

FEDERAL RESERVE BANK OF ST. LOUIS

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REVIEW



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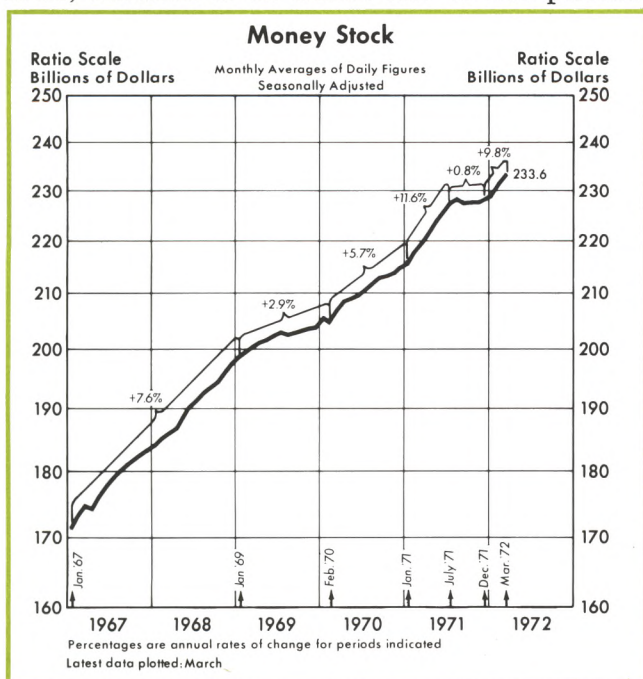
Recent Monetary Growth

by NORMAN N. BOWSHER

MONETARY growth has been quite uneven since early 1971. On average, this expansion has been slower than in 1967 or 1968 but faster than in 1969 or 1970. Research at this Bank indicates that the trend rate of money growth is an important determinant of the rate of inflation and that marked and sustained changes in the rate of monetary expansion exercise an important short-run influence on output. Furthermore, the lagged effects of a change in the rate of monetary expansion on prices and output differ. This article traces the course of recent monetary expansion and discusses some of the factors causing this expansion.

Course of Monetary Expansion

From January to July 1971 the money stock, defined as private demand deposits and currency outside banks, increased at an annual rate of 11.6 percent.



This was more rapid than any other six-month expansion since the beginning of the daily average series on money (1947). By comparison, money rose at a 5.7 percent annual rate from early 1970 to early 1971, the same rate which prevailed from late 1966 to 1971.

Some of the rapid injection of money during the late spring and summer of 1971 was undesired. The Federal Open Market Committee (the chief policy-making group of the Federal Reserve System) during May, June and July issued directives to the Federal Reserve Bank of New York calling for "moderate" or "more moderate" growth in the monetary aggregates.¹ However, chief emphasis in day-to-day operations was placed on attaining some firming in money market conditions.

Growth in money slowed abruptly after July last year, and from July to December the money stock increased at a slow 0.8 percent annual rate. The change from the previous six months was the sharpest sustained decline in the rate of increase in the daily average series on money. The rate of increase from July to December was less than in 88 percent of all consecutive five-month periods since early 1948.

During the final four months of 1971, the Federal Open Market Committee desired faster money growth.² At both the September and October meetings, directives called for moderate growth in monetary and credit aggregates through a gradual easing of money market conditions. At the November meeting "somewhat greater growth" of monetary aggregates was sought, and appreciably easier money market conditions were requested and achieved. At the December meeting the Committee agreed to promote that "... degree of ease in bank reserves and money

¹See "Record of Policy Actions" of the Federal Open Market Committee, released about 90 days after each meeting and published in the Federal Reserve *Bulletin*.

²*Ibid.*

market conditions essential to greater growth in monetary aggregates."

Since December money has again increased rapidly. From December to March the increase was at a 9.8 percent annual rate. According to the released "Record of Policy Actions" for January 11, open market operations were to be directed more toward achieving desired growth rates in member bank reserves than previously. This change in emphasis was for the purpose of facilitating desired expansion in monetary aggregates.

Money Stock Determination

The money stock is determined by the interaction of a number of forces stemming from the institutional characteristics of the financial system, the public's behavior, and the actions of policymakers.³ The effect of policy actions as distinguished from other forces can be presented conveniently by the following identity which expresses the money stock (M) as a function of two explanatory variables:

$$M = mB$$

The variable "B" is the monetary base, which consolidates those factors under direct control of the monetary authorities. The multiplier (m) is a ratio expressing those factors determined by the nature of institutions, public behavior, and the size of Government deposits in commercial banks. The observed money stock (M) is by definition the product of the base and the multiplier.

The monetary base can be expressed in terms of either its "sources" or "uses." Sources of the base include Federal Reserve credit, Treasury currency, and the gold stock. A net increase in the base caused by changes in its sources means a corresponding change in the total of member bank deposits at the Federal Reserve and currency in circulation, the "uses" of the base.

Since the total sources are dominated by the actions of monetary authorities, the total level of reserves and currency supplied is likewise controllable. Changes in the sources of the base which are not entirely under the control of monetary authorities, such as changes in the gold stock, can be neutralized by the Federal Reserve through open market operations.

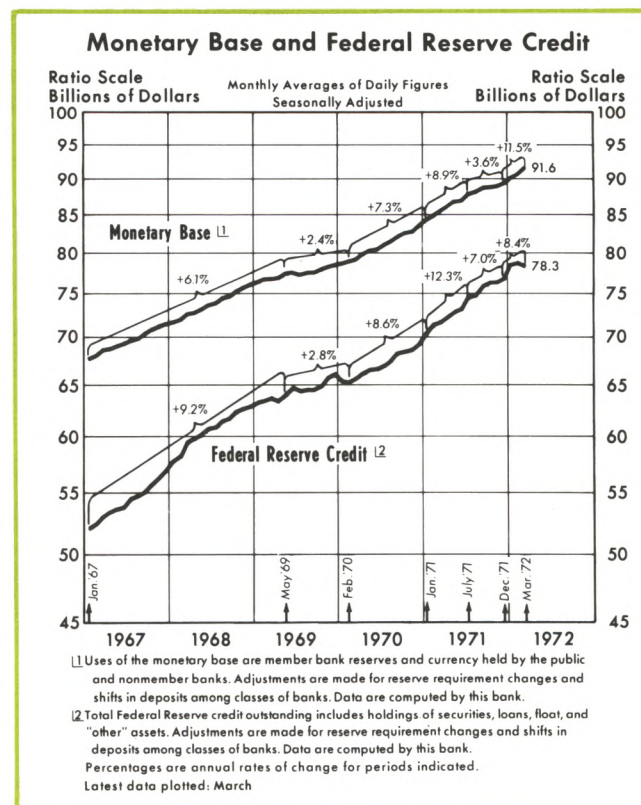
The amount of private nonbank holdings of demand deposits and currency supported by a given level of

the base depends on actions taken by the public, banks, and the Treasury, as summarized in the money multiplier. These include the ratio of excess reserves to deposits banks desire to hold, the distribution of deposits between different types of accounts, and the amount of currency relative to demand deposits which the public desires to hold. For example, an increase in the public's demand for currency relative to demand deposits, or an increase in the demand by banks for excess reserves, will tend to decrease the multiplier, and, for any given size of base, will lead to a decline in the supply of money.

Studies at this Bank show that the multiplier has been fairly stable, and that most past movements can be largely explained. These observations lead to the conclusion that the base acts as a severe constraint on the growth of the money stock. Thus, prolonged accelerations or decelerations in the growth of money are unlikely without either similar accelerations or decelerations in the growth of the base or explainable changes in the multiplier.

Recent Trends in the Base and Its Components

The monetary base rose at an 8.9 percent annual rate from January to July 1971. Although this was



³For a more complete discussion of the money supply process, see Albert E. Burger, *The Money Supply Process* (Belmont: Wadsworth Publishing Co., 1971).

somewhat slower than the 11.6 percent rate for money in the same period, it was in the 99th percentile of all possible consecutive six-month periods since January 1948. The trend of the base from late 1966 to late 1970 was at a 5.4 percent rate. By comparison, the base rose at a 4.4 percent trend rate from the fall of 1961 to late 1966 and at a 1.6 percent trend rate from early 1952 to the fall of 1961.

Actions of the Federal Reserve System were the chief causal force in expanding the monetary base in early 1971 (Table I). In fact, other factors affecting

interest rates, reflecting among other things, Federal deficits and net flows of funds out of the country. Interest rates rose substantially, credit markets became tighter, and the System purchased a sizable volume of securities in an effort to avoid a more rapid tightening of credit conditions.

In addition, the Reserve Banks increased their loans to member banks by \$450 million in the January to July 1971 period, which also added to the monetary base. Although these advances were in response to demands for credit by member banks, the System encouraged such borrowing by establishing a more attractive discount rate. In early January the discount rate was 5.50 percent, while in early July the discount rate was 4.75 percent.

This decline in the discount rate contrasted sharply with a rise in competitive rates from early 1971 to July, which also made borrowing from Reserve Banks more attractive. One competing rate is the Federal funds rate—that rate by which individual banks with temporary reserve shortages can borrow funds from other banks with excesses. Although such inter-bank borrowing satisfies the demand of one bank for reserves, it does not add to the total reserves in the banking system. The Federal funds rate averaged 4.14 percent in January and 5.31 per-

Table I

Sources of Monetary Base

(Dollar Amounts in Millions)

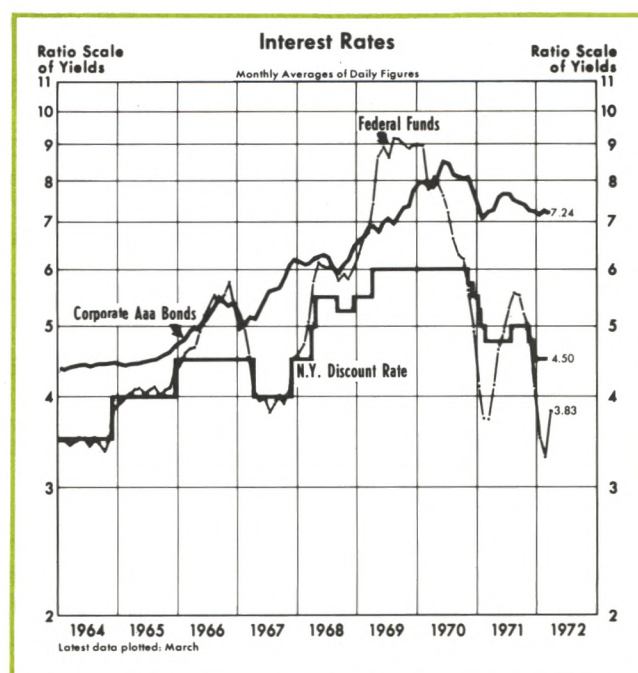
	Jan. 1971	July 1971	Change	
			Amount	Annual Rate
Federal Reserve Credit:				
Holdings of Securities	\$61,323	\$65,660	\$+4,337	+14.6%
Loans to Member Banks	370	820	+ 450	
Float and Other F.R. Assets	4,852	4,151	— 701	
Total Federal Reserve Credit	\$66,545	\$70,631	\$+4,086	+12.7
Other Sources of Base:				
Gold Stock	\$10,732	\$10,332	\$— 400	
Treasury Currency	7,157	7,437	+ 280	
Treasury F.R. Deposits (Absorb Base)	— 1,028	— 1,546	— 518	
All Other	729	939	+ 210	
Total Other Sources	\$17,590	\$17,162	\$— 428	— 4.8
Monetary Base	\$84,135	\$87,793	\$+3,658	+ 8.9

NOTE: Averages of daily figures, seasonally adjusted

the base tended to reduce it, on balance. Among these other factors was a \$400 million net sale of gold to foreign Governments and a \$518 million build-up in Treasury deposits at Reserve Banks.

