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INTERNATIONAL ASPECTS OF WARTIME MONETARY EXPERIENCE

RICHARD A. LESTER

INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS AND SOCIAL INSTITUTIONS

PRINCETON UNIVERSITY

Princeton, New Jersey

The present essay is the third of a series under the auspices of the International Finance Section of the Department of Economics and Social Institutions in Princeton University. Dr. Lester's data and conclusions are, in part, based on unpublished information, including that acquired in discussions with servicemen recently returned from Africa, Italy, the Middle East and the Far East. Published sources of material are indicated in the bibliography appended to this essay.

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INTERNATIONAL ASPECTS OF WARTIME MONETARY EXPERIENCE

RICHARD A. LESTER

Duke University

I. INTRODUCTION

OUR understanding of money has, in large degree, been derived from wartime conditions. Adam Smith drew upon the experience of the American colonies in the French and Indian Wars to illustrate the principles of money. Ricardo and others developed the body of orthodox monetary theory mainly from England's experience during the Napoleonic Wars. Studies of the inflations after World War I made a further major contribution toward solving the mysteries of money.

This essay deals with certain phases of the world's monetary experience during World War II. The phases that have been selected for examination are those that are rather new or at least novel: (1) the widespread use of military currency, (2) gold sales in the open market to prevent inflation of an alien currency, and (3) exchange-rate policies for occupied areas.

Emphasis on the novel monetary features of this war should not cause us, however, to overlook the fact that much monetary experience this time follows the patterns set in previous wars. When prices rose in this country, during the Civil War, our silver coins left circulation in accordance with Gresham's law. The same thing happened to silver coins in North Africa as prices rose in this war. When the printing presses poured out German marks in 1921, 1922, and 1923, the real purchasing power not only of the monetary unit but of the total money supply declined sharply, mainly because the velocity of circulation of the money increased but also because its area of circulation was reduced as the mark was partly replaced by other currencies and by barter. Much the same thing has happened during the inflation in Free China, and for the same reasons. Between December 1939 and May 1943 the volume of Chinese national currency outstanding increased fifteen fold but prices rose thirty fold and the real value of the total note circulation fell by almost 70 per cent. These are but samples of the numerous cases that could be cited to show how past experience is being repeated.

The data used in this essay have been collected from various pub-

lished and unpublished sources.[1] In certain instances, the available material is so fragmentary that tentative conclusions only can be drawn at this time. This study is, therefore, in the nature of a preliminary report. When more complete data become available, more definitive studies can be made, but enough is now at hand to make worth while an interim statement.

II. SOME ASPECTS OF MILITARY CURRENCY

a. *Use and value.* Widespread use of military currencies, by both the Axis countries and the Allies, is a distinctive feature of this war. It raises many interesting theoretical and practical issues.

In connection with *offensive* actions, military currency is issued by one country (the occupying power) for enforced circulation in another country (the occupied area), and its official exchange value in terms of existing currencies is determined by the occupying power.

As a *defensive* measure, in areas threatened by enemy occupation, currency may be marked, thus permitting it to be isolated and repudiated in case it should fall into the hands of the enemy. Shortly after Pearl Harbor, for example, the regular American currency in the Hawaiian Islands was called in and was replaced by a new brown-seal dollar with the word "Hawaii" printed on it. This was done to distinguish the currency and to define its area of circulation. Although originally issued for defensive purposes, this currency has since been used as occupation money in Japanese Islands in the Pacific taken over by our troops.

Military currency is pure "fiat money." It is generally issued with no coverage, no reserves, no "backing"; it may not even represent a promise to pay.[2] Often it is printed in the monetary units of the area to be occupied. The issuing power may not accept any responsibility whatsoever for the military currency that it puts out. Usually the occupying power attempts to force upon the occupied country the responsibility for the continued acceptance and exchange of the military currency issued during occupation, in this way saddling the occupied country with at least that part of the costs of occupation represented by expenditures of military currency.[3]

If military currency is absolutely unsecured and the issuer refuses to accept responsibility for it, why does it have any value? Does it get

[1] See statement on the inside front cover.

[2] This, for example, was true of the Allied military lira.

[3] Our yellow-seal "spearhead" currency, used in North Africa and Italy, created corresponding dollar credits in favor of the countries where it was spent. Either it was redeemed in dollar credits in New York or it was hoarded (many millions of dollars of it were outstanding in North Africa months after the invasion), which also meant an increase in the outstanding foreign claims to American goods.

its value from the fact that the occupying power declares it to be legal tender and the occupying power has become the government in the occupied area? Or from the fact that the occupying power establishes a certain rate of exchange with pre-existing currency in the occupied area and forces the banks to maintain that rate of exchange? Or is its value dependent upon some hope of future redemption of the military currency in gold or in foreign exchange on gold-standard countries? Also, what factors cause the value of the military currency to vary after it is first issued?

An analysis of Japan's use of military currency should help to answer these questions. The Japanese have, perhaps, been the most successful of all nations in the issuance of military currency—successful in the sense of gaining the most per unit of effort spent upon the currency issued.

