

Chapter 7

Under Treasury Control, 1942-51

The nine years from 1942 to March 1951 divide almost equally into years of war and peacetime expansion. For Federal Reserve policy, the period can be treated as a whole, a repeat with different details and a different outcome of the experience during and after World War I. Once again, the Federal Reserve put itself at the service of the wartime Treasury and, once again, it had difficulty extricating itself from the Treasury's hold after the war. And, again, it took almost as much time to free monetary policy as to fight the war.

The Federal Reserve summarized its "primary duty" in wartime as "the financing of military requirements and of production for war purposes." Board of Governors (1947) In practice, this meant continuation of the historically low interest rates carried over from the 1930s. Principal efforts to control spending and inflation fell to administration tax policy and, during wartime to price and wage controls and the rationing of several commodities. The Federal Reserve supplemented these policies mainly by regulation of credit for purchasing consumer durable goods. Since the supply of durable goods was restricted by wartime allocation of materials and conversion of factories to military production, consumer credit controls intended to restrict demand at the controlled prices. After the war these controls were removed (1947) but soon after restored (1948). In the early postwar years, margin requirements for purchasing stock were used to limit securities purchases.

Eccles described his work in wartime as "a routine administrative job...[T]he Federal Reserve merely executed Treasury decisions." Eccles (1951, p. 382) When his term ended in

February 1944, he offered to resign but agreed to remain if the President would commit to consolidation of banking regulation and supervision under a single agency. His reappointment as a member of the Board ran to 1958, as Chairman to 1948.¹

The Treasury rebid more heavily on taxation in World War II than in World War I. Tax receipts rose from less than \$9 billion (7% of GNP) in the 1941 fiscal year to more than \$45 billion (21% of GNP) in 1945, but expenditures rose more, public debt increased by \$200 billion in the same four year period (approximately 25% of GNP). Secretary Morgenthau's passionate attachment to low interest rates meant that in practice the Federal Reserve's "primary duty" was to market the debt at prevailing interest rates and, as in World War I, assist in the periodic war loan drives.² To carry out this policy beginning in April 1942, the System fixed ceiling rates on government securities at 3/8% for Treasury bills and 2.5% on long-term bonds, with intermediate rates on intermediate maturities. This pattern of rates became a main source of difficulty. With all rates expected to remain fixed, banks, financial institutions and the public bought higher yielding long-term bonds and sold short-term bills in the market where they were acquired by the System.

The Federal Reserve became increasingly restive under the Treasury's control, in the postwar years, 1946 to 1951. They believed that restrictions on interest rates converted the Federal Reserve into an "engine of inflation." Morgenthau's resignation in 1945 did nothing to

¹ The President's wartime powers included authority to reorganize government agencies. According to Eccles, Roosevelt agreed to consolidate the banking agencies but soon after rejected Eccles's proposal. Eccles did not resign. Eccles service dates from 1934, but he was reappointed to a 12-year term in 1936 after reorganization. Since he had not served a full term, he could be appointed for 14 years. The other members at the time were; Governors Ransom, McKee, Draper, Szymczak, and Evans.

² There is no evidence supporting Toma's (1997) argument that the low interest policy intended to maximize the government's seigniorage. Under the rules adopted in 1933, the Federal Reserve did not transfer any surpluses to the Treasury to compensate for its subscription to the initial stock of the Federal Deposit Insurance Corporation. This rule changed in 1947 to the present rule under which the Federal Reserve pays 90% of its net earnings to the Treasury. A reader familiar with Secretary Morgenthau's excessive concern about small changes in interest rates in the 1930, when debt issues were relatively small, would not seek another explanation for wartime interest rate pegs when the size of debt issue increased by about 20% of GNP.

change the Treasury's stance. His successors, Fred Vinson and John W. Snyder, were no less concerned about maintaining the pattern of interest rates. Little changed until Congress, under the leadership of Senator Paul Douglas, supported the Federal Reserve's position and the start of the Korean War in 1950, heightened concerns about renewed inflation. The result was an agreement in March 1951, known as The Accord, permitting the Federal Reserve to pursue an independent policy.

In fact, early postwar monetary policy was far from an "engine of inflation." By the end of 1948, prices were falling, and long-term interest rates were below the Treasury-Federal Reserve maximums. The decline in prices was soon followed by a decline in output and a mild recession. Chart 7-1 shows growth of output and inflation from 1942 to 1951. The large spike in inflation in third quarter 1946 (and some of the increase in the previous two quarters) reflects the removal of wartime price and wage controls in that quarter.

Insert Chart 7-1 here

Reliance on selective controls to limit general price level increases, reflects the System's inability to use more general measures. But it reflects, also, the lingering effects of the real bills doctrine. As in the effort to restrict stock market credit in 1927-29, buyers of durables could borrow in other ways instead of in the particular way that was restricted. The end result was unaffected.

References to "speculative" uses of credit almost disappeared from Federal Reserve discussions of current policy during the 1930s, although speculative uses of credit continued to be cited as a principal cause of the 1929-33 depression. Real bills views were so well entrenched that none of these discussions undertook to explain how inflation---a sustained rate of increase in a broad-base price index---could be controlled by limiting the use of credit to purchases

particular goods and services.³ To prevent "speculative" accumulation of inventories of consumer goods, bankers were urged to curtail lending to firms with rising inventories.

In June 1950, the United States went to war again. Spending to fight the war brought nominal government spending back to peak wartime levels. Wartime deficits were comparatively modest, relative either to the size of the economy or to previous war. After a brief spurt, inflation remained modest. Despite pegged interest rates, growth rates of the monetary base and the money stock were modest also, in part because gold outflows increased. The principal international financial events are the attempted reconstruction of an international monetary system and, at the end of the period, the start of the gold outflow from the U.S. At first, the Federal Reserve and the administration welcomed the loss of gold as a necessary step in the reconstruction of an international monetary framework. A decade later, concerns about the U.S. gold loss became the subject of an increasingly active discussion about the viability of the monetary standard based on gold and the dollar.⁴

The early postwar monetary standard, known as the Bretton Woods system, intended to remove the problems of the interwar gold exchange standard while retaining fixed exchange rates and a link to gold reserves. The agreement established the International Monetary Fund as a public intermediary in the international monetary system. The Fund agreements key features: (1) a lending and borrowing agreement to adjust "temporary" imbalances, and (2) a structural adjustment arrangement to correct "permanent" imbalances.

The lending or borrowing arrangement permitted countries with a "temporary" current account deficit to borrow the balances of countries in surplus. The provision sought to avoid the problem that the United States and France created to expand and inflate in response to gold

³ As late as 1980, the Carter administration imposed selective credit controls seeking to end a general inflation.

⁴ I return to this discussion, and proposals for change, in a later chapter on the 1960s.

inflows at the end of the 1920. Their decisions forced deficit countries to contract, without triggering an equilibrating expansion in the surplus countries. Under Bretton Woods rules, deficit countries did not have to contract. They could borrow the funds accumulated by the surplus countries.

The structural adjustment provisions permitted countries to correct persistent or permanent imbalances by adjusting exchange rates. A major problem with this provision was that central banks and governments could not distinguish temporary from persistent imbalances ex ante or even for some time after deficits appeared. A related problem was that Fund rules did not make clear what should happen when the principal reserve currency country---the United States---ran persistent trade or current account deficits.

These problems became evident later. In its early years, the Fund, its sister institution, the World Bank, and the United Nations were attempts to maintain peace and prosperity through collective action that would avoid the mistakes of the interwar years. The focus of these institutions suggests the types of problems that the designers expected in the postwar years.

The principal designers of the Fund were John Maynard Keynes of Great Britain and Harry Dexter White of the United States. Keynes spent the war years, until his death in 1946, at the British Treasury. White was an economist at the U.S. Treasury. In contrast to the 1920s, when Governors Benjamin Strong and Montagu Norman were the principal architects of the postwar international monetary arrangements, power and influence over international monetary arrangements were firmly vested in the two Treasuries. Here, too, central banks had a subsidiary role.

The Administration and Treasury Wartime Program

There are both similarities and differences in the financing programs for the two world wars. As Table 7-1 shows, interest rates were both lower and rose less in World War II, and the measured rate of inflation was lower also. Price controls distort the timing of price changes for the period, but controls were removed in third quarter 1946; the deflator rose 49% (annual rate) in that quarter, releasing most of the changes suppressed by wartime controls.

Table 7-1

Money, Prices, Debt and Interest Rates in Wartime

Date	Monetary Base (billions)	Money (M1) (billions)	Deflator	Interest Rate (short-term in percent)	Public Debt*
World War I					
1917-1	4.8	16.4	26.2	4.12	1.2
1918-4	6.5	20.8	33.2	5.81	12.4
1920-3	7.3	23.5	40.7	7.97	24.3
Change %					
annual rate	11.6	10.2	12.5		
World War II					
1941-4	17.9	48.2	32.1	0.69	49.0
1945-3	36.3	101.8	36.9	0.75	258.7
1946-3	37.2	107.7	45.6	0.81	269.4
Change %					
annual rate	15.4	16.9	7.4		

*End of preceding fiscal year (June 30) from Historical Statistics (1960, p. 720).

The first observation for each war is the nearest quarter to the start of U.S. participation-- April 1917 and December 1941. The second observation is the quarter in which the war ended.-- November 1918 and August 1945. The third observation is the postwar quarter in which wartime inflationary pressures began to recede, as measured by the rate of growth of the monetary base. Annualized rates of change for money and prices are computed from the first to the third date shown in the table.

Financing World War II was a much larger task. The size of the war was substantially larger both absolutely and relative to GNP. Real GNP was approximately 2.5 times greater in the later war, and the deflator was similar in both periods. Taxes paid for a larger share of World War II, but debt issues and growth of base money were larger also, as shown in the table. Also the Federal Reserve's chose a different method of supplying reserves and supporting the Treasury market. In World War I, the Federal Reserve did not have an open market policy. Banks obtained reserves by borrowing at the discount window using Treasury securities as collateral. In World War II, reserves were supplied principally by open market purchases. Since the Federal Reserve supported a pattern of rates, it was obligated to serve as residual buyer. This left control of reserve changes to the banks' decisions, much the same as in World War I.

With long- and short-term interest rates comparatively lower in the 1940s, the demand for real money balances was higher. Base money, money and prices rose at about the same rate, 10 to 12% in World War I. Real balances declined slightly. In the period around World War I, base money and money rose at about the same (16%) rate, but prices rose at less than half the rate, reflecting the rising demand for cash balances. The rise in real cash balances was considered a source of spending and inflation at the end of the war and, therefore, a cause for concern.

In addition to the effect of interest rates, the rise in cash balances reflects restrictions on output of durable goods. Beginning in 1942, automobile production was severely curtailed, and all residual production was taken by the government. Production of other durables was curtailed also, spending declined, and saving increased.

Chart 7-2A, shows the relation of base velocity to a long-term interest rate. Quarterly data for 1942 to first quarter 1951 are highlighted. The chart suggests that much of the quarterly movement in wartime and postwar velocity (the reciprocal of average cash balances) is consistent with the long-term relation. Velocity was historically low, and average cash balances correspondingly high, principally because long-term interest rates were pegged at a 2.5% maximum. (Chart 7-2A here)

Chart 7-2B looks at the war and postwar period on a finer scale. The positive relation remains. The effect of the interest rate ceiling at 2.5% is clearly visible. Observations at the ceiling rate, mainly in 1943 and 1944, suggest that ceiling was binding in these years. If we extrapolate from the linear relationship, the data suggest that interest rates and velocity would have been higher and average cash balances correspondingly lower in these years. For much of the period, however, the ceiling rate was not binding.⁵

Chart 7-2B here

The opposite side of the much large rise in cash balances was the much smaller increase in public's share of the debt. Morgenthau's Treasury tried hard to encourage individuals to purchase debt. The Treasury issued Series E war bonds, at prices as low as \$18.75 per bond, and war savings stamps, for as little as ten cents, that could cumulate to a bond purchase.

⁵ Base velocity is computed as the ratio of GNP from Gordon (1982) to high-powered money from Friedman and Schwartz (1963). The money data does not adjust for changes in reserve requirement ratios, so it slightly overstates the value of velocity in this period.

Corporations, schools and other institutions were encouraged to sell bonds and stamps through payroll deduction.

These actions were not enough to offset the low interest rates paid on the debt. The non-bank public acquired a smaller portion of the debt in World War II. Commercial banks acquired 40% of debt held outside the government and the Reserve banks.

Morgenthau's interest rate policy increased the problem of marketing debt to the non-bank public. The larger share of the debt held by banks in World War II is a consequence of the interest rate policy. Although many citizens and corporations pledged to buy bonds during bond drives, many of the bonds were sold subsequently and acquired by banks.

Secretary Morgenthau set three major objectives for war finance. Blum (1967, pp. 14-15) He wanted to finance (1) 50% of the war by direct taxation, (2) most of the rest by voluntary purchases of bonds, and (3) with low interest rates. He believed that low interest rates would minimize the cost of the war. He succeeded in his third objective, came close to his first, and he managed to avoid most of the pressures from Congress and other parts of the administration for compulsory bond purchases.⁶

For calendar years 1942-1945, total government spending was \$306 billion, revenues \$138 billion, and GNP \$740 billion. These periods correspond to the war years, with a few additional months of demobilization and reconversion to peacetime resource uses at the end. Based on these data, tax collections were 45% of spending, only \$15 billion short of Morgenthau's goal.⁷

⁶ J.M. Keynes advocated a compulsory saving scheme as part of a British plan for war finance. Many of Keynes's followers in the United States wanted to adopt Keynes's program. Morgenthau opposed, in part because the U.S. economy started the war with output far below capacity, in part because he was able to market the debt at historically low interest rates. Blum (1965, v. 2, pp. 297 and 299).