Federal Reserve credit, the major source of changes in the base, rose at an extremely rapid 12 percent annual rate from January to July last year. The bulk of the gain resulted from sizable net purchases (\$4 billion) of securities by the System. From January through April 1971, monetary expansion was encouraged by the Federal Reserve System. The economic recovery was in its initial stages and seemed fragile. Also, there had been a shortfall in money growth from its desired level in the final quarter of 1970, for which some recovery was sought.⁴

From early May through July, a more moderate growth in monetary aggregates was desired. However, in this period, great upward pressures were acting on



⁴"Record of Policy Actions," Federal Reserve Bulletin (April 1971), pp. 320-327.

cent in July. Another rate which competes with the discount rate is the 3-month Treasury bill rate. Individual banks can attract a larger portion of the existing reserves by selling Treasury bills, but the rate on 3-month bills increased from 4.44 percent in January to 5.39 percent in July.

Growth in the base slowed abruptly beginning in August. After going up at a rapid 8.9 percent annual rate from January to July, the base rose at a sluggish 3.6 percent rate from July to December. Injections of Federal Reserve credit became markedly smaller, and most other factors affecting the base operated to reduce it. The largest single other factor was a further \$380 million build-up in deposits at Federal Reserve Banks by the Treasury.

rates, borrowing from Reserve Banks became a less attractive method for individual banks to correct reserve deficiencies. The Federal funds rate, for example, fell from 5.31 percent in July to 4.14 percent in December, and the 3-month Treasury bill rate dropped from 5.39 percent to 4.01 percent over the same period.

From December 1971 to March 1972 the monetary base rose at a rapid 11.5 percent annual rate. The increase was caused by net purchases of securities by the Federal Reserve System. Loans to member banks by Federal Reserve Banks remained at a nominal level since the discount rate hovered above most market rates during this period. Other factors absorbed the base on balance.

Table II

Sources of Monetary Base (Dollar Amounts in Millions)

	July 1971	Dec. 1971	Change	
			Amount	Annual Rate
Federal Reserve Credit:				
Holdings of Securities	\$65,660	\$67,805	\$+2,145	+ 8.0%
Loans to Member Banks	820	107	— 713	
Float and Other F.R. Assets	4,151	4,887	+ 736	
Total Federal Reserve Credit	\$70,631	\$72,799	\$+2,168	+ 7.5
Other Sources of Base:				
Gold Stock	\$10,332	\$10,132	\$— 200	
Treasury Currency	7,437	7,611	+ 174	
Treasury F.R. Deposits (Absorb Base)	— 1,546	— 1,926	— 380	
All Other	939	494	— 445	
Total Other Sources	\$17,162	\$16,311	\$— 851	— 11.5
Monetary Base	\$87,793	\$89,110	\$+1,317	+ 3.6

NOTE: Averages of daily figures, seasonally adjusted

System holdings of Government securities rose at an 8 percent annual rate from July to December 1971, after rising at a 15 percent pace earlier in the year. As noted earlier, the System intended to provide for a greater growth in money during the final five months of 1971 than actually occurred. However, interest rates were declining, reflecting among other things, some reduction in inflationary expectations as well as the investment of funds in this country by foreign central banks. With rates declining, System actions to provide reserves were taken cautiously to avoid causing an excessive downward movement in interest rates.

Outstanding loans to member banks by Federal Reserve Banks fell sharply from an \$820 million average in July 1971 to a \$107 million average in December. The discount rate, which was 4.75 percent in early July, was 4.5 percent in late December. However, in view of the much greater decline in most market

Recent Trends in the Multiplier

As in the past, the multiplier relationship between the monetary base and money has changed little since early 1971. Movements that occurred in the multiplier tended to supplement those in the base, and can be explained by other economic developments.

In January 1971 the multiplier averaged 2.559, meaning that the average money stock in the period was slightly more than 2.5 times as large as the average level of the base. By July the multiplier had risen to 2.590. The increase in the multiplier was at a 2.4 percent annual rate in this period, accounting for 21 percent of the unprecedented increase in money (the rise in the base accounting for the other 79 percent).

The growth of time deposits slowed markedly during the summer, freeing more of the base to support money. This caused the multiplier to rise. The behavior of time deposits can be attributed to the much

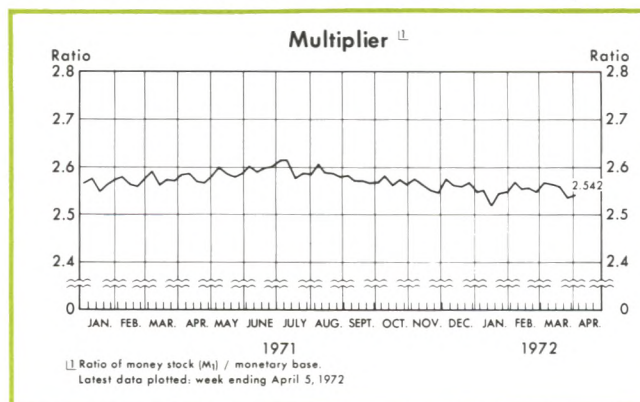


Table III

Sources of Monetary Base
(Dollar Amounts in Millions)

	Dec. 1971	Mar. 1972	Change	
			Amount	Annual Rate
Federal Reserve Credit:				
Holdings of Securities	\$67,805	\$70,544	\$+2,739	+17.2%
Loans to Member Banks	107	99	- 8	
Float and Other F.R. Assets	4,887	3,757	-1,130	
Total Federal Reserve Credit	\$72,799	\$74,400	\$+1,601	+ 9.1
Other Sources of Base:				
Gold Stock	\$10,132	\$ 9,588	\$- 544	
Treasury Currency	7,611	7,859	+ 248	
Treasury F.R. Deposits (Absorb Base)	-1,926	- 933	+ 993	
All Other	494	655	+ 161	
Total Other Sources	\$16,311	\$17,169	\$+ 858	+22.8
Monetary Base	\$89,110	\$91,569	\$+2,459	+11.5

NOTE: Averages of daily figures, seasonally adjusted

sharper rise in interest rates on most money market instruments than in rates paid by banks on time and savings deposits. Also, during the first seven months of 1971, currency in the hands of the public rose less rapidly than demand deposits. This also increased the multiplier. Demand for currency generally reflects trends in smaller retail sales, and so currency usually rises at a slower rate than demand deposits in periods of accelerated injections of the base. Another factor increasing the multiplier was a decrease in Treasury deposits at member banks.

By December 1971, the multiplier declined to 2.561, decreasing at an annual rate of 2.7 percent in the period from July. This change in the multiplier accounted for about one-third of the slowdown in money after July; the slower expansion in the base accounted for the other two-thirds. Several factors acted to reduce the multiplier. First, market interest rates declined more sharply than rates paid on time deposits. Consequently, time deposits rose at a faster pace from September to December than in the previous three months, causing a decline in the multiplier. Second, currency continued to rise at a moderate rate with the expansion of retail sales, with the result that the currency/deposit ratio went up, also reducing the

multiplier. Both of these developments followed their usual response to changes in interest rates, business activity, and the base.

The multiplier in March this year was slightly less than in December last year. Hence, the rapid growth in money from December to March was occasioned by changes in the base. The decline in the multiplier from December to January and the increase in the following month, reflected movements in Treasury deposits at member banks.

Conclusions

Growth in the money stock has been irregular since early 1971. From January to July last year, money rose at a record pace. During the remainder of the year, money changed little. Since late last year, money has again risen rapidly.

Monetary policymakers in 1971 recognized the desirability of somewhat less rapid growth of money during the late spring and early summer and a less severe and prolonged deceleration in money after July. Nevertheless, money grew very unevenly, and it appears that changes in Federal Reserve credit were the major source of the uneven growth. Other factors affecting the monetary base were relatively minor, while changes in the money multiplier were small and tended to supplement changes in the base.

The discrepancy between monetary actions and intentions during much of this period, with regard to the aggregates, can be explained in great part by the concern about possible effects of wider movements in interest rates and other money market conditions. From the viewpoint of money market conditions, monetary developments may be interpreted as restrictive, even when the System is supplying funds rapidly to moderate a rise in market rates. Conversely, it appears that conditions are easy, even though the System may be adding only slowly to reserves to slow a decline in interest rates.



U.S. Balance-of-Payments Problems and Policies in 1971

by CHRISTOPHER L. BACH

THE MAGNITUDE of the United States balance-of-payments deficit and concern about the effective operation of the international monetary system dominated thinking about U.S. payments problems and policies in 1971. Dollar outflows had long been critical to the functioning of the Bretton Woods system, but the continuous accumulation of dollars by foreigners, the relative fixity of exchange rates, and effectively integrated money and capital markets led many to seek reform of the international monetary system during 1971. The objective of most proposed reforms was to diminish the importance of the dollar in the system's operation and to promote a more effective means of adjusting countries' external payments positions, including that of the United States.

For years, dollar deficits had been beneficial to both U.S. and foreign residents. Foreigners used the dollars to finance trade imbalances and to minimize costs of holding liquid transactions balances in several currencies. Countries chose to use dollars to meet their exchange rate stability obligations as members of the International Monetary Fund (IMF). New York money and capital markets served as the primary source of funds (dollars) for American and foreign enterprises and dollars played a critical role in the formation and development of an important interbank market for funds — the Eurodollar market.

As U.S. payments deficits persisted, the supply of dollars in the hands of foreign residents became more than was necessary for minimal foreign private liquidity purposes and for exchange into American goods and financial instruments. The willingness of private foreigners to hold additional dollar deposits (or dollar claims) above minimum levels declined after the mid-1960s when the potential dollar claims exceeded the available gold stock. Evidence of the decline in demand for dollars was indicated by their sale to central banks by private foreigners. It was the continuing dollar deficits plus the decline in the willingness of

foreigners to hold dollar balances that finally hindered effective operation of the international monetary system in 1971.