In 1938 Japan began to issue military yen in the Japanese occupied areas of China. The issue was without any coverage of bullion or foreign exchange and without the guarantee of any responsible financial institution. In the same year a central bank was established in North China (the Federal Reserve Bank of China). This bank was financed by the Japanese and began to issue "puppet" currency in dollar denominations (FRB$). Somewhat the same procedure was followed when a new central bank (the Central Reserve Bank of Nanking) was established and, in January 1941, began to issue "puppet" currency (CRB$) for the Japanese-occupied areas in central and southern China.

In each case the military yen or puppet dollars were issued initially at a par of 1-for-1 with the Chinese national dollar; in each case the military currency (yen or $) exchanged in unofficial markets at a discount, amounting to as much as 40 per cent within a year or two. The chief reason for such discount seems to have been the rapid increase in military currency, accompanied by withdrawal of some Chinese national dollars from circulation.[4] For example, it is estimated that, by July 1943, the Japanese had acquired about CN $3 billion in exchange for CRB dollars.

To promote the circulation of their military currency, the Japanese and puppet governments took steps to restrict the circulation of Chinese national currency and to increase the use of military currency. By a series of decrees the military and puppet currencies were not only de-

[4] At the end of December 1938, there were 15 million military yen and 162 million Federal Reserve dollars outstanding. By December 1939, the figures were 68 and 458 million respectively. In March 1943, there were 1.7 billion FRB$, 4 to 5 billion CRB$, and about 200 million military yen in circulation. (Military yen outstanding reached a previous estimated peak of 500 million.)

clared legal tender, but taxes, train fares, public utility bills, imports, and exports had to be paid in one or the other of them, and all government and bank accounts had to be kept in these currencies.

The Japanese went further in an attempt to depreciate and displace the Chinese national currency. By steps, official exchange rates were changed to increase the exchange value of the military currencies to 1CRB$ = 2CN$, 1 military yen = 4CN$, and 1FRB$ = 11.2CN$. Such progressive exchange depreciation was accompanied by decrees withdrawing the legal tender privilege from the Chinese national dollar in occupied areas and fixing limited periods for exchanging that currency, at depreciated rates, for the "puppet" or military currencies. Thereafter, all circulation of Chinese national currency was prohibited in certain specified areas and any person bearing or using such outlawed currency in those areas was subject to punishment, often death.

If the progressive depreciation of the CN$ in terms of the military currencies had represented differences in internal purchasing power, it might have been justified. However, scattered price statistics indicate that the purchasing power of the CRB$ was declining about as fast as that of the CN$.[5] By highly overvaluing their military currencies in terms of the CN$, the Japanese and their puppet banks obtained billions of CN$ at a very cheap rate.

The Chinese national dollars thus acquired in exchange for military currency (or through purchase of goods with military currency and sale of the goods for CN$) have enabled the Japanese to outbid the Chinese in Free China for certain products such as tungsten, tung-oil, cotton, and wool, which have been smuggled into Occupied China. It is estimated that as much as half of the tungsten production of Free China has, at times, been moving into Occupied China. Through overvaluation of their military currencies, the Japanese have encouraged smuggled imports, discouraged exports to Free China, and improved the terms of trade of Occupied China.[6]

[5] In Shanghai, gold was selling for CRB $5,600 an ounce in April 1943, compared with CN $6.000 an ounce in Chungking in May 1943. In April 1943, the average cost of a picul of rice or flour in Shanghai or Hankow in CRB$ was reported about the same as the average cost in CN$ in nearby cities like Anking, Hangchow, Hukow, Nanchang, Yoyang, and Yiyang. (The fact that Chinese national dollars were circulating in some occupied areas indicates that the Japanese decrees outlawing Chinese national currency were not fully effective.) In Tientsin the cost of rice and flour in FRB$ was as high as in the above mentioned cities, although in the smaller cities the cost in FRB$ seems to have been about half the cost in CRB$ in Shanghai and Hankow. By September 1942, the cost of living in Shanghai was reported to have been about 23 times the 1936 figure.

[6] Smuggling has given Free China an export balance with Occupied China, that

Until our Foreign Funds Control was extended to Japan and China, in June 1941, the Japanese were using their military currencies to acquire several hundred millions of American dollars, and British pounds sterling, with which they purchased scrap steel, oil, machine tools, and other sinews of war. This they did either by obtaining Chinese national dollars in exchange for military currency or by using their military currency to obtain Chinese goods for export. When they operated through Chinese national dollars, those dollars were used to buy foreign exchange from the banks in Shanghai, the foreign exchange being supplied in the main from the American and British stabilization loans granted to help peg the Chinese dollar to the American dollar and the British pound. In short, the Japanese were obtaining from us vital war goods (paid for, in part, with our stabilization loans to China) and those goods cost them only the effort spent in printing and using their military currency.

Recent experience in Occupied China indicates that military currency gets its value (1) from the extent of its use (demand) relative to its supply, and (2) from the value of pre-existing currency, in the occupied area, insofar as the military currency is made interchangeable with pre-existing currency at fixed rates.[7] If free and unlimited two-way convertibility is maintained between the military and the pre-existing or regular currency, the value of both would be completely tied together at the established rate of interchange. It is possible, however, for the military currency to be at a discount, or a premium, with respect to its official exchange rate for regular currency, when there are restrictions upon the interchangeability of the currencies and their demand-supply situation differs, either because of differing restrictions on their use or differing policies regarding their issuance. Either the military or the regular currency may, of course, lose all of its purchasing power or value in a particular area if it is effectively denied the possibility of circulating there.

b. *Withdrawal of currency.* The occupying power need issue no more military currency after it has made arrangements to obtain amounts of the regular currency sufficient to supply its needs for means of payment

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balance apparently being met for the most part by shipments of CN$ acquired through the issuance of military currency.