⁷ Eccles (1951, p. 381) includes the pre-war defense spending in his calculation. For July 1940 to December 1945, he reports spending as \$380 billion financed by \$153 billion of taxes (40%), and \$228 billion of borrowing and

Tax Policy

Morgenthau had difficulty getting Congress to adjust his tax proposals. Despite a Democratic majority in both houses, and his effort to shelter low-income workers, he did not fully meet his goal. By 1944, relations between Congress and the administration became so strained that the President vetoed a tax bill early in 1944. For the first time in U.S. history, Congress overrode a tax bill veto, with large majorities in both houses voting to sustain the congressional bill. The administration did not try again to change tax rates during the war.

The main sources of conflict were the level of rates and the distribution of the tax burden. Many Congressmen favored a sales tax. Morgenthau opposed on equity grounds; the sales tax would put more on the burden on low-income earners. At the opposite extreme, Roosevelt favored a limit of \$25,000 in individual after-tax income, \$50,000 for families. This proposal had so little appeal that it was not seriously considered by Congress.

The 1943 tax bill adopted tax withholding at the source. Prior to 1943, tax payers paid taxes on the previous year's income in March of the following year. Withholding shifted most tax collection to the current year, a pay-as-you-go system for wage earners and some others that greatly simplified tax collection as the number of taxpayers expanded to include 40 to 50 million returns on incomes as low as \$600 a year.⁸

Morgenthau opposed the initial plans for withholding because Congress planned to forgive all previous year tax liabilities when withholding began. His main objection was on equity grounds; with progressive taxation and high wartime rates, high-income taxpayers (and

money creation. Non-bank investors acquired about \$130 billion, but sold some of their bonds to commercial banks after the bond drives.

wartime profiteers) would benefit most. He was able to limit the windfall. The bill forgave \$50 or 75% of the lower of 1942 or 1943 tax liabilities. Withholding began on July 1, 1943.

Morgenthau recognized that inflation was a tax on households. He preferred direct taxation to inflation.⁹ The Treasury tried several times to interest Congress in a plan for raising the social security tax on labor income during the war. The proceeds were to be returned after the war, if needed, as unemployment compensation. Blum (1965, v. 2, p. 313) Perhaps without fully recognizing the change, Morgenthau had become a proponent of countercyclical fiscal policy.

At the Federal Reserve Marriner Eccles saw the war as a major shift in demand that had to be met by substantial tax increases. He now parted company with the Keynesian group who believed that, given the high unemployment at the start of the war, a policy of increasing both "guns and butter" would work. Eccles did not disagree with this view in 1940-41. By 1942, he was concerned that the administration and Congress would be slow to recognize that, in his words, the problem was an excess supply of goods. There was an excess supply of money. Eccles (1951, pp. 346-47).¹⁰

Debt Finance

⁸ The proposal was advocated in 1941 by Beardsley Rumz, head of R.H. Macys Department Store and Chairman of the New York Federal Reserve. Hence it was often referred to as the RUMML plan. Morgenthau opposed Ruml's plan because it forgave 1941 taxes so that taxpayers would not have two assessments in the transition year.

⁹ Using the average values of the monetary and GNP for the war years, the government taxed nearly 10% of the base through inflation. The base was about 5% of GNP and 15% of government spending, so the inflation tax on the base is about 1/2% of GNP and 1-1/2% of government spending.

¹⁰ Eccles cites a conversation with Roosevelt in December 1940 just after Roosevelt had announced the lend-lease program to help Britain. Roosevelt explained that the public would support shipments of goods but would be reluctant to lend money. "If we made a dollar loan to the British, it would seem to our people that we were giving the British money, of which we were short, instead of goods which were in surplus." Quoted in Eccles (1951, p. 348)

The Treasury and Federal Reserve agreed on the desirability of ceiling rates of interest, high tax rates, and selling bonds mainly to the non-bank public. Morgenthau described relations with the Federal Reserve as "more harmonious during the war than they had ever been during the years of the New Deal." Blum (1967, v3, p. 15) Board members shared this view but were more restrained. Vice chairman Ransom agreed that relations were very good. Differences about substance remained. Board Minutes (April 9, 1942, p. 8)

System officials wanted higher tax rates. Eccles and some others preferred a mandated program to Morgenthau's mainly voluntary bond purchase program. The Board offered proposals in each of the eight bond drives intended to increase sales to non-banks, restrict speculation in bonds, and limit the role of banks to short maturities. Few of these suggestions were adopted.

There were other differences about debt finance. Although the Treasury agreed on the aim of selling as many bonds as possible to non-bank investors during bond drives, it was less concerned than the Federal Reserve about whether the purchasers held the bonds. Getting the bonds sold at prevailing rates was their controlling interest.

Three main problems arose. First, with interest rates lower on short- than on long-term debt, bond prices rose as the term to maturity shortened. Bank and non-bank holders sold short-term securities at a profit and reinvested in longer-term bonds. Second, to assure that bond drives were successful, banks loaned money to finance bond purchasers at interest rates below the bonds' yield. Since the purchasers could profit by buying the bonds, bond drives were oversubscribed. Many banks entered into agreements to buy the bonds from customers after the drive. This filled subscription quota at the expense of bank financing Third, Treasury certificates with less than one-year maturity were troublesome throughout. The Treasury first offered

certificates in 1942 at a yield of 0.8%. The rate was above the rate required by the market, so prices rose to a premium. The Federal Reserve tried repeatedly to get the price reduced to 0.75% on new issues or to shorten the maturity and lower the rate, but the Treasury would not change. Since the certificates could be sold to the Federal Reserve, banks bought them from corporations and, as they approached maturity, sold them to the Federal Reserve. Minutes, Open Market (March 1, 1944, at 11:40, p. 1)

Officially, the Treasury opposed the borrow and buy policy. In practice, it did little to prevent it. Eccles (1951, p. 361) As a result, non-bank purchasers acquired \$147 billion of government securities (include non-marketable war bonds) but held only \$93 billion. Of this total, corporations subscribed to about \$60 billion, but increased their holdings only by \$19 billion.

The banks financed their purchases by selling Treasury bills and other low yielding securities to the Federal Reserve. With bill rates pegged and ceiling rates set on all other Treasury securities, the banks moved down the yield curve. To limit bank purchases many of the bonds were made "bank restricted." Small and medium-size banks complained that mutual savings banks and savings and loans could buy restricted bonds, thus were able to offer higher returns to savers. In 1944, commercial banks were permitted to purchase restricted securities during bond drives up to 10% of their savings deposits. Board Minutes (December 7, 1943, pp. 2-4) Overall, bank purchases were limited to \$10 billion during all bond drives. Bank holdings increased by \$57 billion, however. Eccles (1951, p. 362)¹¹

As in World War I, debt finance was much less successful than the heralded successes of the war bond drives. The monetary base doubled in the four years ending fourth quarter 1945, an

¹¹ The Federal Reserve minutes for the period return repeatedly to the topic of educating the public about the importance of holding the bonds they purchased.

18% compound average annual rate. Treasury securities account for almost all of the \$18 billion increase in the base.¹²

Eccles's alternative had three parts. First, he wanted more of the debt made ineligible for bank purchases. This limited the profits that non-banks could make by buying bonds at a favorable price during bond drives and reselling to banks after the drive.

Second, Eccles thought more of the debt should be in non-marketable securities to supplement the series E, F and G bonds sold to individuals. The Treasury accepted part of this proposal, by issuing a non-marketable, short-term bond. They did not issue a long-term bond, mainly because they did not want to pay the additional cost.

Third, Eccles wanted to limit bank eligible issues to the residual amount required to finance the budget. He urged Morgenthau to sell banks only short-term securities with low yields. This "would have prevented the excessive profits which many banks were able to make." Eccles (1951, p. 365)

To support Eccles's suggestions, the Executive committee of FOMC voted to recommend a long-term program. On January 28, 1942, it sent a memo to the Treasury proposing: (1) tap issues (on demand) to absorb surplus funds of non-bank corporations; (2) a 2-1/2% rate on securities with 15 or more year to maturity; (3) flexible rates on shorter maturities, bounded between 1/4% and 1/2% for Treasury bills.

The Treasury was not interested in a long-term plan. It accepted only the 2-1/2% peg. Morgenthau would not close off options. And he was not interested in rate flexibility. Eccles program would have required higher interest rates. Morgenthau was not interested. He was proud of his achievement--financing more than \$200 billion at very low interest rates. In World

¹² Morgenthau blamed "speculative practices" for the sale by non-bank investors. In contrast, Eccles recognized that Treasury practices as the cause. He argued, also, that Eccles program would have raised interest rates, increasing

War I, the average interest cost was 4.22%. At the end of World War II, the average interest cost was 1.94%. The average interest fell during the war as the outstanding debt rose. Blum (1967, v 3, p. 30).¹³

In all, there were seven war bond drives and a Victory Drive between November 1942 and December 1945. Judging from discussions by the New York Federal Reserve directors and the Open Market Committee problems with "speculators" increased in the later drives. The bank put limits on the volume of discounting and issued warnings to member banks not to participate in these activities. Minutes, New York directors (November 16, 1944, p. 48; July 5, 1945, p. 8; October 25, 1945, p. 96)

The warnings did not reduce the undesired activities. The Open Market Committee was reluctant to change course at the end of the war; until the last (Victory) bond drive was completed in the fall of 1945. But, it agreed unanimously to discuss with the Treasury "policies which should be adopted for the reconversion and postwar periods." Minutes, Open Market (October 17, 1945 at 10:15, p. 5) The December 5 meeting of the Executive committee initiated discussion of a policy change without reaching any conclusion.

Unable to convince the Congress to pass their proposed tax increases, the administration turned to price and wage controls. In July 1941, the President asked for selective controls on prices, but the bill did not pass in the Senate. After the war started, Congress approved the emergency Price Control Act in January 1942 authorizing selective controls.

In March, the President appointed a committee to consider the inflation problem. The Committee concluded that selective price controls would fail. They recommended controls on

the profits of banks and Federal Reserve banks. Blum (1967, v 3, p. 29)

¹³ Morgenthau was so pleased with his achievement that he concluded that the Treasury should have a larger role in monetary and financial policy. He advocated returning the Secretary to the Board of Governors. Blum (1967, v 3, p. 31)

rents, profits, wage rates and prices. Workers would have an incentive to increase by working more hours (at overtime rates). Corporate executives and professionals would be limited to \$50 thousand a year.¹⁴ Morgenthau opposed wage controls, but he favored limiting profits to 6% of invested capital. Blum (1965, v2, p. 314)

In April and July 1942, Roosevelt tried selective price controls. Prices rose at 4.8% annual rate in the first three-quarters. This was considered too high. The President requested authority to freeze prices and wages, warning Congress that, if the bill was not passed by October 1, he would issue an executive order. The Stabilization Act gave the President broad authority to control prices and wages. Justice James Byrnes resigned from the Supreme Court to administer the Office of Economic Stabilization. Controls remained until the fall of 1946, when congress repealed the authority it granted in 1942.¹⁵

The Federal Reserve in Wartime

In a prescient 1942 memo, the staff of the Philadelphia Reserve bank analyzed the problem faced by the Federal Reserve in wartime. Although the war was less than a year old, the bank's staff projected that, by the end of 1944, the government debt would reach \$200 billion. Banks would hold between \$85 and \$100 billion; bank reserves would have to increase by \$14 to \$18 billion to support the purchases. Memo, Supply of Reserve Funds, Board of Governors (Box 1452, October 8, 1942.) The memo concluded that open market purchases were the best method of supplying the reserves. (ibid., p. 7)

¹⁴ The Committee also recommended compulsory saving and lower tax exemptions to absorb purchasing power. In the Treasury, Undersecretary Randolph Paul and Harry White also favored compulsory savings. Blum (1967, v3, p. 43)

¹⁵ One modest policy benefit during the war was the end of the wasteful policy of purchasing Canadian silver and reduction of the purchase price for Mexican silver to 35 cents an ounce, slightly below the world market price. The reason for these changes was to release silver for wartime use in photography and armaments. The Treasury

With discount rates at 1/2% and open market rates on Treasury bills below 3/8%, banks preferred to sell bills rather than discount. The main wartime decision of the Federal Reserve was to keep this structure unchanged.

Pegged Rates

On April 30, 1942, the Federal Reserve announced its commitment to purchase all 90-day Treasury bills offered "on a discount basis at the rate no higher than 3/8% per annum." Board of Governors (Box 1441, April 30, 1942) Rates on other government securities were not explicitly fixed, but a pattern of rates was established and maintained throughout the war and beyond. One-year rates were kept at 7/8%. At the longest end, the rate on bonds with 25 or more years to maturity was held to a maximum of 2-1/2%, as noted earlier.

The announcement put maximum Treasury bill rates above the rates prevailing at the time. At the start of the year, the Treasury bill rate was 2/100%. It rose gradually to 1/4% by early 1942. At the long-term end, bond yields had increased from 2.0% in much of 1941 to 2.5% in January 1942. The announcement had no effect on the long-term yield.¹⁶

Eccles (1951, p. 350) explains the reasoning at the time. Variable rates would remove any belief that investors who delay purchases would get higher rates. This would limit speculation and fluctuations. Stable rates would also hold down the cost of financing the war.

continued to purchase domestically produced silver at 71.11 cents an ounce, as required by law. Blum (1967, v3, p. 12)

¹⁶ The Treasury's initial interest was not in an explicit peg. They asked the System to keep large excess reserves in the market, preferably by reducing reserve requirement ratios. When the Federal Reserve objected, the Treasury proposed the 3/8% bill rate. The FOMC approved the agreement unanimously. The agreement to support the "pattern of rates" was made in March. "The general market to be maintained on about the present curve of rates, but this does not mean special support for issues that may be out of line." Minutes FOMC (May 8, 1942, p. 3) the agreement provided for more flexibility than the Treasury allowed.

The Federal Reserve would create the amount of reserves required to finance the war at existing interest rates.¹⁷

Even granting that the Federal Reserve had no choice but to finance the war at fixed rates, it was a mistake to accept the prevailing structure of interest rates. That structure reflected market anticipations in April 1942 about future economic expansion and inflation. The positive slope of the yield curve, expressing rates by maturity of the debt, shows that the market anticipated that output, inflation and therefore interest rates would rise over time. Fixing rates for the duration of the war and beyond implied that rates should be the same for all maturities, or at least for maturities up to the anticipated removal of the peg. Further, the peg made all government securities equally liquid, or nearly so.

