be repaid was greater than the sum received. Thus the charge which these loans involved was evidently a heavy one, reflecting the lack of confidence which prevailed.

[1] Some of the loans, such as the Polish, were actually repayable at a rate above the par value (103 in the Polish case).

As has been shown above, the majority of European countries achieved preliminary stabilization without specific financial assistance abroad. On the other hand, where recourse was had, initially or at some later stage, to foreign loans or credits, these alone could not have been a sufficient condition to ensure lasting exchange stability.

CHAPTER 4

STABILIZATION EXPERIENCES OF REPRESENTATIVE COUNTRIES

This chapter reviews the stabilization experiences of the 'twenties in some detail for a number of European countries. An attempt has been made to group them by types as follows: First, the course of the inflation and the measures taken to achieve eventual stabilization in four countries which underwent hyper-inflation are treated.[1] Secondly, the experiences of five countries which failed in the first attempt to stabilize their currencies, though they ultimately succeeded, are analyzed. Thirdly, the influence on exchange stabilization of favourable export conditions for particular commodities is illustrated by reference to the experiences of some ten countries.

In studying the stabilization developments in the various countries, a detailed examination has been made of the movement of their currency circulation, exchange rates, prices, foreign trade and industrial production. Those of the indices examined which appeared particularly significant in each case have been plotted in the digrams given below for most of the countries considered. The following summaries and comments are made against the background of the picture afforded by the whole set of indices examined for each country. Specific reference is only occasionally made to the diagrams, which should be read in conjunction with the accompanying text.

(a) Stabilization after Hyper-Inflation

The runaway inflation in Austria, Hungary, Germany and Poland during the early post-war years, though it differed in course and intensity from country to country, was due to a common cause: the failure to restore order in the disrupted public finances and to check the use of the note-issuing apparatus for covering deficits. Owing to the astronomical figures ultimately reached, the final phase of the in-

[1] In the case of Poland, only the period up to and including the first stabilization, which was successful at the beginning but failed later, will be dealt with under this group.

flation in Germany has to be omitted from Diagram 3.

The German mark was stabilized in November 1923 at the rate of 1,000,000,000,000 paper marks to the pre-war gold mark, the Polish currency in January 1924 at 1,800,000 paper marks to the gold zloty, while the Austrian and Hungarian crowns were stabilized in November 1922 and June 1924, respectively, at 14,400 and 14,500 paper crowns to the pre-war Austro-Hungarian crown.

Austria and Hungary

The Hungarian crown, dollar-exchange quotations for which are available only from the middle of 1920 onwards, had depreciated up till then in close sympathy with the Austrian crown. Subsequently it followed a less rapid course, although ultimately the same degree of depreciation in terms of gold was reached as in Austria.[1] Stabilization of both currencies was achieved with foreign financial assistance coupled with a thorough reorganization of the whole financial system of the two countries.[2] The financial reforms were supervised by representatives of the League on the spot and by the Financial Committee of the League to whom these representatives reported.

[1] The Hungarian crown was first stabilized towards the middle of 1924 on the basis of the pound sterling, acquired a stable gold value the beginning of 1925 and became definitely linked to gold as a result of the re-establishment of the gold standard in the United Kingdom towards the end of April of that year.

[2] Most of the small initial gold reserve of the National Bank of Austria was derived from subscriptions to the share capital; 3.8 million gold crowns accrued to the gold reserves from this source in January 1923 and another 6.5 million in December of the same year. The initial foreign exchange reserve (82.5 million gold crowns) taken over from the Central Exchange Committee was subsequently increased, partly out of subscription payments as above but mainly out of the gradually released proceeds of the reconstruction loan. The gold which the Government had received from the liquidation of the old Austro-Hungarian Bank did not accrue to the new Bank but was all sold abroad. Thus, the initial gold and foreign exchange backing for the stabilized currency was relatively small and did not *per se* guarantee the success of the stabilization.

This was equally true of the Hungarian stabilization. Most of Hungary's share in the gold stock of the Austro-Hungarian Bank had previously been spent by the Central Exchange Control Committee in futile attempts to check the exchange depreciation. The initial gold reserve of the National Bank (14.6 million gold crowns) was derived mainly from the Government's subscriptions to the share capital. This reserve *plus* the foreign assets taken over from the Central Exchange Control Committee and *plus* such minor amounts of gold and foreign exchange as accrued to the Bank from non-Government subscriptions to its capital was considered too small to enable it to stabilize the exchange. Therefore, an advance of £4 million (corresponding at the time to less than 100 million gold crowns) in anticipation of the reconstruction loan, the flotation of which had been delayed, was granted by the Bank of England in June 1924 to the National Bank, which started operations in the same month.

DIAGRAM 1—AUSTRIA

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1925

(Base for A-D: 1919–1922: 1920 = 100; 1923–1925: Dec. 1922 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (cost of living)
D Industrial production
E Exports as percentage of imports

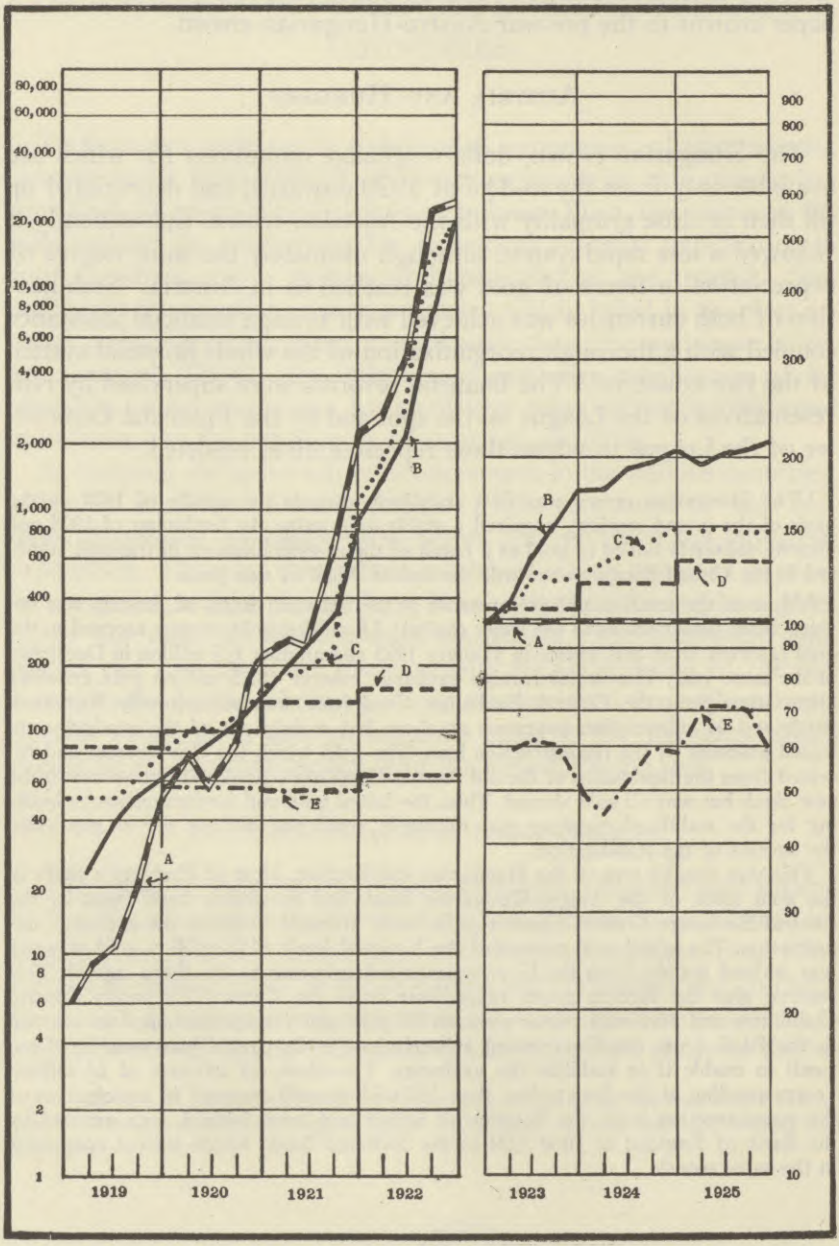
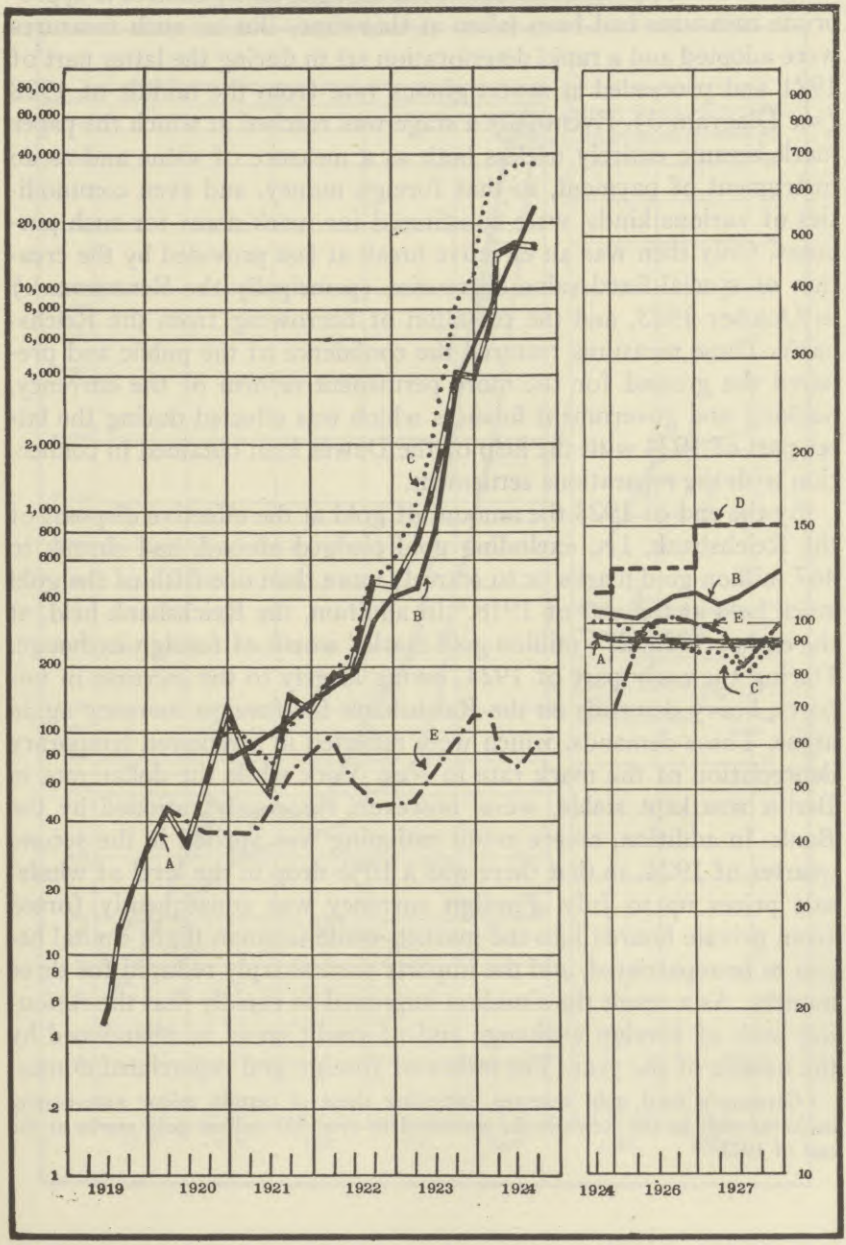