The Japanese are reported to have captured some official plates for the printing of CN$ but have apparently not used them much, preferring to acquire CN$ in the manner explained above.

[7] Of course, the issuance of the military currency and the rate of exchange established may affect the value of the pre-existing currency and, thus, of the military currency.

in the occupied country. Such arrangements may include levies, borrowing, or use of the currency plates for printing the regular currency. Generally, the central bank of the occupied country assumes the burden of redeeming the military currency in regular currency and of supplying the needs of the occupying power for regular currency. Central bankers usually prefer to issue their own currency rather than to have an occupying power threaten their monopoly by issuing military currency.

The problem becomes more complicated when (1) the enemy has the plates for printing the regular currency of an occupied area, or (2) the enemy has flooded the occupied area with currency prior to withdrawal. Both phenomena have occurred in a number of instances during this war, and a combination of the two promises to provide many problems for the Allies as they take over German-occupied Europe.

In French Equatorial Africa and the Cameroons, in former Italian Africa (Eritrea, Italian Somaliland, Abyssinia, and Tripolitania), and in French Somaliland, the existing currency was withdrawn, and was replaced by new currencies, on their occupation by the Allies.[8]

When French Equatorial Africa and the Cameroons came under the control of the Free French National Committee, in 1940, they were shut off from their normal supply of currency which had been printed and issued by the Banque de l'Afrique Occidentale (with head offices in Dakar and Paris) through five branches in the areas in question. To escape control of their money supply by Vichy, and to avoid the possibility that the enemy might finance purchases and activities in Free French territory simply by printing more notes, the Free French replaced the existing note circulation with a new currency of their own. The retired French West African francs were held in the Caisse Centrale pour la France Libre as "backing" for the new currency issue.

The value of the new Free French franc did not, of course, vary with changes in the value of its "backing" (the French West African franc); the two francs were absolutely separate and independent. As that "backing" could not be increased, the volume of Free French notes in circulation soon far exceeded it. Nevertheless, for more than a year after Allied occupation of French West Africa, the Free French franc in Equatorial Africa and the Cameroons had an exchange value, and apparently an internal purchasing power, well above that of the West African franc.[9]

[8] Except for small denominations. Maria Theresa thalers also seeped into Italy's former East African colonies, and helped, along with East African shillings, to replace the previous lira circulation.

[9] During 1942 and the first half of 1943, the currency in circulation in French West Africa more than doubled, increasing much faster than the note circulation in Equatorial

When French Somaliland came under control of the Free French, in December 1942, the legal tender currency was the Jibuti franc issued by the Jibuti branch of the Banque de l'Indo-Chine. The next month, the Free French required that this currency be turned in and replaced by a new currency. The conversion, however, was accompanied by the levy of a heavy progressive tax on the amount of currency registered per person.[10] Apparently the purpose of the tax was to reduce the note circulation in order to combat price inflation.

A similar program was designed for Tunisia and Corsica, but for a different purpose. In these instances, the Germans had flooded the area with Bank of France notes prior to Allied occupation. By paying excessive prices, by giving the notes to certain groups, and by making heavy levies upon some elements of the population, the Germans had greatly changed the distribution of property in the area, so that it became more favorable to their friends.

In Tunisia, for example, the note circulation more than doubled during six months of German occupation, most of the increase being accounted for by the French franc notes brought in by the Germans.[11] Many of these notes were distributed among the Arab and Italian followers of the Nazis either in the form of outright gifts or of extremely high prices for goods.[12] The holders could convert these notes into large real profits with subsequent purchases at lower prices. On the other hand, very heavy levies were imposed on the Jews, many of whom were forced into debt to meet the levies.

In order to withdraw all Bank of France notes above 20 francs, and to try to eliminate windfall profits from German occupation for certain collaborating groups, the French authorities in North Africa after the German surrender decreed that all Bank of France notes above 20 francs be turned in. At the same time all bank accounts in Tunisia were blocked, with certain withdrawals permitted for current expenses. A

Africa and the Cameroons. The rapid increase in the volume of West African notes, especially in 1942, resulted from the Vichy policy of buying up goods for export, without corresponding imports. The excess exports resulted in credits with the Bank of France against which additional currency was issued to pay exporters in French West Africa.

[10] The tax was as follows: the first 5,000 Jibuti francs per person were exchanged for 5,000 new francs; on sums from 5,000 to 100,000 francs per person 20 per cent less of new francs were given in return; and all sums over 100,000 Jibuti francs per person were reduced by 50 per cent in new francs.

[11] It was a normal pre-war practice for French franc notes to circulate in Tunisia, as legal tender, along with Tunisian franc notes issued especially for Tunisia by the Banque de l'Algerie.

[12] The Germans paid exorbitant prices while enforcing strict conformance with price control upon the inhabitants.

program was worked out to place a progressive tax on the increase in bank balances and on currency holdings of persons in Tunisia during the period of German occupation.

c. *Gresham's law.* One might suppose that "cheap" military currency would, according to Gresham's law, drive the regular currency out of circulation. In some instances it has helped to drive coins out of circulation, but paper currency has a very low value as a commodity. Only in the last stages of hyper-inflation would it be possible for one paper currency to drive out of circulation some other paper currency which had become worth more as a commodity than as money.

