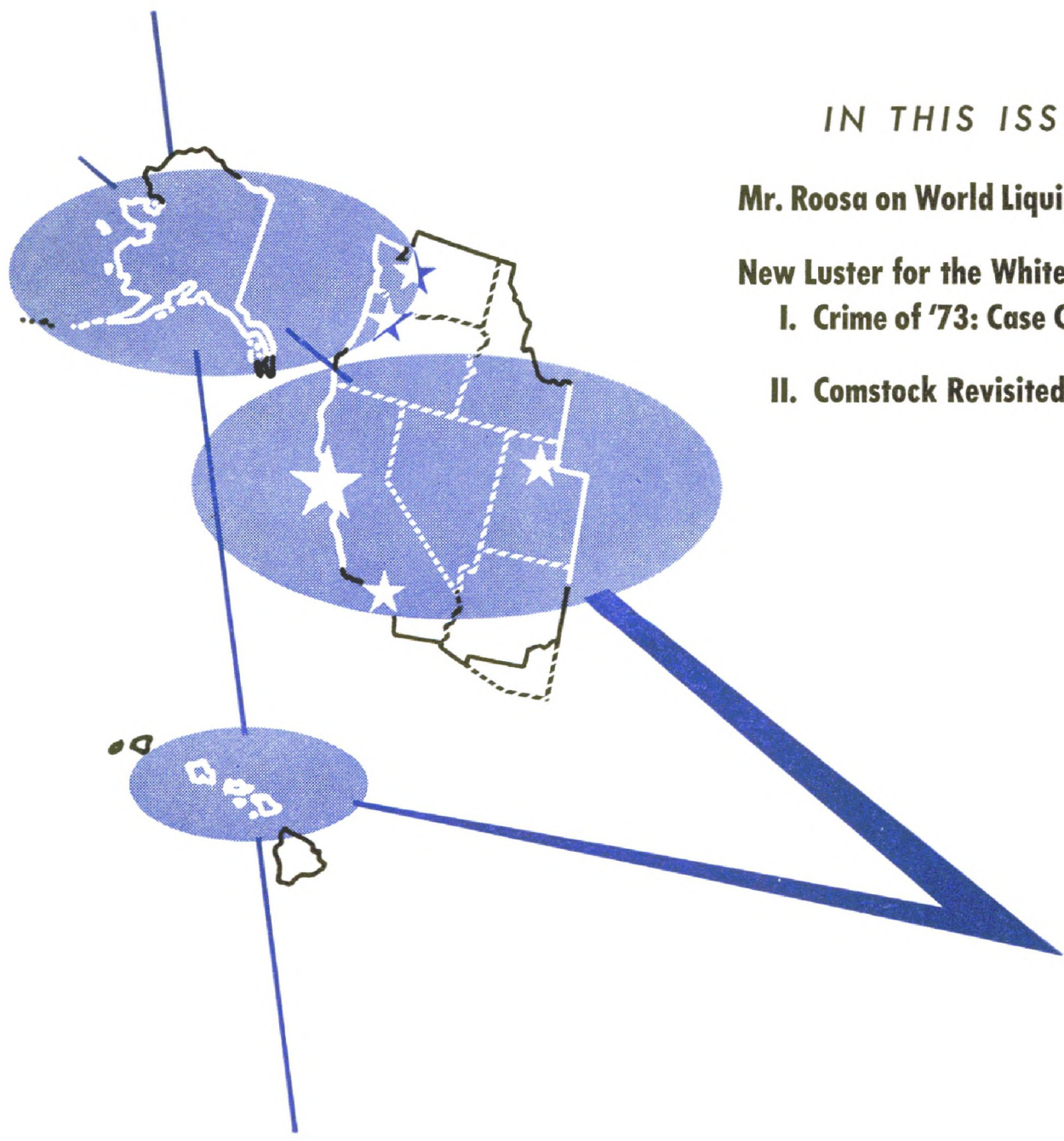


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FEDERAL RESERVE BANK OF SAN FRANCISCO

MONTHLY REVIEW



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JUNE
1964

Mr. Roosa on World Liquidity

. . . full text of the speech, "The Potentialities of Our International Payments System".

Crime of '73: Case Closed

. . . silver's new-found success leads to the latest episode in its checkered legislative career.

Comstock Revisited

. . . rising silver prices cause District producers to expand development and exploration activities.

Mr. Roosa on World Liquidity

THE Eleventh Annual International Monetary Conference of the American Bankers Association met on May 21 of this year at the Palais Schwartzburg in Vienna. Mr Robert V. Roosa (Undersecretary of the Treasury for Monetary Affairs) highlighted the session with an analysis of recent and possible future developments in the field of international liquidity. His speech, "The Potentialities of Our International Payments System," has aroused a great deal of interest in the business and financial community, and for that reason it is reprinted here in its entirety.

In the rising crescendo of calls for reform of the international monetary system, the continuing themes of present experience seem sometimes to be barely audible. But I scarcely need remind this audience that they are still important, and indeed are likely for a long time to come to provide the structure on which all of us in the world of finance will continue to depend.

It has been one of the remarkable and reassuring aspects of the close and intensive studies which have been under way for some months now within the so-called Group of Ten*, that the participants have never lost sight of the essence of what we already have. While it would be inappropriate for me, or for any of us, as yet, to venture in public any views on specific possibilities for the future evolution of the international monetary system, I believe I may be permitted to reflect for a few minutes, in purely personal terms, on some of the features of the arrangements that are already in being. Even here, there is room for wide differences of view, but each of us must attempt some sorting out of this kind as a prerequisite to taking any part in the process of testing out and appraising the full range of thoughts, aspirations or proposals that have been suggested for the future.

*Ed. note—In October 1963, representatives of the ten leading industrial countries agreed "to undertake a thorough examination of the outlook for the functioning of the international monetary system and of its probable future needs for liquidity." These countries are: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States.

There are a number of avenues of approach that one might take toward a broad view of our international payments system and its ability to meet the world's need for liquidity. One is that of constructing various theoretical models of an ideal system and then, somewhat disappointedly as a rule, measuring the performance of our present arrangements against this standard. A second line of approach traces historically the steps along which the world has evolved toward the present liquidity system, concluding all too often that we are already living in the best of all possible worlds, or if not, that the only answer lies in turning back to an earlier stage of monetary evolution. Still a third kind of approach has come to appeal to me. Somewhat more eclectic in its point of view, it draws from our past experience while recognizing that the chief lesson of history is that payments systems and liquidity arrangements—like most things in a dynamic world—are constantly evolving in response to current experience.

Such an approach asks the historical question "Where have we been and how did we get where we are?", but it asks this question for the purpose ultimately of answering another: "Where do we want to go and how do we get there?" It recognizes that our ability to foresee the future and its needs is gravely limited; that perhaps our surest course is to develop a cooperative and flexible approach,

both toward finding the direction in which we may wish to move, from one period to another, and in selecting the processes that will take us forward in an orderly manner.

The work of the Group of Ten will have been fully successful, I believe, if it helps to assure and confirm the commitment of all the participating countries toward such an approach. For as we look to the future with an eye to the past, we cannot escape the evidence that the evolution of our payments system has too often been scarred by disruptive convulsions set off at an unexpected moment by the force of change itself. The system, too often, was not readily flexible in meeting and adapting to underlying changes that were already in motion. In looking toward the changes that an uncertain future always brings, the Group of Ten is building with a new spirit of international financial cooperation that has been developed in recent years and strengthened during the current discussions. To me, this spirit and its perpetuation represents a stride forward that is at least as important as any more concrete recommendations that may in the end emerge from our studies.

A glance backward, in the history of our international liquidity system, suggests a number of intriguing parallels, as well as contrasts, with the liquidity systems that have been developed within individual nations. The financial history of national economies, in the main, reflects a progressive development in the effective use of the liquidity-creating process to meet national economic purposes and goals. This development has generally taken place through the market place of private credit—where, in a never-ending attempt to economize on money, an almost infinite variety of near-money substitutes has been developed. But it has been accompanied by the emergence of central banking, and paralleled by a growing reliance upon debt management and fiscal policy. This con-

tinuous perfecting of the liquidity-creating process within nations has rested on the establishment and perpetuation of secure political institutions for the areas served. And it has been buttressed by an integrated system of financial markets and institutions—in various stages of development in different countries—as well as by the existence of only minimal barriers within national boundaries to the free flow of men and goods, and money and capital.

In the international area, the money-creating element of the liquidity process cannot rest upon the political sovereignty that has been its essential foundation in the individual nation. Nor can it rest on a unity of essential economic and financial policies among nations. National monetary, fiscal, trade, employment, and growth policies can and do differ in both philosophy and practice. Nor can the creation of international money rest on a unified system of financial or commercial institutions or on a single money and capital market. To be sure, great strides have been made in recent years in bringing the countries of the Western world closer together in all these areas, but we would only be deluding ourselves if we were to think that we have reproduced internationally—or are likely to do so in the near future—the things that we can safely take for granted within national boundaries. We must be mindful, therefore, when we draw on analogies with national systems, as we try to visualize the potentialities for the creation of monetary assets, as well as all other forms of international liquidity, that a cautious and selective approach will be required.

In the international area we are still in the comparatively early stages of learning how to economize on the primary element of international liquidity, the monetary reserves themselves. This effort to economize is not new, but its adaptation from the internal usage of nation-states to the external needs of

the international community has necessarily been slow. As recently as the Twenties, the dominant theme among those concerned over the adequacy of the international liquidity system was that of economizing on gold, although an historian today might describe the aim more broadly as that of enlarging the capabilities for trade and finance of a system that rested ultimately upon a slowly growing base of monetary gold. It was generally recognized then, too, that frequent changes in the price of gold offered no useful alternative. For monetary stability was hinged upon the certainty of a generally acceptable fixed-value base, and in turn was itself seen, then as now, to be essential for sustained economic progress.

At that stage, of course, the economizing on gold was accomplished, almost unconsciously, by increases that had been occurring for some years in the supply of a reserve currency—particularly the pound sterling—which formed the most important part of the increase taking place in the basic reserves of most other countries. Later, as a concomitant of the vast resources and productive capacity of the United States, emphasis shifted to the dollar. Growth in the dollar component of reserve assets over the past two decades has provided the major source of additions to international liquidity as a whole, while an impressive redistribution of the world's monetary gold reserves from the United States to other countries has also been taking place.