The rising yield curve created several problems. Two of the problems were discussed earlier. Banks could lend to their customers at rates below the rates on long-term debt. As debts matured, the price rose to a premium. Holders sold, took capital gains and purchased longer-term debt. Although the Treasury disliked both practices, it was unwilling to consider any changes in the structure of rates during the war.

The banks followed the same pattern, selling bills with yields of 3/8% to the Federal Reserve and buying longer maturities with higher yields. By 1945, the Federal Reserve had acquired almost all of the outstanding bills. "They ceased to be a market instrument." Eccles (1951, p. 359)

Since the Treasury chose to sell a relatively large volume of short-term debt and the market wanted more long-term debt, Federal Reserve purchases and sales were dictated by

¹⁷Although Eccles was fully aware of the inflationary consequences policy, and worked to reduce them, he nevertheless added the following: "[I]t would have been wrong for the government to pay increasing rates of interest for the use of the funds it helped to create." Eccles (1951, p. 350) The same statement could be made at any time about any supply of base money.

market demands. By fixing the structure of interest rates, it sacrificed its ability to change the composition of the debt held by the public.

The Treasury was unsympathetic to occasional, mild complaints about rates on maturities of one year or less. Initially it wanted a 1/4% rate on ninety day bills and pressed the Federal Reserve to keep excess reserves of New York banks at \$2 billion or more.¹⁸ In 1944 the Open Market committee began to shift its position. It asked the Treasury to increase bill rates to 1/2% by lengthening the term to four months. Minutes, FOMC (March 1, 1944, p. 5) Eccles opposed the request on the improbable grounds that large banks would use the additional revenue to absorb exchange charges on checks. Small banks would increase these charges, weakening the banking system. Board Minutes (March 8, 1944, p. 2)

Eccles and Morgenthau favored the rate structure throughout the war. Morgenthau wanted low interest rates. Eccles's supported him to lower financing costs and to prevent owners of Treasury securities from profiting from war finance. He opposed proposal to extend the maturity of the debt by selling more 3 to 4 year securities and fewer bills. This would increase the government's cost and "there was no reason why they [banks] should receive 1-1/4 or 1-1/2%. Board Minutes, Meeting of the Federal Advisory Council (December 4, 1944, p. 9) "[I]t was highly desirable that the proportion of outstanding Government debt in the form of bills and certificates (under one year) should continue." (ibid., p. 11) He regretted only that banks did not buy more short-term securities. It was a mistake, he thought, not to restrict them to these short-term issues in 1941. (ibid., p. 13) The banks had too much profit.¹⁹

¹⁸ All of the discussion is about Treasury finance. Private borrowing was small. From 1941 to 1945, non-government debt increased about \$1 billion. Eccles (1951, p. 375)

¹⁹ He felt that since the banks had a franchise from the Government to create money in the form of checks the banking system was vulnerable to the trend throughout the world to socialize the banking system." (ibid., p. 17)

With views of this kind firmly held by its Chairman, the Federal Reserve was unlikely to seek changes in interest rates during the war. Even if they had sought higher rates, they would have faced two obstacles. Morgenthau opposed any increase. And populists in Congress claimed the interest cost was too high. Congressman Patman (Texas), a member of the Banking Committee, denied that he wanted "printing press money". "[I]f money must be created on the government's credit, the taxpayers should not be compelled to pay interest on it." Board of Governors (Box 141, July 1942)²⁰

Patman's argument is based on the correct point that the option to create base money had been ceded to the banks. As long as the peg was in place, this remained true. Once the peg was removed, the Federal Reserve could change rates and, thereby, impose losses (or gains) to debt holders.

The Board and the banks understood the inflationary consequences of pegging rates. There was no opposition to the policy during the war. Those most concerned about inflation urged higher income tax rates, sales or expenditure taxes, or compulsory savings to absorb purchasing power. The only other proposal was to improve understanding of the problem and disseminate information more widely. To this end, Eccles urged the Reserve banks to expand their research staff and coordinate their efforts through a System committee.²¹ Board Minutes (March 2, 1943, pp. 2-7)

Open Market and Other Purchases

²⁰ The item contains a June 1942 clipping from a Dallas newspaper signed by Congressman Wright Patman.

²¹ Eccles's proposal called for a staff member at the Board "to direct the coordination of the work of the Board and the Federal Reserve Banks." This brought a quick response from Allan Sproul of New York opposing direction by the Board.

Meetings of the Open Market Committee had only routine business to accomplish. Changes in limits on the size of the account and authorizations to purchase and sell were approached. Much of the time was spent discussing problems associated with bond drives, banks playing the pattern of rates, the possibility of lending to banks instead of buying securities, or using repurchase agreements instead of discounts and outright purchases.

At first, banks purchased securities by reducing excess reserves. Banks held more than \$6.5 billion of excess reserves early in 1941. By December, when the U.S. entered the war, half of these excess reserves had been absorbed. The decline was most rapid in New York, slowest at country banks.²² By August, New York banks had all but eliminated their excess reserves. Minutes FOMC (August 8, 1942) To provide reserves, the Federal Reserve had removed all restrictions on the amount of short-term securities (bills and certificates) in the System Account by the end of 1942. Limits on the amount of longer-term securities remained.

Table 7-2 shows the rates of purchase in 1942 to 1945. By the end of the war, short-term government securities had become the principal asset. The pre-World War I problem of an insufficient portfolio to offset a gold inflow or, in the 1930s, excess reserves greater than the portfolio would not return. Financing World War II left the Federal Reserve balance sheet and the monetary base dominated by the open market portfolio. This result was very different than the founders' plan; the System had become an indirect source of government finance.

²² At the end of the war, excess reserves of all member banks were about \$1 billion. The low yield on Treasury bills and the small size of many country banks probably explains the sacrifice of pecuniary returns. The FOMC considered reducing the discount rate to encourage banks to hold fewer excess reserves, but did not act. Minutes Open Market Committee (August 3, 1942, pp. 14-17)

Table 2
Purchases of Government Securities, 1942-45

Year	Purchases	
	(Dollars)	(Percent)
	<u>billions</u>	
1942	3.9	174.5
1943	5.8	86.5
1944	7.3	63.3
1945	<u>5.4</u>	28.7
Total	22.4	

It soon became a direct source as well. On March 27, 1942, the Second War Powers Act authorized Federal Reserve Banks to acquire direct or guaranteed obligations of the United States by purchase from the Treasury. Eccles supported the bill enthusiastically. At one point, he suggested that the FOMC should view the change as a new method of distribution. "[I]nstead of having to...price an issue at a figure which would attract heavy over-subscriptions, the securities could be taken by the System and sold to the market as it could absorb them" Board Minutes (February 3, 1942, p. 4).

Other Board members accepted the change as a wartime measure needed to assure that Treasury issues would not fail to find buyers at established rates and to furnish funds for short periods around tax dates. Sproul, who was at the meeting, did not oppose the amendment. He criticized the Board's failure to discuss the subject with the Presidents before it was included in

the War Powers bill and Eccles's suggestion about using the Reserve banks to distribute government securities. He accepted the change as a temporary measure only to help around tax dates or in an emergency.²³

The change repealed part of the Banking Act of 1935 that prohibited the System from purchasing government securities except in the open market. A few months later, the Board told the Account Manager to combine direct purchases from the Treasury with open market purchases in the weekly statement. The War Powers Act expired six months after the war ended; initial authority for direct purchases expired in December 1944. The Board requested renewal for two more years. later, the authority was made permanent.

Despite the low interest rates on short-term debt, war finance greatly increased earnings of the Reserve banks. Net earnings rose from an average of \$11 million for 1937 to 1941 to more than \$92 million in 1945. The Federal Reserve had been relieved of payments to the U.S. Treasury after 1933 in exchange for the capital provided to establish the Federal Deposit Insurance Corporation.²⁴ By September 1942, Vice-Governor Ransom anticipated that the franchise tax would be reinstated if earnings rose. Board Minutes (September 15, 1942, p. 2) He was premature. In 1946 Congress imposed the tax equal to 90% of annual net earnings. The tax offset a substantial position of the interest payments on Treasury debt held by the Reserve banks.²⁵

²³ In the course of the discussion Eccles offered his interpretation of central bank independence. "[T]he kind of independence a central bank should have was an opportunity to express its views in connection with the determination of policy, and that after it had been heard it should not try to make its will prevail but should cooperate in carrying out the program agreed upon by the Government. ...[A]ny other kind of independence would be an impractical position which would result in the loss of authority and influence that it otherwise might have." board Minutes (February 3, 1942, p. 8)

²⁴ The System paid a modest amount to the Treasury from 1936 to 1946 for interest received on industrial loans. The largest annual payment was \$327 thousand.

²⁵ There were other lasting changes. The large increase in wartime debt and in trading led to changes in the market for government securities. The FOMC and the Board considered proposals to use the Reserve Banks instead of government dealers. The Reserve banks opposed suggestions to sell all government securities to the Reserve banks, who would market the debt to the public. Instead, the New York bank agreed to license government security

Reserve Requirements

The Treasury wanted lower reserve requirement to increase bank reserves and lower interest rates. With the bill rate at 3/8%, and income taxable at high wartime rates, banks outside New York and Chicago did not bother to invest in bills. They continued to hold excess reserves in 1942.

New York and Chicago banks bought bills. Their excess reserves fell rapidly. The Federal Reserve responded by reducing required reserve ratios at central reserve city banks on three steps, from 26% to 24% on August 19, 22% on September 14, and 20% on October 3. Together, the three reductions released \$1.2 billion, equivalent to a 6% increase in the monetary base at the time. The amount is 1/4% of the increase in the monetary base from other sources in 1942.

The three changes brought required reserve ratios for the two central reserve cities to equality with reserve city banks for the first time in Federal Reserve history. There were no further changes in reserve requirement ratios during the war.

The principal effects of the change was not on reserves or the monetary base but on the earnings of the banks and Reserve banks. With interest rates rigidly fixed, banks as a group determined the aggregate amount of reserves by buying or selling Treasury bills. Unlike an open market purchase, the change in reserve requirements released reserves but did not increase the Federal Reserve's holdings of Treasury bills. Further, New York and Chicago banks could crate

dealers. In exchange, the dealers agreed to provide detailed portfolio and transactions data. Minutes FOMC (February 29, 1944, pp. 6-8) Another change increased the roles of Reserve bank economists at FOMC. Until the war, only New York had sent an economist to the meeting. During the war, all banks were invited to adopt this practice.

more deposits and add more to earning assets per dollar of reserves or base money. Hence, the Reserve banks had fewer earnings, and the banks had more.²⁶

The Banking Act of 1935 did not permit the Board to change reserve requirements for only one class of banks. Congress approved the additional authority on July 7, 1942. The change was contentious within the System. The Federal Advisory Council opposed the change and, initially, so did the Board. Eccles described reduction as "a grave mistake. Board Minutes (February 16, 1942, pp. 2-3)²⁷ The only other wartime change in reserve requirements removed reserve requirements on war loan deposits.

Discount and Other Rates

Discount rates ranged from 1 to 1-1/2% when the war started. With some prodding from the Board, discount rates became uniform at 1% on April 11, 1942. No further changes were made in the basic discount rate until 1948. since the discount rate was above the rate on Treasury bills, the discount rate served as a penalty rate. As expected, discounts remained small through most of the war.

The relation of discount to open market rates explains the modest role of discounting as a source of war finance in World War II.

In addition to the basic discount rates, the Federal Reserve set a preferential for loans collateralized by short-term government securities and the rate on direct loans to military

²⁶ The Board did not fully understand the limited effect of the change. On April 9, 1944, it unanimously approved a letter to a Mississippi banker who had written to request a reduction in the reserve requirement ratio for country banks from 14% to 7%. The Board explained in part that reserves supplied through open market operations... go in the first instance directly to the particular banks needing them. Board Minutes (June 9, 1944, pp. 4-5) The letter then went on to cite other reasons, including the greater ease of monetary control after the war. The emphasis on the initial effect is puzzling since the effect would be transitory.

²⁷ By August some of these views changed. Governor McKee argued that, because of their low capital ratios and high collection charges, banks now wanted to hold more excess reserves. The reduction would release reserves to help the Treasury sell its debt. Board Minutes (August 5, 1942, p. 7)

contractors. Loans to individuals and corporations had been authorized in the Banking Act of 1933. This provision was used in wartime to assist in financing production of war materials. The amount outstanding on June and December reporting dates never exceeded \$35 million (in 1936). During World War II, the total outstanding was about \$10 million. Almost all of the loans were for 1 year or less. Board of Governors (1976, p. 492)

Analysis at the Philadelphia Reserve bank correctly noted that banks would obtain reserves at lowest cost. With discount rates above Treasury bill rates, discounting would remain small. Preferential rates for loans collateralized by government securities would not affect the volume of borrowing, only the collateral used to borrow and the maturity of bank held debt would change. Board of Governors (Box 1452, October 8, 1942, pp. 7-10)

The memo is critical of preferential discount rates on other grounds also. The memo reveals that the real bills doctrine had at last been rejected. "The experience with preferential rates in the last war and the postwar period on the whole was not satisfactory. The general conclusion of Reserve officials and analysts is that the particular paper used to secure an advance has no relation at all that the bank will make of the funds it secures." (ibid., p. 9)

Despite this correct analysis, the Board adopted a preferential discount rate of 1/2% for discounts secured by short-term governments. The main argument for the preferential rate was that banks would be encouraged to hold more short-term bills instead of higher yielding bonds. George Harrison said that it would be easier to eliminate the preferential rate, when it was time to reverse policy, than to increase the general discount rate. Board Minutes (October 7, 1942, p. 9)²⁸

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In June 1945, Sproul proposed an increase to 3/4%. All the Presidents concurred, but the rate remained at 1/2%. Minutes, FOMC (June 20, 1945, p. 9) The following month, the New York bank directors asked to eliminate the preferential discount rate. The Treasury was unwilling, so the rate remained. Minutes, New York Board (July 19, 1945, p. 20)

New York set the rate on direct loans to war contractors at 4% to 6%. The Board wanted the rate reduced to 2-1/2% to 4%. The compromise was to lower the rate schedule to 4% to 5%. Minutes, New York Directors (May 7 and June 4, 1942)

There was occasional grumbling about the Treasury tax and interest rate policies. When the opportunity arose, members of the Council argued for higher rates on short-term securities to get banks to hold more of them. The most strenuous plea came from a member who argued that banks could not be expected to finance the war if they were "bled white' through the maintenance of low interest rates and application of high taxes." Board Minutes (April 9, 1942, p. 13)²⁹

Selective Credit Controls

Unable to control money or interest rates the Board turned first to controls on consumer credit and later to controls on real estate, stock market, and other forms of lending and

²⁸ Harrison, former Governor of the New York bank, was a member of the Federal Advisory Council. His memory of 1919-20 was faulty. The Treasury was willing to increase the general discount rate before it was willing to raise the preferential rate. See Chapter 3.