In May, official foreigners indicated their unwillingness to accumulate more dollars. On August 15 the United States indicated it was no longer willing to tolerate the projected balance-of-payments deficits. It suspended convertibility of dollars into gold, imposed an import surcharge, and announced its intention to seek a realignment of parity rates and multinational cooperation on reform of the international monetary system.

Reactions to the Deficit

Reactions to the U.S. payments deficit in 1971 were divided into two time periods by the President's announcement of August 15.

Prior to August 15

Recent marked reserve accumulation among industrial countries other than the United States began in 1970. Little importance was attached to the fact at that time. Many nations had seen some decline in the foreign exchange component of their reserves from preceding years with the flow of short-term dollars from Europe to the United States. The reserve inflows in 1970 returned the reserve balances to their previous levels, but as the U.S. deficit increased in 1971, reserve accumulation became a source of concern.

In early April, all major currencies began to appreciate against the dollar in the forward exchange markets because of the large interest-rate differentials between this country and abroad, and perhaps, in anticipation of an impending formal decline in the relative value of the dollar. Many industrial countries had difficulty in restraining domestic inflation while meeting their exchange-rate stability responsibilities

Table 1

Official Reserves of Selected Industrial Countries, 1968-71*

(Billions of Dollars; End of Period)

Country	1968	1969	1970	1971			
				March	June	September	December**
United States	\$15.7	\$17.0	\$14.5	\$14.3	\$13.5	\$12.1	\$13.2
United Kingdom	2.4	2.5	2.8	3.3	3.6	5.0	6.6
Belgium	2.2	2.4	2.8	3.1	3.2	3.4	3.5
France	4.2	3.8	5.0	5.5	5.7	7.3	8.2
Italy	5.3	5.0	5.4	6.0	6.1	6.7	6.8
Netherlands	2.5	2.5	3.2	3.5	3.5	3.6	3.8
West Germany	9.9	7.1	13.6	15.8	16.7	17.0	18.4
Canada	3.0	3.1	4.7	4.8	4.9	5.0	5.7
Japan	2.9	3.7	4.8	5.9	7.8	13.4	15.4
Sweden	.8	.7	.8	.9	1.0	1.0	1.1
Switzerland	4.3	4.4	5.1	4.6	5.1	6.5	7.0

*Includes \$3.4 billion SDR allocated on January 1, 1970, and \$2.9 billion allocated on January 1, 1971. The U.S. share in these allocations was \$867 million and \$717 million, respectively.

**Reserve figures are restated to reflect the anticipated rise in the dollar price of gold from \$35 to \$38 an ounce and the realignment of currencies in late December.

Source: International Monetary Fund

under the rules of the IMF.¹ Swap lines with Belgium, the Netherlands, Switzerland and Germany were activated in an attempt to reduce declines in U.S. reserve assets. Further action by the United States to slow the dollar outflow involved the renewed sale by the Export-Import Bank and the U.S. Treasury of special three-month certificates of indebtedness to foreign branches and agencies of U.S. banks. Several foreign central banks lowered their discount rates in late March and April in order to narrow, or even reverse, the interest arbitrage spreads which had been in favor of domestic currencies in the first quarter.

The Eurodollar market remained calm in the first quarter of 1971 as it had throughout 1970. Eurodollar rates declined as many Eurodollar borrowings were repaid, particularly by U.S. banks, and rates fell well below most European interest rates. In contrast to normal times of 1970 and early 1971, when the Eurodollar market served as an international intermediary both for depositors seeking high rates of return on their money balances and for borrowers seeking lower cost credit than they could obtain at home, the Eurodollar market took on an increasingly speculative tone in the second quarter of 1971. As exchange rate uncertainties increased and banks and businesses borrowed funds in the Eurodollar market for conversion into domestic currencies, the rate rose rapidly. In

¹Under rules of the IMF, countries were responsible for limiting exchange-rate fluctuation to one percent on either side of parity throughout most of 1971. After December 18 the range of permissible exchange-rate fluctuation was increased to 2½ percent on either side of parity for most countries.

April and early May the three-month rate climbed to about 7.5 percent and overnight rates on individual days reached 45 percent or more. In late May and June the rate receded, but in late July and August the three-month rate rose again to nearly a 9 percent level with the overnight rate soaring to 200 percent on the last day of August.

The country most sensitive to the U.S. deficit and international financial conditions in the first half of the year was Germany. Faced with a particularly large inflow of dollars, substantial domestic inflation, and interest rates well above the Eurodollar

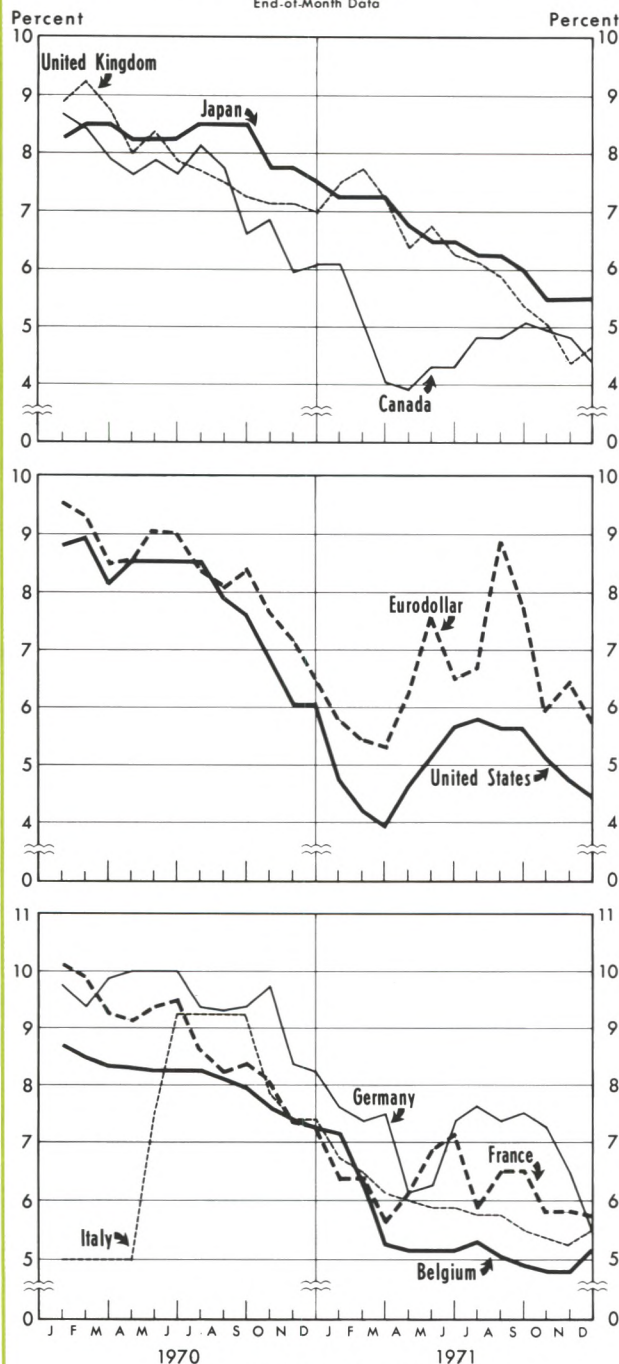
and most European money market rates, the Bundesbank suspended its foreign exchange operations in the wake of a \$1 billion inflow over May 3-4, and an additional \$1 billion inflow in the first forty minutes of trading on the morning of May 5. The Frankfurt market reopened on May 10 with an announcement by the Bundesbank that trading limits for the mark would be suspended temporarily, although the official parity was to remain unchanged. This action permitted the German government to continue its restrictive stabilization policies. It chose to supplement the action by announcing on June 2 an increase in banks' minimum reserve requirements of 15 percent across the board, while the requirements against foreign liabilities were raised to twice the level of the new domestic requirements.

Shortly after the German decision, speculative pressures shifted to other "strong" national currencies. The Netherlands subsequently permitted the guilder to fluctuate and Belgium strengthened its two exchange rate system — one official and one financial — and permitted the latter to appreciate. Switzerland and Austria raised their parities by 7.07 and 5.05 percent, respectively.

The release of the second quarter U.S. balance-of-payments data indicated a marked deterioration in the U.S. external position, and when combined with the behavior of fluctuating exchange rates in July and August, offered additional evidence that the dollar might need to be devalued. U.S. reserve assets had diminished to about \$12.1 billion in mid-August from \$14.6 billion at the beginning of the year, and nearly 45 percent of the \$2.5 billion decline came in early

Selected Short-Term Money Market Rates

End-of-Month Data

Source: *World Financial Markets*, Morgan Guaranty Trust Co.

Note: The following interest rates were used:

- Belgium - 4-month Fonds des Rentes certificates
- Canada - 3-month prime finance company paper
- France - 3-month interbank money against private paper
- Germany - 3-month interbank deposits
- Italy - interbank deposits of up to one-month maturity
- Japan - call money rate
- United Kingdom - 3-month local authority deposits
- United States - 3-month prime industrial paper
- Eurodollar rate - prime bank's bid rate for 3-month deposits in London

August. Although the United States again drew heavily on its swap lines of credit, private and public pressures to convert dollars into other currencies and ultimately U.S. reserve assets became overwhelming.² The United States suspended convertibility of the dollar into gold on August 15.

August 15

In addition to the suspension of dollar convertibility and a program designed to reduce unemployment and domestic price-wage pressures, the President's program of August 15 imposed an additional tax (surcharge) of 10 percent on goods imported into the United States. The apparent purpose of the surtax was to set the stage for useful international negotiations to achieve a realignment of currencies and a better access to foreign markets for American producers. As a related measure, the President ordered a 10 percent reduction in foreign aid.

Table II

Selected Countries Affected by the U.S. 10 Percent Supplemental Duty on Imports

Industrial Countries	Percent of Total Exports Affected	Exports Affected as Percent of Domestic GNP
Japan	29%	3%
Canada	16	4
Germany	9	2
Italy	9	1
United Kingdom	8	1
Belgium-Luxembourg	5	2
France	4	1
Netherlands	3	1

NOTE: Exports based on 1970 annual data compiled by U.S. Department of State; GNP based on annual data for latest year available, primarily from various OECD sources.

