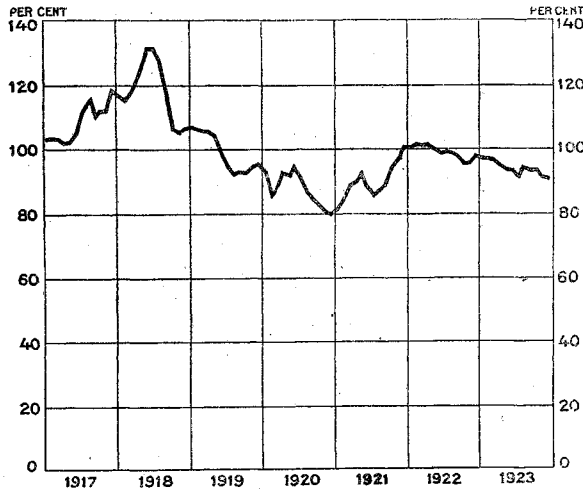


SWISS EXCHANGE AND MONEY RATES, 1915-1923.

The increased importance of Switzerland as a money market during the period of currency and financial disorganization in other European countries, and the relative stability of Swiss exchange during the war and post-war periods, make it opportune to present a brief study of the course of exchange and money rates in Switzerland since the outbreak of the war.

During 1915 and 1916 the Swiss franc was somewhat below par as compared with the dollar. With the entry of the United States into the war in 1917, the Swiss franc, in terms of dollars, rose rapidly, and in June, 1918, reached its highest exchange value, being quoted in New York at 31 per cent above par. In 1919 Swiss exchange began to decline, and



Average monthly buying rate of the Swiss franc in the New York market, expressed as a percentage of par (19.3 cents per franc).

in December, 1920, it was quoted in New York 20 per cent below par. With the beginning of 1921 the Swiss franc improved rapidly, and toward the end of that year it was again above par, as measured in dollars. This situation lasted until May, 1922, when the franc began to decline, and on December 10, 1923, it was quoted at about 10 per cent below its par of exchange. With all these fluctuations, Swiss exchange has been more stable than that of any other European currency, except the Swedish.

Bank-note circulation.—The volume of notes of the National Bank of Switzerland in circulation increased considerably during the period from 1913 to 1920, but this increase—in round numbers from 300,000,000 to 1,000,000,000 francs—was moderate as compared with cur-

rency increases in other countries. The rise of prices in other countries of the world tended to induce a corresponding advance in the price level and cost of living in Switzerland, since Switzerland is dependent mainly upon importations for her foodstuffs and raw materials. This advance in prices in itself created a demand for more currency, which demand was further enhanced by the tendency to transact business more generally on a cash basis. It is to be noted also that considerable quantities of Swiss currency were being hoarded in adjoining countries, especially in Germany and Austria.

Before the war notes in circulation were based upon gold and commercial bills of exchange. With the outbreak of war documentary bills of exchange largely disappeared, being supplanted by short-term treasury notes. The policy of the Government, however, was to fund regularly its floating debt so as to prevent too large an increase in the outstanding volume of discounted short-term treasury paper. Increase in the amount of bank-note circulation was accompanied by an increase of the metallic reserve held by the bank. Even at its lowest point in 1918 the ratio of gold to notes in circulation was 40 per cent as compared with 54 per cent in 1913. Since 1918 this ratio has considerably improved. By the end of July, 1923, it had risen to 61.15 per cent, and, if silver is included, to 73 per cent.

NATIONAL BANK OF SWITZERLAND.

[In millions of francs.]

	De- cember 1913.	De- cember 1914.	De- cember 1915.	De- cember 1916.	De- cember 1917.	De- cember 1918.
Loans and discounts	147	196	190	222	362	584
Current accounts and deposits	59	71	82	129	137	134
Notes in circulation	314	456	466	537	702	976
Metallic reserve—						
Total	191	263	301	397	409	473
Gold	170	238	250	345	358	415
Silver	21	25	51	52	52	58
Ratio of total metallic reserve to notes in circulation	60.79	57.65	64.72	74.08	58.30	48.49
Ratio of gold to notes in circulation	54.15	52.17	53.72	64.30	50.92	42.50