"Cheap" military currency may itself fail to circulate. For example, the Japanese in invading Burma put out a military rupee currency, which was printed on a very poor grade of paper, with poor ink, allegedly on presses brought in with the troops. Many Burmese simply refused to accept and use this "cheap" Japanese military currency, thus preventing its widespread circulation. Gresham's law cannot operate where the people discriminate against the "cheap" money.

A very interesting and instructive case of Gresham's law in reverse is provided by the dual currency in the "Free City" of Tangier. A dual standard, along with a free foreign-exchange market, was continued after occupation of Tangier by Spanish troops in June 1940, following the fall of France. Both regular Spanish peseta notes and French Moroccan franc notes had long been legal tender in Tangier, and the Spanish authorities made no change in the situation after their annexation of the territory. Gresham's law had not operated in Tangier because there was no legal rate at which the two currencies were freely interchangeable and because the merchants generally had followed the practice of quoting their prices in the appreciating currency. By insisting upon payment in pesetas, when the franc was depreciating prior to its *de facto* stabilization in 1926, the merchants caused the franc to disappear from circulation. In the early 1930's, however, the franc began to come back into circulation as the safer currency, and it completely displaced the peseta with the outbreak of civil war in Spain in 1936.

After the French Armistice of June 1940, the franc again began to depreciate,[13] reaching 2.55 francs to a peseta in June 1941, 5 francs in June 1942, 8 francs in August 1942, and 11 francs to a peseta in No-

[13] At first, to the surprise of many, the franc did not depreciate much because of the net balance of the smuggling trade between French and Spanish Morocco. Supplies in Spanish Morocco had been depleted during the Spanish war whereas French Morocco had sizeable stocks of all sorts of supplies on hand in June 1940. Smuggling from French to Spanish Morocco meant that there was a large peseta demand for francs in Tangier to make payment for the contraband imports from French Morocco.

vember 1942, just before the Allied invasion of North Africa. This depreciation was caused not only by the demand of merchants in Tangier that they be paid in appreciating peseta notes but also by the smuggling of Moroccan franc notes into Tangier either in payment for the net balance of goods smuggled into French Morocco from Spanish Morocco or to be translated into other currencies (capital export and flight from the currency in French Morocco).

Our invasion of North Africa once more reversed the monetary situation in Tangier. With the Moroccan franc tied to the American dollar and the British pound sterling, the merchants of Tangier considered the franc to be safer than the peseta and began to quote all their prices in francs. At the same time the supply of Moroccan francs in Tangier began to decline (1) as persons in French Morocco tried to repatriate their funds, through conversion into francs in Tangier, and to smuggle the francs back into Morocco, and (2) as the net balance of the contraband trade in merchandise between Spanish and French Morocco tended to be reversed with the increase of supplies in French Morocco. The net result of increased demand for, and decreased supply of, Moroccan francs in Tangier was the rise of that currency in the free Tangier exchange market from 11 francs to a peseta early in November 1942, to 6.50 francs late in November, to 5.75 francs in December, and to 4.7 francs to a peseta in June 1943.

In this instance the occupying power (Spain) became much alarmed to find its own currency displaced and suffering relative depreciation. A decree was issued forbidding merchants to shift their price quotations from pesetas to francs, but the decree was not fully effective.[14]

d. *Conclusions on military currency.* From this discussion of military currency, the following conclusions can be drawn:

1. "Ideal" military currency is pure "fiat" money. Its value comes from demand and supply, and may be supported by forced interchange with pre-existing currencies. Experience during the war has repeatedly indicated that the kind of "backing," or the lack of "backing," may have no effect on the value of a new currency.

2. Military currency can be used to acquire goods and services in the country where it circulates, can serve as a means of saddling part of the costs of military occupation on the occupied country, and, under certain circumstances, can even be used to pay for goods acquired from neutral or enemy areas.

[14] Shortly after occupation the Spanish had attempted to increase the demand for pesetas by requiring that customs duties, and electricity and telephone bills, be paid in Spanish money.

3. Military currency can also be used to influence the distribution of property and money claims in any area. Such influence can continue long after the occupying power has been expelled, though certain remedial measures are possible.

4. Because paper currency has a low commodity value, Gresham's law has not operated to drive either the regular or the military currency out of circulation. In Tangier, discrimination between the two currencies resulted in the "dearer" (appreciating) currency driving the "cheaper" currency out of circulation. Usually this does not happen because the occupying power fixes an exchange rate and is able to force acceptance of military currency in the price structure of the country at that rate.