DIAGRAM 2—HUNGARY

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1926

(Base for A-D: 1919–1924: 1921 = 100; 1924–1926: Sept. 1924 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (cost of living)
D Industrial production
E Exports as percentage of imports



Germany

In Germany the inflation proceeded at a much slower pace than in the other three countries up to the middle of 1921. The general level of German wholesale prices actually declined between March 1920 and June 1921, *i.e.*, the period of the post-war slump abroad, and the inflation could perhaps still have been brought under control if appropriate measures had been taken at that time. But no such measures were adopted and a rapid deterioration set in during the latter part of 1921 and proceeded at a vertiginous rate from the middle of 1922 (see Diagram 3). Eventually a stage was reached at which the paper mark became entirely useless both as a measure of value and as an instrument of payment, so that foreign money, and even commodities of various kinds, were substituted for mark notes for such purposes. Only then was an effective break at last provided by the creation of special fixed-value currencies (principally the Rentenmark) in October 1923, and the cessation of borrowing from the Reichsbank. These measures restored the confidence of the public and prepared the ground for the more permanent reform of the currency, banking and government finances which was effected during the latter part of 1924 with the help of the Dawes loan obtained in connection with the reparations settlement.

By the end of 1923 the amount of gold at the effective disposal of the Reichsbank, *i.e.*, excluding gold pledged abroad, had shrunk to 467 million gold marks or to scarcely more than one-fifth of the gold stock held at the end of 1918.[1] In addition, the Reichsbank held, at the end of 1923, 274 million gold marks' worth of foreign exchange. During the early part of 1924, owing largely to the increase in imports, heavy demands on the Reichsbank for foreign currency again arose. These demands, which were reflected in a renewed temporary depreciation of the mark rate in New York while the dollar rate in Berlin was kept stable, were, however, rigorously rationed by the Bank. In addition, severe credit rationing was applied in the second quarter of 1924, so that there was a 10% drop in the level of wholesale prices up to July. Foreign currency was consequently forced from private hoards into the market, while German flight capital began to be repatriated, and the imports were sharply reduced for three months. As a result the situation improved so rapidly that the rationing both of foreign exchange and of credit could be abandoned by the middle of the year. The influx of foreign and repatriated domes-

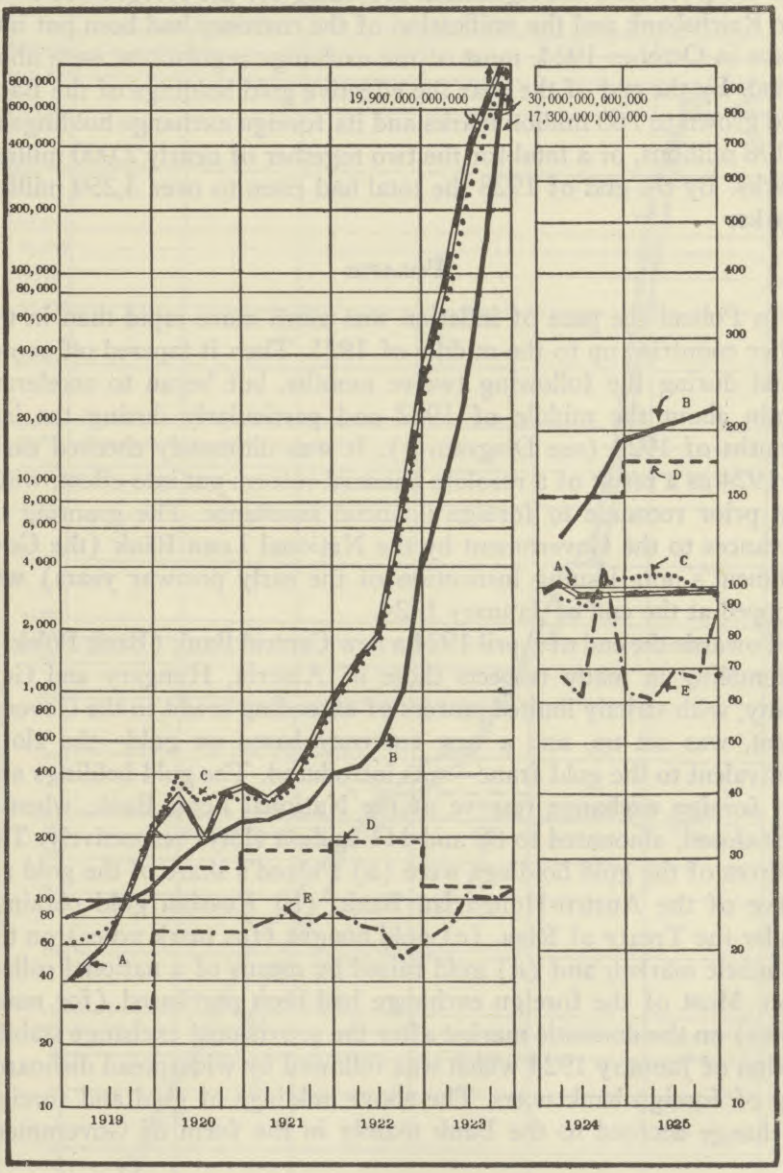
[1] Germany's total gold reserves, including those of certain minor note-issuing banks as well as the Reichsbank, amounted to over 500 million gold marks at the end of 1923.

DIAGRAM 3—GERMANY

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1925

(Base for A-D: 1919–1923: 1919 = 100; 1924–1925: Dec. 1923 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



tic capital increased greatly in the late summer and autumn months—especially after the successful flotation of the 800 million gold mark reconstruction loan. The foreign exchange demands arising from a renewed increase in imports during the autumn (much sharper, in fact, than that of the first five months of the year) could therefore easily be met, especially as exports were rising steadily though much less steeply. After the legislation providing for the reorganization of the Reichsbank and the unification of the currency had been put into force in October 1924, most of the exchange regulations were abolished. By the end of the year the effective gold holdings of the Bank had grown to 760 million marks and its foreign exchange holdings to 1,198 millions, or a total for the two together of nearly 2,000 million marks. By the end of 1928 the total had risen to over 3,250 million marks.

Poland

In Poland the pace of inflation was much more rapid than in the other countries up to the middle of 1921. Then it tapered off somewhat during the following twelve months, but began to accelerate again about the middle of 1922 and particularly during the last months of 1923 (see Diagram 4). It was ultimately checked early in 1924 as a result of a resolute financial reform put into effect, without prior recourse to foreign financial assistance. The granting of advances to the Government by the National Loan Bank (the Government's note issuing institution of the early postwar years) was stopped at the end of January 1924.

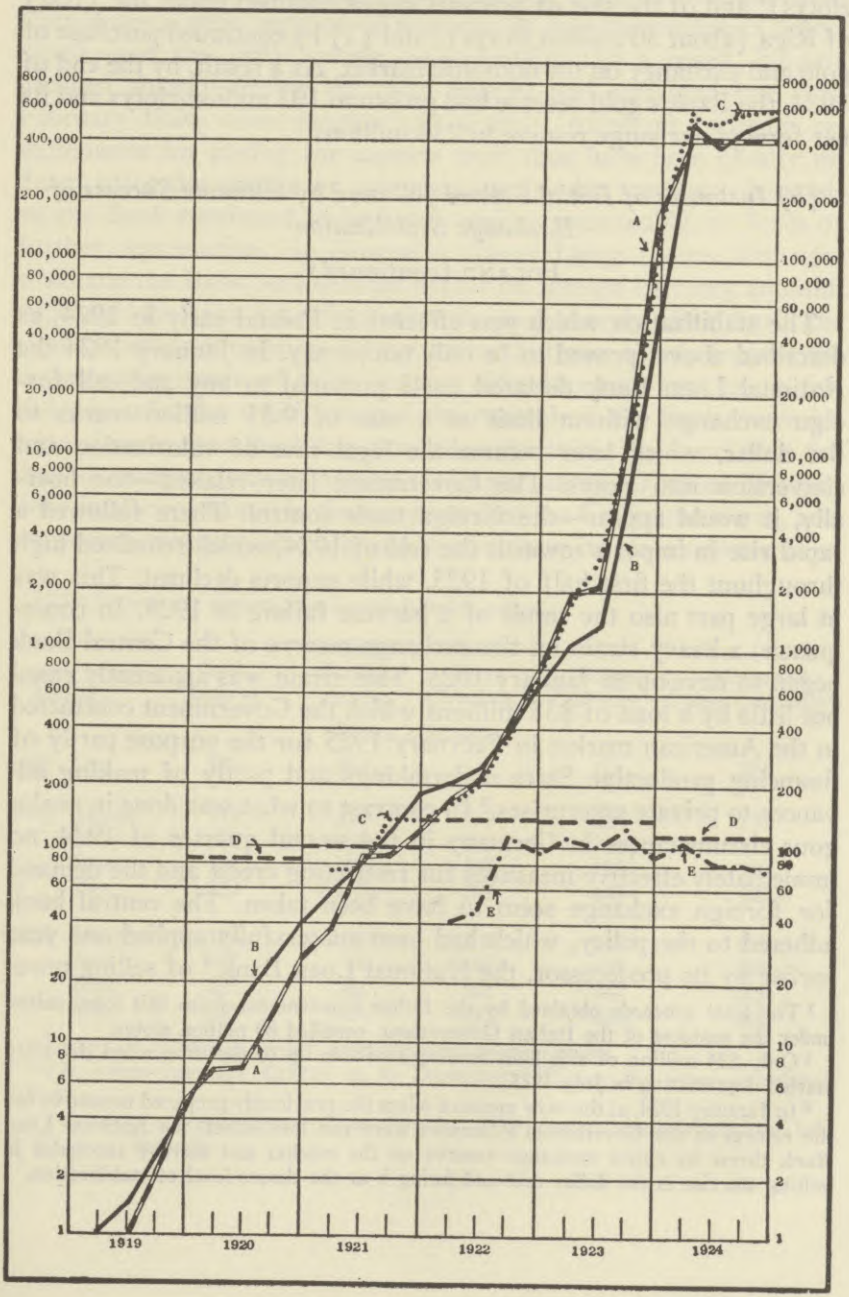
Towards the end of April 1924 a new Central Bank (Bank Polski), resembling in many respects those of Austria, Hungary and Germany, with strictly limited powers of extending credit to the Government, was set up, and a new currency based on gold—the zloty, equivalent to the gold franc—was introduced. The gold holdings and net foreign exchange reserve of the National Loan Bank, when it was closed, amounted to 88 and 111 million zlotys respectively. The sources of the gold holdings were (a) Poland's share of the gold reserve of the Austro-Hungarian Bank, (b) Russian gold obtained under the Treaty of Riga, (c) gold bought (for mark notes) on the domestic market, and (d) gold raised by means of a national collection. Most of the foreign exchange had been purchased (for mark notes) on the domestic market after the provisional exchange stabilization of January 1924 which was followed by widespread dishoarding of foreign bank notes. The above holdings of gold and foreign exchange accrued to the Bank mainly in the form of Government