²⁹ Between 1941 and 1945, member bank income after taxes rose from \$390 million to \$788 million, about 50% increase in real terms. (Since prices were controlled, the price index is biased downward. Using the 1945 price index, the gain is 60%; using 1946, after controls were removed, the gain was 43%). To help the Treasury sell debt to the public, the Board discussed lowering the maximum rate that commercial banks could pay on time deposits from 2-1/2% to 1-1/2%. Eccles, Ransom, and Lee Crowley (Chairman of FDIA) favored the change, but it was not

borrowing. Some of these actions were taken to show that it was "doing something" to control inflation, some in the belief that it had to use existing authority before Congress would grant additional powers, and some at the urging of other agencies.

The Board adopted Regulation W to reduce the demand for durable goods. The original order required a 20% down payment and limited the term of the loan to 18 months. Wartime revisions and amendments extended the range of goods covered, raised the required down payment, and reduced the maximum term.³⁰ Experience with the regulation established once again that efforts to regulate a complex economy produce unforeseen consequences leading to both extensions and exclusions from earlier regulations.³¹ Since credit is fungible, restrictions on one type of credit shifted demand to less regulated forms and encouraged innovation to circumvent the regulation.³²

By 1943, the Board began discussion of extending credit regulation to include real estate securities and commodities. Eccles explained to the Reserve bank Presidents that "the Board was not seeking the authority...but was willing to accept it." Board Minutes (June 29, 1943, p. 21) Eccles preferred to increase taxes and forego additional regulation. he accepted the new responsibility to keep credit control under the Reserve System. "Some of the Presidents indicated agreement with Chairman Eccles's attitude and expressed doubt as to the ability of any agency successfully to discharge the responsibility." (ibid, p. 22)

done. One reason is that banks feared that they would lose saving deposits to non-bank thrift institutions, a problem that would return in the 1960s.

³⁰ By the spring of 1942, the list included new and used goods, shoes, hats and haberdashery. Monthly charge accounts were covered also. The regulations became so detailed that the Board agreed to exempt the boy Scouts and railroad employees required to use a precision watch. Board Minutes (June 29, 1942, p. 9; august 12, 1942, p. 1)

³¹ The Board had to decide such weighty matters as: should reupholstered furniture be treated like new furniture? Should loans for funeral expenses be exempted? Medical and dental expenses? Minutes, Board Meeting (August 12, 1942, p. 1)

³² Careful studies of the effect of selective controls on housing and durable goods find no evidence of their effectiveness. For housing, see Kane (1977) and Meltzer (1974). For durables, see Hamburger and Zwick (1977, and 1979). These studies apply to later periods, but their findings are as applicable to the war. A principal finding is

Enforcement created difficulties also. The Reserve banks chose the degree of enforcement, so it differed across the country. Vice Chairman Ransom complained at one point that the Board had chosen a middle course between strict and lax enforcement. Strict enforcement "would antagonize the people whose support was necessary", and lax enforcement would foster the "impression that the System did not care whether the provisions of the regulation were observed." Board Minutes (June 29, 1943, p. 23)

Executive Order 9112, on March 26, 1942, appointed the Reserve banks as fiscal agents for financing war production. In practice this meant that the Reserve banks made or guaranteed loans for war contractors at rates fixed by the Board. These regulations, too, required frequent revision, extension and modification of terms, although the volume of loans remained small.

Common stock prices have fallen, on average, from 1939 to 1941 by more than 20%. Stock prices rose 20% in 1942 but remained below their 1938 value. Ibbotson and Sinquefeld (1989) In March 1943 the Board began discussion of increases in margin requirements on securities. The volume of trading had increased to about one million shares a day, making some of the staff uneasy.

the Board had issued Regulations T and V to set margin requirements as authorized by the 1934 Securities Exchange Act. Some staff members urged a pre-emptive strike against speculation. The Board decided not to act. Board Minutes (March 15, 1943, pp. 2-4) Price continued to rise. By the end of 1944, the stock price index was almost 40% above the 1936 peak.

On February 5, 1945, margin requirements were raised to 50%. Eccles argued that there was no evidence of excessive use of credit in the stock market, but the Board approved the

that there is a clear effect on the form in which credit is extended but no evidence of an effect on the allocation of resources.

increase to show that they were concerned about future inflation. Board Minutes (February 2, 1945, pp. 3-9)

Three weeks later, Eccles reported that the Economic Stabilization Board had suggested that margin requirements should be 100%. Eccles saw no need for the change, but Chairman Vinson of the Stabilization Board thought that congress would not authorize new powers until existing powers had been used. Eccles suggested that Vinson send a letter to the Federal Reserve asking for the increase in margin requirements. Board Minutes (February 23, 1945, pp. 7-8) The letter was sent, but the Board delayed a decision.

On the Board, the leading proponent of higher margin requirements was Governor Ernest Draper.³³ His main argument was the danger of potential inflation, a throwback to the real bills views that dominated the Board's thinking in the 1920s. Draper proposed increasing margin requirements first to 70% and then to 100%.

Eccles may have remembered what he learned from Lauchlin Currie when he wrote his first memo to Roosevelt. He told the Board that he did not believe that higher margin requirements would have much effect on inflation, but he favored the increase as part of the Stabilization Board's program. Higher tax rates, he believed, would be most effective, but congress would not approve new taxes or other new powers until they had used the power they had.

The Board approved a motion to let Eccles tell the Stabilization Board that the System favored an increase to 70%; the vote was 5 to 13. Governor McKee opposed because the government's anti-inflation program was incomplete, and not much credit had been used for purchasing and carrying securities.³⁴ Board Minutes (May 3, 1945, pp. 7-8)

³³ Draper joined the Board on March 30, 1938 and served till September 1, 1950.

³⁴ John K. McKee was appointed to the FOMC in February 1936. He served nearly ten years, leaving in April 1946.

The stabilization plan included more than tinkering with margin requirements. The Stabilization Board favored an increase in the capital gains tax rate, an extension (from six months to three years) of the minimum holding period for long-term capital gains, and controls on mortgage credit.

The Federal Advisory Council agreed unanimously that speculation in real estate and stocks was of concern. "Farm bonds are about where they were in 1913."... There has been a good deal of speculation in the larger apartment buildings and hotels and in some kinds of commercial buildings, but even there the prices are below the cost of reproduction. Stock prices are not above the 1936-37 levels, in spite of the fact that in the interim most corporations have added very materially to their assets." Board Minutes (May 14, 1945, p. 2)

The Council favored reduction in military spending to reflect the end of the European war and the release of equipment to transfer. Eccles expressed strong agreement, but he did not want the Council to issue a statement calling for reductions.

Many people in the government wanted stricter controls on credit. "[T]he Board may be faced with the problem of accepting the responsibility or seeing it assigned to some other Federal agency or agencies." (ibid., p. 5)

By late June, the Economic Stabilization Board agreed to recommend credit controls on real estate, higher margin requirements on stock transactions, and a longer holding period for capital gains. An increase in the capital gains tax rate was possible also. New construction would probably be exempt from real estate controls. Eccles believed that the credit controls would be ineffective and should not be used unless Congress passed a tax increase. Board Minutes (June 21, 1945, pp. 18-19)

The Board voted to increase margin requirements to 75% effective July 5. The new requirement applied to new purchases. However, the Board required that any cash from security sales be used to bring the margin on the whole portfolio toward the new requirements before it could be distributed to the owner. Governor McKee again opposed the increase.

The new requirements were unpopular with the public, many bankers and securities dealers. In September, the Federal Advisory Council urged the Board to consider returning to a 50% margin. Eccles thought it was premature to consider a reduction. Effective January 2, 1946, the Board increased margin requirement to 100%--all cash transactions.

Other Wartime Changes

Rapid growth of the Federal Reserve's portfolio and the monetary base, and a small gold outflow, lowered the System's gold reserve ratio toward the legal limit--40% of notes in circulation and 35% of deposits at Federal Reserve banks. By mid-1944, the reserve ratio had fallen to 55% (from 91% in November 1941).

FOMC minutes first mention the problem in May 1944. The Committee voted to prevent any of the Reserve banks from going below 45%. Members agreed to buy Treasury bills from the Reserve banks with low ratios and to change the allocation of open market purchases.

Minutes FOMC (May 4, 1944, pp. 14-15)

The gold reserve ratio continued to fall. In July, the Executive Committee considered asking Congress to reduce the ratio to a uniform 25% against notes and deposits. Eccles favored eliminating the requirement, but the Committee thought the public was not ready to remove all ties to gold. The Executive Committee voted to put off any decision until after the election.

Legislation was introduced in January, and passed in June, lowering the gold reserve requirement to 25% and extending the "temporary" authority first granted in 1932, to use government securities as collateral for Federal Reserve notes.³⁵ The FOMC responded by lowering to 35% the reserve ratio at which the individual Reserve banks would cease to participate in open market purchases. The System ratio, 45% at the time, reflected New York and Chicago. Table 7-3 shows that even after the legal change, several of the banks were far below the gold requirement.

Table 7-3
Gold Reserve Ratios, June 1945
(in percent)

Bank	Ratio	Bank	Ratio
Boston	24.9	Chicago	65.3
New York	50.1	St. Louis	28.8
Philadelphia	25.4	Minneapolis	22.9
Cleveland	32.6	Kansas City	31.0
Richmond	38.2	Dallas	22.0
Atlanta	44.9	San Francisco	59.4

Source: Minutes, Executive Committee, June 20, 1945, p. 5.

³⁵ When the bill was introduced, Senator Thomas wrote asking the Board to append his bill authorizing all banks and other financial institutions to carry government obligations at par value. It declined. Board Minutes (January 26,

To supplement price controls the government ordered coupon rationing of gasoline, food, shoes and other consumer goods. Purchasers presented coupons along with each to complete transactions. Processing ration coupons became the responsibility of commercial banks and Federal Reserve banks beginning in January 1943.

The Army decided early in 1942 to move Japanese and Nisei living in the western states into concentration camps. After the administration approved the order, Japanese and Nisei had to leave their homes and businesses. The Treasury had responsibility for protecting the property. The Federal Reserve banks administered the program for the Treasury. Blum (1967, v 3, pp. 3-4)

Postwar Planning

Planning postwar economic policies began long before the war ended. Interwar experience convinced many businessmen, economists, and others that it would be unwise and probably unacceptable to return to the high unemployment rates and instability that characterized the interwar period.

Keynes's work gave an intellectual basis for these beliefs. The General Theory (1936) seemed to provide an economic rationale for activist government policies.³⁶ His plan for international monetary cooperation, prepared during the war, was a major contribution to the development of the postwar Bretton Woods institutions, but he had made the case for international monetary reform, based on a more flexible gold standard in his Treatise on Money (1930).

1945, p. 2).

Domestic Plans

In the spring of 1943, the System began to study postwar reconversion. One set of issues was transitional. For example, when military contracts were cancelled, small and medium-sized firms would need loans to convert to peacetime production. Regulation V loans to finance military procurement would end. The System appointed a committee to study transitional lending. Board Minutes (April 29, 1943, pp 5-7; June 20, 1943, pp. 5-7)

In May 1944, the Board authorized a series of studies of postwar policies. Board of Governors (August 1945). A sample of the ideas gives the flavor of many economists' opinions at the time.

The Board's Economic Adviser, E.A. Goldenweiser, recommended the "continuation of wage and price controls, of rationing and allocation, as well as licensing of exports... [as] a prime condition of a successful transition from a war to a peace economy." (ibid, v. 1, p. 3) Goldenweiser proposed that the government offer employment to any unemployed worker to sustain consumption. He favored keeping selective credit controls, margin requirements, and "all the powers over the general volume and cost of money that they have had in the past, and they should have additional authority over member bank reserves." (p. 15) The "additional authority" is almost certainly a reference to the ceiling on reserve requirements.

The main concern at which these policies aimed was unemployment. The second study in the series warned of another 1929 collapse and unemployment of 6 to 8 million during reconversion to peacetime. (ibid., v. 1, pp. 18-49)³⁷

³⁶ In fact, Keynes (1936) says very little about activist policies. Keynes's support for such policies antedate his book and is more explicit in his policy tracts. See Meltzer (1988)

³⁷ There is nothing in the studies about the need to restore monetary control by eliminating the interest rate peg. Volume 8, devoted to Federal Reserve policy is given over mainly to an historical review of past options.