I do not have to remind this audience, however, that the creation of international money through the deficits of a reserve currency country can also involve problems. The overriding necessity that has for some time been apparent to restore equilibrium in the United States balance of payments, and our recent progress toward that end, make it quite unlikely that the dollar would be able to add to international liquidity over the next decade

as it has over the two preceding decades. This may to some imply, of course, a possible need to find additional substitutes for gold, perhaps through finding ways for other currencies to serve as convertible monetary reserves. But the need might also point in a different direction—toward economizing on the foreign exchange component of international reserve assets—just as in the past the reserve currencies themselves were the means of economizing on the use of the limited supplies of gold.

There are, to be sure, a number of different ways of looking at the most recent phase of development in international liquidity. Some observers, particularly in the academic fraternity, would stress the evidence they see of a shortage of international reserves. Others would consider that any evidence points instead to a short-fall in long-term capital flows, and would regard liquidity as superabundant. And there are, of course, many other variants. For myself, I have begun to wonder whether the international economy may not presently be completing a phase of concentration on the build-up of primary reserve assets and whether perhaps it is now entering a phase in which this supply of primary reserves can, without further substantial increases, at least for a time, serve as a reasonably adequate basis for the gradual erection of a somewhat larger credit structure.

Perhaps, if some of the developed countries are coming to consider their present reserves of gold and dollars as reasonably sufficient, they might wish instead, with proper safeguards, to use some part of any additional surpluses for extending credit to others. On the part of the less developed countries, while some may have additional scope for holding reserves, there are not many which can afford further sizeable accumulations to be held idle in reserves for very much of the time. They need only the minimum that will serve for working capital purposes and as a base

to support borrowing. In other words, the problem lying directly ahead of us may not necessarily involve a need for more dollars, nor for the immediate creation of another international money to supplement them, but it may instead call for greater use of credit facilities and the international money substitutes that are created as such credit facilities are utilized.

This interpretation does not imply any fundamental change in the role of gold and the reserve currencies in our international monetary system, either as a means of international settlement or as international stores of value. It does not imply changes in the customary uses of currencies in private transactions. Nor does it imply that there are necessarily any natural limits upon the use of these familiar arrangements. There would be ample room in official reserves for — hopefully — an increased volume of newly available gold at the continuing fixed price of \$35 an ounce and for additional holdings of acceptable currencies, depending on the free choice of each of the individual countries concerned.

If this should be the phase of development that our international monetary system has reached, countries would increasingly come to regard their primary reserve assets as a base upon which credit—in many different possible forms—might be granted or received. In effect, for example, a country's reserves might decline somewhat less at times of strain than in the past because more of the customary drains upon reserves would be met by credits—credits made credit-worthy, in part, by the reserve assets still being held by the affected country. And conversely, surplus countries, instead of piling up more and more reserves, might accept in some form the credits needed by the deficit countries.

In many respects, under conditions of this kind, we would have reached a stage in the international area that was reached in several of the national financial systems seventy-five

to one hundred or more years ago, when the transition began from exclusive reliance on hand-to-hand currencies to a system which involved the use of a credit expansion process and the creation of money substitutes by financial intermediaries. As now developed, greater reliance on facilities for creating money substitutes and supplements within individual nations has made possible a much more intensive use of the money supply itself. To an important degree, credit arrangements that increase, in effect, the velocity of money do reduce the scale of needed increases in the money supply.

It is essential in such an appraisal, too, to distinguish carefully between the needs of the private sector and the underlying needs for official reserves. Much, if not most, of the discussion of international liquidity is carried on in terms of the public sector. But it is proper to remind ourselves that the ultimate aim of all that we do is to ensure that the liquidity needs of the private sector can be met. This, of course, involves most of the same questions which the monetary authorities in each country must face in determining domestic financial policy—questions as to the relationships between domestic liquidity, growth, employment, price stability, and the balance of payments. In part the problem is one of assuring adequate facilities for the working balances needed to carry on trade and payments abroad. In part, too, the problem is one of access to international credit and, particularly for countries where money markets are not well developed, it includes a need for holding secondary reserve assets abroad. But above all, there is the need for assuring ready convertibility at a stable price among the various currencies used to finance the flow of current payments for trade and services, to cover new investments abroad, and to service old ones.

The actual operating needs of the private sector are serviced by an efficient complex of

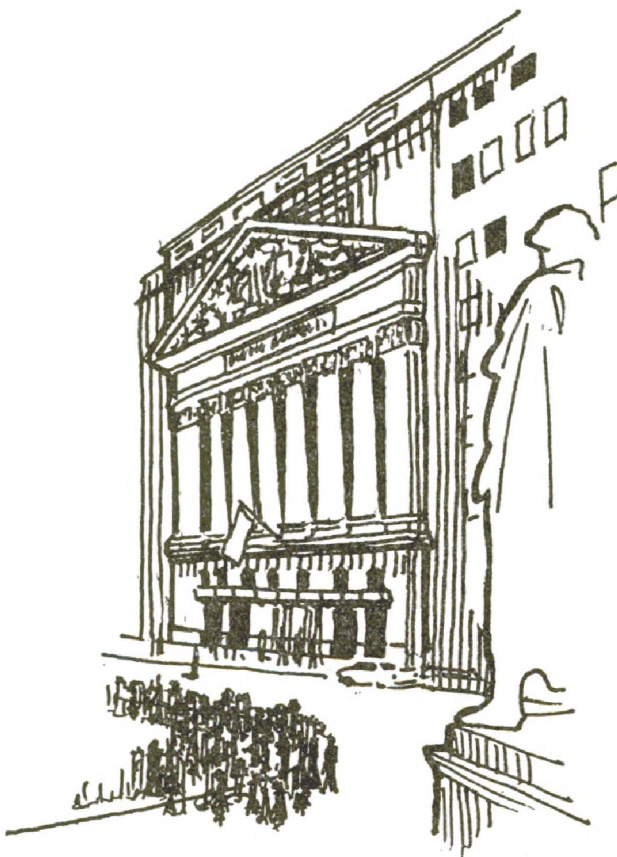
private banking and credit institutions, many of them national in origin but international in the scope of their operations. As representatives of such institutions, you are confident, I am sure, as you should be, that existing facilities for private credit, at least at short term, are adequate to meet the challenge of a growing world economy. And wherever they may tend to lag behind, competition will, within the open environment of free convertibility, set in motion forces to widen appropriately the scope of such facilities.

But underneath all of the structure and processes of private credit lies the capacity of the monetary authorities of the individual countries to meet, at their posted exchange rates, the composite of drains arising from all of the private transactions that affect them. If inflows do not balance outflows, national policy changes may be needed to bring adjustment, but meanwhile any adverse flow must be financed. Adjustment and financing are sometimes contrasted in ways which make them seem antithetical. But I am sure that the monetary authorities — and particularly those of the leading financial countries that have made such pioneering efforts in the area of cooperative action in past years—are alert to the need to respond to the disciplinary warnings that are sounded when an individual country's payments position leads to inroads on official liquidity.

We are, however, still in the process—and it will certainly be a continuing one—of developing arrangements to ensure that when the clustering of payments shifts heavily for or against an individual country, the necessary means of payment can be made available in ways that will set in motion forces that will assist in the return to balance while avoiding abrupt interruption of domestic stability and growth. We must stress the importance of arrangements which encourage and facilitate the adjustment process. There

would be serious risks for an individual country, or for an international liquidity system, that concentrated solely on ways and means of piling up primary reserves, in order to meet all possible contingencies. In those circumstances, the world might well be subjected again to the dangers of a competitive race for reserves as neighbor beggared neighbor in order to acquire and hold a mercantilist hoard of primary reserves. And as more and more reserves were created, there would be less and less assurance that the self-restraint and discipline inherent in any system that relies on credit would be brought into play. This would be true irrespective of the form of primary reserve involved. It would be true even under a full gold standard system—for an individual country and for the system as a whole—if the additions to holdings were large relative to internal monetary needs.

We need not, therefore, view the possible emergence of greater reliance upon a credit



element in international liquidity as a weakness in our system. Instead, it may be a positive advantage—a flexible means of creating liquidity at the times and at the points where it is needed, but a means also of preventing maladjustments from going too far and of encouraging the timely adoption of necessary policies to restore equilibrium.

The challenge to which we must respond in the international liquidity area is thus similar in many respects to the challenge faced by central banks and monetary authorities throughout the world in their respective monetary and credit spheres. It is the challenge of assuring an ample expansion of liquidity for the real economic growth that is the object of all our actions while maintaining the control necessary to keep expansion from resulting in inflation. To be sure, the more successful individual countries are in maintaining relative price stability along with achieving their desired growth and employment levels, the fewer the problems there are likely to be for international liquidity. For liquidity needs cannot be separated from the amplitude and magnitude of payment imbalances and these in turn depend on the internal circumstances of individual countries. This only means, however, that any consideration of liquidity must proceed hand-in-hand with consideration of ways and means of improving the balance of payments adjustment process and making it more efficient.

If it should be true that the present phase of international financial development involves a shift of emphasis away from primary reserves and toward more use of credit facilities, as well as toward greater reliance by creditor countries upon the supplementary reserve assets which the use of these credit facilities implies, we are left with another crucial question: What form shall these arrangements take in order to achieve our twin goals of (1) the ample financing of temporary balance of payments swings and (2) the

exertion of pressure for an orderly correction of any underlying imbalances that may occur? It cannot be emphasized often enough that the function of international liquidity is not to permit countries to avoid the need to make what may sometimes be painful adjustments in domestic policies and practices. It is rather to permit those adjustments to be made in an orderly fashion and in ways that minimize the possibility of cumulative pressure on other countries and on the international system as a whole. We need liquidity so that economic ills can be cured without the use of shock treatment. We do not need, and cannot successfully use, liquidity to avoid the necessity of a cure.

I suspect that the only thing that can safely be said now about the credit facilities that will be needed to meet these ends is that they will be composed of many elements. Our own American experience of the past few years has witnessed the establishment of new facilities — including most notably the Federal Reserve swap network and Treasury foreign currency bonds—along with the adaptation of older arrangements to meet new needs in unexpected ways. Who, for example, could have foreseen even five years ago that the long-term loans that we extended to Europe during the period of its reconstruction would be convertible into liquidity instruments for our own use through advance debt prepayments by a number of our European partners? These have been among the fruits of international financial cooperation in the past few years, and I am sure that we will see many more.

As we look to future liquidity arrangements, and in the process take a searching look at the past and the present, I believe that we are also making healthy rediscoveries of what we already have and what we can do with our present arrangements.