The President's *Economic Report* describes the import surcharge as applying only to "goods on which duties had been reduced under reciprocal trade agreements, and in no case . . . was it to raise a duty beyond the statutory rate. Where it was limited by the statutory ceiling, the surcharge was less than 10 percent. On automobiles, in particular, the tax amounted only to 6.5 percent. Furthermore, all imports subject to mandatory quantitative restrictions were exempt from the new tax. Such goods included petroleum, sugar,

²Federal Reserve swap lines with foreign central banks and the Bank for International Settlements were drawn on in the amount of \$3,565 million between January 1 and August 13. During the same period \$1,330 million in current and previous drawings were repaid by use of foreign currency balances and Special Drawing Rights, through U.S. borrowing from the International Monetary Fund, and through the sale of special securities to foreign official institutions. On August 15 there was a total of \$3,045 million of swap indebtedness outstanding compared to \$810 million on January 1.

meat and dairy products, certain other agricultural products, and cotton textiles covered by the Long-Term Textile Agreement. The surcharge affected about one-half of U.S. imports."³ Subsequent announcements confined the Job Development Tax Credit to domestically produced machinery and equipment as long as the import surcharge remained in effect.

Despite the price freeze on domestically produced items, prices of imported goods were allowed to rise by the full amount of the additional duty imposed. Prices of items assembled or produced in the United States with foreign components would also be allowed to rise by the amount of the additional duty levied on the foreign components. The President also removed the 7 percent excise tax on autos which was applicable to imported as well as domestic cars.

After August 15

The European exchange markets were closed for a week following the President's announcement. When the markets reopened, no major industrial country except France tried to maintain the value of its currency against the dollar within the one percent upper limit of its parity rate. In France, the foreign exchange market was separated into a market for dollars received as a result of international trade, in which the French continued to intervene to maintain the parity value, and a "financial franc" market in which all other exchanges were transacted. Although severe restrictions were imposed on inflows of funds through the financial franc market, the exchange rate was allowed to find its own level.

The Japanese government initially tried to purchase all dollars offered at the ceiling rate, but in face of a \$4.4 billion inflow in August, it was later forced to suspend the rate and limit intervention so as to permit about a 5 percent rise relative to the dollar in the subsequent month. Other administrative actions to assist in limiting the appreciation of the yen relative to the dollar over the remainder of the year included placement of a ceiling on all nonresident free yen deposits that Japanese commercial banks might receive, prohibition of prepayment of trade bills to Japanese exporters, and a request that banks not increase their Eurodollar borrowing. Many of these exchange controls were relaxed early in 1972.

Many other countries also imposed restrictions on foreign exchange transactions, but still permitted the

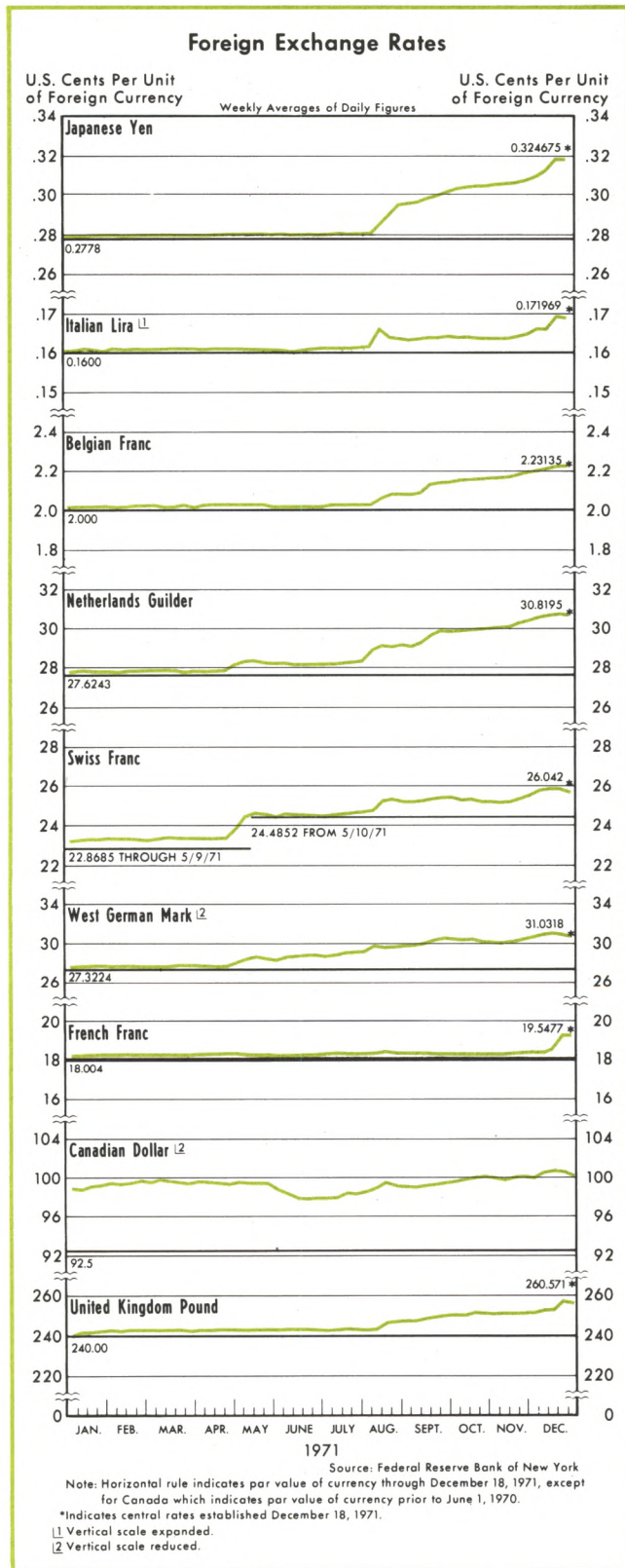
value of their currencies to fluctuate relative to the dollar. From time to time central banks intervened in markets to limit the pace at which their currencies appreciated relative to the dollar. By early December, it was clear that a set of regulated exchange rates between foreign currencies and dollars had emerged which was substantially different than at the beginning of the year. Many of the new exchange rates were formalized shortly after the Smithsonian agreement of December 18 by the declaration of temporary "central values," and the announcement by the United States of its willingness to raise the dollar price of gold by 8.57 percent and remove the import surcharge. Simultaneously, most countries agreed to permit exchange-rate fluctuations within a 2.25 percent range on each side of the central value.⁴

⁴Numerous alternatives were available to the United States in seeking a realignment of exchange rates after August 15. The desire to realign exchange rate patterns could have been achieved by: (1) permitting exchange rates to float upward to their new and higher levels vis-à-vis the dollar; (2) devaluation of the dollar against other currencies; (3) revaluation of other currencies against the dollar while leaving the value of the gold content of the dollar unchanged; and (4) a combination of devaluation of the dollar with respect to gold and a change in the exchange rates of other nations vis-à-vis the dollar and each other. In the end, the latter path was chosen.

One of the considerations in determining the extent of exchange-rate realignment was the state of the U.S. balance of payments. The Administration concluded that the size of the required correction would be an exchange rate realignment necessary to bring a turnaround of \$13 billion. Their calculations were as follows:

1. Under conditions of reasonably full employment in both the United States and other major trading countries, the U.S. deficit on current account (excluding U.S. Government grants) for 1972 was projected to be \$4 billion on the basis of the exchange rates and other trading conditions in effect in April 1971.
2. The annual outflow for Government grants and credits plus private long-term capital flows from the United States to countries other than Western European nations, Canada, and Japan was estimated at \$6 billion, or just over one-half of one percent of the U.S. gross national product. The average annual outflow for these purposes during the 5-year period from 1967 through 1971 was about \$5½ billion.
3. A secure payments position would require that this estimated \$6-billion capital outflow be covered by a surplus on current account. Since the projected "full-employment" current account for 1972 was in deficit by \$4 billion, achieving a surplus of \$6 billion required an improvement of \$10 billion in the U.S. current account.
4. Two other factors caused additions to this basic estimate. The first was an allowance of \$1 billion a year to cover a persistent outflow, which the data collection network does not capture. This outflow, which is shown as "errors and omissions" or unidentified transactions in the accounts, fluctuates from year to year, but it has been consistently negative since 1960, the average level being around \$1 billion. The second factor was an allowance of \$2 billion to provide the prospect of a small surplus on basic balance, to cover persistent short-term capital outflows or to serve as a margin of safety against errors in the underlying assumptions and calculations. With the addition of these two factors, the turnaround required for the United States to achieve a secure position was estimated to be \$13 billion. [*Economic Report of the President, 1972*, pp. 154-155.]

³*Economic Report of the President, 1972*, p. 148.



The effective devaluation of the dollar based on the new central rates for the 14 countries indicated in Table III was 10.35 percent on a trade-weighted

average basis. About two thirds of the total trade of the United States is conducted with these countries. Against all currencies that revalued relative to the dollar, the effective devaluation was about 9.7 percent on a trade-weighted basis. These countries account for about 80 percent of total U.S. trade. Finally, against all currencies of the world, including those which did not change their exchange rate with the dollar as well as those who did — such as Israel, Ghana, South Africa, and Yugoslavia — the effective dollar devaluation on a trade-weighted basis was about 7.5 percent. By December 31, currencies of the 14 countries in the table had appreciated only 9.05 percent relative to the dollar on a trade-weighted basis.

Balance of Payments Analysis

On a yearly basis, the United States balance of payments was in deficit by \$22 billion on a liquidity basis and \$29.8 billion on an official settlements basis in 1971, compared to deficits of \$3.8 billion and \$9.8 billion, respectively, in 1970. The liquidity deficit averaged \$3.4 billion from 1965 to 1969 and \$2.8 billion from 1960 to 1964. The official settlements balance averaged about zero from 1965 to 1969 and a negative

Table III

Exchange-Rate Changes

	Percentage Changes Against the U.S. Dollar from pre- May 1971 Parities*, Expressed in U.S. Cents		Trade-Weighted Average Changes Against a Group of Major Currencies	
	New Central Rates	Market Rates Dec. 31	New Central Rates	Market Rates Dec. 31
United States dollar	0.00	0.00	-10.35	- 9.05
Canadian dollar	+ 8.49**	+ 7.87	+ 5.58**	+ 5.44
Japanese yen	+16.87	+14.37	+11.93	+10.34
British pound	+ 8.57	+ 6.35	+ 0.67	- 0.43
German mark	+13.58	+12.01	+ 4.54	+ 4.24
French franc	+ 8.57	+ 6.45	- 1.31	- 2.20
Italian lira	+ 7.48	+ 5.28	- 1.90	- 2.76
Belgian franc	+11.57	+11.61	+ 1.51	+ 2.79
Dutch guilder	+11.57	+11.33	+ 1.17	+ 2.12
Swiss franc	+13.87	+11.75	+ 3.89	+ 3.39
Austrian schilling	+11.59	+ 9.59	+ 0.60	+ 0.22
Danish krone	+ 7.45	+ 6.26	- 1.31	- 1.17
Norwegian krone	+ 7.49	+ 6.56	- 1.41	- 1.04
Swedish krona	+ 7.49	+ 6.47	- 1.46	- 1.16
Australian dollar	+ 8.57	+ 6.12	- 0.24	- 1.15

*pre-June 1970 for Canada

**A central rate has not been set for the Canadian dollar. The December 17, 1971 market rate is used in lieu of a central rate.