Eccles and many others agreed that credit, price and wage control should be lifted slowly. Eccles believed that opportunities to control inflation was lost with repeal of the excise profits tax in 1945, termination of the War Labor Board, and failure to increase the capital gains tax at the end of the war. Board Minutes (November 19, 1945, pp. 10-11)

Price and wage controls distorted allocation, caused many low priced goods to disappear, and encouraged producers to lower quality as a substitute for raising prices. Similarly, wage controls encouraged both labor "hoarding" and shortages and the substitution of non-cash benefits for cash payments.³⁸ Eccles believed that controls could be removed after firms converted from peace to war production. Neither he, nor his staff, recognized that correct price signals would speed the transition and reduce waste.³⁹

Fortunately, Congress did not concur. It responded to the general dissatisfaction with wartime controls rationing, and black markets by removing most controls by the fall of 1946. The immediate effect in the third quarter was a short-lived surge in reported price index. Most of this surge represented price increases that had been deferred or hidden. In the fourth quarter, the GNP deflator rose at a 6% annual rate, after at a 60% rate in the third quarter.⁴⁰

Currie, on the White House staff, and other Keynesian economists at Commerce, Treasury, and other agencies believed that a severe postwar depression was likely. They bolstered their argument by showing that private spending would not expand enough to replace

³⁸ World War II wage controls, and tax deductibility, produced a long-term inefficiency--health care benefits, paid by employers who deduct the cost. This distortion limits opportunities for individual workers or families to choose the health insurance they prefer.

³⁹ Eccles had a mixed view of price and wage controls. He supported the call for controls in 1942 but he saw them as, at best, a supplement to taxation that removed private command of resources. At the same time, he seems aware of the conflicts set off by controls--whether costs could be controlled as effectively, or more effectively, than prices, problems such as setting rents, concerns about excess profits, etc. See Eccles (1951, pp. 370-72) Morgenthau favored controls on prices, but not on wages. He thought that labor was not a commodity so wages should not be treated like other prices.

⁴⁰ Price controls expired in June 1946. Congress voted for rapid decontrol, but President Truman vetoed the bill, so controls ended. In early August, Congress renewed controls (but not food subsidies). This was followed almost immediately by meat shortages. Almost all controls were abolished by Executive Order on November 11, 1946.

military spending. Much of the shortfall was a consumption "gap"--the difference between predicted consumption spending and spending consistent with full employment. And, because the consumption gap would be large, private investment would remain low and unemployment high.⁴¹

To smooth postwar readjustment, Keynesian economists urged gradual release of materials from military use, beginning in 1944, but the military opposed, and nothing was done. In April 1945, with the European war ended, interest in peacetime conversion rose. Keynesian economists wanted to shift a large share of government spending from military to civilian uses. The National Resources Planning Board advocated a comprehensive social welfare program, pollution abatement, public transport systems, and other government programs.

Nothing in Keynesian analysis favored government spending instead of tax reduction as a way for government to influence the transition from war to peace. Largely as a matter of belief, administration economists and their outside advisers⁴² favored government spending.

System economists were divided. At a meeting of the Board and the Presidents to discuss the Board's studies of postwar problems, John H. Williams was highly critical of a study by Richard Musgrave, a member of the Board's staff. The study showed that the budget would not be balanced if government spending remained low. The argument, based on a Keynesian model, relied on the government to absorb excess saving. Williams countered that Musgrave had neglected the crowding out of private spending. Some government spending makes "private business work better, but when you get up to this level, you are bound to ask what these

⁴¹ This section is based on Jones (1972).

⁴² Principal among them were Alvin Hansen of Harvard and Paul Samuelson. Others such as Herbert Stein preferred lower taxes. Stein's influential essay became the basis for policies advocated by the Committee for Economic Development, a business sponsored group.

expenditures are doing to the private economy. It is inevitable that it will take its place to an increasing degree." Board Minutes (March 2, 1945, p. 5)⁴³

President Roosevelt adopted part of the Keynesian program. His last state of the union message to Congress mentioned a goal of 60 million postwar jobs. At the time, there were 55 million people in the civilian labor force and an additional 11.4 million in the armed forces, but some of these were women who were expected to leave the labor force after the war. The statement was seen to be, a loose commitment to "full employment."

Roosevelt's statement was soon followed by a proposed Full Employment Act that finally became the Employment Act of 1946.⁴⁴ The original proposal recognized a person's right to employment and the government's responsibility to provide full employment. To achieve this end, the proposal called for some national planning; a National Production and Employment Budget would forecast the state of the economy and the level of employment and the level of output consistent with full employment. The President would recommend actions needed to close any "gap" between expected and full employment.

Discussion of the bill shows the large shift in opinion that had occurred in a decade. The bill was co-sponsored by three Republican Senators and had more than one hundred sponsors in the House. The last included Congresswoman Clare Booth Luce, a prominent conservative. Few in Congress criticized the commitment to an expanding economy or the idea that the government could affect the economy. The right to a job and a commitment to full employment were more contentious. Opponents pointed to the risk of inflation, the possibility of continuous

⁴³ Williams added. Economists "are interested in large and even growing public expenditures. I think there is a lot to be looked into on that point before we accept it as a guide for postwar policy." Board Minutes (March 2, 1945, p. 6)

⁴⁴ See Murray (1945). The standard reference to the Act is Bailey (1950). The bill was pushed by Leon Keyserling, one of the first members of the Council of Economic Advisers and its second chairman. Keyserling had been a legislative assistant to Senator Robert Wagner of New York, one of the sponsors. Keyserling was a principal developer of "the Fair Deal", President Truman's program. See Brazelton (1997)

budget deficits, and the possible use of the Act to promote "national planning," price controls, or other restrictions on freedom.

The Act that emerged was a compromise, but it gave more to the opponents than the original proponents.⁴⁵ Gone were the commitment to full employment and mandatory computation of the 'gap". This legislation called only for "maximum employment, production, and purchasing power," a phrase that was undefined, therefore, open to whatever interpretation an administration or Congress might put on it. Gone, also, was the commitment to forecasts of economic activity.⁴⁶

The Act created a council of Economic Advisers in the Office of the President to help the President decide on economic policy. The intention may have been to keep the Council as a professional body, free of politics. In practice, the Council, as a staff agency, has a weaker position than many of the line agencies representing business, labor, environmental, educational, consumer, and other interest groups. The role of the council has varied with the President's interest in receiving its advice and the relation of the Council's Chairman to the President.⁴⁷

The Board's reaction was generally positive and supportive of the original bill, S. 380. Woodlief Thomas, assistant director of research at the Board, read the bill as an attempt to "legislate the Keynes-Eccles-Hansen-Beveridge theory of economic stabilization." Memo Thomas to Ransom Board of Governors (Box 198, February 12 and 4, 1945) Thomas saw enactment of a particular economic theory as a danger, but the Act did not do that. The bill was "a statement of goals, not an outline of policies" (ibid.)

⁴⁵ For a contrary view, see Keyserling (1972). According to Keyserling, the Act allowed economic planning but was not carried out because of the unwillingness of government (and Keynesian economists) to focus on income distribution.

⁴⁶ Forecasters' failure to foresee rapid postwar recovery instead of a return to high unemployment did not strengthen their case. See Stein (1990, p. 202) On the inaccuracy of economic forecasts, see Meltzer (1987).

Eccles had favored countercyclical use of fiscal policy since the early 1930s. That was the reason he came to Washington. In a letter to Senator Wagner, he accepted the objectives of the bill but emphasized the primary role of the private sector in providing employment. He urged Wagner to substitute for full employment "maintaining economic stability at as high a level of

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Planning for postwar international monetary cooperation began before the United States entered the war. Section 7 of the lend-lease agreement, under which Britain and others obtained military supplies and equipment on "credit", provided that the United States could waive postwar

⁴⁷ The Reagan administration considered abolishing the Council because of differences between one of its chairman and other presidential advisers over budget deficits. Since the Council was authorized in the Employment Act,

repayment if the British agreed to eliminate trade "discrimination" and reduce tariffs.

Discrimination was not further defined, but the objective it expressed included elimination of the prewar system of imperial preference that bound Britain to its empire and favored British exports.

Avoidance of bilateral agreements and imperial preferences was a major goal of the State Department. Secretary Cordell Hull favored a multilateral system centered around "most favored nation" clauses that gave each dignitary the lowest tariff rate agreed with any other. The British accepted section 7 out of wartime desperation. They did not like it. Presnell (1997)

In the course of negotiations leading to the lend-lease agreement, Keynes broadened the terms of reference to include finance and exchange rates. The two Treasuries then took the lead in negotiations, shifting emphases from trade issues to finance.

By September 1941, Keynes had developed a proposal for an international currency union as the Treasury's part of the British contribution to discussion of postwar arrangements. With minor adjustments, Keynes's proposal became the British government proposal in April 1943 when formal bilateral discussions began. Meltzer (1988, pp. 236-37)

Keynes visited the United States in the fall of 1941 and possibly discussed informally the planning he had done. In December, a week after the United States entered the war, Morgenthau asked Harry Dexter White to "prepare a memorandum on the establishment of an inter-Allied stabilization fund" as the basis for postwar international monetary arrangements. Blum (1967, v. 3, pp. 228-29)⁴⁸ Morgenthau's diary suggests that he had no more than a vague idea about expanding the prewar Tripartite Pact to avoid competitive devaluation.⁴⁹

démission required legislation, so the Administration chose not to raise the issue.

⁴⁸ White was Director of Monetary Research and later Assistant Secretary of the Treasury. The U.S. proposal that became the basis of the International Monetary Fund is often referred to as the White Plan. Keynes's plan called for

Keynes (1924) developed the basic problem. Each country acting alone can achieve either stable prices or a fixed exchange rate but not both. To achieve both, there must be international cooperation or agreement. The gold standard is one type of agreement; each country accepts the rules of the standard, defining currency value in grams of gold, agreeing to buy and sell gold at a fixed price, and allowing money and prices to rise or fall with gold movements. If member countries follow these rules, exchange rates remain fixed and inflation or deflation is limited to relatively small, self-reversing changes around zero.

With the growth of industrialization, labor unions, and the spread of the voting franchise, countries were less willing to follow gold standard rules in the 1920. Gold standard rules required pro-cyclical policies--allowing gold inflows to inflate the economy during expansions and deflate the economy during contractions of output. There had many earlier proposals to eliminate or reduce pro-cyclicality.

Keynes was particularly interested in preventing a return of Britain's problems in the interwar period when efforts to expand the economy by lowering interest rates were followed by a current account deficit and an outflow of gold that reduced the money stock and forced contraction and deflation.⁵⁰

Both Keynes and White proposed a middle way between fixed and fluctuating rates. Exchange rates would be fixed but adjustable; countries with balance of payments surplus (like

a clearing union to adjust current account balances of debtors and creditors. White envisaged a permanent fund that could lend to debtor countries. White's reason prevailed.

⁴⁹ Blum (1967, v3, p. 228) speaks of 'a kind of New Deal for a new world' and avoiding past difficulties caused by 'private bankers, pursuing selfish ends.' (ibid., p. 229). Gardner (1956) is a comprehensive history of the origins of the Fund. Several papers in Bordo and Eichengreen (1993) are a useful supplement. I limit my discussion principally to Treasury and Federal Reserve responses and actions.

⁵⁰ Keynes's dislike of the classical gold standard and, what he called *laissez-faire*, were no longer heretical in Britain by the 1940s. The established view was that the maldistribution of gold had made the system untenable. The dominant view was that Britain should manage domestic policy to maintain full employment. Ikenberry (1993), Presnell (1997). Fluctuating rates were anathema also to bankers and policymakers. An influential study by Nurkse (1944) concluded that fluctuating exchange rates caused destabilizing speculation in exchange rates and the prices of

the United States in the 1920s) would lend to countries with deficits (like Britain in the 1920s). Countries could pursue the domestic policies of their choice, a main issue for Britain; eventually there was to be multilateral clearing and current account convertibility, a main aim of the United States.

One of the perceived benefits of the new arrangement was that deficit countries would avoid contractions and deflation. By avoiding contraction, they would maintain imports from the rest of the world, instead of sending a contractive influence to these countries. Thus, all countries--both deficit and surplus countries--would benefit from the new arrangements.⁵¹

Both Keynes and White soon limited their proposals to trade financing and current account deficits. To the extent that lending and borrowing on capital account was discussed, it proposed bank for reconstruction and development, later called The World Bank.

White explained to the Board that the bank would be responsible for capital transfers.⁵² The more difficult problems were financing current account balance and preventing countries from pursuing aggressive trade policies at other's expense. Another task of the Fund was to prevent multiple currency practices, discriminatory bilateral arrangements, and competitive devaluation.

White dismissed the gold standard. "There isn't the slightest chance of getting other countries to return to the gold standard." White to the Board and Reserve Bank Presidents

traded commodities. Nurkse's agreement and evidence as later challenged by Friedman (1953), but Nurkse's view remains widely held by bankers and governments.

⁵¹ This benefit could be achieved if all fluctuations were temporary, or cyclical, so that could borrow in recessions and repay in recoveries, but the authors did not specify how to distinguish cyclical or temporary changes from permanent changes. Countries were allowed to devalue up to 10% without approval by the fund, and by more than 10% with prior approval. Devaluation was to be used to adjust to a "fundamental" disequilibrium. The fund was never able to define "fundamental" or to enforce the requirement that countries could not devalue by more than 10% without agreement.

⁵² "Many of the loans will be risky and there will be some losses. That is one of the reasons why we insisted that the Bank be an international bank rather than to take the risks by ourselves. We felt that the benefits would be world-wide and that other countries should bear part of the risk." White to the Board and Reserve Bank Presidents, Board Minutes (March 2, 1945, p. 17)

(March 2, 1945, p. 20) The only chance for agreement was to combine stability of exchange rates with the flexibility to change them with the Fund's approval. Others agreed to this mixture of stability and flexibility when it was joined to an agreement that gave each country some assurance that it could borrow in an emergency. Adjustment may take 2, 3, 5 or even 10 years. "We must give them time to balance their payments in such a way that they will not hurt the rest of the world." (ibid., p. 25)

The Board began to consider the Keynes and White plans in May-June 1943. Their first concern was the amount of new bank reserves that would be created. Keynes's proposals called for the elimination of all restrictions on current account financing. His plan required an expansion of \$25 to \$30 billion of base money close to the total amount of base money then outstanding. Board members wanted either power to control the domestic effect of a large increase or a limit on the size of the increase. Board Minutes (May 29 and June 1, 1943).⁵³ The Board also favored a provision, suggested by the Canadian representatives, that, if the amount of foreign exchange balances at the Fund increased beyond a pre-set limit, the member would gain voting power. (ibid., June 1, 1943, p. 4) This would permit a surplus country to eventually limit borrowing and expansion of its money stock. This proposal was unacceptable to the British.