Part of this process of rediscovery has been to realize the potential of the International

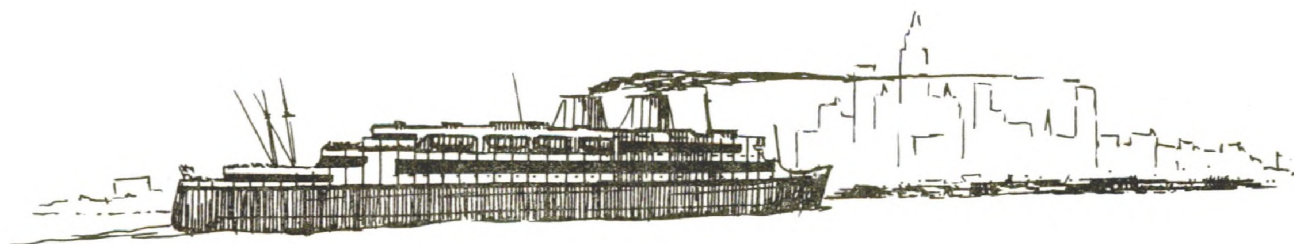
Monetary Fund as the major international agency where credit financing and financial discipline naturally come together. Our American view of the International Monetary Fund had, in the past, been colored by the assumption, shared with us by many others, that the prime function of the Fund would be to serve as a distributor to other countries of the dollars paid in by the United States under its quota. To be sure this was expected to be a revolving fund rotating among countries with the greatest present need, but the potential usefulness of the Fund to the United States was not always fully appreciated. Many of us, at least, thought of the various quotas as drawing rights, to be used as "borrowing facilities" in case of need—something to be considered, so to speak, as a sort of asset "below the line." We did not also think of our quotas as creating an equal opportunity for acquiring an asset "above the line"—as our own currency was drawn from the Fund by others—an asset that would be readily available, in turn, for us to draw upon at will if we needed to use reserves.

It did not occur to many of us in the United States that, as dollars were paid out by the International Monetary Fund over the early postwar years, we were gaining a valuable asset in the parallel increase in our "super-gold tranche" position, or, more properly, our "net creditor position" in the Fund. Then more recently, as dollar shortage gave way to dollar plenty, in some countries, debtor countries to the Fund were able to pay back the dollars they had drawn earlier. The Fund itself was thereby absorbing a significant fraction of the dollars that our pay-

ments deficit was pumping into the world—amounting, in fact, to about \$1.3 billion in the period from 1958 to 1963. Or, to put it another way, without receiving very much attention, the United States was making use of its creditor claims on the Fund, acquired in years of balance of payments strength, to meet a significant part of its reserve drain as our deficit accumulated—consisting largely of some \$304 million in 1959, \$442 million in 1960 and \$626 million in 1962.

At the present time, as you know, the United States is a small net user of the Fund's resources. In effect, dollars drawn by others in earlier years have been wholly repaid out of the dollars created by our more recent deficits. And now, in order to facilitate additional dollar payments to the International Monetary Fund out of the accumulated reserves of Fund debtors, the United States has itself drawn modest amounts of foreign currencies under the standby arrangement made in July, 1963.

Beginning in 1960, but increasingly in 1961 and thereafter, the Fund has filled the drawing requests of member countries by using the national currencies of those countries on the Continent that have run sizeable balance of payments surpluses. And as these currencies have been paid out, a form of reserve assets has been created for the countries supplying them—assets that can be used as needed in other times and other circumstances. The value of these assets is becoming more and more fully recognized. Some of the Group of Ten countries already include their "super-gold tranche" claims, as well as their normal gold tranches in the Fund, among



their primary reserve assets, while others consider them as a useful second line supplement. Most recently, Italy, following the pattern of the United States, has been able to use during a period of deficit the added reserves acquired a few years earlier when other countries were actively drawing lire from the Fund.

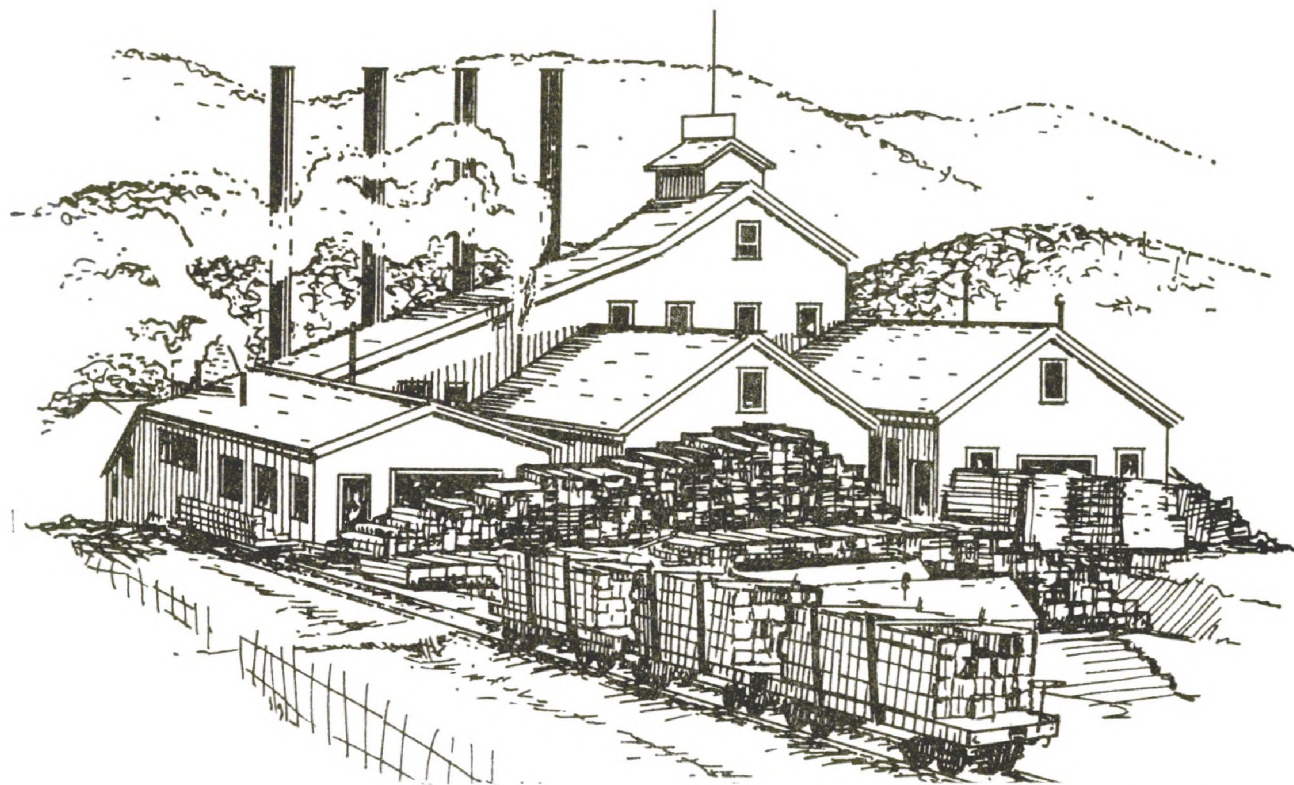
I expect that the months and years ahead will see more of a reappraisal and rediscovery of the dimensions and potentials of the International Monetary Fund for our payments system and as a center of international liquidity. The Fund's own study of liquidity will itself, I am sure, be a stimulant to our thinking and to our planning. I personally cannot visualize arrangements for the future that will not include a leading role for the Fund. For in the Fund we have an established institution that provides, through its normal operations, an accepted way of using national currencies to bolster international liquidity in a limited and systematic way.

I spoke to you in Rome two years ago of the problem of multilateralizing a part of the role performed by the key currencies. It seems to me that the International Monetary Fund has developed more and more as a mechanism where the non-reserve currency countries can share in a multilateral way the responsibilities for the financing of payments swings and thereby make a contribution to longer-run liquidity needs.

In addition, room has been found outside the Fund for other bilateral and multilateral facilities as well—supplementing and reinforcing, but in no way supplanting, the central role of the Fund itself. We have come a long way in these past ten years, and building on our past experience we can look to the future with confidence. Over the period, as seen from the U. S. point of view, one of the major achievements has been the develop-

ment of the Federal Reserve swap network. While originally designed mainly as a defense for the dollar, the reciprocal nature of the arrangements has become progressively apparent. They have proved their usefulness in economizing on primary reserves by combatting speculation and avoiding disruptive swings in reserve positions—and have already served more importantly for other currencies at periods of great stress than for the dollar itself. Together with other mutual central bank arrangements, these swap facilities will clearly play an integral role in any liquidity system in the future. Treasury foreign currency bonds have similarly demonstrated their usefulness, not only in absorbing the temporarily large dollar accruals of some individual countries, but also in providing supplementary reserve assets for the original creditor, which he may later use in case of need—as Italy has already done.

But these are only examples of the credit forms that make up an essential part of our present-day liquidity system. I am sure that new forms will emerge as needs appear. The emphasis I would like to place is not upon the specific instruments themselves, but on the process that has created them—the process of evolutionary change shaped by common appraisal and cooperative action. All countries, and particularly the leading industrial countries, have not only a mutual interest but also a shared responsibility in the maintenance of an adequate and stable international monetary system. The fortunate fact is that they recognize and understand this imperative. They are, I believe, determined to find those approaches which will, while adapting to the shifting needs of the world economy, most nearly fulfill the potentialities of our international payments system.



New Luster for the White Metal

I. Crime of '73: Case Closed

POPULIST orators, finding no rational explanation for the grinding deflation that racked the nation's economy before the turn of the century, argued that hard times were the result of a monstrous conspiracy organized by London bankers and their Wall Street minions. When asked for evidence, these orators (as in this passage from *Coin's Financial School*) automatically pointed to the "Crime of 1873":

"A crime, because it has brought tears to strong men's eyes and hunger and pinching want to widows and orphans. A crime because it is destroying the honest yeomanry of the land, the bulwark of the nation. A crime because it has brought this once great republic to the verge of ruin, where it is now in imminent danger of tottering to its fall."

The "crime"—the legislative demonetization of silver—was denounced in such violent

terms because the Populists felt that this measure contracted the money supply and thereby contributed to a deliberate policy of deflation. In their eyes, the "crime" was compounded in 1900 with the formal adoption of the gold standard, and it was only partly assuaged in the 1930's with the discarding of gold as a domestic means of payment and the adoption of a silver-purchase program. Yet, last year, when legislation was passed which permitted the Treasury to withdraw silver certificates from circulation, strong men no longer wept and the Republic failed even to note its peril. Aside from a few nostalgic editorials, the news of the event was confined to the financial pages.

Perils of success

There was no national crisis, primarily because the turn-of-the-century monetary battles had eventually persuaded the nation to

enact the Federal Reserve Act, and thereby to institute flexible methods of monetary control. But the matter was more complex than that, since silver's rebirth as an industrial and artistic material has contributed significantly to its problems as a monetary metal. A 40-percent jump in the New York price quotation in the year or so preceding the new legislation was a response not only to the shortfall in the major sources of supply—Western mines and Treasury stockpiles—but also to the significant strengthening of silver demand throughout the economy. Because of its varied characteristics—silver is foremost in electrical and thermal conductivity, highest in optical reflectivity, and second only to gold in ductility — the white metal has gained new luster among dentists as well as debutantes, and among spacemen as well as slot-machine enthusiasts.