	De- cember 1919.	De- cember 1920.	De- cember 1921.	De- cember 1922.	August 1923.
Loans and discounts	512	475	378	425	245
Current accounts and deposits	175	163	129	165	106
Notes in circulation	1,036	1,024	1,009	976	860
Metallic reserve—Total	591	664	658	639	627
Gold	517	543	550	535	526
Silver	74	121	108	104	101
Ratio of total metallic reserve to notes in circulation	57.00	64.91	65.17	65.44	72.92
Ratio of gold to notes in circulation	49.80	53.03	54.44	54.80	61.15

It may be remarked that the large accumulation of gold has had little, if any, influence on exchange rates. In 1918, when the reserve ratio reached its lowest point, the Swiss franc stood at its highest level, while during the following two years Swiss exchange, in terms of dollars, decreased rapidly, though the ratio of gold to notes increased steadily.

Money rates.—The discount rate of the Swiss National Bank reflects only to a small extent the general trend of economic conditions in the country. From the beginning of 1915 to October 3, 1918, the official bank rate remained unchanged at 4½ per cent. During 1915 open-market rates were comparatively high and only about 1 per cent lower than the bank rate. Large shipments of gold into Switzerland during the following year, at a time when the development of war conditions made the exportation of capital hazardous, provided an abundance of funds and caused easier rates for money. Low interest rates prevailed until the fall of 1917. The large excess of imports over exports during 1918, combined with heavy taxation, tended to harden open-market rates, and the steady decline of the gold ratio during 1918 induced the National Bank of Switzerland, on October 3, 1918, to increase its discount rate to 5½ per cent. Although it was lowered on August 21, 1919, to 5 per cent, interest rates remained high throughout 1919, 1920, and the first quarter of 1921. Decline in the general price level was followed by the stagnation of industry and trade which set in in the middle of 1920, and was coupled with the liquidation of many war industries. As a result money became plentiful and interest rates declined rapidly, at times below 1 per cent. The bank rate which had already been lowered three times was further reduced on August 17, 1922, to 3 per cent.

SWISS BANK RATE AND OPEN-MARKET RATE, 1913-1923.

[Per cent.]

	1913		1914		1915		1916		1917		1918	
	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.
First quarter....	5.00	4.65	3.89	3.50	4.50	3.86	4.50	2.67	4.50	2.98	4.50	4.00
Second quarter....	5.00	4.58	3.50	2.94	4.50	3.75	4.50	2.08	4.50	1.89	4.50	3.45
Third quarter....	4.74	4.49	4.96	4.89	4.50	3.34	4.50	1.98	4.50	1.82	4.50	3.87
Fourth quarter....	4.50	4.37	5.00	4.73	4.50	3.16	4.50	3.02	4.50	3.95	5.48	5.20
Yearly average....	4.81	4.52	4.34	4.02	4.50	3.52	4.50	2.44	4.50	2.66	4.75	4.15

SWISS BANK RATE AND OPEN-MARKET RATE, 1913-1923—Continued.

	1919		1920		1921		1922		1923	
	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.	Bank rate.	Open-market rate.
First quarter.....	5.50	4.90	5.00	4.65	5.00	4.21	3.84	2.11	3.00	1.90
Second quarter.....	5.50	4.66	5.00	4.59	4.53	3.54	3.50	1.45	3.00	1.60
Third quarter.....	5.28	4.52	5.00	4.49	4.22	2.96	3.25	1.18	(1)
Fourth quarter.....	5.00	4.64	5.00	4.45	4.00	2.61	3.00	1.80
Yearly average.....	5.32	4.68	5.00	4.56	4.43	3.32	3.40	1.64

¹ On July 13 the bank rate was increased to 4 per cent.

Low interest rates prevailing throughout 1922 stimulated the issue of securities, public and corporate. During 1922 such issues amounted to 892,000,000 francs, as compared with 703,000,000 francs for 1921 and 328,000,000 francs for 1914. The supply of loanable funds was, however, so large that it was not absorbed by domestic demand, and 70,000,000 francs of foreign loans were placed in Switzerland.