III. GOLD SALES TO CHECK INFLATION

Since the outbreak of war, price levels in warring and neutral countries have risen in varying degrees. Compared with our own price level, for example, the price levels in India and the Near East have risen 2½ to 6 times, and in China about 150 times. In those countries the price of gold has gone up, in terms of local money, along with the prices of other commodities; yet the exchange rate between the local currency and the dollar has been pegged. As a consequence, an ounce of gold is worth more than the official price of 35 American dollars in the Near East, India, and China, and also in South America, where price levels have likewise risen more rapidly than in this country.[15]

Converting the local currency price of gold into American dollars at the official exchange rates gave the following dollar figures for an ounce of gold in April 1943: $280 in Free China, $81 in Iran, and $76 in India. A year later the converted price had reached $500 in Free China; had fallen to about $70 in Iran and Egypt and to $60 in India; was between $43 and $45 in Argentina and Chile; and varied from $38 to $39 in Mexico. In short, the premium that gold enjoyed over dollar drafts ranged from about 10 per cent in Mexico to around 1330 per cent in China.[16]

Gold coins have generally enjoyed higher prices than large gold bars, primarily because they can more readily be purchased and held by the general public. In Buenos Aires, for example, gold sovereigns seem to

[15] A wide discrepancy between our official dollar-gold ratio and the buying-power ratio of dollars and gold abroad can continue to exist only because the Treasury of the United States, for various reasons, will not freely redeem dollars in gold at the official price and permit the gold to be exported.

[16] Because of the restrictions on the importation of dollar bills and other measures taken by this country to depreciate dollar currency, especially in Europe, such currency has been at a discount of around 25 per cent compared with dollar drafts in "free markets" such as Tangier, Lisbon, and in Switzerland.

have enjoyed a premium of 15 to 20 per cent over gold bars during 1943.[17] The American and Canadian $5 gold pieces, furnished our aviators in their "escape" kits, have been known to sell for 2,500 to 3,200 francs in North Africa, or from $50 to $64 (at the official rate of 50 francs to the dollar).

In a very rough way, the rise in gold prices in terms of any local currency has represented the depreciation in the internal purchasing power of that currency during the war.[18] In countries like India and Iran, especially in 1943, the general price level and the price of gold have tended to rise and fall in fairly close correspondence. To a considerable degree, therefore, the premium on gold over American dollars in those countries indicates the percentage by which the official exchange rates overvalue the currencies in terms of the dollar. The premium could, of course, be measured in terms of other commodities instead of gold. For example, the premium (or profit) on pen-and-pencil sets sent to Free China from this country by mail was about 900 per cent in the Spring of 1943, which was slightly above the premium then prevailing for gold in terms of American dollars at the official exchange rate.

Beginning in 1943, the price of gold in certain Near and Far East countries has been affected by the policy of Allied sales or auctions of gold in the open market. Such sales have served both as an anti-inflationary measure and as a means by which the Allies can acquire native currency at a much better figure than at the official exchange rate.

Open sales of gold, by Britain and the United States, began in Iran in June 1943, and in India in August 1943. Such sales, for Egypt's own account, were inaugurated in Egypt in November 1943. In September 1943, China arranged to draw $200,000,000 of gold from this country for sale in China. Early in 1944 Chile was successful in making arrangements for the return of the gold in the ores that Chile exports to this country. Such gold was to be sold at a weekly auction in Chile, partly as a means of checking price inflation there. Sales of gold in India reached the substantial sum of $2,500,000 a day early in 1944.

The advantages of a program of raising part of the funds for Allied expenditures in the Near and Far East by means of gold sales in those countries are that:

[17] In Iran, in June 1943, gold sovereigns in bazaars reached a peak price of 830 rials compared with the official exchange rate of 128 rials for a sovereign. Shortly thereafter it was reported that gold coins would permit purchases of iron bars in Iran at one fourth the price in the equivalent number of dollars converted at the official rate of 32 rials to the dollar.

[18] The measure is, of course, imperfect. In India commodity prices have tended to rise faster than the price of gold; in Free China the price of gold has generally risen more rapidly than the wholesale price level.

1. It reduces the need for a currency issue to supply us with the local money we spend in those countries, thus keeping down the money supply and prices.

2. It supplies the local hoarding demand with precious metals, thus releasing hoarded commodities for sale. As a consequence, it tends to relieve commodity scarcities and to reduce commodity prices.

3. It improves our terms of trade with those countries, saving on the dollar volume of our expenditures there. Consequently, it keeps down the dollar volume of credit balances that those countries build up both in Great Britain and the United States during the war, as well as our interest payments on such balances.

4. It permits us to unload part of our huge gold hoard upon hoarders in those countries, thus relieving us of part of our unproductive gold burden by swapping it for supplies and services for our troops. Such wartime redistribution of gold should mean a better post-war distribution of the metal.

The use of our sterile gold hoard as payment for supplies and services in the Near and Far East has present advantages over the use even of military currency. It costs us absolutely nothing in current resources since it comes from our tremendous gold stock. It takes up much less shipping space than would its equivalent in military currency. It tends to reduce local prices for us (unless used as a basis for local currency issue), whereas the use of military currency, by increasing the local money supply, tends to raise prices and enhance the dollar costs of the things we buy.

The Allies are in large measure responsible for the inflation in the Near East and India. Allied military expenditures in Syria, Palestine, Iraq, Egypt, Iran, and India have been from two to eight times the national budget of those countries. The British have an arrangement whereby, for payment of pounds sterling in London,[19] those countries will supply Great Britain with their own currencies at the official exchange rate. Consequently, Britain's military and economic policies exert tremendous influence upon their currency issues. To the extent that British armies live off any country, that country's sterling balances in London increase —and so does its money supply. Balances and gold holdings, in London and New York, are used as "backing" for the country's currency issue.