Source: *World Financial Markets*, Morgan Guaranty Trust Company, January 19, 1972, p. 3. For method of computation see the article accompanying their table, and the October 18, 1971 issue of the same publication.

Table IV

U.S. Balance of Payments, 1960-71

(Billions of dollars)

Type of transaction	1960-64 average	1965-69 average	1968	1969	1970	1971
Merchandise trade balance	\$ 5.4	\$ 2.8	\$ 0.6	\$ 0.7	\$ 2.1	\$ -2.9
Exports	21.7	31.3	33.6	36.5	42.0	42.8
Imports	-16.2	-28.5	-33.0	-35.8	-39.9	-45.6
Military transactions, net	-2.4	-2.9	-3.1	-3.3	-3.4	-2.9
Balance on investment income ¹	3.9	5.8	6.2	6.0	6.2	8.0
U.S. investment abroad	5.1	8.6	9.2	10.5	11.4	12.7
Foreign investment in the United States	-1.2	-2.8	-3.0	-4.6	-5.2	-4.8
Balance on other services	-1.0	-1.2	-1.2	-1.3	-1.4	-1.5
BALANCE ON GOODS AND SERVICES²	5.9	4.4	2.5	2.0	3.6	0.7
Private remittances and government pensions	-0.7	-1.1	-1.2	-1.3	-1.4	-1.5
BALANCE ON GOODS, SERVICES, AND REMITTANCES	5.2	3.3	1.3	.7	2.2	-0.8
Government Grants ³	-1.8	-1.8	-1.7	-1.6	-1.7	-2.0
BALANCE ON CURRENT ACCOUNT	3.3	1.5	-0.4	-0.9	.4	-2.8
Balance on direct private investments	-1.8	-3.0	-2.9	-2.4	-3.5	-4.7
U.S. direct investment abroad	-1.8	-3.3	-3.2	-3.3	-4.4	-4.5
Foreign direct investment in the United States	.1	.3	.3	.8	1.0	-0.2
Balance on other long-term capital flows ⁴	-2.2	-0.6	1.9	.4	(⁵)	-1.8
BALANCE ON CURRENT ACCOUNT AND LONG-TERM CAPITAL	-0.7	-2.2	-1.3	-2.9	-3.0	-9.3
Balance on nonliquid short-term private capital flows	-1.1	-0.2	.2	-0.6	-0.5	-2.5
Errors and unrecorded transactions	-1.0	-1.0	-0.5	-2.6	-1.1	-10.9
Allocations of special drawing rights	—	—	—	—	.9	.7
NET LIQUIDY BALANCE	-2.8	-3.4	-1.6	-6.1	-3.8	-22.0
Transactions in U.S. liquid short-term assets, net	-0.1	.1	-0.6	.1	.2	-1.1
Transactions in U.S. liquid liabilities to other than foreign official agencies, net	.8	3.3	3.8	8.7	-6.2	-6.7
OFFICIAL RESERVE TRANSACTIONS BALANCE	-2.2	(⁵)	1.6	2.7	-9.8	-29.8
Financed by change in:						
Nonliquid U.S. Government and U.S. bank liabilities to foreign official agencies ⁶	.1	.7	2.3	-1.0	-0.3	-0.2
Liquid liabilities to foreign official agencies	1.1	-0.6	-3.1	-0.5	7.6	27.6
U.S. official reserve assets, net	1.0	(⁵)	-0.9	-1.2	2.5	2.3

¹Includes direct investment fees and royalties.²Excludes transfers under military grants.³Excludes military grants of goods and services.⁴Excludes official reserve transactions and includes transactions in some short-term U.S. Government assets.⁵Less than \$0.05 billion.⁶Excludes U.S. Government nonliquid liabilities to foreign official agencies other than official reserve agencies.

Note — Details will not necessarily add to totals because of rounding.

Source: Department of Commerce.

stantial adverse movements on trade and long-term capital accounts as well.

Current Account

The trade account, which is an important component of the current account, declined from a surplus of \$6.8 billion in 1964 to a deficit of \$2.9 billion in 1971. Strikes had a particularly adverse effect on the balance in 1971, but deterioration can more generally be attributed to (1) the gradually increasing overvaluation of the dollar relative to other currencies, and (2) the relative income, output, and price trends in Europe and the United States. The effect of income, output, and price movements on the trade balance is discussed below.

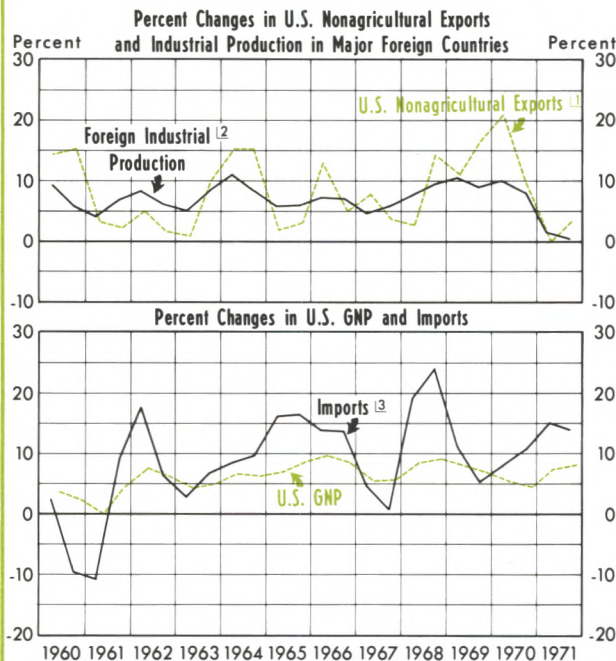
As a general rule, movements of U.S. nonagricultural exports are related to income and output movements in other industrial nations. The accompanying chart shows that the rate of expansion in foreign industrial production varied between five and ten percent over the decade, and that fluctuations in the rate of expansion resulted in nearly simultaneous and wider fluctuations in U.S. export growth. The increase in the rate of expansion in foreign industrial production in 1967 and 1968 was followed by an acceleration in U.S. export growth, and a subsequent decline in the rate of foreign industrial production in 1970-71 by a deceleration in U.S. export growth.

Movements in U.S. imports are related to movements in U.S. GNP. Variations in GNP growth

over the decade were accompanied by simultaneous, but wider, fluctuations in import growth. However, this explanation does not appear to be as valid in analyzing the import performance of 1970 and 1971 as in earlier years.

Determinants of U.S. Foreign Trade Position

Percent Change from Corresponding Period 1 Year Earlier
Semi-Annual Data



Source: U.S. Exports - Department of Commerce; Industrial Production - OECD
(Main Economic Indicators)

① U.S. nonagricultural exports are adjusted to exclude automotive exports to Canada and exports of aircraft.

② Industrial production in Canada, United Kingdom, Germany, France, Italy, and Japan weighted by these countries' percentage shares in U.S. exports.

③ Excludes automotive imports from Canada.

Note: Semi-annual averages of monthly or quarterly data.

Price as well as income movements determine the pattern of trade flows. Until late 1969 prices of goods exported from the United States rose substantially faster than those exported by the United States' competitors. However in 1970 and 1971, export prices of competitors rose 8.4 percent compared to 2.4 percent for U.S. goods, thereby improving the U.S. relative export position. Much of the relative improvement was apparently due to rapid domestic inflation in Europe (indicated by a rapid rise in costs per unit of production) which spilled over into the export sectors in 1970 and 1971.⁵

⁵Although both price and income movements proved more favorable to the United States in 1970 and 1971 than in previous years, much of the improvement can be attributed solely to the different cyclical positions of the United States and most European nations, and represents no fundamental improvement in the U.S. trade position. Both the OECD and the Federal Reserve Board have begun work to develop data on "cyclically adjusted" trade balances. The OECD's preliminary cyclical adjustment estimates indicate that the observed U.S. surplus of \$2.2 billion on current transactions (excluding Governments grants) in 1970 was \$2.4 billion higher than it would have been under "normal" conditions (defined as a condition of normal high employment in all OECD countries). U.S. calculations indicate a 1970 adjustment for cyclical and other special factors of \$2.8 billion, or an adjusted deficit of \$0.6 billion. A similar adjustment for

Table V

U.S. Relative Cost and Price Position, 1961-1971

Unit Value of Exports of Manufactured Goods:	United States	Competitors [*]
	1963=100 ^{**}	
1961	100.2	101.1
1962	100.2	99.8
1963	100.0	100.0
1964	100.7	101.5
1965	104.0	102.5
1966	106.9	104.3
1967	110.2	105.6
1968	112.7	105.5
1969	117.6	109.3
I/1970	123.0	114.3
II/1970	124.0	116.5
III/1970	124.0	117.8
IV/1970	124.0	117.2
I/1971	128.0	118.0
II/1971	127.0	121.0
III/1971	126.0	124.0

Unit Labor Cost in Manufacturing:		
1961	102.0	98.5
1962	101.6	98.7
1963	100.0	100.0
1964	98.6	99.6
1965	99.1	103.3
1966	100.8	105.5
1967	103.7	105.4
1968	107.7	103.9
1969	111.6	106.0
I/1970	114.1	110.3
II/1970	114.4	113.7
III/1970	116.2	117.3
IV/1970	116.2	121.1
I/1971	118.0	121.0
II/1971	119.0	123.0
III/1971	120.0	129.0

^{*}Weighted average for Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, and United Kingdom.

^{**}Adjusted for changes in exchange rates.

Source: Department of Labor, International Monetary Fund, Council of Economic Advisers.

Private and Government Capital Accounts

A major component of the outflow of private capital in the 1960s has been private U.S. direct capital investment abroad. In the early 1960s the outflow averaged \$1.8 billion, compared to \$3.3 billion from 1965 to 1969. It reached \$4.4 and \$4.5 billion in 1970 and 1971, respectively. This outflow has been more than offset in most years by income on U.S. investments abroad (included in the current account) and by foreign direct investments in the United States. The flow of foreign direct investment to the United States increased markedly in 1969 and 1970 when cyclical conditions were favorable, but diminished to a deficit of \$0.2 billion in 1971.

the first three quarters of 1971 indicates the underlying trade balance was much less favorable than the observed figure of \$0.1 billion. *Economic Report of the President, 1972*, p. 153.