The latest episode in silver's checkered legislative career, in brief, was a reflection of the metal's dazzling price performance during the early 1960's. The major episodes in silver's earlier monetary history, by way of contrast, were products of prolonged price declines for silver, and for everything else, in the Great Depression of the 1890's and the even greater catastrophe of the 1930's. So, just as the "Crime of '73" epitomized the earlier time of monetary troubles, the virtual repetition of that act may well typify silver's newfound period of prosperity.

Now that a major chapter in silver's long, emotion-drenched monetary history has come to a close, some perspective may be gained from a review of the legislative highlights. The record dates back to 1792, when the new nation set up two units of value: a gold dollar containing 24.75 grains of pure gold and a silver dollar containing 371.25 grains of pure silver. Silver's monetary value of \$1.2929 per ounce, although not defined in such terms in the law, could be derived by dividing the number of grains in an ounce (480) by the num-

ber of grains of pure silver in the silver dollar (371.25). Silver's monetary value is still measured in the same way, but that apparently is the only sign of stability in the metal's volatile behavior between 1792 and today.

The Founding Fathers—specifically, Alexander Hamilton—thus opted for a bimetallic standard, with the unit of account and all types of money kept at a constant value in terms of gold and also in terms of silver. Practically, however, an alternating standard developed because of the implacable workings of Gresham's Law, since the metal that was overvalued for monetary purposes consistently drove out of monetary use the metal that was undervalued for such purposes. The original 15-1 mint ratio was below the market ratio, and the consequent gold outflow tended to make silver the nation's standard money until the 1830's; gold was then revalued, however, and the resultant 16-1 mint ratio caused a reversal of the situation and led to a disappearance of silver.

Greenbacks and Gresham

Then came the Civil War, followed by a losing thirty-year battle waged by debtor groups to maintain prices at the high wartime levels at which their debts had been contracted. The postwar price decline had developed partly because of the cessation of the war-induced demand for commodities and partly because of the sudden buildup in farm surpluses resulting from the rapid expansion of the trans-Mississippi West—but also because of a shift in monetary policy toward contraction of the paper currency and resumption of specie payment. The contractionary policy was imposed despite the growing economy's need for a long-term expansion of the monetary stock—and despite the Government's need to supply Federal currency again in the area of the old Confederate States.

The struggle of the Populist farmers and other debtors to restore wartime price levels

through currency inflation was led initially by the Greenbackers. That group, which demanded the redemption of war bonds in paper and not in gold, suffered a crucial defeat when the Administration resumed specie payments in 1879. The inflationists thus were driven to another expedient. Since the value of the currency could not be forced down to the level of inconvertible paper, they reasoned that the same end probably could be achieved by injecting silver into the monetary system at an inflated ratio.

In accordance with Gresham's Law, silver at the 16-1 mint ratio had been undervalued and had long since disappeared from circulation. In fact, such a long time had elapsed since any silver had been presented to the mints for coinage that Congress in 1873 stopped the further minting of the standard silver dollar, and thereby effectively demonetized silver. Whether deliberately or through oversight, Congress simply failed to include in a long, very detailed and technical revision of the coinage laws any provision for the continuing coinage of the standard (371.25-fine-grain) silver dollar. Thus was the "Crime of '73" perpetrated.

No cries of outrage greeted the event at the time it occurred, since every ounce of silver was then worth \$1.30. But within three years the situation altered drastically: the price of silver dropped to \$1.16 and below, on the heels of a glut occasioned by the opening of new mines in Nevada and the closing of silver markets in the new gold-standard countries of Western and Southern Europe.

Crime and the Cross of Gold

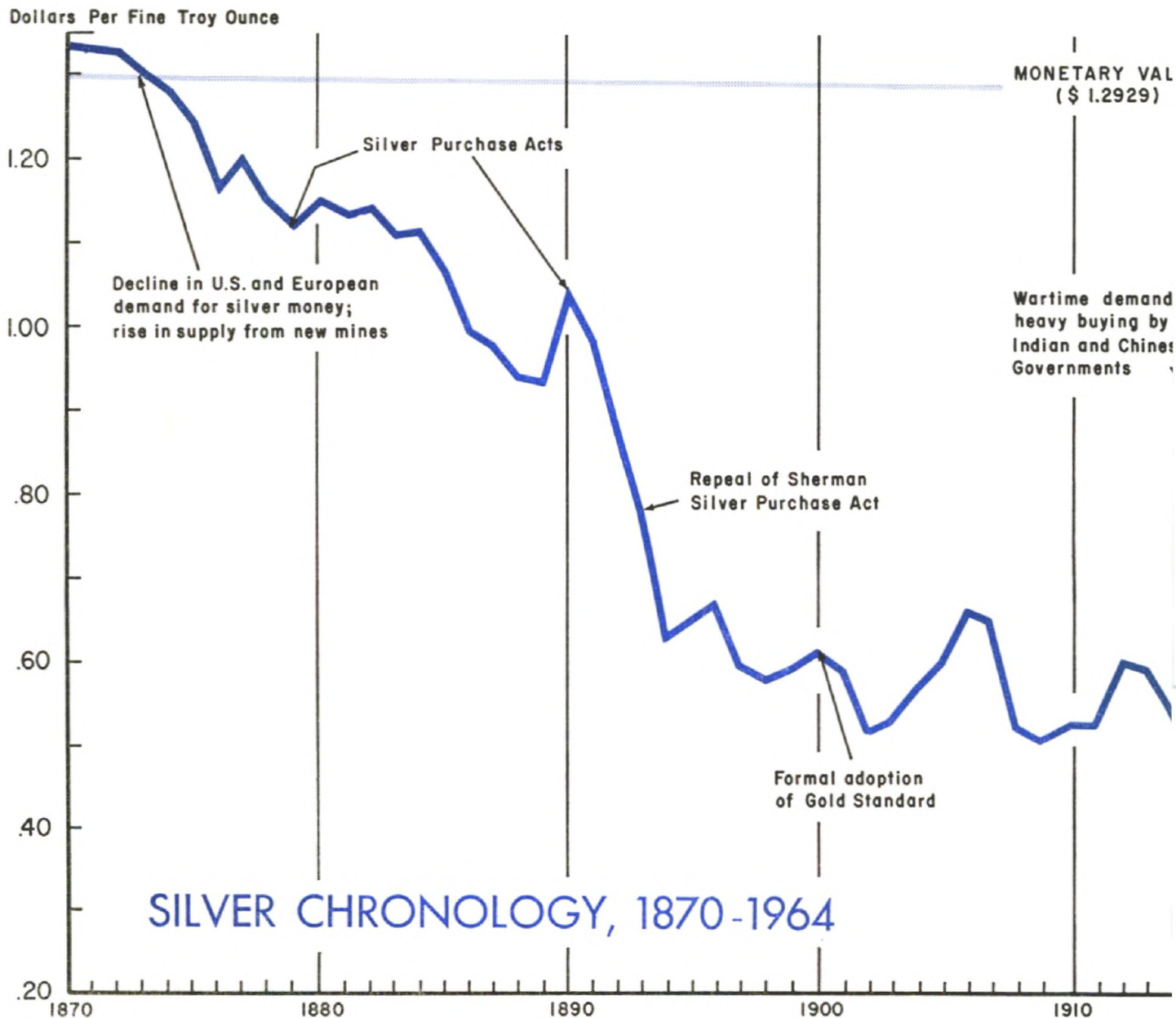
The Populists cried conspiracy, since if enough silver could have been coined at the old 16-1 ratio the workings of Gresham's Law would have driven out the gold and reduced the value of currency to that of silver. In order to repair the ravages of the crime, therefore, these inflationists demanded that Congress re-

store the free and unlimited coinage of silver at the old 16-1 ratio. The best they could obtain, however, was the passage of the Bland-Allison Act of 1878, which required the Treasury to buy not less than \$2 million of silver every month for coinage or for backing of silver certificates. But the net increase in currency—\$253 million in the period 1879-90—merely met the normal growth in the country's requirements; the silver certificates in particular simply took the place of national bank notes which were being retired with the concurrent reduction of the national debt.

The price of silver dropped to \$0.94 within the following decade, so the inflationists demanded that more be done. This time the best they could accomplish was the passage of the Sherman Silver Purchase Act of 1890, in a trade whereby Westerners voted for a tariff bill which they disliked while Easterners voted for a silver bill which they feared. The Sherman Act directed the Secretary of the Treasury to buy 4.5 million ounces of silver bullion monthly (almost the entire domestic production). The bullion was to be paid for through the issue of new legal-tender Treasury notes, which were to be redeemable in either gold or silver—a provision which permitted the "endless chain" of gold withdrawals in the panic of 1893.

Despite these efforts, the Sherman Act did not succeed in its purpose. It failed to raise the price of silver, and it failed just as dismally to increase the amount of money in circulation and to affect the steady decline in farm prices. (Senator Sherman's influence obviously was far more lasting in the antitrust field.)