In view of such arrangements it is easy to understand why Egypt has experienced a 150 per cent rise in prices despite the fact that her national budget has shown a surplus. The same factors largely explain why prices in Iran have risen six to ten fold despite the fact that Iran's

[19] 40 per cent in gold, and 60 per cent in sterling, in the case of Iran.

currency is backed 100 per cent by gold or exchange balances with a guaranteed gold value. Iran, with such a highly secured or "backed" currency and with double her pre-war gold supply, has experienced one of the more extreme price inflations of World War II prior to 1944.

Sales of gold are particularly appropriate as an anti-inflationary measure in the Middle East and the Far East. People there are accustomed to holding their savings in the form of precious metals, so that large amounts of the metal will be absorbed without much change in prices. Orientals will not save large sums through bond purchases or paper currency hoarding. If precious metals are not available, they tend rather to save by hoarding commodities, thus driving up commodity prices.

In China, where prices have been rising at the rate of around 10 per cent a month for the last three years, commodity hoarding is very profitable in terms of local currency.[20] Early in 1942, the United States made a dollar stabilization loan of half a billion dollars to China in order to help support her currency and to combat price inflation. Great Britain also made a loan of 50 million pounds sterling for the same purpose. Such loans could help to curtail price inflation in China only if the Chinese Government should use them to reduce its expenditures of Chinese money or to acquire some of the outstanding Chinese currency. The latter could be accomplished either by selling the Chinese people dollar and pound balances, or securities payable in such foreign currencies, or by importing goods or gold for sale in China. Sales of securities payable in American dollars were tried in 1942, and in the first part of 1943, but proved relatively ineffective.[21] Consequently, the Chinese Government literally imported hundreds of tons of its own currency, printed in this country and sent into China by air under high priority. For the two-year period 1941 and 1942, the volume of Chinese national currency outstanding increased by approximately the amount of the budget deficit, which was about four-fifths of the Government's expenditures.

The advantages of importing gold, rather than tons of currency, into China are fairly obvious. It was contended, however, that some gold sent to China might find its way into the hands of the Japanese. Why the Japanese would be foolish enough to give up needed goods and services to acquire gold, to hoard, was not explained, nor was it easily explainable in view of the fact that the Japanese had severely curtailed

[20] Not, of course, in real terms, unless the real value of the hoarded commodity rises.

[21] Such sales ceased, August 3, 1943, because American troops were buying the securities at more than 100 per cent profit, converting their pay in American dollars into Chinese money in the black market and buying the securities at the official exchange rate. Sales, until August 1943, apparently were well under $100,000,000 in American currency.

their own gold production in order to release resources for more important activities.

How effective have gold sales been as an anti-inflation measure? Before such sales began, Allied expenditures, say in Iran and India, generally meant a corresponding increase in the money supply of those countries, which supplied rials and rupees in exchange for sterling and dollar credits abroad. Gold sales in the open market provide the Allies with a means of acquiring those currencies without increasing the money supply of Iran and India. Since it has not been possible to pay for all their expenditures in Iran and India by means of the proceeds of gold sales, the Allies, by their operations, have continued to increase the money supply in those countries though at a rate reduced by the volume of the sales of gold.

The statistics show that the level of wholesale prices in India, after continually rising, declined by 14 per cent from September to December 1943. In Iran, the level of wholesale prices was no higher in December than in April 1943, whereas in neighboring Iraq such prices rose about 15 per cent during the same period. The introduction of fairly effective price control and other economic factors help to explain these price results. (The price indexes do not, of course, include black market prices.) Nevertheless, gold sales seem to have exercised a significant depressing influence upon commodity prices in both the countries where the sales first began.

The most controversial issue in connection with gold sales in the Middle and Far East has been as to who shall get the profit or premium on such sales. The Persians and Indians have argued that they should have it, not only because the gold sales are within their boundaries but because they have been building up large balances of gold, sterling, and dollars, abroad, which they contend that they should be permitted to withdraw. The South Africans have argued that they should have the profit to the extent that the gold sold comes from South African mines. The British, and we ourselves, have insisted that actually there is no profit, that we suffer a real loss when we buy things in those countries at inflated prices and pay for them in dollar or sterling balances at the official exchange rate, and that gold sales merely permit us to avoid such real losses by getting the true purchasing power equivalent of the dollar or the pound sterling in rials or rupees. Under an agreement, in April of this year, the South Africans have, however, been permitted to share in the gold sales in India to the extent justified by South Africa's expenditures in that country.

The policy of insisting that the Allies make the gold sales, since they are making purchases at inflated prices in the countries concerned, has

not, in fact, been consistently applied. The greatest inflation has occurred in China where, even at the special 1944 Army rate of 40 Chinese dollars to one American dollar, we are paying in American dollars from 50 to 100 times what the same item would cost in this country. Yet we have permitted China to import and sell gold there and to make the profit. That also is true in Chile, where we are buying things at relatively high prices. The Chileans make the profit from the gold we take out of imported Chilean ores and send back to Chile. The Egyptians have been allowed to use their London balances to import and sell gold there, thus getting the "profit" themselves. Perhaps political or other special circumstances explain these cases which seem to run counter to general Allied policy.

The premium of gold over dollars exists only because of the restrictions upon converting dollars into gold and upon exporting gold. Under free conditions, gold could not exceed in price an equivalent amount of dollars by more than the cost of converting dollars into gold and shipping the gold. Only under the present peculiar conditions can the currencies of the Middle and Far East continue to become increasingly overvalued, as has generally been the case during the past three years.