DIAGRAM 4—POLAND

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1924

(Base for A-D: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



subscription to the share capital, and in exchange for new (zloty) bank notes. Additional amounts were acquired by the Bank: (1) to a minor extent from non-Government subscription to the share capital; (2) by purchase from the Government of the exchange proceeds of a small loan raised in Italy in March 1924 (about 60 million zlotys)[1] and of the sale of precious stones obtained under the Treaty of Riga (about 30 million zlotys); and (3) by continued purchase of gold and exchange on the domestic market. As a result, by the end of 1924, the Bank's gold reserve had grown to 103 million zlotys and its net foreign exchange reserve to 254 millions.

(b) Instances of Initial Failure followed by Ultimate Success of Exchange Stabilization

Poland (*continued*)

The stabilization which was effected in Poland early in 1924, as described above, proved to be only temporary. In January 1924 the National Loan Bank declared itself prepared to buy and sell foreign exchange without limit at a rate of 9.35 million marks to the dollar, which later became the legal rate of valorization and conversion into zlotys. The Government later relaxed—too liberally, it would appear—the foreign trade control. There followed a rapid rise in imports towards the end of 1924, which remained high throughout the first half of 1925, while exports declined. This was in large part also the result of a harvest failure in 1924. In consequence, a heavy strain on the exchange reserve of the Central Bank began to develop in January 1925. This strain was apparently eased but little by a loan of $35 millions which the Government contracted in the American market in February 1925 for the purpose partly of financing productive State undertakings and partly of making advances to private enterprises.[2] In contrast to what was done in analogous circumstances in Germany in the second quarter of 1924, no immediately effective measures for restricting credit and the demand for foreign exchange seem to have been taken. The central bank adhered to the policy, which had been successfully applied one year earlier by its predecessor, the National Loan Bank,[3] of selling unre-

[1] The total proceeds obtained by the Polish Government from this loan, raised under the auspices of the Italian Government, equalled 80 million zlotys.

[2] Only $24 million of this loan became available up to the time when the zloty started depreciating in July 1925.

[3] In January 1924, at the very moment when the previously prepared measures for the reform of the Government's finances were put into effect, the National Loan Bank threw its entire exchange reserve on the market and thereby succeeded in halting the rise in the dollar rate and fixing it at the chosen level of stabilization.

stricted amounts of foreign exchange at the established rate. From the beginning of 1925 zloty notes in increasing amounts were exchanged at the Bank against foreign currency, with the result that both its circulation outstanding and its foreign assets were rapidly reduced.[1]

In May 1925, restrictions (mainly in the form of increased customs duties) were imposed on imports; in July the exchange depreciated; and the 1925 harvest was plentiful. As a result, imports declined sharply during the third quarter and remained low until February 1926, while exports rose sharply. Although exchange requirements for paying for imports must thus have been greatly reduced after the middle of the year, the foreign currency demands on the Bank continued to be heavy owing, presumably, to fears of further depreciation. By November the exchange reserve had vanished and the Bank became a net debtor on foreign currency account. Although the bank-note circulation dropped sharply after April, the total monetary circulation did not shrink but rose slowly because the Government issues of token notes (with denominations up to five zlotys) and coins which escaped the control of the Bank, were increased more than the Bank circulation declined. The legal limit for the Government issue of twelve zlotys per capita, or about 350 millions in all, was raised in the autumn when the Government was, as a temporary measure, also allowed to overdraw its statutory credit of

[1] The figures are shown on a quarterly basis below.

End of:		Gold Reserve	Net Foreign Assets	Bank Note Circulation	Token Currency [b]	Total Bank Notes and Token Currency [b]
			Zlotys (000,000's)			
1924	Dec.	103	254	531	151	702
1925	March	117	250	563	218	781
	June	120	115	503	269	772
	Sept.	132	37	397	395	792
	Dec.	134	(— 3) [a]	381	440 [c]	821 [c]
1926	March	134	(— 12) [a]	389	426 [c]	815 [c]
	June	135	10	448	460	908
	Sept.	135	88	581	427	1008
	Dec.	138	125	593	428	1021

[a] Excess of foreign exchange liabilities over foreign assets.

[b] The token currency figures up to December 1925 are the gross circulation figures.

[c] The token currency figures from January 1926 onwards exclude amounts held by Bank of Poland.

50 million zlotys with the Bank. As there was a marked and persistent decline in industrial activity throughout 1925, which should normally have reduced the requirements for domestic currency, the continued increase in the money circulation was evidently indicative of inflationary developments. In July the stabilization rate was abandoned, and dollar quotations and wholesale prices rose steeply towards the end of the year.

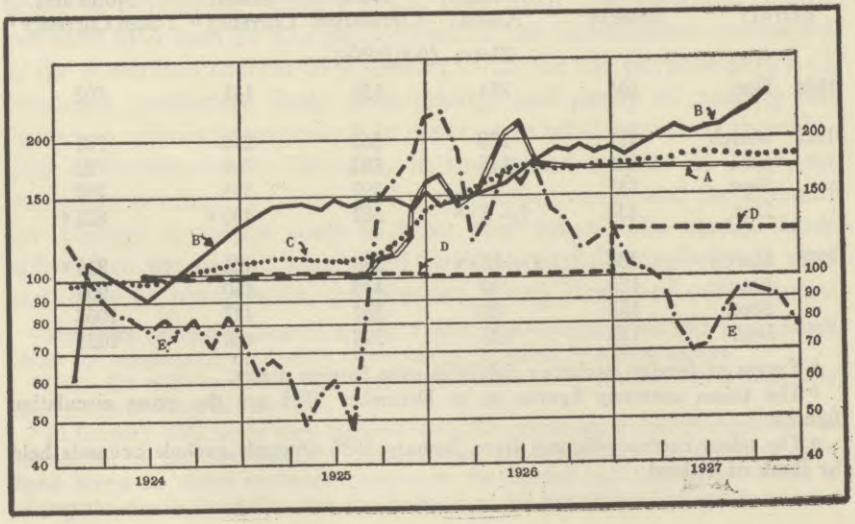
Measures were then taken to improve the shaken budgetary position and to check foreign currency demands. Thus the incipient inflationary trend was not allowed to degenerate into a repetition of what had happened before 1924. The rise of the dollar rate was checked, temporarily at first, in the early months of 1926, and finally (at a level 72% above the 1924 stabilization rate) during the late summer and the autumn, when the movement of wholesale prices was also brought under control at a level some 50% above that of mid-1925. The persistent and very substantial export surplus helped to improve the foreign exchange position of the Central Bank and thus to secure the success of the renewed stabilization.

DIAGRAM 5—POLAND

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1924–1927

(Base for A-D: 1924 = 100)

A Exchange rate (price of dollar)
B Note and token currency circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



Negotiations were then entered upon with a view to obtaining an international loan to help *inter alia* in effecting the final currency reform along the lines followed in the post-war reconstruction schemes of other countries. The loan, amounting in all to the equivalent of some $72 million (face value), was floated in November 1927. By the end of September the gold and foreign exchange reserves of the Central Bank had grown to 182 and 221 old zlotys, respectively, or a total for the two together of 403 million old zlotys. This was equivalent, at the legal conversion rate fixed in October, to 694 million new zlotys against a note circulation [1] of 1,124 millions. Whether this reserve was not in itself sufficient to secure the legal stabilization without the necessity of a large foreign loan may be a debatable question. But since the crop failure of 1924 and the temporary difficulties which, in consequence, Poland experienced in her balance of payments, had demonstrated the need for a large reserve of international liquidity, a foreign loan was considered desirable.

The factual review here dwelt upon at some length suggests that failure of the first stabilization was due largely to errors of policy and particularly to the failure to maintain sound government finances. As is shown by the experiences of some other countries, the first stabilization might well have proved a complete success, even without recourse to any substantial foreign loan for currency reform purposes, had a policy of greater restraint and less light-hearted optimism been pursued for some appropriate transition period, and had the requisite measures always been taken without delay.