President Cleveland and the other "gold-bugs" favored abandoning silver to its fate and adhering formally to the gold standard. The silverites, on the other hand, continued to favor the unlimited coinage of silver and the pegging of the silver price at the traditional 16-1 ratio. For a while, Cleveland had his way; faced with the panic of 1893 and with

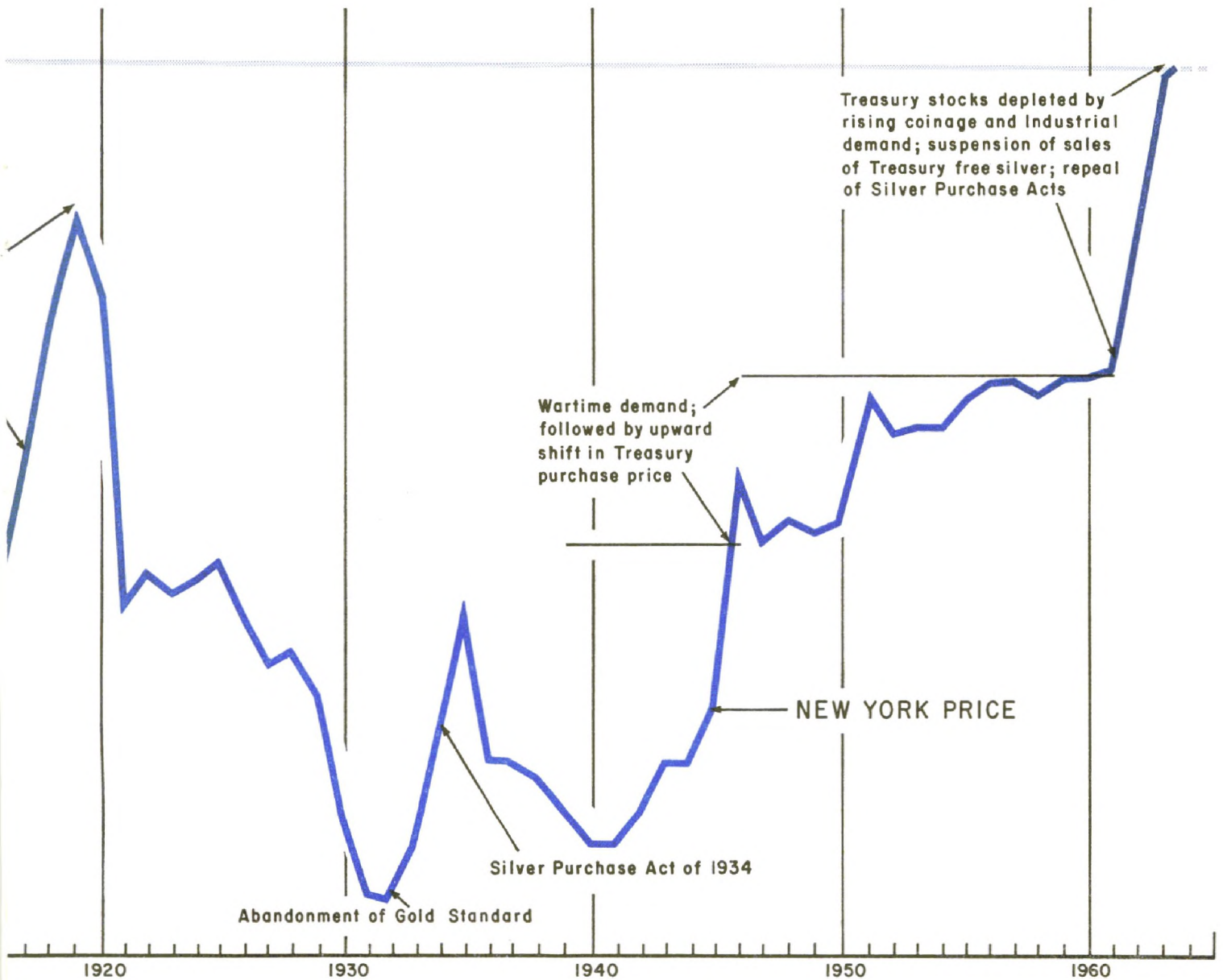


a substantial gold outflow which reduced the gold reserve below the tacitly recognized floor of \$100 million, he forced through Congress the repeal of the Silver Purchase Act. Yet this led to his repudiation by his own party and to the mighty Populist upsurge which in 1896 carried William Jennings Bryan just to the verge of the Presidency.

Gold-bugs triumphant

Nonetheless, within four years the money question was no longer at the center of public

controversy—in fact, was hardly in the public eye at all. Early in 1900 the victorious “gold-bugs” secured the passage of an act providing that the gold dollar of 25.8 grains nine-tenths fine should be the unit of value and that all other forms of currency should be maintained at parity with this dollar, with parity to be accomplished through a \$150-million gold reserve which the Treasury would hold available for the redemption of paper money. Then, later in 1900, Bryan’s second defeat sealed the doom of silver as a dominant political issue.



The issue died out simply because of the long-awaited reversal of the downward trend in the price level. Between the low point of 1896 and 1914 the general price level increased 40 percent. But inflation and farm prosperity were achieved not through the Populists' chosen instrument, silver, but rather through the influence of two unexpected factors—developments in the metal they detested (gold) and in the center of the gold “conspiracy” which they despised (the city).

New gold discoveries in South Africa and North America, along with the development of new processes for extracting the precious metal from the ore, flooded the world with gold during these critical years. The average annual coinage of gold increased about 50 percent in the two decades around the turn of the century, and this development permitted a corresponding expansion of per capita currency circulation. After 1896, therefore, the gold inflation brought the inflationary movement which the farmers for so long had tried to win with silver. The evidence was appar-

ent on every hand—wheat rising from 72 cents a bushel in 1896 to 98 cents a bushel in 1909, corn rising from 21 cents to 57 cents, and so on throughout the list.

But the American city itself, and not simply the gold inflation, saved the American farmer. Throughout that golden age the farmer in most lines of production was rapidly losing a large part of his foreign market. What sustained his prosperity was the very thing that was cited as evidence of his political submergence—the great increase of the urban population. In 1890, 4.6 million American farms supplied a domestic urban population of 22 million; in 1910, 6.4 million farms supplied 42 million city-dwellers. Relatively fewer but larger, more efficient, and more mechanized farms produced an increasing part of their total produce for the home market (and less for the foreign market), under far stabler and more advantageous conditions of transportation and finance than had prevailed in the past. And yet this favorable trend—labeled “From Pathos to Parity” by one historian—was achieved despite the inability of the Populists to utilize their favorite weapon, silver inflation.

Gold-bugs forlorn

The second major development in silver’s dramatic history occurred in another major period of deflation—the 1930’s. Once again a movement arose to halt a prolonged deflationary spiral by restoring currency values to the level at which wartime and postwar debts had been contracted. And once again a remedy was proposed, in the Thomas amendment to the Agricultural Adjustment Act of 1933, that envisioned both the printing of more paper money and unlimited coinage of silver. The Amendment, in addition, authorized increased open market purchases of Government securities and reduction in the gold content of the dollar.

The last-named of these alternatives received the most emphasis in early New Deal days. Under the authority of the Gold Reserve Act of 1934, the value of the dollar was officially fixed at 59.06 percent of its formerly established (1900) value in terms of gold. But much to the surprise of the theorists who influenced the Administration’s decision—theorists who posited a close relationship between the price level of commodities and the gold content of the monetary medium—the price level did not automatically respond. True enough, the wholesale price index increased somewhat in line with the general expansion of demand following the Depression low, but the increase was only about half of what the inflationists expected in view of the 41-percent reduction in the gold content of the dollar. Silver inflation, therefore, was brought forward as a supplement to the incomplete gold inflation—and as an answer to the perennial legislative demand to “do something for silver.”

Since 1873, the downward trend in the price of silver had been interrupted only twice, during the silver-purchase period around 1890 and again during World War I. In fact, since the turn of the century (except during the inflationary war period), the market price generally had been less than half the nominal mint value. Silver had remained in a monetary limbo with respect to new acquisitions; some was used for subsidiary coins, some circulated in the West in the form of standard silver dollars, and a roughly fixed stock of silver certificates remained as a relic of the 1890’s. Thus, by the 1930’s, only about 650 million ounces were in use as coin or as currency backing at the Treasury.

Silver, silver everywhere

At the end of 1933, with the market price of silver standing at about \$0.44 an ounce (75 percent above Depression low), unlimited purchases of newly mined silver were

initiated at \$0.6464 cents an ounce under the authority granted by the Thomas amendment. But inflationist pressure then brought about even further action, in the form of the Silver Purchase Act of 1934. Under its terms, the Secretary of the Treasury was directed to purchase silver at home and abroad until the market price reached the traditional mint price of \$1.2929 an ounce, or until the monetary value of the Treasury's silver stock reached one-third of the monetary value of its gold stock. The support price at which purchases were made was changed on several different occasions during the ensuing decade; originally \$0.6464, it was eventually set at \$0.9050 in 1946.

Under the authority of the silver-purchase legislation of the 1930's and subsequent Presidential proclamations, the Treasury acquired some 3,200 million ounces of silver—about half of it in the four-year period 1934-37, and about half in the subsequent quarter-century. Some 110 million ounces consisted of silver that was "nationalized" in mid-1934, when the Administration required nonmonetary silver to be turned in at \$0.5001 per fine ounce, so as to capture the profits expected to be realized from the increased government purchase price. Some 2,210 million ounces consisted of metal purchased abroad at prevailing market prices, and the remaining 880 million ounces consisted of newly mined domestic silver.

Until 1955, the Treasury support price for newly mined domestic silver was higher than the market price, so almost all domestic silver went to the Treasury while the demand of American silver users was met by foreign sources. But from 1955 to late 1961, the market price approximated the support price, and silver users not only absorbed current output but also purchased from Treasury stocks of the metal.

In little over a quarter-century, the Treasury purchased \$2 billion in silver and sex-

tupled the physical quantity used as currency or held in stockpiles. Nevertheless, the silver program during that period failed to achieve either of the objectives specified in the 1934 Silver Purchase Act: a market price equal to the monetary value of \$1.2929, or a 1-to-3 ratio of the monetary stocks of silver and gold. Prior to the recent expansion of world demand, upward pressures on prices above the \$0.9050 floor were relatively weak. Meanwhile, the ratio of monetary silver to monetary gold stocks (both at their nominal monetary values) generally ranged around a 1-to-5 figure in the prewar period, then rose to 1-to-7 as a consequence of the early postwar gold inflow, and finally dropped to 1-to-4 during the following decade as gold began to flow out instead of in. More important, the underlying goal of general price inflation eventually was achieved, just as in the preceding generation—but, when achieved, it turned out to be both unwanted and also somewhat irrelevant to silver's newfound monetary problems.

Triumph of the market

Eventually, the market accomplished what legislation could not do for the cause of silver price support. In the late 1950's, world monetary and nonmonetary consumption of silver increased about 4 percent annually, while world production rose only about 1.5 percent annually. Sales from Treasury stockpiles filled the gap—and held the price line—for several years, but the depletion of stocks finally brought the process to a halt.

The situation came to a head in late 1961. By that time, the worldwide industrial-artistic-coinage demand for silver approximated 300 million ounces annually (of which about half was American demand), whereas worldwide production approximated 235 million ounces annually (of which only about 15 percent was from American mines). The gap had to be filled by Treasury sales from its

stocks of free silver, that is, from the portion of the Treasury's holdings that was not required to back silver certificates or converted to subsidiary coin.

