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INTERNATIONAL ASPECTS OF WARTIME MONETARY EXPERIENCE

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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 Lester's data and conclusions are, in part, based on unpublished information, including that acquired in discussions with servicemen recently returned from Africa, Italy, the Middle East and the Far East.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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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 published 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.