As the plan developed, the Board's discussion of substantive issues faded into the background. Board staff participated actively in meetings organized by the Treasury, but few of the issues they raised came before the Board. Alternative proposals, and objections to the plan by leading bankers and by Sproul were put aside and never considered on their merits by the Board.

The Board's move toward acceptance of the proposals that became the Bretton Woods Agreement is remarkable in its failure to discuss and agree on substance. This was not its

intention when the subject was first discussed. On March 7, 1944, Governor Szymczak proposed that the Board approve the joint statement of a committee of international experts provided the Board would participate in the selection and control of the U.S. representative to the Fund. Board Minutes (March 7, 1944, p. 1) No action was taken. The following day, at the meeting of the Federal Advisory Council with the Board, the Council supported the principal of exchange rate stabilization under an international agency, but no details were mentioned.⁵⁴

A week later, governor Szymczak asked whether the Board wanted to suggest changes in the plan.⁵⁵ There was "general agreement...that if a plan were to come into existence it would not be possible for the Board to propose any fundamental changes" Board Minutes (March 13, 1944, p. 2) Discussion brought out that the proposed fund would be limited to commercial balances. Capital movements would be the responsibility of another entity. The only decision was that a majority wanted "a voice in the selection of the American member of the board of directors." (ibid., p. 3)

No decisions were taken. "Reference was made to the fact that discussion of the plan up to this point had been strictly on a staff level and that none of the interested heads of agencies of the Government had in any way committed himself to what had been done." (ibid, p. 4) The Board agreed to wait and not take a position until other agencies did. Goldenweiser, one of the Board's representatives at the technical discussions, was instructed to say that the Board's representatives did not speak for the Board.

⁵³ The White Plan and the agreement limited the U.S. obligation to \$2.5 billion.

⁵⁴ Menn S. Szymczak, who served from 1933 to 1961, was a professor of business administration at DePaul University in Chicago when he was appointed to the Board. He had been active in Chicago area banking and had served also as comptroller of the city of Chicago. He was the Board's expert on international economics and participated in some of the Treasury meetings preparatory to the Bretton Woods conference. Later, he served as director in charge of rehabilitation of the German economy, on leave from the Board. His long service is explained by appointment to a 12-year term in 1936 followed by a 14-year term beginning in 1948. He resigned six months before his term expired. Katz (1992)

The Treasury was now moving toward agreement on the plan. Morgenthau called a meeting in mid-April to discuss next steps. Eccles reported to the Board that Morgenthau had asked whether the Board would make a commitment to the plan. Eccles said no, the discussions had been at the staff level and "it was understood that no commitments had been made or were expected at this time. I said it had been my understanding that the principals would meet and consider the report of the technicians, after which there would be an opportunity to discuss the matter, and that no such meeting had been called." Board Minutes (April 18, 1944, p. 2) White, who was present did not agree. The conference "would not go outside of the statement of principles." (ibid., p. 1)⁵⁶ The Board hesitated, neither endorsing nor opposing the plan.⁵⁷ Instead they adopted a statement saying that

"[N]o governments are committed by action of the technicians. It now becomes necessary for the executive branch of the Government to consider the proposal of the technical experts and to determine what course of action in this matter should be undertaken and ultimately what program should be recommended to Congress." Board Minutes (April 24, 1944, p. 2)

The Board voted 5-1 to approve the statement, McKee abstained because he thought the statement had no value.

Late in May, the President announced that an international conference would be held beginning July 1 at Bretton Woods, New Hampshire. Governor Szymczak told the Board that on June 15, technical experts from 12 countries would meet to prepare the conference agenda.

⁵⁵ Before the meeting, each of the members received a copy of the Joint Statement of Experts, a syntheses of the Keynes and White plans, and a statement of the positions taken by the Board's staff in the discussions.

⁵⁶ Goldenweiser was present also. He told Eccles that agreement with the statement of principles meant a commitment to a major part of the plan.

⁵⁷ This was not true of the New York bank. Sproul was opposed, and his vice-president John H. Williams had made several public statements opposition. Eccles agreed to suggest to Sproul that Williams desist.

Eccles, who was not present at the Board meeting, had agreed to be a member of the U.S. delegation. Some of the Board staff would serve as members of the Conference staff.⁵⁸

The Board agreed that the main issue to be decided was how the Board wished to counsel Eccles as their representative. Board Minutes (May 31, 1944, p. 3) Governor McKee asked for a meeting with the Reserve Bank Presidents to hear objections from President Sproul and to discuss the plans "point by point." (ibid., p. 3)

The meeting was held on June 6, but the "point by point" discussion did not occur. The reason was that Eccles was now a member of the delegation and the conference was only a few weeks away. Eccles was away, so the meeting was chaired by Vice Chairman Ransom.

Ransom opened the meeting by limiting discussion "to the question of how to make the international fund serve the best interests of this country, including the Federal Reserve System, rather than the question whether the international fund should be created or some other mechanism devised." Board Minutes (June 6, 1944, pp. 2-3) Governor Szymczak proposed removing additional topics from discussion. The meeting should discuss issues that had not yet been decided at the technical level, how the proposed arrangement would affect the U.S. economy and Federal Reserve operations, and how the U.S. contribution to the fund should be raised. This was entirely opposite from the position taken a few months earlier, but it largely prevailed.

The most substantive event came after Goldenweiser distributed copies of the plan agreed to by U.S., British and Russia experts. The opening paragraph said in part:

"No government is formally committed. In practice, the governments are committed, except that congress can refuse to ratify." Board Minutes (June 6, 1944, p. 4).⁵⁹

⁵⁸ Szymczak reported that White had agreed that John H. Williams could come as an assistant to Eccles if Eccles wished. He made no demands at the time. Later, he insisted that Williams could participate only if he accepted the

Sproul responded that "the plan as indicated is the wrong way to approach the problem" (ibid, p. 8). He recommended that the conference concentrate on the immediate postwar problem of providing borrowing and lending arrangements for the transition from war to peace. Ransom replied that the international conference would not consider alternative proposals. It would be limited to discussion of the prepared joint statement. Sproul's reply summarized what had happened. He was now faced with the outcome of:

"the procedure which had been followed of discussions at the technical level, with no commitments...leading inevitably to the position where, without having expressed its views or having been able to develop its point of view, the System would be committed to a program on which it was stated there was to be no variation except as to details." (ibid, p. 9).

Sproul threatened to oppose the program when it came before Congress.⁶⁰

Those who spoke in favor of the plan did not discuss the plan. They spoke in favor of international cooperation and the need for monetary stability. Sproul and Williams, supported by governor McKee, wanted to limit agreement to a transitional arrangement. Most of their arguments did not attack the plan directly; they argued that the plan was not appropriate at that time.

Sproul, Williams, and many bankers disliked the plan partly for the lack of attention to transitional problems. They accepted the principle that exchange rates could not be left to a

Joint Statement of Experts as the basis for discussion.

⁵⁹ The proposal Goldenweiser distributed contained many of the provisions in the final agreement. The Fund would have \$80 billion, \$8 billion from countries in the United Nations. Country quotas would be paid 25% in gold. Quota sizes had not been set. The Fund was limited to financing trade; capital movements were excluded explicitly from fund lending. Exchange controls on current account were to be removed in three to five years, but capital restrictions were permitted.

⁶⁰ Williams asked whether there was agreement at the technical level by all countries. Goldenweiser replied that he knew only about England and Russia. He agreed that the fund "was wholly inadequate" for the postwar transition. It would have to be part of a program of lending and relief. (ibid., p. 11)

single country. That principle, in minimal form, was accepted in the Tripartite Agreement. They preferred a system like the Tripartite Agreement, based on gold and fixed exchange rates. They distrusted the British because they viewed the commitment to full employment as inconsistent with stable exchange rates. They were skeptical about the end of imperial preference, and believed that the British transaction would be longer than three years. Although Sproul and Williams did not express their distaste for an international organization, they must have seen the plan as a further weakening of New York's influence on international economic policy.⁶¹

A central concern of the opponents was often implicit in their remarks. Although currencies were defined in terms of gold, the agreement reversed a central principle of the classical gold standard. Countries on the gold standard were expected to adjust domestic policies to maintain their exchange rate. The Agreement allowed international policy to adjust to domestic policy. A country could adopt a full employment policy. If the policy was incompatible with the exchange rate, the country could borrow from the Fund to cover its current account balance or, if the problem persisted, it could devalue.

Agreement was possible because this central principle was acceptable to the British and the Americans. Much of the negotiation was concerned with how the principle would be carried out in practice. This involved the size of the Fund, how much could be borrowed, what happened if a country's surplus became large relative to the Fund, etc.

Williams addressed some of this issue at the meeting. This is a stabilization plan with all the stabilization measures left out." (ibid., p. 16) The British press, he said, was exultant. "Lord Keynes is said to have said that this plan is the opposite of the gold standard. If this is so, I think

⁶¹ Williams's proposal tried to solve the transaction problem by permitting different speeds of adjustment to convertibility. At first, the U.S., Britain, and a few others would adopt stable exchange rates. Other countries would have more time to adjust. At the time, as much as 50% of all trade was denominated in pounds sterling.

that we should declare that this cannot be the opposite of the gold standard." (ibid., p. 16) Later, he added:

"The essence of monetary stability is to stabilize the major currency and all else flows from that. If you do that, it is much easier to permit of exchange controls and exchange rate variations for the younger countries. That does not really affect stability." (ibid., p. 17)

Alvin Hansen replied that countries were unwilling to deflate. Without the plan, the international system would lack discipline. The issue was internal, not external stability. Turning to the unmentioned concerns about British postwar policy, Hansen said, the plan "would exercise moral restraint against unsound policies." (ibid., p. 20)⁶²

Karl Bopp (Philadelphia) pointed out that, if the Fund had existed in the 1930s, it would not have prevented any devaluation that took place. But, he favored international cooperation. Unlike Williams, he believed that exchange rate adjustment was important because it was unlikely that postwar exchange rates would be set correctly.

The meeting concluded without reaching agreement on the plan or discussing most of the provisions. Those present agreed only on the importance of the System being consulted on the choice of the U.S. director and of having his reports sent to the Chairman of the Board of Governors as well as the Secretaries of Treasury and State.

At the June 19 meeting, with McKee absent, Eccles was unanimously approved by the Board as the Board's representative at the conference and given full discretion to act for the Board. In an attempt to silence Sproul and Williams, the Board agreed that "public expressions

⁶² In correspondence with Jacob Viner, Keynes wrote that he favored price stability as a goal and was skeptical of the alleged advantages of devaluation. The main reason for devaluation, he wrote, was when efficiency wages increased relative to wages abroad. Viner replied that the wage criterion "accepts the business agent of the powerful unions as the ultimate and unlimited sovereign over monetary policy." See Meltzer (1988, p. 241)

of differences of opinion within the System would tend to impair effective representation at the international conference and to destroy any influence that the System might have." Board Minutes (June 19, 1944, p. 8)

The meeting at Bretton Woods lasted three weeks. At its end, forty-four countries agreed to the plans for the Fund and the Bank. In contrast to the 1920s, the meeting was run by representative of the U.S. and British Treasuries. Central bankers had a modest role.⁶³ In contrast to the League of Nations agreement, key members of Congress were members of the U.S. delegation. White's assistant, Edward Bernstein, described the work of the conference as modest. "[E]verything of importance had been discussed and settled in the two years of discussion before the Conference." Black (1991, p. 47)⁶⁴ This refers more to the IMF than to the Bank. The Bank agreement was much less developed before the meeting because there was less controversy about the main provisions, and no agreement about the Bank would have been made if there was no agreement about the Fund.

The Board's principal effort after the Conference was to include an International Financial Council in the bill authorizing U.S. participation in the Fund and the Bank.⁶⁵ The

⁶³ The American delegation was led by Morgenthau included Fred Vinson, Dean Acheson of the State Department, Harry White, and four members of Congress. Eccles was the only representative of the Federal Reserve, but Edward Brown, president of the First National Bank of Chicago and Chairman of the Federal Advisory Council was a member. Senator Robert Taft was omitted because he was opposed. The British delegation, led by Keynes, also included only one representative of the Bank of England. Williams refused to accept the restriction that his comments remain within the proposal, so he did not attend.

⁶⁴ Bernstein served as Chief Technical Adviser of the Delegation and Chairman of the Committee on Unsettled Questions. Later, he became the IMF's first Director of Research.

⁶⁵ Eccles and the Board also attempted to silence the critics of the proposal at the New York bank. on September 19, Eccles read a proposed statement that he wanted to give to the Presidents. The statement reviewed the discussions held the previous spring, then concluded: "[T]he public expression of an adverse attitude, if any, on the part of any of the Federal Reserve Banks and their officers would be likely to impair the usefulness of the System in relation to the problems growing out of the conference." Board Minutes, (September 19, 1944, p. 6) Eccles explained that by attending the conference, he had committed the Board to support the plan. Only McKee argued against the statement. He could accept a statement saying that no one could speak for or against the agreement, but not a one-sided statement. The Board approved the statement with McKee voting against. When the Board met with the Presidents' Conference, the statement was the last (eleventh) item on the agenda. Eccles read the prepared statement. Sproul responded that on an issue of this importance, until it became law, "he had a duty to express his views and that if...such an express [was] damaging to the System then he would have to decide whether to leave the

proposed Council, with the Board represented, would supervise, approve or reject decisions by U.S. representatives to the Bank and the Fund before any action could be taken. The Treasury agreed to an informal arrangement but would not include the Council in the legislation.⁶⁶

This was a rather obvious attempt to restore some of the System's power to decide monetary policy. At the same meeting, they voted to end the Treasury's Exchange Stabilization Fund. The Fund was scheduled to expire on June 30, 1945. The Board asked that the Stabilization Fund should terminate when the subscription to International Fund became due.