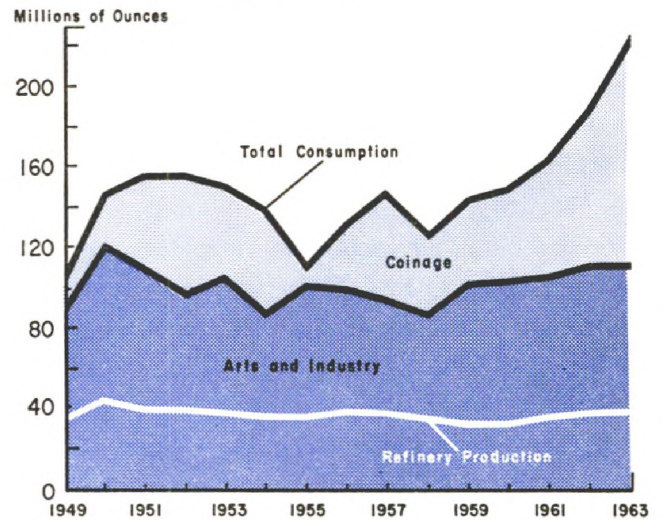
The Treasury's supply of free silver had reached its peak in early 1959 at 222 million ounces. But by the end of 1960, the supply was more than halved, and by late 1961, all but 22 million ounces was gone. There remained, however, nearly 1,700 million ounces in a bullion reserve held against the issuance of part of the nation's paper currency. About one-fourth was held against \$5 and \$10 silver certificates, and the remainder was used to support \$1 and \$2 silver certificates. The larger denominations could have been issued in the form of Federal Reserve notes, but then-existing legislation authorized only silver certificates for the smaller denominations.

The final act?

The stage thus was set for the final legislative drama. On November 28, 1961, President Kennedy wrote Treasury Secretary Dillon, "I have reached the decision that silver metal should gradually be withdrawn from our monetary reserves"—and with that, he instructed the Secretary to suspend further sales of the Treasury's free silver, to suspend the use of free silver for coinage, and to obtain the silver required for coinage needs through the retirement from circulation of \$5 and \$10 silver certificates. (Interpreting the President's statement as a Treasury withdrawal from the supply side of the market, the market responded with a 10-percent jump in price the very next day, and with a further 30-percent rise during the following year.)

With the passage of Public Law 88-36 (June 4, 1963), the legislative record was complete. The Act repealed the Silver Purchase Act of 1934 and subsequent legislation, and repealed the tax on transfers of interest in silver bullion. But in particular, the Act authorized the issuance of Federal Reserve

Coinage, industry needs soar while output lags far behind



Source: U. S. Bureau of Mines.

notes in the smaller denominations, thereby providing for the eventual elimination of silver as backing for \$1 and \$2 bills.

The purpose of the Administration's policy was clear; in President Kennedy's words, "Our new policy will in effect provide for the eventual demonetization of silver except for its use in subsidiary coinage." Nonetheless, Secretary Dillon found it necessary to clarify several points in the hearings which preceded the adoption of the new law. The bill, he emphasized, did not envision the debasement or devaluation of the currency, nor did it mean the disappearance of the silver dollar and other traditional silver coins.

The Secretary, faced with the charge that the replacement of silver certificates with Federal Reserve notes constituted debasement of the currency, pointed out that the value of silver certificates has never depended on their silver backing, but rather upon the fiscal and financial integrity of the Government. This has consistently been so; the market value of the silver behind silver certificates generally has been far below the monetary value of \$1.2929 per ounce.

The Secretary also emphasized that the bill did not encompass devaluation of the dol-

lar; aside from the fact that the Administration has consistently rejected devaluation, there was simply no relationship between the proposed legislation and the question of devaluation. As always, the international exchange value of the dollar is maintained through the nation's policy of standing ready to settle its international accounts through the purchase and sale of gold—the only internationally accepted monetary metal for this purpose—at its monetary value of \$35 per ounce.

In this connection, however, the Administration noted that the substitution of Federal Reserve notes for silver certificates would have some effect, albeit a minor effect, on the gold backing of the dollar. Since Federal Reserve notes are subject to a 25-percent gold-reserve requirement, the substitution represents a reduction in the Treasury's stock of free gold, that is, in the portion of the gold stock not required as backing for Federal Reserve note and deposit liabilities. With approximately \$2 billion of silver certificates outstanding, the shift, if made immediately, would involve roughly a \$500-million reduction in free gold—but the retirement of silver certificates is expected to be spread out over a period of years.

Silver rush of '64

There remained the problem of silver dollars. The new legislation authorized the Secretary of the Treasury at his option to redeem silver certificates by payment of silver bullion instead of silver dollars, but this authorization was made solely in order to avoid the wasteful expense of redeeming certificates in silver dollars when redemption was desired only for industrial purposes. As Secretary Dillon pointed out in legislative hearings in mid-1963, an ample supply of silver dollars was available, and more could be minted if needed. But the market felt otherwise, and soon thereafter staged the dramatic epilogue to the Act of 1963—the great '64 silver rush.

Underlying this sudden development was the inability of the Philadelphia and Denver mints to keep up with the public's burgeoning demand for coin. Circulating coin, at \$3.0 billion today, has more than doubled within the postwar period—and almost half of the increase has occurred within the past five years, because of the heavy toll levied by vending machines, sales taxes, school lunches, parking meters, and coin telephones, and also because of the insatiable demands of the growing band of coin collectors.

The mints, intent on supplying the public demand for minor coin, have not minted standard silver dollars during the entire postwar period; in fact, the last of these "cartwheels" came out in 1937. Yet, for some time, there appeared to be no problem. Of the present supply of 485 million silver dollars, only 170 million were in circulation in 1950, and by 1960 the number in circulation had increased only to 305 million. But then the outflow accelerated, and accelerated even more in the months following the enactment of the new silver legislation.

Only 28 million "cartwheels" were left in Treasury hands at the beginning of this year. Many of them went into circulation by early March, and then, when the House Appropriations Committee rejected a Treasury request for an appropriation to begin minting these pieces again, the rush was on. In two weeks' time the Treasury shipped out more than 11 million pieces to the tradition-loving Western states—and meanwhile distributed more than 3 million pieces to a jostling, haggling crowd which besieged the Treasury building in search of choice "Morgan" dollars of turn-of-the-century vintage.

Driven from the temple

At that point—as a leading financial journal described the scene—"Secretary Dillon drove the money changers out of his temple." Exercising the option open to him under the

terms of the 1963 legislation, the Secretary decreed that silver certificates henceforth would be redeemable only in silver bullion at the monetary value of \$1.2929 per ounce. Holders of silver certificates could continue to exercise their legal right to demand an amount of silver precisely equal to the silver content of a standard silver dollar, but they would be assured of getting only several slivers of metal in an envelope instead of a coin of considerable numismatic value.

The great silver rush thus came to an end, but while it lasted it demonstrated both the canniness of coin collectors and the continued devotion of Westerners to the noble white metal. In fact, in subsequent weeks several Western senators not only supported the Treasury's request for an appropriation for minting silver dollars but, in addition, introduced legislation to reduce the silver content of the nation's coinage—legislation which the Treasury vigorously opposed.

The Treasury admitted that eventual exhaustion of its silver stock was possible in the absence of a radical change in the supply-demand equation. But its holdings, which now amount to about 1,500 million ounces, are considered ample for the continuation of the present coinage and for supplying industrial demands for some years ahead; for example, at the recent rate of redemption of outstanding silver certificates, the present supply of silver should last until about 1972. The Treasury therefore opposed any consideration of major changes in the coinage until the completion of a continuing study of the problems created by the excess of silver demand over current production.

Changing the alloy

Under the terms of legislation introduced this March by Montana's Senator Metcalf, the problem would be met by changing the content of silver coins from the present alloy of 90 percent silver and 10 percent copper to

an alloy of 80 percent silver and 20 percent copper. But, according to Treasury Undersecretary Roosa's appraisal, "its enactment would in fact raise the monetary value of silver to \$1.45; this would, in turn, soon cause the disappearance from circulation of all presently outstanding silver dollars, would in all probability in the near future lead to the melting down of our present subsidiary silver coinage, and would consequently lead to an impossible situation for the mints in supplying the coinage needs of our country."

In his testimony on the bill, Mr. Roosa argued that silver would tend to disappear from circulation simply on the basis of the suggestion that the price of the metal be raised through the reduction in the silver content of the dollar. He contended, therefore, that the best solution is for the Treasury to maintain the ready availability of silver at the \$1.2929 price. While that availability continues, with current stock at about 1,500 million ounces and total annual consumption at 186 million ounces, the market price, in his view, is not likely to rise appreciably above monetary value of \$1.2929.

There the matter stands. Recent developments, however, constitute not only an important aftermath to the legislation of 1963 but also an ironic epilogue to the "Crime of 1873." Indeed, the Treasury may yet be able to do what it could not do 90 years ago—that is, resume minting of silver dollars as soon as mint facilities and appropriations are made available by Congressional action.

But silver's history has been full of such ironic touches. Despite all the efforts of the Populists to raise silver prices and to restore prosperity through the silver legislation of the late nineteenth century, success came only through the inflation generated by the despised metal gold and through the growing market created by the distrusted city multitudes. Despite all the similar efforts of their successors exerted through the silver legisla-

tion of the 1930's, prosperity returned only as increased demands were generated by a war which everyone sought fervently to prevent. And now that the price of the metal has soared

to near-record levels because of the demands generated by this age of space and affluence, silver's very success has created its current difficulties as a major monetary metal.

II. Comstock Revisited

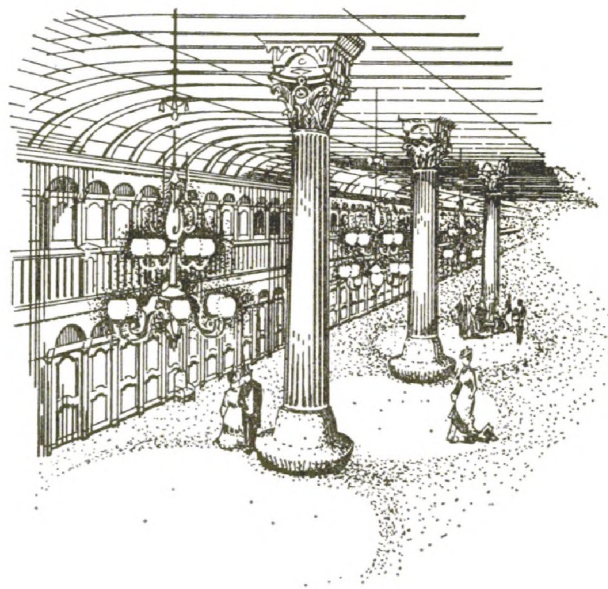
SILVER is the Western metal *par excellence*. Its output today may be relatively insignificant, but in the century since the opening of the Comstock Lode the white metal frequently has dominated both the national and the regional stage. The voice of silver has been heard in the halls of Congress, and the economy, the society, and the politics of the West have harkened to its voice.