Private financial short-term capital flows generally respond to the stocks of assets held by U.S. and foreign residents as well as changes in those stocks, and the level of and changes in interest-rate differentials. In periods of greater than normal uncertainty, such as existed in part of 1971, speculative transactions may obscure these fundamental economic relationships. The major change in financial capital flows in 1971 was an increase in certain nonliquid short-term private capital outflows (loans by banks and nonbanks to finance foreign trade) by \$2.0 billion to \$2.5 billion from an average outflow of \$0.5 billion in 1970. Errors and omissions increased to a \$10.9 billion deficit in 1971 from a \$1.1 billion deficit in 1970. A small portion of these errors and omissions (about \$1 billion) represents errors in data collection and reporting. The remainder of the errors and omissions is probably highly interest-rate sensitive and reflects speculative short-term capital flows not captured by normal reporting procedures.

The net liquidity balance deteriorated in 1971 because of adverse movements on trade account, long-term private capital, and errors and omissions. The deficit was \$22 billion in 1971, compared to deficits of \$3.8 billion in 1970 and \$6.1 billion in 1969.

The change in accounting procedures made in mid-1971, which included liquid short-term assets along with liquid liabilities to other than foreign official agencies as a financing item of the net liquidity bal-

ance, decreased the net liquidity deficit by \$1.1 billion in 1971, while increasing it \$0.2 billion in 1970. The accounting change which included nonliquid U.S. Government and long-term U.S. bank liabilities to foreign official agencies as financing items of the liquidity balance decreased the liquidity deficit by a billion dollars or less in each of the last three years.

Official Settlements Balance

The official settlements balance increased to a \$29.8 billion deficit in 1971 from a \$9.8 billion deficit in 1970 and a \$2.7 billion surplus in 1969. The shift from surplus to deficit in the past two years reflected net outflows of liquid private capital in addition to the adverse movements on trade account, long-term private capital, and errors and omissions which contributed to the liquidity deficit. These liquid dollar movements shifted from inflows of \$3.2 billion and \$8.8 billion in 1968 and 1969, respectively, to outflows of \$6.0 billion and \$7.8 billion in 1970 and 1971, respectively. Much of the outflow was associated with repayment of Euro-dollar liabilities of U.S. banks to their foreign branches and agencies.

The official settlements balance was financed in 1971 by a reduction in reserve assets of \$2.3 billion and a net increase of liquid and certain nonliquid liabilities to foreign official agencies of \$27.4 billion. Most of the reduction in reserve assets occurred before August 15.



Outlook for Farm Income and Food Prices¹

by CLIFTON B. LUTTRELL

ACCORDING to the United States Department of Agriculture both gross and net farm income will rise sharply this year. The physical volume of farm product sales will remain at about 1971 levels, but rising demand will cause prices to average somewhat higher. The slower growth in farm production will tend to reduce the rate of increase in food supplies, which along with rising food demand, points to higher average food prices than last year.

Realized net farm income in 1972 may exceed that of 1971 by 10 to 15 percent, according to the U. S. Department of Agriculture. Gross farm income is expected to rise \$3 to \$3.5 billion from the record \$58.6 billion in 1971, and production expenditures may increase only \$1 to \$1.5 billion, resulting in a realized net income gain of \$1.5 to \$2 billion from the 1971 estimate of \$15.7 billion. This would be one of the largest annual income gains to farming in recent years. Average income per farm is expected to exceed \$6,100, a gain of 13 percent from a year earlier.

Most of the expected gain in gross farm income will be from increased receipts from livestock products and higher Government payments. Receipts from livestock product marketings may rise about \$2 billion from \$29.7 billion last year, and Government payments to farmers may rise \$1.25 billion from last year's \$3.2 billion. Crop receipts are expected to remain near their \$21.9 billion level of last year.

Total farm production expenditures may rise about \$1.5 billion, continuing their long trend upward, but at a slower rate than in most recent years. Since 1965, such expenses have risen at the average rate of \$2 billion per year, reflecting both the uptrend in volume of production items used by farmers and a high rate of inflation. In the five years prior to 1965, at a time of little inflation, total farm production expense rose less than \$1 billion per year.

¹The outlook portion of this article is a summary of the reports given at the 50th National Agricultural Outlook Conference in Washington, D. C., during the week of February 22, 1972.

Table 1

	FARM INCOME				
	(Billions)				
	1960	1965	1970	1971*	1972*
Cash Receipts	\$34.2	\$39.4	\$49.2	\$51.6	\$53.6
Government Payments	.7	2.5	3.7	3.2	4.4
Realized Nonmoney Income	3.2	3.1	3.6	3.8	3.8
Realized Gross Income	\$38.1	\$45.0	\$56.6	\$58.6	\$61.8
Farm Expense	26.4	30.9	40.9	42.9	44.4
Realized Net Income**	\$11.7	\$14.0	\$15.7	\$15.7	\$17.4
Net Income Per Farm (dollars)	\$2,953	\$4,192	\$5,369	\$5,459	\$6,146

*Data for 1971 are estimates and 1972 data are projections.

**Components may not add to totals because of rounding.

Farm Product Supply, Demand, and Prices

Little overall change in the physical volume of farm product sales is expected in 1972 from last year's levels. Total food output may be sufficient for per capita consumption to remain near 1971 record levels. After climbing for six consecutive years, the quantity of red meat supplied per capita this year may average slightly less than the 192 pounds in 1971. Beef output will be up moderately, partially offsetting some expected declines in veal, lamb, mutton, and some 4 to 5 pounds less pork per capita. Output of chicken will be sufficient to provide an increase in consumption from the record 41.6 pounds per person in 1971, but the gain may be smaller than in most recent years. Turkey production is expected to increase slightly from the 1971 level. Per capita supplies of red meat and poultry combined will thus remain near the levels of a year ago.

Egg output will likely be down from the relatively high levels of last year because of the recent decline in the laying flock. Although dairy product supplies are expected to rise, a portion of the increase will likely be removed from the market through Government price support operations.

Given normal weather conditions, crops will be in greater supply in 1972 than in 1971. Total processed vegetable stocks are slightly larger than a year ago. Winter and spring vegetable crops may increase slightly from last year's levels. Citrus crops may equal those of last year, but more efficient juice

extraction methods may enhance the supply of citrus products. Potato stocks are down slightly from last year, but are about the average of recent years.

A large feed grain crop was produced in 1971 which, combined with a carryover from the previous year of 34 million tons, resulted in record feed grain stocks of 239 million tons. The resulting lower prices may lead to more liberal feeding, and total domestic feed grain usage this year may reach 184 million tons. Exports will probably total about 21 million tons, the same as a year ago. Carryover at the end of the current market year may total 55 million tons, up 22 million from last year and the largest volume of carryover stocks since 1964.

The impact of the large quantity of feed grains on domestic food prices will, however, be reduced as a result of Government price support programs. The large stocks will tend to hold prices near the Government loan rate throughout the marketing year, thus preventing any major seasonal price increases. The Government price supports will prevent any major reductions. Government support prices for most grain crops in 1972 are unchanged from 1971 levels with the announced support prices: for corn, \$1.08 per bushel; oats, \$0.54 per bushel; and rye, \$0.89 per bushel. The support price for barley was raised from \$0.81 to \$0.86 per bushel.

Rice stocks are likewise in excess supply for the current marketing year beginning August 1, 1971. Carryover stocks were up 13 percent from a year earlier, and coupled with the larger 1971 crop, resulted in a rice supply of 104.4 million cwt., about three times the expected domestic use for a year. Exports, however, may be up from the 46.5 million cwt. of last year, with most of the gain arising from subsidized export programs. Despite the excess stocks, prices will be supported by the Government at somewhat higher levels than last year, and cash receipts for the 1972 crop will likely be somewhat higher.

Wheat supplies are at the highest level in nine years as a result of the record 1971 harvest of 1,640 million bushels and the above average carryover stocks of 730 million bushels. The total supply of 2.4 billion bushels exceeds the previous year's level by 115 million bushels. Domestic wheat usage plus exports may total about 1.4 billion bushels, resulting in carryover stocks at the end of the current market season of almost one billion bushels — the largest carryover since 1963.

Wheat is grown under a two-tiered Government price support program — one price for wheat used for

domestic food and the other for wheat used primarily for livestock feed and for export. The program for 1972 is little changed from that of a year earlier. The Government loan rate is \$1.25 per bushel, but the total support price for that portion of the crop used by the domestic food industry will be 100 percent of parity, or somewhat above the \$2.93 per bushel in 1971. The voluntary set-aside acreage for payment is up to 75 percent of domestic wheat allotments in 1972, whereas in 1971 there was no payment for voluntary set-aside acreage.

Soybean stocks are down from the 1970-71 total, and carryover into next year may be down to a minimum operating level. Stocks in the current marketing year total 1,268 million bushels compared with 1,354 million bushels a year earlier. Domestic crushings this year may not exceed 725 million bushels, down from 760 million last year, and exports are expected to be down somewhat from the 422 million bushels of a year earlier.

Soybean prices have risen sharply in recent weeks, and the price for the year is expected to average well above \$3 per bushel, the highest since 1947-48. With this increased price incentive, planting intentions are up. Even so, stocks are expected to remain relatively small for another year. The outlook is for relatively high prices for the 1972 crop and another gain in cash receipts from soybean sales.

Cotton planting restrictions have in recent years resulted in a relatively short supply. Smaller beginning stocks and below average production for the past two years may lead to the smallest stock of cotton in more than two decades. The 1971 crop of 10.4 million bales was only slightly above the previous year's crop and, with distribution for the two years totaling almost 23 million bales, carryover stocks at the end of the current year may not exceed 3.5 million bales. As a result, prices have increased sharply since mid-1971.

Cotton has for several decades faced intensive competition from man-made fibers. Domestic mill consumption in the calendar year 1971 totaled 19 pounds per person, down from 22 pounds in 1958. Its share of the fiber market slipped to 37 percent in 1971, compared with 68 percent in 1958. In contrast, man-made fiber usage reached a record high of 31.4 pounds per capita in 1971, or 61 percent of the fiber market, compared with 10 pounds per capita and 30 percent of the market in 1958.

Tobacco stocks, which like cotton are held in check by Government production control programs, are somewhat lower this marketing year than a year ago.

The 1971 tobacco crop was 6 percent less than a year earlier, and tobacco stocks, while still ample, are down 3 percent. This year's marketing quotas for flue-cured and burley tobacco are down 1 and 4 percent, respectively, from 1971 levels. Tobacco use has trended downward for several years, and this trend is likely to continue through the current marketing year. Prices received by farmers, however, are at record levels under the price support program, and the mandatory supports will be up 4.8 percent for this year's crop. Thus, cash receipts to growers are likely to rise somewhat.