Belgium

Another instance of preliminary stabilization breaking down after a period of apparent success is offered by Belgium. Up to about the middle of 1925 the exchange value of the Belgian franc was closely associated with that of the French franc for reasons which seem to have been more psychological and traditional than strictly economic in character. In the course of 1924, exchange fluctuations in Belgium narrowed round a value of 20 francs to the dollar. This was a consequence of the action taken at that time in France to support the exchange by means of temporary credits arranged in London and New York. After it had been kept comparatively stable for nearly a year, the French franc began to depreciate again towards the middle of 1925. The Belgian franc at first followed suit; but in the early au-

[1] Under the new currency reform scheme the Government ceased to issue token notes, the sole right of note issue being vested in the Central Bank, which subsequently replaced the token notes by bank notes.

DIAGRAM 6—BELGIUM

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1927

(Base for A-D: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports

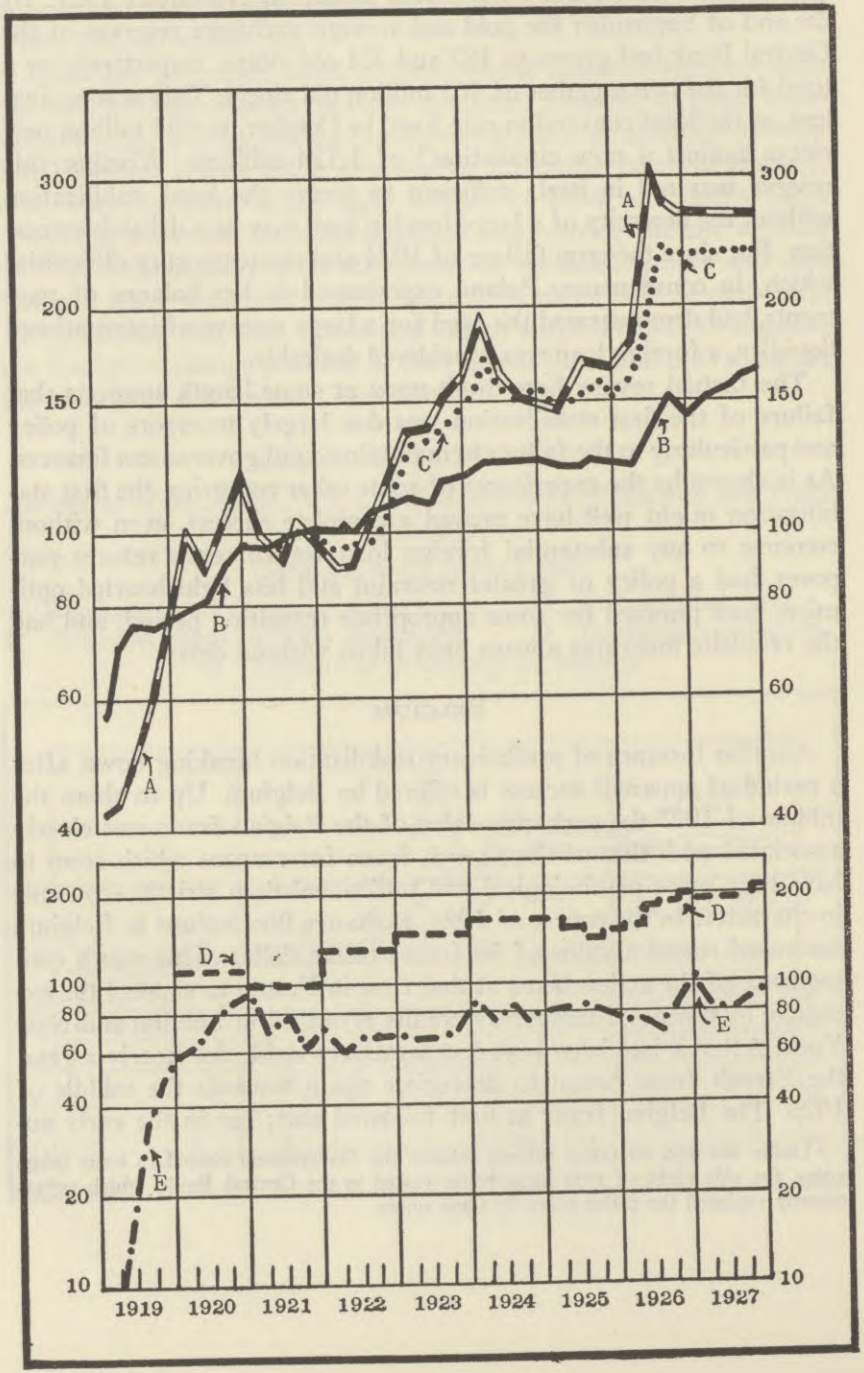
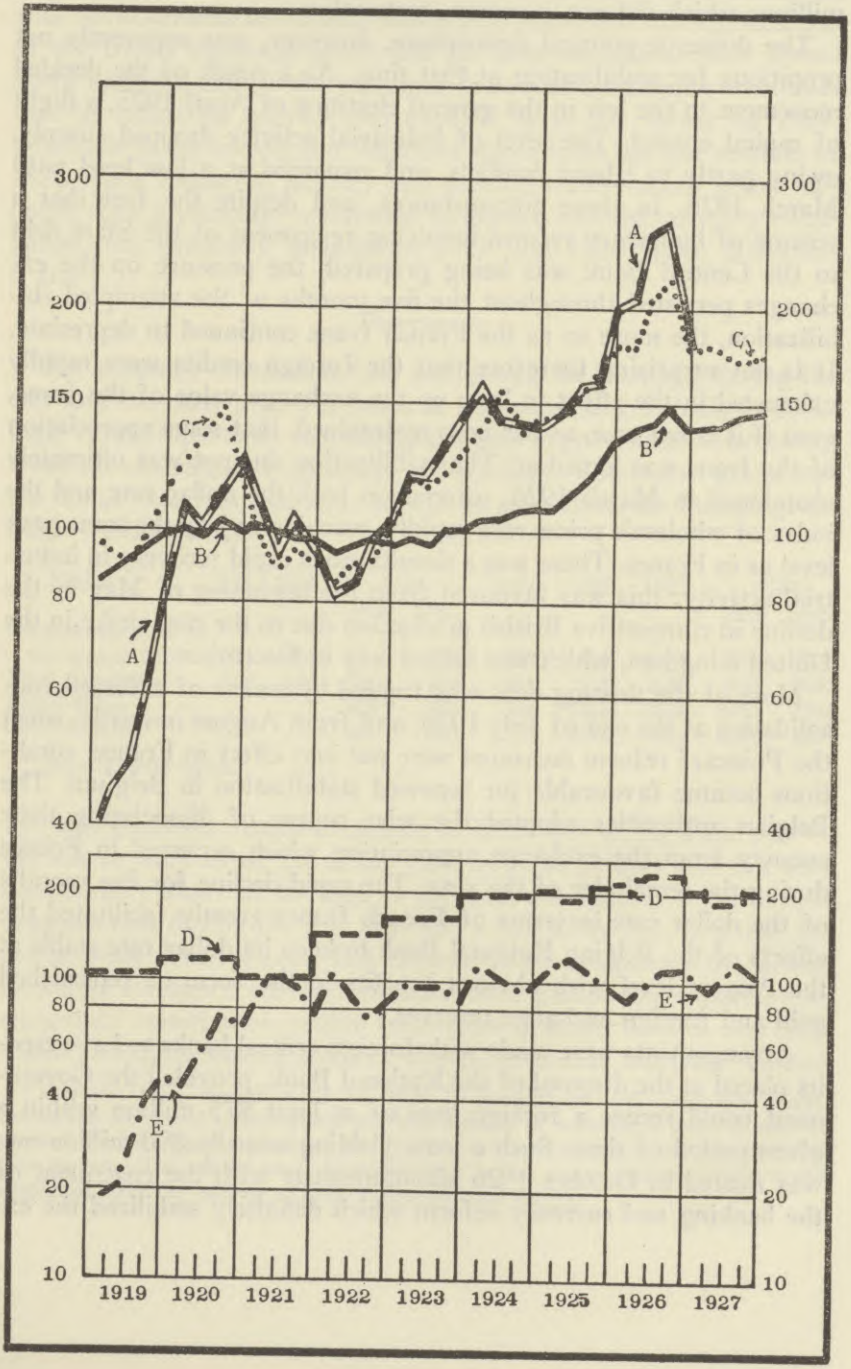


DIAGRAM 7—FRANCE

Exchange Rate, Circulation, Prices, Production and Trade, 1919–1927

(Base for A-D: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



tumn of 1925 its depreciation was arrested, and a *de facto* stabilization was achieved for a period of five months by means of foreign short-term credits of about $100 millions, part of which was obtained in anticipation of a projected long-term foreign loan of $150 millions which did not, however, materialize.

The domestic political atmosphere, however, was apparently not propitious for stabilization at that time. As a result of the decided movement to the left in the general elections of April 1925, a flight of capital ensued. The level of industrial activity dropped sharply, owing partly to labour conflicts, and remained at a low level until March 1926. In these circumstances, and despite the fact that a scheme of budgetary reform involving repayment of the State debt to the Central Bank was being prepared, the pressure on the exchanges persisted throughout the five months of the attempted stabilization, the more so as the French franc continued to depreciate. It is not surprising therefore that the foreign credits were rapidly exhausted in the effort to keep up the exchange value of the franc, even if it is not true, as has been maintained, that some appreciation of the franc was aimed at. The stabilization attempt was ultimately abandoned in March 1926, whereupon both the dollar rate and the index of wholesale prices rose rapidly, reaching in July the same peak level as in France. There was a simultaneous rapid recovery in industrial activity; this was favoured from the beginning of May by the decline in competitive British production due to the coal strike in the United Kingdom, which was settled only in December.

Most of the floating debt was funded by means of a forced consolidation at the end of July 1926, and from August onwards, when the Poincaré reform measures were put into effect in France, conditions became favourable for renewed stabilization in Belgium. The Belgian authorities adopted the wise course of dissociating their country from the exchange appreciation which occurred in France during the remainder of the year. The rapid decline for five months of the dollar rate in terms of French francs greatly facilitated the efforts of the Belgian National Bank to keep its dollar rate stable at the August level with obvious benefits in the form of replenished gold and foreign exchange reserves.