The Board's resolution supporting ratification of the agreements included a provision asking congress to create the Council. They did not condition their support on the creation of the Council, and they revised their earlier statement to remove the explicit reference to their membership on the Council. The Council "would not only advise the American governors and directors on the Fund on the Bank of its views with respect to the financial and monetary policies of the United States, but would also be authorized to act for the United States in matters which require approval under the agreements."⁶⁷ To reduce bankers' resistance, the Treasury supported the proposal. The resolution was approved, Governor McKee abstained. Board Minutes (March 21, 1945, pp. 1-5)

The System remained divided on the proposal for the Fund. Except for McKee, the Governors supported the plan. At the New York bank, Sproul and Williams favored the Bank but opposed the Fund, usually stating their opposition as a matter of timing, not principal. Other

System, but he could not agree with the view that the officers of the System from here on should be muzzled." Board Minutes (September 22, 1944, p. 31) President Peyton (Minneapolis) supported Sproul. Eccles retreated. He thought it would harm the System but, they were at liberty to express conflicting views.

⁶⁶ The Board obtained assurance from White that he would discuss the Board's request with Senator Wagner, Chairman of the Senate Banking Committee and other committee members. Since the proposal originated with the American Bankers Association, Morgenthau regarded it as additional evidence that the Federal Reserve represented the bankers. He had held that view for some time, so it did not take much to convince him. Blum (1967, v3, p. 428)

Presidents were undecided or neutral. White attributed opposition or ambivalence to the influence of the American Bankers Association, which opposed both the Fund and the Bank.

In its haste to pass the House so as to show the US's international commitment before the San Francisco meeting of the United Nations, Congress did not ask Board members to testify. Sproul and Williams were called as witnesses at the Senate hearings, however both favored the Bank but opposed the Fund.⁶⁸

Sproul and Williams testified on June 21.

Objections to the Fund. The Board's consternation was out of keeping with the testimony. Both Sproul and Williams favored the World Bank and international cooperation. They did not oppose the Fund; they opposed starting the Fund at a time when there was no hope of restoring multilateral trade.⁶⁹

⁶⁷ Congress gave the Treasury main responsibility for the Bank and the Fund. The U.S. Executive Directors are Assistant Secretaries of the Treasury. The Secretary is the U.S. delegate, and the Chairman of the Board of Governors is his alternate.

⁶⁸ Board members were enraged. On September 25, they discussed voting to censure Sproul. Their counsel advised them that they knew his intention in advance and had authorized his right to appear more than a year before (in September) when the Board had tried but failed to silence the opponents, so they did not have a case. They then discussed statements by Chairman Ruml, of the New York bank, and his use of this position as a platform from which to criticize the Bretton Woods Agreements. Eccles said that Ruml should not be reappointed when his term expired. Eccles also thought that the Board should dismiss John Williams because his "part time job (as Vice President and Research Director) left him free to make public statements. The decision was to prepare a statement of policy about public statements by Bank officials. Board Minutes (September 25, 1945, pp. 7-10) The Board prepared a letter to Chairman Ruml stating that Sproul's actions were "in appropriate and unwise." The Board "could not countenance" that degree of independence. Nothing could be done about the past, but in the future they must function as a System. The Governors could not agree, so they noted to have Eccles speak to Sproul. Board Minutes (October 16, 1945, pp. 3-4)

In December, Eccles reported on his conversations with Sproul and Ruml. Sproul replied that the directors of the New York bank would not accept the Board's position. Sproul made no commitment to be bound by the Board's positions. Eccles replied by threatening not to renew his appointment as President. Sproul repeated that but would not commit to a different position. Board Minutes (December 7, 1945, pp. 4-7)

Then Eccles discussed Williams part-time appointment and his freedom to express his views outside the Bank. Again, Sproul disagreed. He was able to control Williams's public statements. This did not satisfy Eccles, so he threatened not to renew William's part-time appointment.

Eccles was no more successful with Ruml than with Sproul. He agreed only that he would stay within the policy statements made by the Board but would state his views on other public issues.

⁶⁹ Sproul's Senate Banking Committee testimony is in U.S. Senate (1945, pp. 301-17) Williams is in (ibid., pp. 318-34). Eccles tried to prevent the testimony. He told Morgenthau "he did not think the Banks should be asked to express their views on the Agreements, particularly since at least one of the Banks was opposed." Board Minutes (February 23, 1945, p. 4)

Britain was their principal concern. The British still had imperial preference and were signing bilateral clearing agreements, contrary to the spirit of multilateral clearing. They could not redeem sterling balances, so these balances would overhang the Fund.

Sproul and Williams did not object to exchange control on capital movements, but they doubted that controls on trade and payments would be removed in the foreseeable future. This violated the agreement and, of greater concern, increased the demand for dollars, as the principal convertible currency. The Fund would gain inconvertible currencies, lose dollars, and fail. There would be only \$2.75 billion, so the risk of running out of dollars was high.

Exchange rate flexibility was of concern also. The agreement permitted devaluation, so exchange rates were not really fixed. A country could follow social or economic policies leading to "fundamental disequilibrium," then devalue its currency "if it seems to advance its interests." U.S. Senate, Committee on Banking (1945, p. 305)

Further, the agreement was very explicit about the obligations of creditor countries, much less so about debtor countries. Since countries could devalue, they could force the adjustment on others instead of accepting it themselves. Countries would not agree whether a devaluation was to gain competitive advantage or to respond to a "fundamental problem."

Like Sproul, Williams was concerned particularly about Britain.

"The gist of the agreement is that if this country will create and maintain the conditions necessary for multilateral trade in a free exchange market, England will undertake, after a transition period of 3 to 5 years during which exchange controls and bilateral currency arrangements are permitted, to relinquish her controls and join a multilateral exchange system. The agreement, however, carefully states that, even after the 5-year period, the

member country shall be the judge of whether the conditions are right for relaxing its controls." (ibid., p. 323)

Both Sproul and Williams questioned whether the U.S. should enter the agreement when there was great uncertainty about what Britain and others would do and when, if ever, they would do it.⁷⁰ White's statements that adjustment loans might be made with five or ten years duration suggested that he, too, believed the transition would be long and difficult.

Potential dangers are not the same as flaws. Opponents who favored delay faced two major obstacles: (1) the belief that the United States had to show that it would support a multilateral approach and (2) the conviction that the best time to get agreement was now. White did not disagree with many of the criticisms. He argued that reopening the agreement would not produce a better agreement. The proposal was approved by 2/3 vote in both houses of Congress.

Williams strongest argument was that Britain would not be ready for multilateral trade and the elimination of current account restrictions in 3 to 5 years. He estimated that the British war debt was \$12 billion and rising and that it faced current account deficits of \$1.2 to \$2 billion a year for many years after the war. These arguments lost much of their power when the U.S. later agreed to a \$3.75 billion loan to help make the transition.⁷¹

The loan agreement, signed in December 1945, imposed many of the restrictions Williams wanted. Britain agreed, reluctantly, to reduce the transition period to one year

⁷⁰ "A set of vested interests and a network of discriminatory trade and currency practices will have grown up which it may prove difficult to break down." (ibid., p. 323) "The agreement may institutionalize exchange controls" (p. 306)

⁷¹ The French also borrowed \$800 million to help in the transition. This loan came from the Export-Import Bank, so it did not require Congressional approval. William McChesney Martin, head of the Export-Import Bank and later Chairman of the Board of Governors, opposed the loan. The Treasury insisted, and the loan was made. Black (1991, p. 56)

following the loan's ratification, "that is in July 1947. Trade discrimination against the United States had to end by the end of 1946."⁷²

The Bretton Woods Agreement Act of July 31, 1945 directed the Treasury to pay the \$2.75 billion in installments. In all, \$1.8 billion of the profit on the 1934 revaluation of gold was transferred from the Exchange Stabilization Fund. The remaining \$950 million was paid in dollars and non-interest bearing notes, payable on demand, from tax revenues. The \$950 million was an ordinary expenditure. To fund the \$1.8 billion, the Treasury transferred \$1 billion in gold to the IMF and, in February 1947 sold \$800 million in gold certificates to the Federal Reserve.⁷³

Despite the emphases on trade and avoidance of discrimination in the lend lease agreement, no trade agreement was made at the Bretton Woods conference. In fact, the British delegation was under orders not to discuss trade policy, so the conference limited its statement to a recommendation favoring cooperation in trade matters.

The British loan agreement committed the British to participate in a trade conference. The Conference, held in Havana from December 1947 to March 1948, brought back the conflict between the U.S.; as the proponent of open, multilateral trade, and British attachment to preferential arrangements. The Conference agreed that preferences would end within five years, but the agreement has so many exceptions that the U.S. Congress would not approve it. The Truman administration withdrew the agreement. Presnell (1997, p. 227)

⁷² The Fund began operations in March 1946. Britain removed restrictions, as promised, in July 1947, was followed by the postwar British exchange crisis in August. Under the "scarce currency" clause of the IMF agreement, the British could continue trade discrimination if the dollar was declared "scarce." A main reason for the early postwar discussion of the dollar shortage was to have the dollar declared "scarce."

⁷³ The Treasury issued \$1.75 billion of special non-interest bearing notes to the IMF, in effect borrowing back and deferring payment of part of its subscription. It then used the \$800 million balance obtained from issuing gold certificates to retire \$500 million in debt from the Reserve banks and \$300 million to offset an outflow of gold in January. These operations neutralized the effect on the monetary base. Fforde (1954, p. 194)

Instead, countries accepted the General Agreement on Tariffs and Trade (GATT) negotiated separately. Originally a transitional arrangement, GATT became the postwar trade organization until it was replaced by the World Trade Organization fifty years later.

The International Bank for Reconstruction and Development (World Bank) created much less controversy at the conference. The consensus belief was that international lending would remain small after the experience of the 1930s. The plan was that the World Bank would encourage private capital lending by guaranteeing parts of the loans. John McCloy, the first governor, thought the Bank would concentrate on reconstruction of wartime damage, then close. Dominguez (1993, p. 377)

Senator Taft (Ohio) was the principal opponent of the Bank in Congress. He criticized the Bank as a subsidy to investment bankers. The Bank and the Fund would underwrite bad loans. He preferred unilateral assistance to reconstruction, under U.S. control. And he predicted that the Bank and the Fund would create animosity against the United States. Patterson (1972, pp. 292-94)

The Bank was slow to start operations, so much of its original task of reconstruction depended on direct assistance under the Marshall Plan. By the 1980s, private capital movements had increased. Contrary to the belief, under which the Bank was organized, financial problems in developing countries came about because of too much, not too little, lending.

The Bank specialized at first in loans to developing countries and providing technical assistance. Countries soon learned to offer projects with highest expected return to the Bank.

Although aware that money is fungible, the Bank made few efforts to assess its role in financing marginal proposals with lower returns.⁷⁴

Summary on Postwar Planning

Predictions of postwar depression, and a return to pre-war unemployment rates were based on estimates of consumer spending from early Keynesian models. Market indicators gave a very different forecast. For example, measures of risk such as the spread between Baa and Aaa bonds fell below 1% in 1944 and continued to fall as the yields on more risky bonds declined. By early 1946, the spread was below 1/2%, the lowest value reached by the series up to that time. There is no sign in these or similar data of an expected return to depression, unemployment and bankruptcies.

Investors remained cautious however. Wars had typically been followed by depressions. Stock prices fell in 1946, as profits declined. For the next five years, capitalization of profits remained low relative to past (or future) experience. Chart 7-3 shows the relation of corporate profits to market capitalization, the inverse of the capitalization rate. The relatively low capitalization rate from 1947 to 1951 suggests that wealthowners did not anticipate continuation of robust profit growth.

Chart 7-3 here

In the event, the Keynesian models were inaccurate. There was no postwar depression. Instead, the United States had a sharp recession but, at eight months, one of the shortest on record. The National Bureau dates the peak of wartime expansion in February 1945, two months

⁷⁴ Later the Bank broadened its scope to include poverty reduction, environmental concerns, women's rights, and other projects popular with contemporary political views in the United States. Keynes had feared that locating the Bank in Washington exposed it to pressures of U.S. domestic politics.

before the end of the European war and six months before the end of the Asian war. By November the economy began to recover.

Though brief, the recession produced a large drop in output. Businesses converted quickly from war to peacetime production; industrial production fell 38%, but the peak unemployment rate reached only 4.3% of the labor force. Zarnowitz and Moore (1986)⁷⁵

Abroad, the Bank and the International Monetary Fund did very little to smooth the transition from war to peace. Presnell (1997), Block (1991). After Roosevelt's death, Morgenthau and White resigned. The new Secretary, Fred M. Vinson, recognized that the Fund's resources were too limited. The British loan and, by 1948, the Marshall Plan provided sufficient capital transfer to permit Western Europe to import both non-durables and capital equipment. The U.S. operated unilaterally, outside the institutions it had worked to establish.

One of the anomalies of the period is that the American Bankers Association, and most large New York banks vigorously opposed the IMF agreement. They could not, and did not, foresee the evolution of the Fund. In the 1980s and 1990s, the Fund's main task was lending to countries experiencing capital outflow to permit them to service debts to large banks in New York and other financial centers.

Postwar Policies

Vinson remained as Treasury Secretary for about a year. His replacement was John W. Snyder, a Missouri banker and friend of President Truman who had served during wartime in several government agencies. Snyder remained Secretary until the Eisenhower administration took office in 1953.

⁷⁵ For the year as a whole, production (1957 = 100) fell from 51.7 to 44.6, a drop of less than 14%. The wartime peak in industrial production came in 1944 and was not surpassed until 1952.

The Federal Reserve had limited scope for action, so economic policy remained largely under control of the Treasury. Vinson and Snyder did not seek to repeat Secretary Mellon's post-World War I policy of using surpluses to reduce tax rates and retire debt. In the four quarters ending with second quarter 1946, government purchases, mainly military spending declined from \$97.3 to \$29.9 billion. And the economy grew, so tax receipts stabilized and the budget had a surplus.