In this period the abundance of loanable funds represented in part the influx of funds from abroad, and in part it developed as a consequence of industrial and trade depression within the country. Even with the low rate of interest, securities floated for industrial and commercial purposes decreased from 98,000,000 francs in 1920 to 87,000,000 francs in 1921 and to only 18,000,000 francs in 1922. This decrease in capital issues for commercial purposes was, however, more than made up in 1922 by the issue of Government securities to the amount of 500,000,000 francs—by far the largest amount ever issued by the Government in any one year.

SWISS NATIONAL DEBT.

[In thousands of francs.]

	Consolidated debt.	Floating debt.	Net total debt.	Debt per inhabitant.
1913.....	146,270	112,270	28.95
1919.....	1,381,536	435,046	1,794,061	468.70
1920.....	1,608,857	311,634	1,899,332	490.02
1921.....	1,758,151	372,045	2,116,576	546.07
1922.....	1,902,527	200,497	2,089,702	539.14

Some factors, such as the adverse balance of payments, which tended to raise interest rates, exercised a depressing influence on exchange rates, and generally these moved in a direction

opposite to that of interest rates. Thus during 1920, when interest rates were high, the Swiss franc was quoted at its lowest point in the New York market, while at the end of 1921 and during the first part of 1922, when open-market rates were steadily declining, the dollar was quoted at a discount in Zurich. The extremely low rate of interest prevailing during the second half of 1922 and the first half of 1923 caused an outflow of funds and depreciation of the Swiss franc. The rise in the discount rate from 3 to 4 per cent in July, 1923, was intended principally to protect Swiss exchange from further depreciation and to check the outflow of funds. Open-market rates soon reacted and rose rapidly. At present they are close to the bank rate. Long-term rates show the same upward tendency.

Foreign trade and gold movements.—The balance of Switzerland's merchandise trade has always been adverse, since the country has always depended largely upon "invisible exports" in effecting payment for supplies of raw materials and foodstuffs imported from abroad. With the outbreak of the war an extraordinary demand for goods developed abroad, and Switzerland found herself unable to buy from other countries in her usual amount, under restrictions imposed by the belligerents. The excess of imports over exports accordingly decreased, and in 1916 exports even exceeded imports. These foreign trade developments influenced exchange rates and caused an inflow of gold into Switzerland.

At the termination of the war Switzerland was almost "sold out" and in great need of goods. Consequently, imports increased rapidly. In 1920 they amounted to 4,243,000,000 francs, the largest total in the history of Switzerland, and an amount in excess of exports by 966,000,000 francs. This large trade balance tended to depress Swiss exchange, since the surplus of imports greatly exceeded the amount of Switzerland's invisible exports even under normal conditions, and prevailing conditions were in fact far from normal. During this period Swiss capital invested abroad sustained heavy losses, involving a corresponding decrease of interest payments. Furthermore, the political and economic changes taking place in central Europe, and depreciation of the exchanges of former belligerent countries affected the tourist traffic, which normally provides an important credit item in the Swiss international balance sheet. Under these conditions the balance

of payments became adverse, demand for funds increased, and money rates advanced at times to 7 per cent. The demand for foreign bills accordingly increased and the Swiss franc depreciated.

Exports and imports both declined during 1921, and the adverse balance of trade decreased considerably. In this year also liquidation of many enterprises increased amounts on deposit in banks, and was followed by a decrease in the demand for funds. At the same time foreign funds began to seek refuge in the Swiss money market. The inflow of funds was further augmented by repayment of about 600,000,000 francs of gold credits granted to France, Germany, and some other countries. As a consequence, the Swiss balance of payments became favorable and the Swiss franc for several months was quoted above its dollar parity.

During 1922 imports and exports continued to decrease and the excess of imports was smaller than that for any year since 1917. Foreign trade figures for the first six months of 1923 show an increase of imports, while exports have remained more or less stable, giving an unfavorable balance for the half-year of about 230,000,000 francs.

SWISS MERCHANDISE IMPORTS AND EXPORTS, 1914-1923.

[In millions of francs.]