Arrangements were made with foreign central banks to have credits placed at the disposal of the National Bank, provided the Government could secure a foreign loan of at least $75 million within a given period of time. Such a loan, yielding actually $90 million net, was floated in October 1926 simultaneously with the enactment of the banking and currency reform which definitely stabilized the ex-

change at 175 francs to the pound sterling or 36 francs to the dollar. The greater part of the loan was used for redeeming the state debt to the central bank and the remainder was used for repaying various other government debts. But the loan does not seem to have been indispensable for the currency stabilization as such. By contrast with developments in France, where *pari passu* with the appreciation of the franc, wholesale prices and the note circulation were forced down until the end of the year, and there was a consequent contraction in industrial activity and exports up to the spring of 1927, wholesale prices in Belgium remained stable from the late summer of 1926 while industrial activity and foreign trade—much better balanced than previously—continued to expand and the currency circulation rose gradually throughout 1927 and 1928. (See Diagrams 6 and 7.)

Portugal

The currency circulation rose persistently in Portugal during the war and the early post-war years in response (and, indeed, in strikingly close proportion) to a steady increase in government borrowing from the central bank up to the end of 1924. Both retail prices and the dollar rate followed suit, as will be seen from the indices given below (1913 = 100):

End of:	1918	1919	1920		1921	1922	1923	1924	
			June	Dec.				June	Dec.
Government debt to the central bank	323	466	...	715	929	1325	1873	2010	2375
Note circulation	315	430	516	706	851	1217	1640	1825	2047
Retail prices	...	...	400*	902	938	1361	2019	2316	2346
Cost of dollar	...	...	287	884	1163	2052	2603	3244	1936

* Approximate index.

By June 1920—in marked contrast to December of the same year—the rise in the cost of the dollar (and in retail prices) still fell very considerably short of the rise in the note circulation, a fact which suggests that during the first year and a half after the Armistice the actual trade deficit was in fact covered fairly adequately by current exchange receipts from sources other than commodity exports, *e.g.*, emigrants' remittances, profits from colonial trade, interest and dividends on capital abroad, tourists' expenditures and shipping.[1] Subse-

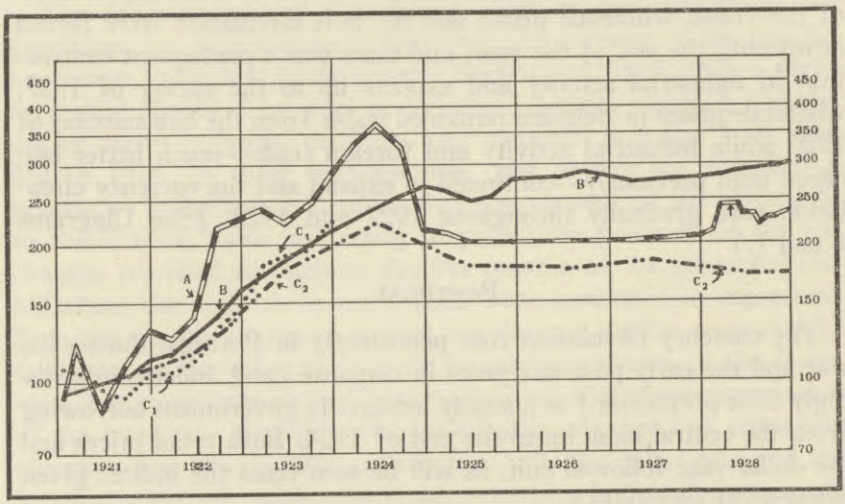
[1] This last item, though small no doubt in comparison with emigrants' remittances and income from capital abroad, was possibly of some importance in view of the fact that Portugal's merchant fleet had more than trebled in tonnage since before the war. The official trade figures in this period are misleading owing to the system in force for valuing exports at conventional values.

DIAGRAM 8—PORTUGAL

Movement of Exchange Rate, Circulation and Prices, 1921–1928

(Base: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C_1 Prices (cost of living)
C_2 Prices (wholesale)



quently, however, import requirements and a flight of capital apparently so increased the demand for foreign exchange as to cause the escudo to depreciate—between the middle of 1920 and the middle of 1924—at a much faster pace than the circulation increase alone would have warranted. Under the influence of the high prices charged for imported goods the general level of retail prices also rose faster than the note circulation during that period (see Diagram 8).

Alarmed by the pace of the exchange depreciation towards the end of 1923, and the spreading flight from the escudo at the beginning of 1924, the Government intervened in the exchange market and took a number of other measures to restore confidence. The silver reserve of the central bank (booked at pre-war mint parity) was demonetized, part of it being sold on the market abroad and the remainder used as collateral for credits raised in London. The exchange control was tightened up, particularly as regards the obligatory delivery of export exchange to the Government. By these means the Government was able in the late summer to turn the tide of depreciation, and increasing amounts of exchange were released from private hoards as the escudo appreciated. As the expansion of the note circulation was checked at the end of the year by stemming the government borrow-

ing from the Bank, the price rise was also brought to a standstill. After five months of sharp appreciation [1] the movement was halted and the escudo was subsequently kept virtually stable for three years (see Diagram 8).

Despite a substantial reduction of imports in 1925 and 1926, however, the Bank was losing foreign exchange. This fact pointed to the persistence of a gap in the balance of payments which was due mainly, no doubt, to the reluctance on the part of both exporters and holders of investment abroad to repatriate the foreign currency at their disposal—a sign of continued lack of confidence in home finances. A renewed rise of the import surplus in 1927 increased the strain on the provisional stabilization rate. Negotiations for an international loan under League auspices were therefore opened in January 1928, but they proved abortive because the Government declined to accept the arrangements for supervision which were made a condition. The weakening of the exchange in the early part of 1928 was undoubtedly connected with the negative outcome of the loan negotiations. Temporary stabilization credits were, however, obtained abroad, while the Government wisely set to work to effect the necessary reforms without the aid of any long-term foreign loan. This action was crowned with signal success; confidence returned and with it also Portuguese liquid capital which had previously been kept abroad in substantial amounts. By June 1931 the final currency reform had been effected together with the requisite reconstruction of the central bank.

Denmark and Norway

Both in Norway and in Denmark the first attempt at stabilization also failed. But this was due to circumstances which were the reverse of those that prevailed in the other three cases just described. Belgium, Poland and Portugal were unable to maintain the preliminary stabilization rates because of the continued downward pressure on their exchanges; Denmark and Norway were obliged to abandon the rates first set because heavy purchases of their currencies by foreign speculators caused them to appreciate beyond those rates.

As a result of the slump of 1920–21 there occurred a severe and protracted banking crisis, worsened in the case of Norway by the plight of international shipping. Consequently both the Danish and the Norwegian crowns, after first appreciating in sympathy with the

[1] This appreciation, amounting to 42%, precipitated an internal economic depression which was reflected in a marked decline in industrial activity lasting for two years.

Swedish crown and the pound sterling, began to depreciate again in the latter part of 1922. The balance of trade, which was negative during the early post-war years, gradually improved, however, and as energetic measures were taken to reconstruct the shattered banking systems the currency depreciation was successfully arrested during the first half of 1924, when both exchanges were linked to the pound sterling in a somewhat flexible relationship. Subsequently they followed fairly faithfully the appreciation of that currency up to June 1925 (see Diagrams 9 and 10). The pound sterling had by then returned to gold parity, and it was generally believed that the same goal was aimed at ultimately in Denmark and Norway.

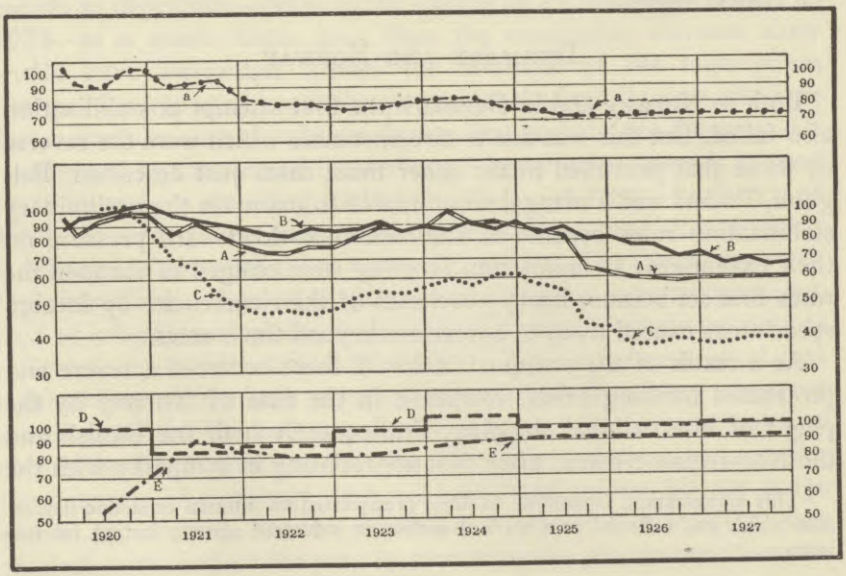
In the case of Denmark, this belief was in some measure confirmed by the passing of a law under which the National Bank undertook to sell dollars at a maximum price, to be lowered by degrees from 5.74 Kroner for the first half of 1925 to 5.32 Kroner for the second half of 1926 (the mint parity being 3.73 Kroner). But owing largely to

DIAGRAM 9—DENMARK

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1920–1927

(Base for A-D and [a]: 1920 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports
[a] Price of the dollar in pound sterling



the action of international speculators, whose range of gainful activities had been narrowed by recent currency reforms, the exchange rate was forced down to 4.13 Kroner to the dollar by September 1925 and back to gold parity by June 1926. There were, however, other factors at work which were of a more lasting nature than speculation, and which ensured that the gold parity could be maintained once it was reached. One such factor was the substantial domestic price deflation which had taken place, and another was the relative price advantage enjoyed by Denmark's export products. In the circumstances, the foreign revolving credits arranged by the Bank at the beginning of 1925 were never used, while its exchange holdings increased rapidly despite the repayment of older exchange credits. Industrial activity, however, declined during 1925 and 1926, evidently as a result of the deflationary monetary policy, and did not recover to the 1924 level until 1928.