Prices received by farmers for most products sold in early 1972 averaged well above those of early 1971 and are expected to remain above last year's levels throughout the year (see Table II). In January, average prices received were 13 percent above year earlier levels. By February, however, the gap between 1972 and 1971 prices narrowed to 9 percent as prices this year rose more slowly than last year. The year-to-year difference will likely remain below that of January throughout the remainder of 1972.

Table II

AVERAGE PRICES RECEIVED BY FARMERS

Commodity and Unit	Feb. 15, 1971	Feb. 15, 1972	Percent Change
All wheat, per bu.	\$ 1.41	\$ 1.34	— 5.0%
Rice, (rough), per cwt.	5.44	5.57	2.4
Corn, per bu.	1.43	1.09	— 23.8
Oats, per bu.	0.675	0.636	— 5.8
Cotton, American upland, per lb.	0.2176	0.3027	39.1
Soybeans, per bu.	2.92	3.00	2.7
All beef cattle, per cwt.	28.50	32.60	14.4
Steers and heifers, per cwt.	30.90	35.30	14.2
Hogs, per cwt.	19.20	25.70	33.9
All milk, sold to plants, per cwt.	5.91	6.06	2.5
Milk eligible for fluid market	6.29	6.41	1.9
Broilers, live, per lb.	0.137	0.146	6.6

Index of Prices Received

All farm products	112	122	8.9
Crops	105	111	5.7
Livestock products	117	131	11.9

Source: U. S. Department of Agriculture, Washington, D. C., *Agricultural Prices* (February 29, 1972).

Meat animal prices this January averaged more than 25 percent above those of a year earlier, reflecting major increases in prices of hogs and beef cattle. Prices for hogs have declined from their relatively high January and February levels, but are expected to remain above last year's levels throughout the remainder of 1972 as a result of an expected reduction in per capita pork supplies. Beef prices are also likely

to average higher than last year, but may decline later in the year if supplies increase as expected.

Milk prices may average above 1971 levels through the first quarter of the year, and broiler and egg prices will likely average higher than last year's levels throughout the year. On the other hand, prices of fresh fruits and vegetables, which have in recent months been far above year earlier levels, are expected to dip below 1971 levels since supplies will probably be larger than the freeze-damaged crops of early last year.

Outlook for Food Prices

Rising private and Government demand for farm products and food and slower growth of the quantity available this year may cause food prices at grocery stores to average about 4 percent above the 1971 level. Much of the expected average increase in farm product prices for the year may have already occurred as a result of sharp increases for meat animals early in the year.

Table III

FARM AND FOOD PRICE CHANGES

(February 1971 to February 1972)

	Percent
Food¹	5.4%
Food at home	5.8
Cereals and bakery products	1.3
Meats, poultry, and fish	11.2
Dairy products	2.5
Fruits and vegetables	10.0
Other foods at home	— 0.1
Consumer Price Index¹	
Commodities less food	2.3
Wholesale Price Index²	
All commodities	4.0
Farm products	6.0
Prices Received by Farmers ²	8.9

¹U. S. Department of Labor, Bureau of Labor Statistics, Washington, D. C.

²Calculated from data published in *Economic Indicators* (March 1972). Prepared for the Joint Economic Committee by the Council of Economic Advisers, 92nd Congress, 2nd Session.

In contrast to a 9 percent rise in farm product prices, the average of all food prices rose only 5.4 percent and food at home rose 5.8 percent during the twelve months ending February 1972 (see Table III). The farmer's share of retail food cost likewise increased during the past year. During the twelve months ending November 1971, while farm prices were rising 7.5 percent, the farmer's share of retail food costs for urban workers rose from 36 to 39 per-

cent. In the same period, the farm-retail spread portion of food cost rose less than one-tenth of a percent, despite a three to four percent general inflation.² The deflated food processing and marketing margin thus actually declined, a movement which often occurs during periods of rapid increases in farm prices.

Meat, poultry, fish, fruit, and vegetable prices rose at substantially higher rates than the average for all foods in the year ending February 1972. Meats, poultry, and fish prices rose 11.2 percent, with most of the increase occurring in the last six months when prices of hogs and cattle were bid up to substantially higher levels. Fruit and vegetable prices rose 10 percent, with most of the gain occurring in the first half of the year because of the cold weather last winter and spring, which reduced supplies of vegetables and destroyed part of the citrus crop.

Ultimately, rising demand for food by consumers is reflected throughout the producing, processing, and distributing sectors. Thus, processing and marketing margins may rise further this year, offsetting the decline last year. Such developments may cause somewhat greater food than farm product price gains.

Impact on Consumer Costs

Consumers have been disturbed by the relatively sharp increases in food prices since late 1971. Food expenditures at home and away from home currently account for about 16 percent of disposable personal income, down from 20 percent in 1960. Still food remains one of the major items in the typical household budget.

Prices of raw farm products are exempt from price controls under Phase II of the price-wage control program. Thus, when farm product prices are bid up as a result of changed supply and demand conditions, the regulations permit processors and retailers to raise their prices to consumers and to maintain customary percentage margins. With the recent rise in food demand relative to supply and the resulting increase in food prices, some consumer groups have requested that price controls be placed on food products.

In reply to the pressure for such controls, the Secretary of Agriculture at the National Agricultural Outlook Conference made four points:

First: Farmers haven't caused inflation. The base period for government statistics is 1967. Since that time the price of food has risen less than most of the other main components of the Consumer Price Index.

In 1971, the American consumer bought her food supply, the best in history, with only 16 percent of her take-home income, the lowest percentage ever, in any country. And it is likely to go lower in 1972 *without* price controls on food.

There is no lack of food. Farmers have done their job. They have doubled the per capita supply of beef during the past two decades. The per capita food supply for 1972 is likely to be at least equal to that of 1971. Farmers are now engaged in converting last year's abundant feed grain crop into meat, milk and eggs, and they will deliver the food if their markets are allowed to operate.

The reason for rising food prices is that consumers, with their increasing incomes, have bid these prices up. And consumers want more service with their food, which adds to price. Farmers are not to blame.

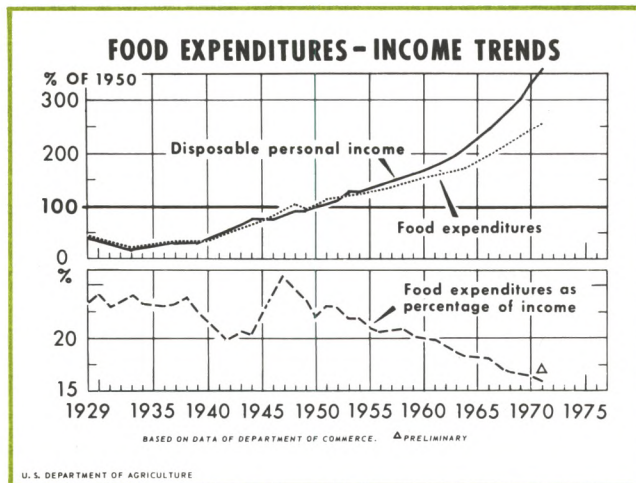
Second: Controls won't work. Controls were tried during the OPA days of World War II, as some of the older people here will remember. What was the result? Black markets, rationing, priorities, subsidies, allocations, regulations, and a whole host of government officials checking prices, weighing packages, and hauling people into court. And empty meat counters. What good does a consumer get from a low price for beef if no beef is available at that price? Price controls won't work for commodities as perishable, as seasonal and as varied in quality as food products. When the war was over we got rid of price controls on food, with widespread consumer support for their ending.

Some consumers, either too young to know or too forgetful to remember, may *think* they want controls. They should read history. It would be easier to learn the difficulties of price control for beef and pork by reading history than it would be to learn while standing in a queue at a half-empty meat counter.

Third: Farm income should not be suppressed. Per capita income of farm people in 1972 is likely to average about three-fourths as high as average per capita incomes of non-farm residents. In 1972, realized net income from farming is likely for the first time to exceed the previous record of \$17.1 billion registered in 1947, twenty-five years ago. For what other major sector of the economy is an income equal to that of a quarter of a century ago thought to be so high that it needs to be suppressed by Government action?

Fourth: Agriculture is competitive. The main cause of the present inflation is the exercise of concentrated economic power by special interest groups. This power is exercised by labor union leaders who demand and receive unrealistic wage increases for their members. Concentrated economic power is also exercised by industrial firms and by the service trades through administered pricing. The West Coast dockworkers, who have been receiving \$7.76 per hour, including fringe benefits, have just negotiated a wage increase that will, at the end of three years, bring their compensation, including fringe benefits, up to \$9.94 per hour. As another example, during the year before the President's Economic Stabilization

²U. S. Department of Agriculture, *The Farm Index* (February 1972), p. 23.



Program went into effect, the price of barbed wire increased 11 percent.

These goods and services are priced administratively, which means that competitive market forces are sharply restricted. The Economic Stabilization Program is properly focused on these particular sectors, which is where most of our present inflation originates.

In contrast, agriculture is highly competitive, sometimes harshly so, and is therefore not in need of control.

While the Secretary's view (that concentrated economic power caused the present inflation) is widely held, there are other explanations.³ Nevertheless, the data confirm his view that food prices have risen less than the average of other consumer prices in recent years. From 1964 to January 1971, the price of all consumer items increased at the annual rate of 3.6 percent, while food prices rose at the rate of only 3.4 percent. Food expenditures have been a declining portion of disposable personal income, dropping from 22.2 percent of such income in 1950 to 16.3 percent in 1971. Furthermore, food costs as a percent of total disposable income are expected to decline again in 1972, despite some further increases in food prices.

³We have no evidence that large unions and business firms exercise greater power now than during the period 1953 to 1961 when the post-World War II inflation was slowed to a one percent rate. Monopolistic power of labor unions or of businesses can cause misallocation of resources and higher levels of unemployment, but it is doubtful that they have been a major cause of the current inflation. For example, the high rates of inflation during World War II and the Korean War were reduced by a slower rate of monetary growth. The money stock from 1953 to 1961 rose only 1.4 percent per year and prices only 1 percent, as measured by the wholesale and consumer price indices. This slower rate of inflation was achieved while a larger percent of the labor force was unionized than is the case today. The share of nonagricultural workers in unions declined from 34 to 28 percent and of total workers from 25 to 23 percent during the period 1953-68.

We likewise have no evidence of an increase in monopoly power in commodity markets. The fifty largest manufacturing

Alternative Means of Reducing Food Costs

If the objectives of public policies are to reduce food costs and encourage economic growth, means are available which offer greater opportunities for success than the direct controls method. As pointed out by the Secretary of Agriculture, if supply and demand, including Government demand through price support operations, are in equilibrium at current prices, any reduction in price through direct controls will mean that consumers must face empty retail grocery shelves. Furthermore, any attempts at such control will require a large number of enforcers, taking manpower from the production of other goods and services, thereby reducing output and increasing inflationary pressure.