	Imports.	Exports.	Excess of imports.
1914.....	1,478	1,187	291
1915.....	1,680	1,670	10
1916.....	2,379	2,448	169
1917.....	2,405	2,323	82
1918.....	2,401	1,963	438
1919.....	3,533	3,298	235
1920.....	4,243	3,277	966
1921.....	2,296	2,140	156
1922.....	1,914	1,762	152
1923 (6 months).....	1,036	806	230
Total.....	23,365	20,874	2,491
Yearly average, 1914-1922.....	2,481	2,230	251.22

¹ Excess of exports.

The causes which have affected Swiss foreign trade have to a considerable extent also influenced the movement of precious metals from and to Switzerland. The large excess of gold imports over exports during the war represented principally cash payments for purchases by belligerents. Of the gold imported during 1921 and 1922, amounting to about 655,000,000 francs, it appears that about 400,000,000 francs was Russian gold which came

mainly from Sweden and partly by way of the Baltic States. This gold was melted down in Switzerland and eventually found its way to the United States. In addition to gold, large quantities of silver were shipped to Switzerland, largely from countries of the Latin Monetary Union, in the form of 5-franc and 5-lire pieces.

SWISS GOLD IMPORTS AND EXPORTS.
[In millions of francs.]

Year.	Imports.	Exports.	Excess of imports.
1914.....	58.3	6.1	52.2
1915.....	16.7	1.7	15.0
1916.....	118.5	.8	117.7
1917.....	35.9	2.8	33.1
1918.....	84.6	1.4	83.2
1919.....	57.3	.1	57.2
1920.....	39.5	1.9	37.6
1921.....	475.2	376.2	99.0
1922.....	179.6	80.0	99.6
1923 (first half).....	148.1	35.3	112.8

Imports and exports of precious metals during the past two years have not materially affected the metallic reserve of the Swiss National Bank, which has remained fairly constant since 1920. During the period from the end of 1921 to May, 1922, when the Swiss franc stood higher than the dollar, the Swiss National Bank put about 200,000,000 gold francs in circulation, which were generally hoarded and subsequently, when the Swiss franc began to depreciate, were probably melted down in considerable amounts and clandestinely exported.

Balance of payments.—Since imports of merchandise and of precious metals greatly exceeded exports, visible and invisible, it would appear that large sums were sent to Switzerland by foreigners for temporary investment, and that some foreign exporters preferred to accumulate credits in Switzerland. That funds originating in this way were not sufficient in amount entirely to offset the adverse balance of merchandise trade and net importation of precious metals is indicated by the estimated value of Switzerland's invisible exports, which, even though reduced in amount in recent years as compared with pre-war times, still constitute an important item in Switzerland's balance of payments.

According to figures published recently by the Schweizerische Volksbank, the invisible exports of Switzerland before the war and during 1922 were as follows:

SWITZERLAND'S INVISIBLE EXPORTS.

[In millions of francs.]

	Before the war.	1922.
Excess of interest on Swiss capital invested abroad over interest on foreign capital invested in Switzerland.....	69	40
Profits of Swiss enterprises abroad.....	200	100
Profits from tourist traffic.....	265	135
Transit traffic of Swiss railways.....	25	20
Insurance.....	20	10
Exportation of electric power.....		10
Total.....	579	315

According to these figures, although the value of Switzerland's invisible exports had decreased 46 per cent, it was sufficient in 1922 to cover the excess of imports over exports and to exercise a favorable influence on Swiss exchange rates. A brief survey of the more important items in this statement is of interest as indicating changes that have taken place since 1914.

Capital investments.—According to Swiss sources, foreign capital invested in Switzerland before the war amounted to about 1,200,000,000 francs. It has been estimated by the Swiss Bank Corporation that most of the securities representing this investment by foreigners have been returned to Switzerland, and that at present foreign holdings do not much exceed 200,000,000 francs. It appears also that loans floated by Switzerland in the United States after the war were repurchased in considerable amount at the time when the dollar was quoted at a discount. At the end of 1922 these loans totaled 258,600,000 francs, as compared with 309,000,000 francs at the end of 1921. Thus, while before the war Switzerland had to meet considerable interest payments on account of loans floated abroad and foreign capital invested in Switzerland, under present conditions the amount of such payments is comparatively small.