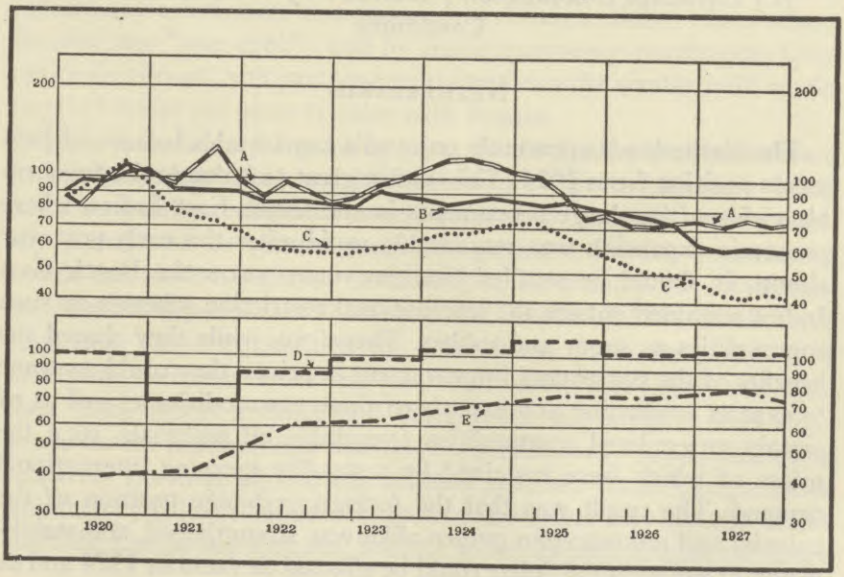
The Norwegian crown also appreciated rapidly, as the result of

DIAGRAM 10—NORWAY

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1920–1927

(Base for A-D: 1920 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



speculation, during the third quarter of 1925. This fact caused considerable concern in certain quarters at home, and a special committee was set up in September to consider the situation and formulate policy proposals. While it was preparing its report, which was published in January 1926, the appreciation was halted. The committee recommended that the exchange should be stabilized, if necessary with the aid of a foreign credit, at a rate as near as possible to that obtaining at the time it reported. The central bank, however, whether for reasons of national prestige or for other reasons, chose not to resist too resolutely the speculative pressure making for continued appreciation. It consequently allowed the exchange price of the dollar to drop, gradually at first, from 4.90 Kroner in January to 4.55 by September, then suddenly down to 3.95 by November, and then again gradually until it arrived back at gold parity towards the end of 1927. Apart from speculation, the chief factors that were instrumental in bringing about the appreciation and subsequent stabilization of the Norwegian exchange were the improvement in international shipping which took place towards the middle of the 'twenties, and the advantageous price position of forestry products, to which we shall refer later. The deflation was less severe in Norway than in Denmark, and the depressive reaction on her industrial activity was of shorter duration.

(c) Exchange Stabilization Facilitated by Favourable Export Conditions

Netherlands

The Netherlands apparently enjoyed a comfortable balance of payments position from 1924. This was in great part due to the favourable yields of her large investments in the Dutch East Indies, where economic expansion was remarkably rapid after the early post-war slump. It should be recalled that for many years the Dutch East Indies remained outside the international restriction schemes on such commodities as sugar and rubber. Therefore, while they shared the benefits of the consequent improvement in prices, they could continue to expand production and exports of these commodities as well as of certain unregulated commodities (vegetable oil materials, etc.) the prices of which were sustained by a steadily growing international demand. The result was that the foreign exchange position of the colonial and metropolitan gulden alike was strengthened, and stabilization at par with the dollar could be effected *de facto* in 1924 and *de*

jure in 1925 without recourse to specific foreign credit arrangements.

In the majority of the other countries which stabilized their currencies *de facto* unaided from abroad, the same primary cause, i.e., an advantageous relative price position for some principal articles of export, would appear to have been an important factor behind the success achieved, and this holds true also of several of those countries which, as a safeguard, raised temporary foreign credits for the purpose. But only where effective measures had been enforced to stop inflation, and particularly to preclude abuse of the note-issuing machinery for purposes of covering public expenditures so that confidence in the future of the currency was restored, could the export price advantage exercise its full influence upon the exchange.

Estonia, Latvia, Lithuania

This point is well illustrated by the experiences of the three Baltic States. These countries, though they were faced with the difficult problem of re-shaping a previously provincial economy to suit their newly won national independence, show a better stabilization record than many of the older countries. For some time after the termination in 1920 of their wars with Russia, all three countries had a large import surplus. Their initial need for substantial imports was obvious enough. Their exports, on the other hand, were hit by the international post-war slump (1920–21). Part of the excess imports represented relief, part was financed by foreign credits (later transformed into "war debt") and by foreign currency remittances from nationals abroad, and part was paid for from the sizable gold stocks received under the peace treaties with Russia.

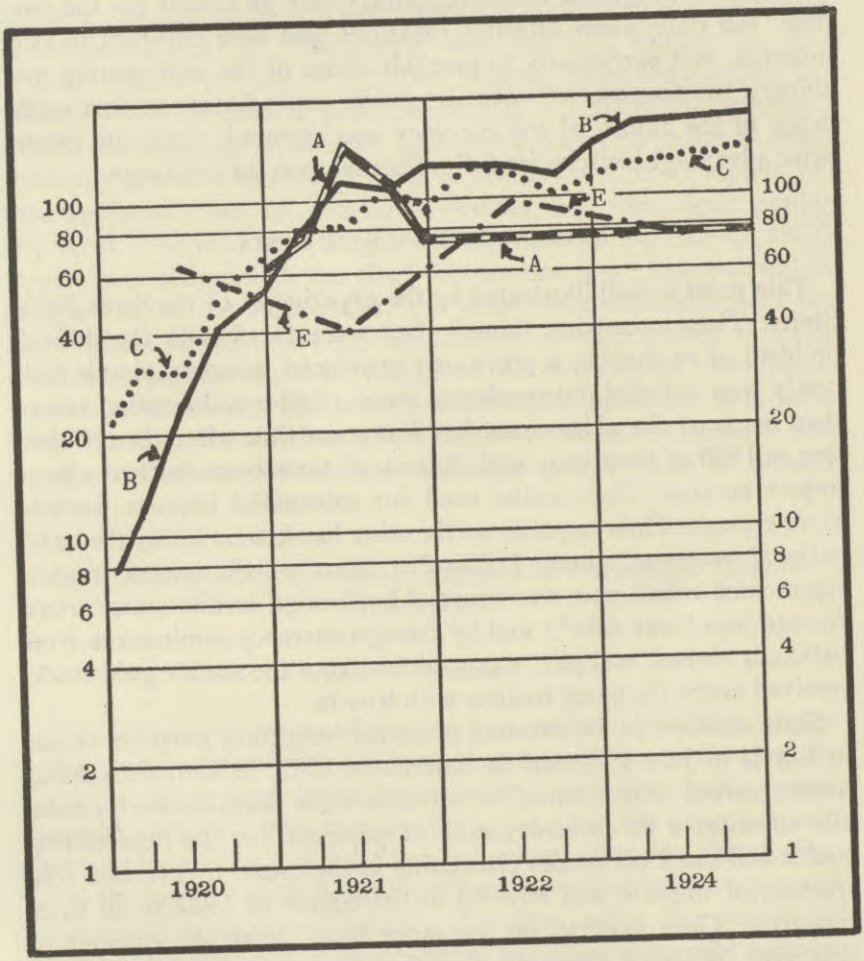
State recourse to the printing press for budgetary purposes ceased in Latvia in July 1921 and in Estonia in 1922. In Lithuania dollar notes received as emigrants' remittances from America were gradually substituted as current means of payment for the depreciating rouble and mark currencies circulating in the country. A certain contraction of imports was effected in the course of 1921 in all three countries. Their exports, on the other hand, from the summer of that year, benefited from the fact that forestry products and flax, their chief export articles, had fallen much less in price than most goods on the international market and subsequently maintained their relatively favourable price and demand position. As a result, a more satisfactory balance between imports and exports was brought about enabling Latvia and Estonia, both of which experienced an exchange

DIAGRAM 11—LATVIA

Movement of Exchange Rate, Circulation, Prices and Trade, 1920–1924

(Base for A-C: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (cost of living)
E Exports as percentage of imports



appreciation in the latter part of 1921, to keep their dollar rates comparatively stable from the early spring of 1922.[1]

In the favourable circumstances which thus developed, Latvia and Lithuania were not slow in effecting the requisite currency reforms.

[1] For Lithuania no dollar quotations are available prior to the autumn of 1922.

By the early autumn of 1922 central banks with the exclusive privilege of note issue were established and new currency units introduced.[1] These were the lat and the lit, equivalent to the gold franc and to ten U.S. cents respectively, both of which were fixed in terms of gold, and were from the outset made effectively exchangeable for gold or foreign exchange valued in terms of gold. Exchange control was abolished. Thereafter neither country experienced great difficulty in maintaining the gold value of its currency, although at times their exports fell short of their imports, especially in years of light domestic crops. The exchange reserves accumulated in the good years, the continued inflow of emigrants' remittances, and short-term funds obtained through ordinary credit transactions, proved sufficient to meet such temporary strains. Moderate amounts of foreign long-term loans for economic development purposes were obtained by both countries in the late 'twenties.

A somewhat different course was followed in Estonia from the autumn of 1922. While exchange control was retained, imports were allowed to increase and there was a large negative balance of trade up to the middle of 1924. The dollar rate was at first supported by sales of gold from the Government reserve. From the autumn of 1923, however, it weakened gradually over a period of some nine months until imports were again brought into line with exports. The result was that the Estonian mark appreciated for some three months in the autumn of 1924 and could thereafter be kept at the ultimate revaluation level, thanks to the maintenance of an active trade balance. The experience of the interim period here described suggests that Estonia would have done better if she had chosen the same course as Latvia and Lithuania in the autumn of 1922. However, in the course of 1925, negotiations were opened up for an international loan under the auspices of the League to aid in the reconstruction of the bank of issue. This was carried into effect in April 1927, when a new gold unit of currency, the kroon, equivalent to the Swedish krona, was created. The loan was subsequently made available and the kroon was legally introduced on January 1st, 1928.

[1] In Latvia, the State notes (Latvian roubles) remained in circulation for many years; but their amount could not be increased and as they were freely exchangeable for bank notes at the fixed rate of 50 roubles = 1 lat; the former were gradually replaced by the latter, the control of the total circulation being vested in the Bank.