When gold moves freely again,[22] the premium of gold over dollars will disappear either through a depreciation in the exchange value of the currencies of the countries of the Middle and Far East, or through internal price deflation there,[23] or through a combination of the two. Subsequent alterations in the exchange value of the currencies will not, however, wipe out the gains in the terms of trade during the war.[24]

The time to take advantage of the premium on gold and to mobilize some of our idle gold hoard is right now, during the war, when it can be used at large real savings to ourselves and to the benefit of our Allies and friends in the Middle and Far East.

Summing up, it may be said that gold sales have helped to combat price inflation, by neutralizing, to some extent, the inflationary effects of Allied expenditures in areas like the Near East and India. The importation and sale of any other commodity would have had the same effect, the advantages of gold being its high value-bulk ratio, so that little shipping space is required, and the fact that we have a large idle hoard of gold so that it can be supplied without any current demand on our productive resources. The effect is the same whether we ourselves sell the gold abroad or permit the recipient country to use its New York

[22] This assumes that exchange control is eliminated.

[23] Including a decline in the price of gold.

[24] Those gains would, however, be reduced to the extent that the dollar depreciates in real value.

or London funds to obtain gold for import and sale in the local market. The only difference is as to which country gets the profit from the premium on gold. Allied policy on that matter seems to have been somewhat inconsistent.

IV. WARTIME EXCHANGE-RATE POLICIES

The exchange-rate policies of the Axis and the Allies during this war, especially as they have been applied to occupied areas, raise some interesting problems. I have elsewhere discussed Allied exchange-rate policy for liberated areas, indicating the effects of our policy, particularly in North Africa.[25] There is no need to repeat the discussion here. Certain phases of the subject, however, need further examination.

In the first section of this essay we observed how the Japanese, at least in China, have varied exchange rates so as to maintain overvaluation of the military yen and the puppet currencies. In the second section, we saw the difficulties into which fixed exchange rates have gotten us, in the Near and Far East, with internal price inflation. Not only are Allied operations in those areas costing us an inordinate amount in pounds and dollars (to the extent that they are not paid for by gold sales), but overvaluation of Near and Far Eastern currencies has opened up possibilities of large dollar profits for speculators (including our own servicemen and seamen), through exchange operations in black markets, through smuggling of goods and gold, and through other evasions of exchange controls. It seems undesirable for our servicemen and seamen to be devoting their attention and energies to such speculative operations, to be making thousands of dollars of undeserved profits from them, and there is little to be said for the speculation in general.

When, upon occupation of European countries, the Germans fixed exchange rates that overvalued the mark, writers here and in England were quick to point out how the Germans would gain in barter terms of trade, in the acquisition of large import balances, and so forth. What those writers overlooked was that although the Germans might control the exchange rate, they did not control the internal purchasing power of the currencies of the occupied countries. Soon internal price inflation in the occupied countries had reversed the situation, leaving most of the currencies overvalued in terms of the mark.

The Germans took steps to avoid the consequences of price inflation in occupied countries. The thirteenth annual report of the Bank of

[25] "Exchange-Rate Policy for Liberated Areas," *Free World*, February 1944, pp. 161-165.

International Settlements, covering the period from April 1, 1942 to March 31, 1943, speaks of these measures as follows: "If a European price stop for all prices has proved impossible, at least a price stop for goods entering into foreign trade has been attempted. Most new clearing and commercial agreements have clauses fixing the prices of the more important commodities exchanged; and, in addition, measures have been taken for price equalization by special funds."[26]

That such measures were not fully effective is indicated by the fact that the German press has continued to be full of complaints about the rise in prices in German-controlled countries and that Herr Walther Funk, president of the Reichsbank and Reich Minister of National Economy, declared in a speech on March 10 of this year that Germany's clearing indebtedness would be paid off after the war by the delivery of marketable manufactures "at rates of exchange corresponding to the purchasing power parities prevailing at the time when the balances were accumulated."[27]

The Germans also discovered that there are disadvantages in having their soldiers, encouraged by overvaluation of the mark, spending large sums in the open market in occupied countries. Such spending tended to stimulate price inflation there, to cause resentment against the Germans, and to interfere with the systematic "milking" of the occupied countries. To restrain such soldier spending, they began to pay their troops in the Balkans partly in "canteen money," spendable only at Army canteens (stores) or worth much more there than in the open market.

In areas they have occupied, the Allies have been plagued by problems similar to those that beset the Germans. In each case, rising price levels have followed our occupation. Allied exchange-rate policies, soldier spending, and our military outlays in occupied countries have been largely responsible for the ensuing rise in prices. For example, marked price inflation occurred in Italy, and in Italian North Africa, after Allied occupation, partly because the Allies overvalued their currencies by depreciating the lira to 1/5 and 1/6, respectively, of its 1940 rate in terms of the dollar and the pound. The fixing of such an exchange rate affected the attitude, of both the inhabitants and the occupying soldiers, toward the lira. The soldiers got large sums of lire for their dollars or pounds and spent the lire freely; the inhabitants tended to hoard goods and to get rid of their money.

The American servicemen and seamen are paid far more for their

[26] Bank of International Settlements, *Thirteenth Annual Report*, Autumn, 1943, p. 169 and also p. 86.