Other means of reducing food costs include such actions as freeing international trade and reducing our domestic farm price support and production control programs. Both methods would release manpower from the less productive to the more productive sectors of agriculture and the rest of the economy, thereby increasing total production of goods and services.

The immediate elimination of import restrictions on meat and sugar could have an important dampening effect on domestic prices. An increase in meat imports would tend to reduce prices for frankfurters, luncheon meats, ground beef, and a variety of canned and frozen meat products. The removal of the sugar quota would result in a decline in domestic sugar prices of about \$.043 per pound.⁴ D. Gale Johnson, of the

firms had 23 percent of value added in 1954 and 25 percent in both 1963 and 1966. Shipments accounted for by the largest four firms in each of twenty-two selected industries showed little change in concentration from 1947 to 1966. Furthermore, firms during this period experienced rising competition from manufacturing firms abroad.

In contrast to the view that imperfect labor and commodity markets are an important cause of inflation, research at this Bank indicates that the rate of money growth is the chief cause. In the recent inflation from 1965 to 1970 the money stock grew at a 5 percent rate, wholesale prices at a 3 percent rate, and the general price index at a 4 percent rate. Earlier inflations have likewise been associated with high rates of money growth.

The relatively long lag between slower money growth and its impact on prices has probably been disappointing with respect to the progress made in slowing the rate of inflation to date. Expectations based on past trends in prices and wages continue to provide inflationary momentum. It is during such periods that the monopoly powers of labor unions and some businesses are most noticeable, since wages and prices often continue to rise despite under-utilization of resources. This momentum may extend over a period of three or four years, following a prolonged and relatively high rate of monetary expansion, as occurred in 1967 and 1968.

⁴Based on New York wholesale price differential between sugar for domestic and foreign use in November 1971.

University of Chicago, reported at the recent Agricultural Outlook Conference that:

At the present time the sugar program imposes an additional cost of approximately \$1 billion on consumers and taxpayers; this compares to total cash receipts from production of sugar cane and sugar beets in domestic areas of about \$700 million in 1970. The cost to consumers is calculated as over and above the import cost of sugar and assumes that world market prices would increase if the U. S. increased its imports of sugar. It is obvious that the economic losses to consumers and taxpayers far exceed any net gains to producers of sugar in the United States; it is equally obvious that both those now producing and consuming sugar could be made better off by other arrangements.⁵

In addition to consumer gains from reduced import restrictions on farm products, any concessions we can obtain through bargaining with our world trading partners for reduced restrictions on farm exports will provide a greater market for our farm products. We probably have a relative production advantage in several major farm commodities. The exports of such commodities could be increased with reduced trade restrictions, and our farmers would gain by selling more of the products that they can produce with greatest efficiency.

A reduction in the nation's farm price support, production control, and related programs probably would not lead to a major change in output of farm products. Lower price supports would tend to reduce production. On the other hand, a relaxation of production controls, including the acreage rental program, would tend to increase production and production efficiency.

Domestic use of farm products would probably not increase significantly. Gains in production efficiency would lead to somewhat lower prices for farm products and food. Lower food prices would in turn lead to some upgrading of diets, thereby providing a marginal gain in domestic farm commodity and food consumption.

Commercial exports of farm products, however, would be expected to increase as a result of both somewhat lower average prices and a change in resource use to the production of commodities where we have the greatest comparative advantage. The lower prices would make our commodities more attractive abroad. By changing to the production of those products where our comparative advantage is greatest, both this nation and our trading partners

abroad would reap the advantages of international specialization. On the other hand, a reduction in export subsidies would result in some decline in the exports of commodities shipped under these programs.

There is little evidence that the farmer is achieving substantial gains from the price support and acreage control programs. In fact, as pointed out so succinctly by D. Gale Johnson, the gains were in the form of a windfall to those who owned land when the programs began and offer little benefit once farm land prices and labor adjust to the new income flows.

The nature of agricultural production is such that efforts to create a cartel under guidance and subsidy from Washington will almost certainly lead to disappointing results. There is no way to restrict entry into agriculture. Thus if a program were to result in higher returns for agriculture through price supports and acreage restrictions, potential producers will attempt to enter the field. One way that this can be done is to buy land which has attached to it the right to produce the particular commodity. After a fairly short time land prices will be bid up and new producers will find that it is no more profitable to produce this particular crop than a number of others. This is not a hypothetical case, but is essentially what has happened in tobacco, where acreage controls, marketing quotas, and price supports have been maintained for two decades.⁶

⁵D. Gale Johnson, "Government and Agriculture: Is Agriculture A Special Case?" *The Journal of Law and Economics* (October 1958), p. 128. For a further discussion of this topic see John F. Floyd, "Effects of Farm Price Supports," *Journal of Political Economy* (April 1965), pp. 148-158. Floyd points out that the benefits of such programs take the form of a windfall, that is, the gain is once and for all. Thus, there is little advantage in these policies for the landless and for the person about to enter the industry. Armen A. Alchian and William R. Allen in *University Economics*, 2nd ed. (Belmont: Wadsworth Publishing Company, Inc., 1968), p. 347, provide an analysis of the windfall aspects of our national farm program. G. S. Tolley in "Management Entry into U. S. Agriculture," *American Journal of Agricultural Economics* (November 1970), p. 492, suggests that the basic agricultural income problem is one of low-level management being outmoded.

Alternative views relative to the farm price support and production control programs are presented by Willard W. Cochrane in *The City Man's Guide to the Farm Problem* (Minneapolis: University of Minnesota Press, 1965). Cochrane states, "If the full excess productive capacity of American farming of the early 1960's were to be eliminated by lower prices, the decline in the level of farm prices could be as much as 40 percent, and the decline in aggregate net farm income as much as 60 to 70 percent" (p. 126). Earlier however, in the same publication, Cochrane states, "Governmental price and income support has provided farmers with assistance and service, but the programs are costly, the long-run income results debatable, and the whole policy subject to intense controversy" (p. 11). Similarly, the National Advisory Commission on Food and Fiber in *Food Needs and U. S. Agriculture in 1980*, Technical Papers, Volume 1 (August 1967), pp. 51, 52, points out the excess capacity in agriculture and the major adjustments that would be necessary for a return to free market prices.

Both of these studies contend that in the absence of Government price supports and production controls, excess ca-

⁵Similar inefficiencies in the U. S. sugar program were found by Thomas H. Bates in "The Long-Run Efficiency of United States Sugar Policy," *American Journal of Agricultural Economics* (August 1968), pp. 521-535.

Table IV

UNITED STATES DEPARTMENT OF AGRICULTURE
BUDGET OUTLAYS¹

Function	1967 Actual	1971 Actual	1972 Estimated
	(Billions)		
Agriculture and Rural Development	\$3.7	\$5.1	\$7.3
Income Security ²	0.4	2.3	2.9
Food for Peace	1.5	0.9	1.1
Natural Resources	0.3	0.8	0.9
Other ³	-0.1	-0.5	-0.6
Total	\$5.8	\$8.6	\$11.6
Number of Farms in U.S. (thousands)	3,146	2,876	2,831
Outlays per Farm (dollars)	\$1,844	\$2,990	\$4,098

¹All years are on a fiscal year basis. Outlays include expenditures and net lending.

²Listed as Health and Welfare in 1967.

³Net receipts.

Source: U. S. Department of Agriculture, *Demand and Price Situation* (February 1968 and 1972).

Another benefit from some dismantling of the farm program would be a reduction in Governmental expenditures. Outlays of the U. S. Department of Agriculture for fiscal 1972 are estimated at \$11.6 billion, \$3 billion more than in 1971 and double the volume of these expenditures in 1967 (see Table IV). Such expenditures are expected to total \$4,098 per farm in 1972, 37 percent more than a year earlier and more than double that of 1967. Not all of these costs are associated with the objective of larger farm incomes.

capacity will have an unfavorable impact on farm incomes. Over the longer run, however, as pointed out by many economists, agricultural capacity adjusts to income changes. Higher returns to resources in agriculture relative to resources in other sectors provide incentive for resources to move into farming. Conversely, reduced incomes in agriculture lead to reduced capacity. See Zvi Griliches, "Estimates of the Aggregate U. S. Farm Supply Function," *Journal of Farm Economics* (May 1960), pp. 282-293; Lowell E. Gallaway, "Mobility of Hired Agricultural Labor: 1957-1960," *Journal of Farm Economics* (February 1967), p. 47; Larry Lange-meier and Russell G. Thompson, "Demand, Supply, and Price Relationships for the Beef Sector, Post-World War II Period," *Journal of Farm Economics* (February 1967), p. 174; Randolph Barker, "Appropriate Methods for Estimating the Short-Run Elasticity of Supply for Milk," *Journal of Farm Economics* (August 1965), p. 841; A. J. Raymer and Keith Cowling, "Demand for Farm Tractors in the United States and the United Kingdom," *American Journal of Agricultural Economics* (November 1968), pp. 896, 906; and Luther G. Tweeten and C. Leroy Quance, "Positivistic Measures of Aggregate Supply Elasticities: Some New Approaches," *American Journal of Agricultural Economics* (May 1969), p. 352.

Agricultural research and extension work, soil conservation, forestry, and a number of the traditional functions of the USDA would remain if the price support, production control, and related expenditures were removed. But, the total costs of these traditional functions of the Department probably don't exceed 10 percent of its current budget.⁷ The major portion of its expense could thus be eliminated in the absence of the price support and production control objectives.

Conclusions

In summation, the outlook is for higher farm incomes in 1972. Gross farm income will probably rise \$3 to \$3.5 billion from a year earlier, largely reflecting higher returns from livestock products and increased Government payments. Net farm income may rise \$1.5 to \$2 billion, the sharpest year to year gain in recent years, and average income per farm is expected to exceed \$6,100. Prices for farm products will also average higher than last year.

Food prices will average higher than a year ago, reflecting increases in both processing and marketing margins and farm product prices. The increases have resulted in pressure for price controls on food. More efficient means of reducing food prices are to be found in freeing up international trade and reducing farm production controls and price supports. Any attempt to directly control food prices while such programs exist would involve one arm of the Federal Government supporting farm prices and another arm attempting to depress them.

The removal of import barriers would result in lower prices for a number of important food items, and to the extent that foreign nations reciprocate, markets for our farm products would be increased. Reduction of the price supports and production controls would result in more efficient use of national resources, reduced Federal cost, and offer greater assurance of success at reducing food costs than attempts at direct controls. A reduction in the production control and price support programs would provide incentive for resource adjustments within the farm sector and between the farm and non-farm sectors, thus increasing the output of all goods and services.

⁷D. Gale Johnson, "Government and Agriculture," p. 122.

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