Following World War I, the budget shifted from a 413 billion deficit in 1919 to a \$500 million surplus in 1921. The larger effort in World War II produced both a larger deficit and a larger swing--from a \$54 billion deficit in fiscal 1945 to surpluses of \$700 million in fiscal 1947 and \$8 billion in fiscal 1948.

Part of the surplus was used to reduce tax rates in November 1945 and in April 1948. The highest income tax rate in World War I was 66.3% on an income of \$1 million. By 1922, that rate was 55%, and a few years later, 24%. In World War II, the highest rate, 90% at \$1 million, was reduced to 84% in 1946-47 and 77% in 1948-49. Thereafter the rate rose to 87% during and after the Korean War.⁷⁶

Despite pegged interest rates, pent-up demand and fiscal stimulus from lower tax rates, inflation remained in the 4 to 6% range (deflator) through most of 1947 and 1948. By 1949 prices were stable or falling. This is one of the very few times in the postwar year to date that the deflator and consumer prices declined.

Treasury operations were a main force reducing money growth and inflation. The Treasury used the proceeds of the Victory Loan in 1946 and its surpluses in 1947 and 1948 to

Table 7-4

Postwar Changes in Composition and Distribution of Government Debt

Composition ^a (billions)		Distribution ^b (billions)	
Bills	-4.9	Government Agencies	10.3
Certificates	-12.0	Federal Reserve	1.0
Notes	-16.0	Commercial Banks	-28.3
Bonds	-10.2	Corporations	-7.4
Non-marketable		All others	-0.6
Treas. Special Issues	10.9	Total	-24.9
Saving bonds	7.0		
Total	-25.2		

Source: Board of Governors (1976)

a/February 1946-February 1949

b/December 1945-December 1948

⁷⁶ The 1947 Act permitted income splitting, so it reduced the rate applicable to many high-income taxpayers. The Act passed over President Truman's veto, increased the standard deduction and reduced rates for all taxpayers. The Act reduced taxes by \$5 billion, about 11-1/2% of receipts.

retire debt.⁷⁷ Gross public debt reached a local peak at \$279.2 billion in February 1946. In the next three years, gross debt declined about 10%, \$28 billion. Table 7-4 shows the change in the distribution of the debt by type of securities and by ownership.

One of the Treasury's aims was to reduce the debt held in the banking system. As the table shows, they succeeded using two means. The Victory loan consisted of securities ineligible for bank purchases, and debt retirement concentrated heavily on notes and certificates, both held mainly by banks. After allowing for bank purchases of outstanding securities, the Victory loan placed nearly \$11 billion net with non-bank holders. Fforde (1954, p. 86)

The Administration retired outstanding debt by reducing spending in 1946, 47, and 48 and running \$13 billion in cash budget surpluses, mainly in 1947 and 1948 calendar years. The Treasury also sold \$11 billion of non-marketable special issues to the trust accounts, to fund its obligations, and the public added \$7 billion to its holdings of government savings bonds.

By running a surplus, the Treasury drew down the public's money balances. Using the surplus to retire debt restored those balances. The main financial effect was to remove debt from commercial banks, allowing them to increase loans without selling government securities to the Reserve System. Table 7-5 shows the changes during this period.

Treasury policy enabled banks to satisfy customer demand for loans without availing themselves of the opportunity to obtain reserves from the Reserve banks on demand. Market yields changed very little during the period. After a short-level drop to 2.08 during the winter of

⁷⁷ The Victory Loan raised \$21 billion between December and February 1946. Gross public declined \$20 billion from February through December 1946, so the net effect was to cancel the Victory Loan. As in the text, the reduction was mainly in notes and certificates, held mainly by banks, so the operation shifted the debt from banks to non-bank holders.

1946, yields on long-term bonds remained between 2.15 and 2.25% until late in 1947.⁷⁸

Thereafter, yields rose slowly toward 2.45%.

Table 7-5
Member Bank Loans and Investments
December 1945 and 1948

	Total Loans and Investments	Total Loans	Total Investments	of which: Governments
	(billions)			
December 1945	107183	22775	84408	52154
December 1948	95616	36060	59556	78338
Change -	11567	13285	-24852	-26184

Source: Board of Governors (1976, pp. 60-61)

Although the Federal Reserve described itself as an "engine of inflation," interest rates, prices, and monetary aggregates show no evidence of sustained inflation. Table 7-6 shows growth rates for the monetary base, the money stock, prices and the cash deficit from 1946 to 1951.

After an initial surge that includes the removal of price controls, the rate of inflation slowed in 1948. By the end of 1948, prices were falling. All of the 5.8% inflation in 1950 came

⁷⁸ The Treasury's efforts to sell bank-ineligible securities was less successful than the description suggests. During the victory loan, commercial banks purchased \$7 billion in the market, almost all of it from non-bank investors.

after the start of the Korean War. During the years of low inflation and falling prices, the monetary base and money fell. Treasury debt retirement, not Federal Reserve policy, is the main influence on monetary growth and inflation in these years.

Table 7-6
Deficits, Growth of Monetary Base, Money, and Prices 1946-51
(4th Quarter to 4th Quarter)

	Monetary		Consumer	Cash Deficit
	Base (%)	M ₁ (%)	Prices(%)	billions
1946	1.6	4.8	16.6	\$0.05
1947	1.0	4.8	8.5	5.66
1948	-1.6	-1.2	2.9	8.02
1949	-1.5	-0.1	-2.1	-1.30
1950	0.1	4.3	5.8	0.45
1951	4.1	5.0	5.8	1.23

Source: Deficit from Federal Reserve Bulletin; Consumer prices is all items 1982-84 base from Dept. of Labor.

Since the Treasury used its surplus to retire debt, it had less reason to be concerned about interest rates. In similar circumstances in the 1920s, Secretary Mellon pressed the Federal

Also, they lent about \$2 billion to non-banks to permit them to carry securities, as they had during the war.

Reserve to avoid actions that lowered interest rates. Secretaries Vinson and Snyder were more concerned about rolling over maturing obligations, so they continued to insist that wartime rates be maintained.⁷⁹

With prices rising in the fall of 1947, President Truman called a special session of Congress. He asked to restore price and wage controls, renew consumer credit controls, introduce controls on commodity speculation among several other derogate measures. The Federal Reserve asked for secondary reserve requirements, a new power.⁸⁰ Congress did not approve any of these requests at the time. In August 1948, Congress renewed consumer credit controls on installment loans for one year. Although installment credit was not rising rapidly, the Board reimposed Regulation W effective September 20, 1948.

Inflation returned after the start of the Korean War in June 1950. The twelve month change in consumer prices rose from -1/2% in June to 5.8% in December. The administration responded in September by increasing tax rates on individuals and corporations and introducing some new excise taxes on durable goods purchases. In January 1951, an excess profits tax passed Congress, retroactive to July 1950. An additional round of tax rates increases on individuals and corporations was passed in October 1951. The net effect, as shown in Table 7-6, was to continue surpluses in the cash budget despite the increase in military spending. Total outlays rose \$30 billion from 1950 to 1952 (calendar years), an increase of 71%. Revenues rose almost as much, so the budget was in surplus in 1951 and had a modest deficit in 1952.

The very aggressive fiscal policy of financing the war by taxation probably contributed to the small pressure on interest rates. Although measured inflation rates were more than double

⁷⁹ When bond yields fell to 2.08% in the winter of 1946, Chairman Brown of the Advisory Council asked Eccles whether the Treasury was concerned. Eccles replied that the Treasury had no financing in prospect so was unconcerned. Board Minutes (April 24, 1946, p. 11)

⁸⁰ The Federal Reserve proposal is discussed in the next section.

the interest rate on long-term Treasury bonds responded very little. Between late June 1 and December 1950, the long-term rate rose only from 2.34% to 2.39%.

In the same period, short-term rates rose more -- from 1.17% to 1.37% on new issues of Treasury bills.

These data suggest that the administration's policy reinforced beliefs that the inflation was a temporary event that would not persist. Growth of the monetary base remained low throughout.

Federal Reserve Beliefs and Actions, 1946-1951

The dominant view in the academic profession and the Board of Governors was that monetary policy was ineffective. As late as the 1980s, long after control of inflation had become a major policy issue, leading Keynesian economists denied any causal role for money growth in inflation.⁸¹ These views now seem extreme, but they dominated professional writing in the 1940s and 1950s.⁸² The Board's staff and its members reflected the views of their contemporaries, as they had in the past.

Eccles's strong belief was that the budget was a much more important instrument for responding to depression or inflation. Unlike many of the Keynesian economists who joined him in urging larger deficits during the 1930s, Eccles urged budget surpluses after the war. He forecast postwar inflation, not depression, so he recommended tax increases at every

⁸¹ "The notion that inflation is a monetary phenomena and that it can be prevented by refusing to allow the quantity of money to increase is to mistake a symptom for a cause." Robinson and Wilkinson (1985). See also Kaldor (1982).

⁸² Three sources will suggest how broadly these views were held in the academic community. Villard (1948) was commissioned by the American Economic Association and published in the association's Survey of Contemporary Economics. Committee on the Working of Monetary System (1959), known as the Radcliffe Committee, denied any role for a policy of monetary control in Britain. As late as 1965, the American Economic Association's Readings in Business Cycles has no role for money. Gordon and Klein (1965). Citations to popular textbooks such as Ackley (1961) or to econometric models of the period provide additional evidence.

opportunity, supported other policies including maintenance of price and wage controls and consumer credit controls until peacetime production was restored.⁸³ (ibid., p. 409)

A key belief of Eccles and many others at the time, was that the large wartime increase in government debt had rendered traditional monetary policy useless. Banks did not borrow from Reserve banks, so discount policy could not be effective. Eccles described the discount rate as "largely irrelevant" because banks could sell government securities. (ibid., p. 420).

"[A] moderate rise in yields on government securities would not prevent and would only slightly restrain banks from selling securities in order to make loans. On the other hand, an increase in rates large enough to exercise effective restraint on banks may have to be too greater too abrupt to be consistent with the maintenance of stable conditions in the government securities market." (ibid., . 420)

Further, market determined interest rates would confront the Treasury with "an impossible debt-management problem." (ibid., p. 420) The Treasury would be at the mercy of the market and subject to chaotic swings in interest rates. Therefore, Eccles confined his recommendations to modest increases in short-term rates, on bills and certificates. Since most of the bills were owned by the Federal Reserve, the main effect of a rise in the bill rate would be the increased interest cost as the bill rate rose and other rates moved in response.

Eccles had always chafed under Morgenthau's control of interest rates and monetary policy. In the 1930s, the Treasury had exercised control by using the Exchange Stabilization Fund. With its small stock of securities, and the large gold inflow, Eccles and the Board believed they were in a weak position to pursue an independent policy. These problems

⁸³ The Board formally disapproved of tax reduction in 1947 and notified the President to that effect. Board Minutes (June 9, 1947, pp. 1-2). Eccles also proposed, and the Board agreed unanimously, to recommend to President Truman that he sign the Taft Hartley Act. The Board recognized that labor relations was not its field but agreed that

vanished with the wartime growth of debt. Now, the argument was that the large debt made traditional monetary policy tools and techniques useless.⁸⁴

The New York Federal Reserve Bank, and many bankers, had a different view. Directors of the New York bank began pressing for higher rates on Treasury certificates late in 1944. In December they arranged to meet with Secretary Morgenthau to convey their views. Minutes, New York Directors (December 28, 1944, p. 112). In January 1945, they discussed the difficulty in maintaining the existing yield curve (pattern of votes) when holders were free to shift from one maturity to another. (ibid., January 18, 1945, p. 139)

Allan Sproul, President of the New York bank, spoke out against the prevailing view. In a December 1946 speech, he argued publicly that small changes in interest rates would have beneficial effects by changing bond values and by introducing uncertainty about future market rates. Uncertainty would remove the belief that reserves could be obtained on demand without loss of principal. He believed this would have a modest effect on the banks' decisions to expand. Sproul did not claim that monetary policy could have more than a secondary role in controlling inflation, but he wanted to adjust market yields to reflect the change from war to peace and the increased risk of inflation. Sproul (1947)

Throughout the period 1946-51, Sproul pressed for a policy change. He was one of the first to urge the Treasury to relax the restriction on long-term interest rates. In 1950, before the Korean War brought renewed inflation, he told his System colleagues:

strikes and labor unrest would disrupt production and raise prices. The letter was approved and sent. Board Minutes (October 17, 1947, pp. 1-5).

⁸⁴ This belief in the impotence of monetary policy was so widely held that it is rare to find a memo suggesting the opposite. One such memo, by Walter Salant makes that the swing in opinion since the 1920s went too far. Monetary policy was not totally impotent, Salant wrote, and experience does not support total impotence. Drawing on Currie (1934) he argued that policy had not been easy during most of 1929-33 or in 1937-38. he concludes with a double negative: there is no reason to believe that monetary policy "cannot exert a significant expansive influence" Salant (1948, p. 8). The memo, dated May 21, concerns mainly policy in recession. At the time Salant was on the staff of the Council of Economic Advisers. He sent me a copy of the memo several years ago.

"[T]here cannot be a purposeful monetary policy unless the Federal Reserve System is able to pursue alternating programs of restraint, neutrality, and ease... The terms of Treasury offerings for new money, and for refunding issues, must be affected." Board of Governors (April 4, 1950, Box 1433).

Vinson remained at the Treasury for about a year. His successor, John W. Snyder, knew very little about monetary or fiscal policies. Morgenthau's staff continued to serve Vinson and were retained by Snyder. The Treasury's goal continued to be minimizing the current budget cost of financing the debt.⁸⁵ Further by maintaining the pattern of rates, the Treasury kept control of interest rates in the Treasury. Though nominally an independent agency, the Federal Reserve remained under Treasury control.

⁸⁵ Eccles describes the clash with Snyder arose from conflicting responsibilities, not personalities Eccles (1951, p. 421) Casimir Sienkeiwicz, who worked in the System from 1920 to 1947 is less charitable. He described the Treasury as under the control of the staff. "Mr. Snyder did not really know very much about the problem he should have been coping with." Interviews with Casimir Sienkeiwicz CHFERS (March 18, 1954, p. 3)