Prosperity has been only a fitful visitor in silver mining camps, however. Prices have fluctuated violently over the years, while the long-term trend of output and employment has been downward. But, as of today, the versatile metal can boast a resurgence of demand, together with the highest level of prices of the past half-century. How will the industry respond to this price upsurge? The industry itself may not know, but a survey of its past performance may yield some clues.

Across the High Sierra

The birth of the nation's silver industry occurred in the Washoe Hills of Nevada in 1859, as thousands of miners rushed across the Sierra from the already failing placers of California's Mother Lode to stake a claim in the fabulously rich Comstock Lode. Twenty years later, the Comstock bonanza had helped finance the Civil War, built transcontinental railroads, and established San Francisco as a glittering and opulent metropolis. By the time the Lode played out at the end of the century, over \$200 million worth of silver and almost as much gold had been recovered.

But Comstock was only one of a series of rich silver finds. In the late 1860's, there was Black Hawk Canyon (Colorado), Cotton-

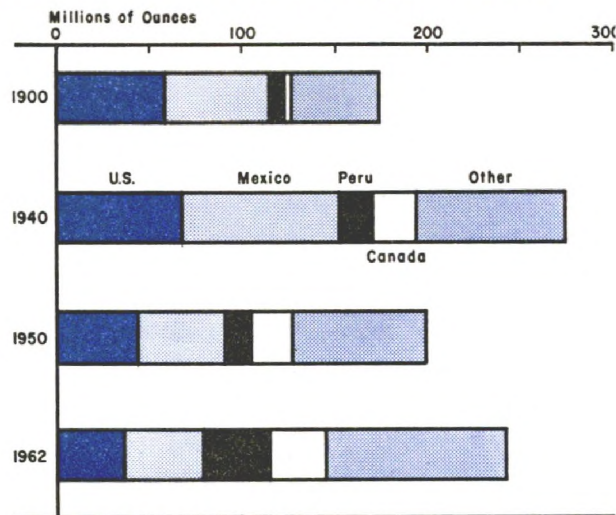


wood Canyon (Utah), Butte (Montana), and Owyhee County (Idaho). The 1870's and 1880's saw the development of the great silver deposits at Leadville, Colorado, as well as the mines in the Calico District of California's High Sierra.

From this series of beginnings, the Western states became the focal point of silver mining in the country, and soon made the United States the world's leading silver producer. (After 1900, however, Mexico took first place.) Colorado and Montana, topping the roster of producing states in 1900, accounted at that time for 60 percent of the domestic total of about 58 million fine ounces. Utah, Idaho, and Arizona were next—and then came Nevada, despite the virtual exhaustion of the Comstock.

Twelfth District states have dominated the industry during this century; in 1963 they supplied almost 80 percent of the 35 million ounces produced domestically. Idaho's share

Other sources take up slack as U. S. and Mexican output decline



Source: U. S. Bureau of Mines.

began to rise dramatically in the late 1930's, and today that State produces almost half of the nation's silver. Most of it emanates from the rich silver-base deposits of the Coeur d'Alene District in northern Idaho, the home of the nation's three largest mines.

Arizona's share also has moved steadily higher; that State today is the second largest producer, mining 18 percent of the country's output. Utah, in third position, accounts for some 13 percent, a somewhat smaller share than heretofore. Nevada's position reached a height in 1913, when development of great deposits at Tonopah gave her 7 percent of the domestic total, while California's share reached a peak of about 8 percent in 1924, at the height of operations at the California Rand Mine in San Bernardino County. Today, however, those two states each account for less than 1 percent of U.S. production.

Declining production

In terms of the value of output and the number of employees, the silver industry throughout this century has been relatively unimportant in the Twelfth District's total economy. This has been especially true since the short-lived boom created by the Silver

Purchase Act of 1934. Thus, while the value of mineral production in the District more than tripled from 1937 to 1963, the value of silver production declined from about \$38.5 to \$35.3 million, or by almost one-tenth. Silver's share of total mineral production in the District therefore receded from 5 to 1 percent. Currently, silver is significant only in the economy of Idaho, where, as the leading mineral, it accounts for about 26 percent of the State's mineral output.

The reduction in domestic production, accompanied by the expansion of production in the rest of the world, has meant a decline in the U. S. share of total world output. Advances in the output of Peru and Canada, countries which are challenging the position of the United States as second ranking producer behind Mexico, have helped reduce this country's share of world output from about 25 percent a quarter-century ago to about 15 percent today. But the increase in production abroad has not meant an increased inflow into this country. Indeed, imports recently have been only about half of what they were a decade or more ago.

Rising consumption

The decline in domestic production of silver has contrasted markedly with the growth in consumption, which has jumped from 145 to 222 million ounces in the 1950-63 period alone. In the last half-decade, industrial consumption of silver expanded 28 percent, from 86 to 110 million ounces. The photographic industry, the largest consumer of silver, was a major source of this demand. In addition, because silver ranks first among the metals in conductivity of electricity and heat, ever-increasing quantities were employed in the manufacture of electrical contacts, switching equipment, and batteries for the growing electronics industry, and also as solders and alloys in the manufacture of jet aircraft and missiles. Meanwhile, consumption of silver

for coinage rose even more dramatically, increasing 192 percent between 1958 and 1963, to 111 million ounces.

As a result of these divergent trends, domestic production of silver has consistently fallen short of consumption throughout the postwar period. But the gap began to widen appreciably only after 1958, and today it equals 185 million ounces, or about twice the size of the average gap of a decade ago. Outside this country, a smaller shortfall in supply has existed since 1960, with production averaging 170 million ounces and consumption 198 million ounces annually.

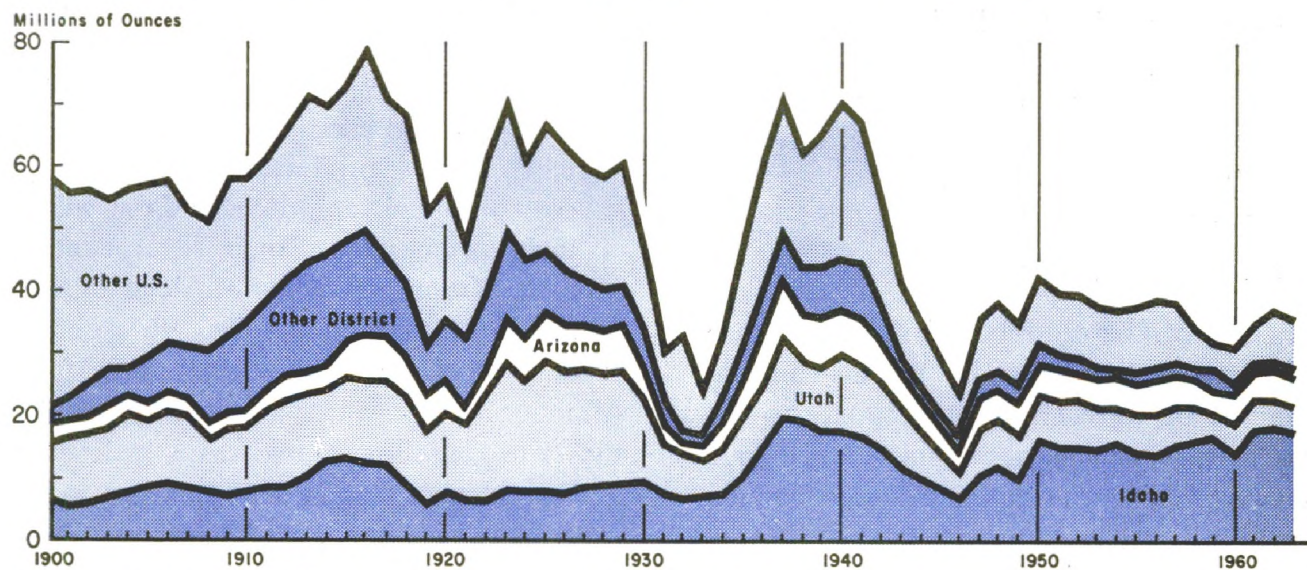
Result: rising prices

Reflecting these scarcities, the New York market price for silver rose fairly steadily from 1950 to 1958, and then jumped above the Treasury's support price of \$0.9050 early in 1959. As users turned to the Government as a source of supply, Treasury stocks of free silver—silver exceeding the amount required as backing for silver certificates—were subject to a heavy drain. By late 1961, free silver stocks had declined from 202 to 29 million ounces, and this led President Kennedy to his

decision to suspend sales from these stocks. With that, the price in the New York market really began to soar. The quotation rose from \$0.9162 an ounce prior to the suspension of Treasury sales to an average of \$1.0453 in January 1962. It held more or less steady for about six months, and then began rising again. Finally, in September 1963, the price reached \$1.2930—the effective ceiling set by silver's monetary value.

Today, as a consequence of market forces and the legislative changes of recent years, the Treasury acts as a residual supplier of the demand in excess of commercial offerings. Between late 1961 and mid-1963, the metal consumed by industry and the arts came mostly from current output and imports—mainly from Mexico, Canada, and Peru—but since that time, disposals of Treasury silver in exchange for silver certificates have been crucially important. In fact, heavy market and coinage demands in 1963 caused total Treasury stocks—free silver plus monetary reserves—to decline by 182 million ounces, to about 1,500 million ounces. About 111 million ounces were consumed in minting, 51 million ounces in silver dollars were sold, and 19 mil-

Idaho dominates silver mining industry . . . other District and other Western states show declining output since turn of century



Source: U. S. Bureau of Mines.

lion ounces were withdrawn through redemption of silver certificates.

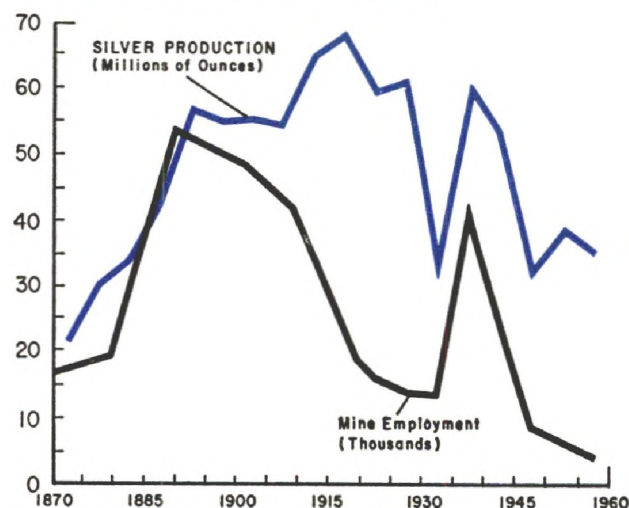
If silver consumption continues to grow at its recent pace, the Treasury's stocks could be exhausted within the next decade or so. Thus the overhanging threat of a further run-up in the price, posed by this depletion, creates some anxiety in the silver marts. The recent rise has brought the metallic value of standard silver dollars to a level at which—disregarding costs of melting—the three-fourths ounce of silver contained in the coins is worth their value as money. Subsidiary coinage—half dollars, quarters, and dimes—would reach their “melting point” at a price of \$1.3824.