In what amount Swiss capital has been invested abroad can not be accurately determined, since estimates vary greatly. Doctor Zollinger estimated the total amount so invested before the war at 2,680,000,000 francs, while the Swiss Bankers' Union estimated it to be between 7,000,000,000 and 8,000,000,000 francs. In this connection it is of interest to note that Swiss nationals owned 202,600,000 francs of Mexican securities alone

It is difficult to ascertain with accuracy the value of Switzerland's foreign investments at the present time when large holdings have depreciated and have in some cases been completely wiped out. According to Swiss sources, a total of about 4,500,000,000 francs was invested in the former Austro-Hungarian Empire, in Germany, and in Russia, and about 500,000,000 francs in the Balkan States and in Central and South America. Thus, of the total Swiss investments abroad, about 5,000,000,000 francs at present have either been lost entirely, as in Russia, or have decreased in value owing to depreciation of the exchanges on Austria, Germany, and the Balkan States.

The belief generally prevails that large amounts of foreign funds, especially German and Austrian, have been invested in Switzerland. To what extent this belief corresponds with facts it is difficult to say. It is, however, well known that after the armistice Germany, Austria, and other central European countries transferred considerable sums to Switzerland. Economic factors were probably less important than political conditions in inducing these transfers. Switzerland, as the only neutral country in central Europe, was regarded by many investors of the Central Powers as the safest place for their funds. Here, it was believed, funds and investments could be better protected against confiscation, heavy taxation, and currency depreciation. Generally such transfers of capital to Switzerland were for temporary investment until political conditions in Europe should become more stable, and in many instances foreign funds transferred to Switzerland were after a brief period invested in other countries where they were likely to figure as Swiss capital.

The outflow of foreign funds and holdings from Switzerland has assumed large proportions, especially since 1922. Low rates of interest (yields of Swiss securities ranged between 4 and 4½ per cent, as compared with a range of from 5 to 7½ per cent on securities of similar quality in the United States, Holland, Sweden, etc.), coupled with the heavy burden of taxation, caused an outflow of funds, which was further accelerated by the agitation for a capital levy. The petition for the bill providing for a capital levy was presented to the Government on September 13, 1921, and was discussed by the chambers from September 28 to October 6, 1922. Although the bill was rejected by a referendum on December 3, 1922, the proposal of a capital levy created great uncertainty in the money market and caused foreign as well as domestic balances to leave the country. In

addition, the complete stabilization of the Austrian krone since August, 1922, and the high rate of interest prevailing in that country made it more profitable for Austrian investors to withdraw their Swiss holdings for investment in the Vienna money market. Decreased trade relations between Germany and Switzerland induced many German firms also to withdraw their Swiss balances and to transfer them to the United States and England, where they needed credits to finance the importation of foodstuffs and raw materials.

Not only foreign but also Swiss funds began to leave the country through different channels, especially at the time when the capital levy was under discussion. This movement from Switzerland assumed such proportions that at a conference called by the chief of the finance department it was resolved that funds should be exported only in such amounts as would not affect domestic needs, and that in making loans to foreign countries the interests of Switzerland should be considered paramount. In fact, credits granted by Swiss banks to Rumania and Yugoslavia carried a stipulation that a percentage of these loans should be used for purchases in Switzerland.

It is probable, in view of all these developments, that the amount of foreign capital at present invested in Switzerland is small, and this is the conclusion stated in a communiqué issued by a conference of Swiss financiers held in Berne on October 30, 1921.

FOREIGN LOANS PLACED IN THE UNITED STATES, 1919-1923.

In continuation of similar figures published on page 1017 of the September, 1922, number of the FEDERAL RESERVE BULLETIN, the Guaranty Co. of New York has furnished the Federal Reserve Board with figures of foreign government and corporate loans placed in the United States during the calendar years 1919 to 1923. The methods used in the preparation of the present compilation are the same as described on page 1016 of the September, 1922, number of the BULLETIN. Separate figures are given for new capital and refunding issues, and the geographical segregation is in accordance with the domicile or place of business of the issuers and not the part of the world to which the capital may have been exported. The classification of the securities also remains unchanged. In the preparation of the tables use has been made of similar compilations by the Commercial and Financial Chronicle and the Monetary Times of Canada.