In Lithuania the bank notes gradually replaced the foreign currencies in circulation. Thus the increase which occurred between 1922 and 1924 was more apparent than real. Further, the bank notes issued in exchange for dollars evidently had an initial gold backing of 100%. Up to the end of 1924 the total note circulation of the Bank was in fact completely covered by its gold and foreign exchange holdings.

Sweden and Finland

The early exchange stabilization effected in Sweden (in the autumn of 1922) and in Finland (at the end of 1923) was no doubt facilitated by the advantageous international price position of forestry products which were their most important export goods. Index numbers illustrating some relevant price relations in the case of Sweden are shown in Diagram 12.

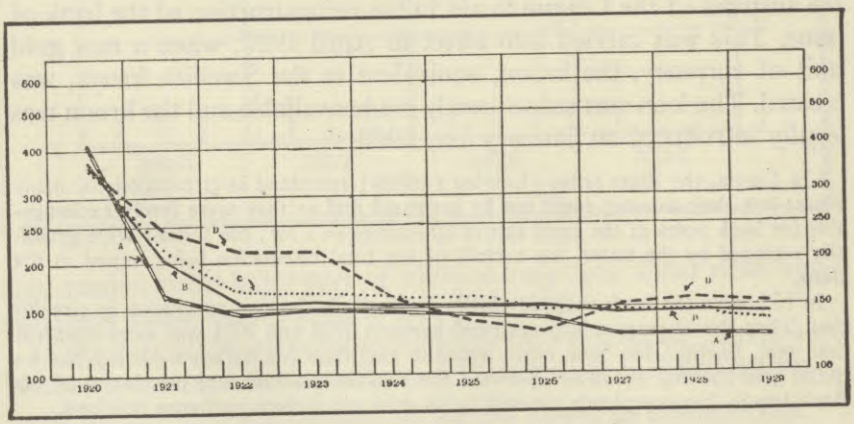
The prices of Swedish (and, by implication, also of Finnish) export goods, though they were unfavourable during the period of heavy excess imports for restocking in 1919 and 1920, became relatively favourable in 1921 when the international slump caused a much heavier drop in the prices of her import goods than in her export goods (particularly timber). The favourable terms of trade lasted throughout the 'twenties, a fact which goes far to explain the rapid improvement in economic conditions which caused Sweden to emerge as a creditor country and allowed Finland substantially to reduce her foreign debt. The strong demand for timber for building and other post-war construction purposes caused the export prices of such forestry products to be maintained much above those of export goods in general during the years 1921–23.

DIAGRAM 12—SWEDEN

Movement of Prices, 1920–1929

(Base: 1919 = 100)

A Prices of imported goods, general
B Prices of exported goods, general
C Wholesale prices
D Prices of timber sawn for export



The improvement in international shipping by the middle of the 'twenties has been referred to above as one of the main factors, along with international currency speculation, that were instrumental in bringing about the appreciation and subsequent stabilization of the Norwegian exchange. The advantageous international price position of forestry products was no doubt an important additional contributing factor, such products (especially pulp and paper) accounting for one-third or more of Norway's exports in the years 1924–28.

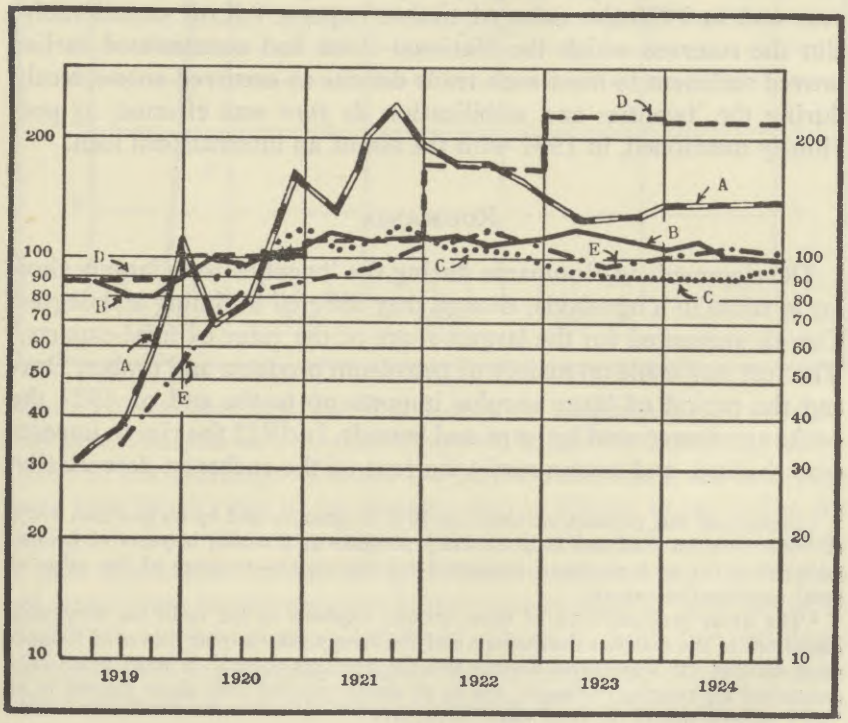
In the case of Denmark the fundamental cause of the exchange appreciation leading up to final stabilization seems to have been the favourable terms of trade which resulted from the strong price posi-

DIAGRAM 13—FINLAND

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1919–1924

(Base for A-D: 1920 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



tion, sustained by a steadily expanding international demand, of dairy and other products of animal origin. These constituted roughly three-quarters of Danish exports during the period 1924–28.

Yugoslavia

The exchange stabilization in Yugoslavia was intimately connected with the international price position of a few of the country's principal export commodities. The trade balance was negative in 1919 and remained so up to the end of 1922. The exchange depreciated violently up to the beginning of 1923, the currency circulation increasing in like degree. In the course of the first ten months of 1923, however, the rise in imports was checked, and the aggregate value of exports increased very rapidly—in fact it more than doubled—owing primarily to the favourable prices obtained for construction timber [1] and also for eggs, pigs and maize. The reaction on the exchange was instantaneous. An appreciation set in which, supported by a persistent export surplus, continued at an even pace until the middle of 1925, when the exchange was stabilized *de facto* at between 56 and 57 dinars to the dollar, the rate finally adopted. During the latter part of that year and in 1926 the value of timber exports fell off considerably. But the reserves which the National Bank had accumulated earlier proved sufficient to meet such trade deficits as occurred subsequently during the 'twenties and stabilization *de jure* was effected, as previously mentioned, in 1931 with the aid of an international loan.

Roumania

Developments in Roumania during the 'twenties were largely similar to those in Yugoslavia, though they differed in timing and degree. Cereals accounted for the largest share of the value of total exports.[2] The rest was made up mainly of petroleum products and timber. During the period of large surplus imports up to the end of 1921 the exchange depreciated by leaps and bounds. In 1922 the rise in imports was checked, and consequently the pace of the exchange depreciation

[1] Exports of this product increased by 70% in quantity and by no less than 270% in value between 1922 and 1923. Forestry products as a whole, in years of favourable prices for such products, accounted for one-quarter or more of the value of total merchandise exports.

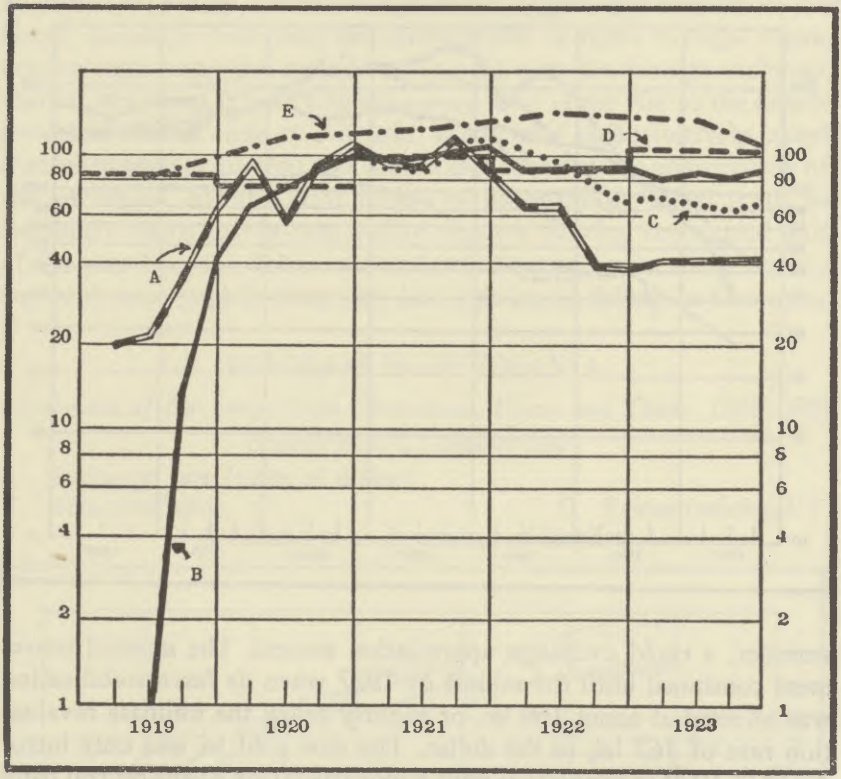
[2] The great predominance of these articles explains in the main the very wide amplitude of the seasonal fluctuations and the bumpy year-to-year course of Roumanian exports. In Yugoslavia cereals and the products thereof in most years only accounted for roughly one-tenth, and in no single year did their share amount to as much as one-third of the total value of exports.