[27] See *The Financial News*, London, March 16, 1944, p. 2.

services than are their counterparts in other countries[28] and, according to European or Asiatic standards, Americans are reckless spenders. For example, in cities such as Casablanca and Palermo, the price paid for haircuts rose 5 to 10 times, as American troops gradually brought it up to the approximate equivalent of 50 cents through tips, waving away the change, and similar actions. It is no wonder that inhabitants of occupied countries, especially those on fixed incomes, have frequently resented the personal expenditures of our military personnel.[29]

Like the Germans, we have learned that the fixing of an exchange rate for an occupied country resembles blindman's buff so long as we do not control the price level (the internal purchasing power of the currency) of the occupied country.[30]

It should be emphasized that, through control of all shipping, the Allies now control all imports and exports of the countries they occupy. They also control the international movement of funds and gold. Only such control by the Allies explains the existence of varied premiums on gold and differences in official exchange rates between the same currencies, such as a rate of 480 lire to the pound sterling in North Africa and 400 lire in Italy.

Since the Allies control the international trade and international payments of occupied countries, the exchange rate set for occupied countries really has only two important effects: (1) on the occupied country's price level (through its effect on import and export prices, soldiers' expenditures, and local attitudes toward the currency) and (2) on the barter terms of trade between the Allies and the occupied country (what the occupying troops get for their expenditures, how much in dollars our military operations in the occupied countries cost, how rapidly the occupied country builds up credit balances in New York and London, and the like). The second effect has a direct bearing upon the first. Indeed, the internal price level is more important than the exchange rate in determining the terms of trade and the rate at which the occupied country accumulates credit balances. With our penchant for fixed ex-

[28] In North Africa the average enlisted man probably drew in cash and in local payment about $35 a month, and the average officer about $80 a month, and the greater part of that pay was spent locally.

[29] The problem was much less acute in the case of the British troops, because their pay was much lower and that lower pay was partly "blocked" through a system of compulsory allotments of pay.

[30] The rate fixed may, of course, have considerable influence upon the internal price level both through its psychological effect and the amount of local money occupying soldiers receive for their pay. In no occupied area has price control been in the hands of the Allies. Our control of the exchange rates of the currencies of occupied areas, moreover, will end with the war, if not sooner, except perhaps in the case of Germany and Japan.

change rates, our action to affect terms of trade is the single, discontinuous, action of initial fixation of the exchange rate at the inception of the occupation. Through influence over internal prices, the occupied country may thereafter largely determine the changes in the terms of trade between the Allies and the occupied country.

Under such circumstances, the Allies have every interest in checking price rises in occupied areas. It therefore would seem to be the part of wisdom for the Allies to support the value of the currency of occupied countries through Allied exchange-rate policy. Any check that exchange-rate policy gives to price inflation in the occupied country not only tends to keep down the prices of the goods and services that the Allies purchase there but reduces the confusion, the commodity hoarding, and the economic wastes that tend to accompany price inflation.

If, to support the currency of the occupied country, a rate must be picked that temporarily overvalues that currency, any "adverse" effects of such a rate can easily be reduced or eliminated. If the rate tends to build up excessive credit balances in London and New York, they can be reduced by the levy of occupation costs or by the sale of gold in the occupied country.[31] If the rate tends to make production for export less profitable than production for the domestic market, that can be remedied by subsidies, premium prices for specially desired exports, or similar measures.

Allied control of exchange rates in occupied areas is, at best, only temporary. Even during the occupation period, the occupying powers do not usually control both of the elements (external and internal value) necessary to maintain any initial undervaluation of the currency of the occupied country. Experience during this war seems to indicate that, for the occupying power, the disadvantages of price inflation in the occupied country far outweigh any probable gains from purposeful exploitation through exchange-rate policy.

V. CONCLUSION

The war has taught us some of the things that can be done through the issuance of military currency. It has demonstrated again, in case after case, how unreliable are "backing," balancing of the budget, or avoidance of debt, as a means of insurance against price inflation. It has indicated at least one way by which our huge gold hoard can be put to use to the benefit both of ourselves and other nations. It should also have taught us not only what cannot be accomplished through the fixing

[31] They are, of course, being kept down to the extent that the rate is holding down price inflation.

of exchange rates but the disadvantages of fixed exchange rates in a world of independent national price levels and monetary policies, in a world characterized by marked changes in the international economic position of products and countries, in a world where countries have persistent deficits or surpluses in their balances of payments on current account.

That is the kind of a world we shall have for many years after the war, for the financial consequences of the conflict will persist long after the last gun is fired. In most areas where the Allies have had troops the native currencies will be left highly overvalued at existing exchange rates. The currencies of most Latin American countries will also tend to be overvalued relative to the dollar. Continental Europe will probably be in greater monetary confusion at the end of this war than at the termination of World War I. The Far East will be full of military currency.

Countries in each of these areas will have to work out a monetary policy and program that is appropriate to the particular circumstances existing within their borders. To attempt to hold each of them in a straitjacket of fixed exchange rates under such circumstances could mean but one thing: indefinite continuation of wartime controls over international trade and finance.[32]

[32] The need for variable exchange rates with varying national monetary policies is discussed in Essay No. 2 of this series, *Fundamentals of International Monetary Policy* by Frank D. Graham.

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