DIAGRAM 14—CZECHOSLOVAKIA

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1919–1923

(Base for A-D: 1921 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (wholesale)
D Industrial production
E Exports as percentage of imports



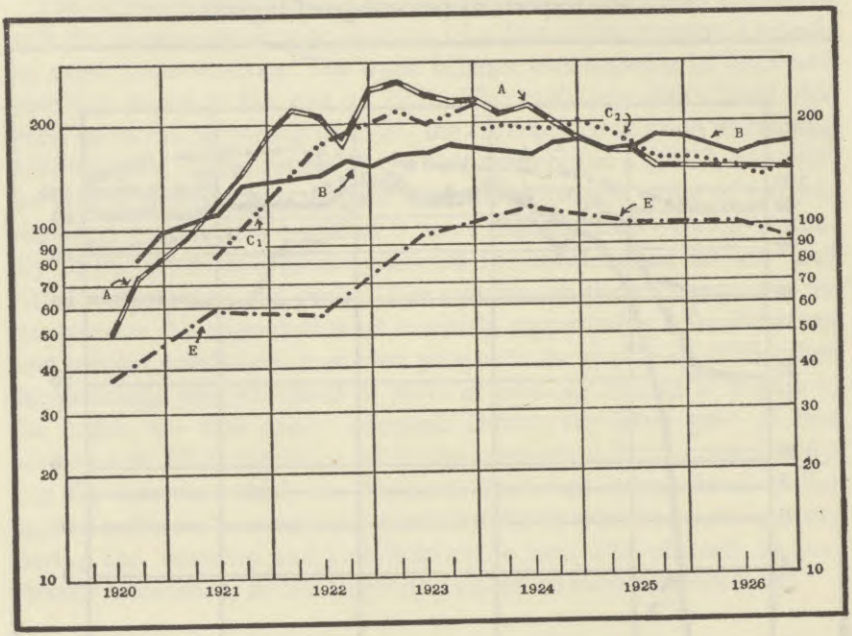
slowed down markedly; but it was only the realization of a substantial export surplus in 1923 that effectively halted the downward movement of the exchange. Though not actually stabilized, the exchange was kept fairly close to an average rate of 200 lei to the dollar for 2½ years from the beginning of 1923 up to the middle of 1925 when a new depreciation set in, owing no doubt to the fact that the balance of trade again turned negative in that year because of light crops. In 1926 the export situation improved, however, both for petroleum products and for cereals. A large export surplus developed and, as the expansion of the currency circulation was stopped by the early

DIAGRAM 15—YUGOSLAVIA

Movement of Exchange Rate, Circulation, Prices and Trade, 1920–1926

(Base for A-C: Dec. 1920 = 100)

A Exchange rate (price of dollar)
B Note circulation
C_1 Prices (cost of living)
C_2 Prices (wholesale)
E Exports as percentage of imports



summer, a rapid exchange appreciation ensued. The upward movement continued until the middle of 1927 when *de facto* stabilization was effected at about 160 lei, or slightly below the ultimate revaluation rate of 167 lei, to the dollar. The new gold lei was only introduced in 1929 in connection with a reorganization of the central bank and the flotation of an international loan.

Bulgaria

The main characteristics of Yugoslavia's and Roumania's stabilization experiences are also common to Bulgaria. Tobacco, which enjoyed an advantageous relative price position owing to persistent international demand, constituted the most important item of Bulgarian exports in the 'twenties. In 1924 it accounted for 37% and in 1929 for 45% of the total value of exports. Eggs were the second most

important single item, while cereals gradually declined in relative importance from 38% in 1922 to a mere 8% in 1929. The rapid exchange depreciation accompanying the heavy trade deficits of the years 1919–21 was arrested in 1922 concurrently with the realization of a positive balance of trade, thanks to favourable crops. A sudden and short-lived exchange appreciation, for which there were no apparent economic reasons, took place in the second quarter of 1923. It coincided with a similar though even sharper appreciation of the Greek exchange following the introduction in April of legal measures strengthening the central bank's hold over the foreign exchange market in Greece. These measures may have given rise to the anticipation of similar steps in Bulgaria. It has been authoritatively stated that exchange speculation was a principal cause of the appreciation of the lev which, for the brief period of its duration, called forth an extremely sharp fall in commodity exports. During the second half of the year both the dollar rate and exports rose again, the latter rising even more rapidly than they had previously fallen. In December

DIAGRAM 16—ROUMANIA

Movement of Exchange Rate Circulation, Prices and Trade, 1920–1925

(Base for A-C: 1922 = 100)

A Exchange rate (price of dollar)
B Note circulation C Prices (wholesale)
E Exports as percentage of imports

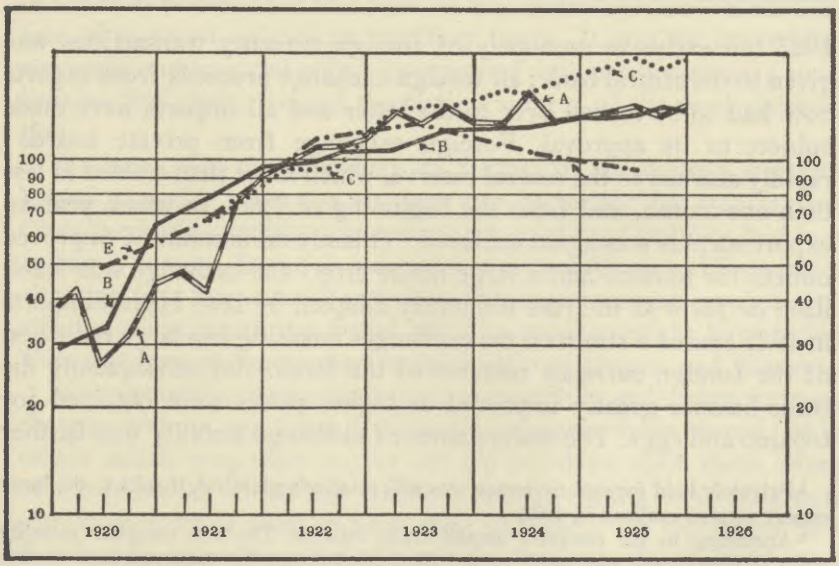
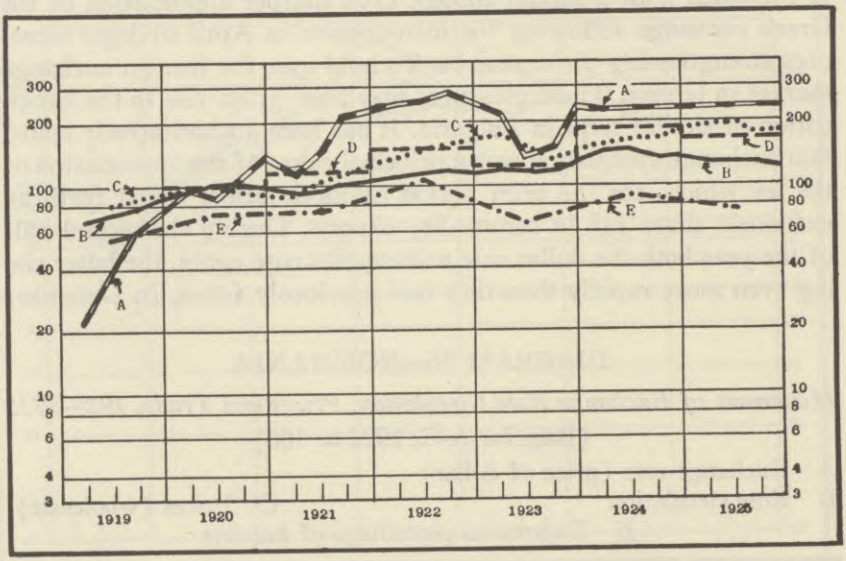


DIAGRAM 17—BULGARIA

Movement of Exchange Rate, Circulation, Prices, Production and Trade 1919–1925

(Base for A-D: 1920 = 100)

A Exchange rate (price of dollar)
B Note circulation
C Prices (cost of living)
D Industrial production
E Value of exports as percentage of imports



1923 the exclusive monopoly of foreign currency transactions was given to the central bank: all foreign exchange proceeds from exports now had to be turned over to the latter and all imports were made subject to its approval. Foreign exchange from private hoards [1] rapidly accrued to the central reserve, which more than trebled in less than one month, and from the beginning of 1924, in which year an export surplus was again achieved [2] (mainly on account of improved outlets for tobacco and a large maize crop) the exchange was stabilized *de facto* at the rate ultimately adopted by law. Heavy imports in 1925 caused a strain on the exchanges resulting in a large reduction of the foreign currency reserves of the Bank. But subsequently the trade balance greatly improved as higher prices were obtained for tobacco and eggs. The maintenance of exchange stability was further

[1] Privately held foreign exchange was still relatively plentiful, thanks to the large export surplus realized in 1922.

[2] According to the complete annual trade returns. The less complete monthly trade returns do not adequately record the trade balance for these years.

facilitated by the international loan which Bulgaria received in 1926 for refugee settlement purposes, and by the final stabilization loan of 1928. Without these loans, and the influx of foreign short-term capital following in their wake, Bulgaria would have been obliged, in order to preserve the stabilization rate, to adjust her imports more closely to her export capacity.

(d) Summary of Stabilization Experiences

One of the main conclusions emerging from the preceding review is that the rôle of foreign financial assistance in ensuring the technical success of exchange stabilization was a relatively minor one. Loans and credits from abroad were neither sufficient by themselves to bring about effective stability of a country's exchanges, nor were they always necessary to that end.

Lasting stability of the exchange rates was inevitably conditional on the balancing of the country's external accounts in a way that was harmonious with the basic structure of that country's economy, and this in turn was bound up first and foremost with the existence of stable domestic currency conditions. Thus, for example, so long as the German inflation continued, no amount of foreign assistance could have saved the mark from depreciating. When the inflation was ultimately checked and preliminary stabilization effected, it was natural enough that recourse should be had to a foreign loan to aid in the final reform; but this loan, or the credits obtained in anticipation of it, could only be an auxiliary factor. It was the appropriate economic and financial policy inaugurated with the preliminary stabilization that really secured the lasting success of the final stabilization.

We have seen that a variety of factors in the various countries helped to decide when the moment was opportune for stabilization. Once the basic conditions necessary for exchange stability had been fulfilled, foreign financial assistance was usually not indispensable, although in a few cases it may have had an important psychological effect without which the initial effort to stabilize might have failed. This was true of Austria and probably also of Danzig and Hungary.

Many countries, as we have seen, succeeded in stabilizing their exchanges without any form of financial assistance from abroad, while others raised temporary credits but did not draw upon them. Many of the countries which had recourse to such credits or to long-term stabilization loans seem to have done so largely for the reason that they had become almost a fashion in the 'twenties. No doubt foreign

loans were useful and beneficial in so far as they helped to meet the basic capital requirements of the receiving countries. But, as was observed earlier in this study, it is questionable whether currency stabilization loans were the best way of meeting those requirements. [1]

[1] See Part I above, Chapter 6, Section (c), and Chapter 7, Section (c).

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