The “melting point” aspect of the price rise has led to the suggestion that existing coins be replaced with coins of lower silver content. Legislation to this effect has been introduced in the Senate (as the preceding article describes), but the Treasury firmly opposes the suggestion on the grounds that it would aggravate the current coinage problem, since it would induce speculators to melt down coins for their silver content. Some foreign countries, meanwhile, already have cut down on their use of silver in coins. In recent years, the United Kingdom has minted substantial quantities of copper-nickel coins as substitutes for silver-bearing half crowns, florins, shillings, sixpence, and three pence. Italy has recently issued aluminum and brass coins, France has issued stainless steel pieces since late 1962, and Australia aims to swing from silver to copper-nickel coins by 1966.

What response to \$1.2929?

There can be no doubt of the importance of increased production, but will a significant increase be forthcoming in response to the price rise? One special circumstance, unique to silver mining, can explain why the reaction has been and may continue to be slight. About two-thirds of silver production is recovered

Output and employment decline ever since boom of the '30's



Note: Data are five-year averages; employment shown for gold and silver mining combined.

Sources: U. S. Bureau of Mines, Resources for the Future.

as a by-product or co-product in the mining of zinc, lead, copper, and gold, so its production frequently depends more on prices received for these metals than on silver prices. Silver's link with other metals undoubtedly has been involved in the failure of production to increase over the last dozen years despite rapidly rising consumption and prices. The price of lead sank to a 15-year low of 9.5 cents a pound by the end of 1962, while the price of zinc, at 11.5 cents, also was below its 1950 level. But the recent strengthening of these prices—to current quotations of 13.0 and 13.5 cents a pound, respectively—along with a 1-cent-a-pound increase in the price of copper, should certainly encourage future increases in silver production.

Most of the silver produced from mines operated primarily for their silver content emanates from the Coeur d'Alene mining district in northern Idaho. In 1961, output in Idaho reached its highest level since 1938. Although output was affected adversely by strikes in the following two years, its level in 1963 was higher than in 1950, contrary to the trend elsewhere in the nation. Recent price trends reportedly are exerting a strong impact

in the State. Since price largely determines the cutoff grade that divides ore from sub-marginal resources, higher quotations are making mining of previously marginal reserves feasible. Moreover, since new and improved deep-level mining techniques now permit increased exploitation of marginal reserves, higher quotations are encouraging producers to install new, efficient equipment of this type.

To obtain greater increases in production, however, will require the reopening of old mines and the discovery of new veins. But luckily, the rising price trend has spurred interest in these activities in virtually all of the major producing states. For example, mines in the Hailey district of Idaho, a significant producing region at the turn of the century, are now being rehabilitated. A new \$500,000 concentrating mill, designed eventually to handle 300 tons of ore daily, has begun operations at this site and currently is processing 150 tons a day. For another example, the U. S. Office of Minerals Exploration is now providing funds for various exploration projects, which are being carried out from the air by large teams using all the latest techniques of geologic analysis, seismic methods, and photogeology.

Outside the United States, development and exploration have been particularly active in Canada. That country's silver production emanates principally from the old Cobalt area of Ontario, from New Brunswick, and from silver-lead-zinc mines in Western Canada. The recent discovery of a rich deposit of copper, zinc, and silver at Timmins, Ontario, illustrates the new look in prospecting there—intensive, scientific exploration of vast areas by big companies, many of them based in the United States.

The U. S. Bureau of Mines estimates this country's reserves of recoverable silver at 763 million ounces, or about 15 percent of estimated world reserves. With prices at current levels, the industry now has a strong incentive to increase its exploration activities and to expand and modernize its exploitation of present reserves. While carrying on these activities, Western silver miners with a philosophical bent will see a great deal of poetic justice in their new-found prosperity. At long last—a century after the Comstock ushered in a period of Western elegance—a new age of space and affluence is creating a demand for the products of their once-fabulous mines.

Monthly Review is published by the Research Department of the Federal Reserve Bank of San Francisco. Individual and group subscriptions to the *Monthly Review* are available on request from the Administrative Service Department, Federal Reserve Bank of San Francisco, 400 Sansome Street, San Francisco 20, California.

Western Digest

Banking Developments

Loan portfolios increased \$230 million and securities holdings declined by an equivalent amount at Twelfth District weekly reporting member banks in May Business loan demand was quite strong in early May; as a result, commercial and industrial loans increased \$111 million during the month, in contrast to net repayments of \$32 million in the year-ago month. On the other hand, the gains in mortgage financing and in consumer loans were only about half as great as in May 1963 District banks recorded a \$550-million decline in demand deposits adjusted. This decrease was partly offset by a \$164-million increase in time deposits; in fact, the savings-deposit inflow, which had lagged the 1963 pace during the early months of the year, finally exceeded that year-ago pace during May.

Employment and Unemployment

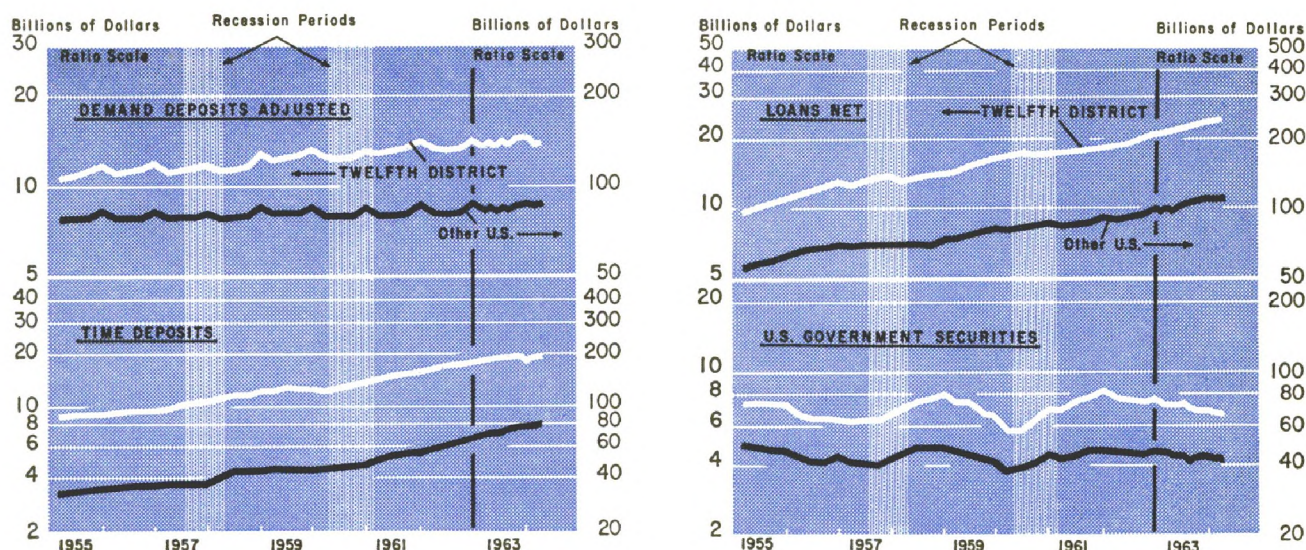
Major District states generally matched the national pace of employment expansion in May, but their increases were not sufficient to cut into unemployment totals, especially in view of the continued growth in their work forces. Whereas the national jobless rate dropped to 5.1 percent (the lowest rate in more than four years), the rate increased from 5.7 to 5.9 percent in California, and from 6.4 to 6.5 percent in Washington. (All rates are seasonally adjusted.) . . . California's total employment rose from 6.51 to 6.59 million between April and May, in the face of a decline in factory jobs. The decline centered in defense-related and food industries At 510,000, California's defense-related employment is now 4 percent below the year-ago level. Over the past year, however, state-local government employment has risen 6 percent, while jobs in construction and in services have increased almost 5 percent Washington employment rose from 1.04 to 1.07 million between April and May, mostly on the basis of seasonal gains in agriculture. Aircraft employment in that State continued to decline; at 51,000, the total is now 20 percent below a year-ago.

Production and Trade

Despite early-spring gains, total construction contracts in the District in the January-April period remained below their 1963 level, while in the rest of the country awards substantially exceeded year-ago figures Lumber prices declined slightly in May, as a result of a continuing decline in new orders. Steel production began its normal seasonal decline in May; unlike last year, however, the industry this summer will not be constrained to work off strike-anticipatory excess inventories. Petroleum refinery inventories were drawn down in recent months, despite heavier imports of crude, because of the inability of District producers to keep up with the growing demand for petroleum products Livestock prices continued at depressed levels in early June, while some fresh vegetables were selling at bargain prices—as much as 50 percent below year-ago levels District department store sales in May ran about 6 percent ahead of the year-ago figure. But in the nation as a whole, department store sales were 12 percent higher than a year ago.

FEDERAL RESERVE BANK OF SAN FRANCISCO

Condition Items of All Member Banks — Twelfth District and Other U. S.



Source: Federal Reserve Bank of San Francisco. (End-of-quarter data shown through 1962, and end-of-month data thereafter; data not adjusted for seasonal variation.)

BANKING AND CREDIT STATISTICS AND BUSINESS INDEXES—TWELFTH DISTRICT¹

(Indexes: 1957-1959 = 100. Dollar amounts in millions of dollars)

Year and Month	Condition items of all member banks ² Seasonally Adjusted				Bank debits Index 31 cities ^{5, 6}	Bank rates on short-term business loans ^{7, 8}	Total nonagri- cultural employ- ment	Dep't. store sales (value) ⁶	Industrial production (physical volume) ⁶		
	Loans and discounts ³	U.S. Gov't. securities	Demand deposits adjusted ⁴	Total time deposits					Lumber	Refined ³ Petroleum	Steel ⁸
1951	7,751	6,370	9,512	6,713	57	3.66	80	68	99	87	97
1952	8,703	6,468	10,052	7,498	59	3.95	84	73	101	90	92
1953	9,090	6,577	10,129	7,978	69	4.14	86	74	102	95	105
1954	9,264	7,833	10,194	8,680	71	4.09	85	74	101	92	85
1955	10,827	7,162	11,408	9,130	80	4.10	90	82	107	96	102
1956	12,295	6,295	11,580	9,413	88	4.50	95	91	104	100	109
1957	12,845	6,468	11,351	10,572	94	4.97	98	93	93	103	114
1958	13,441	7,870	12,460	12,099	96	4.88	98	98	98	96	94
1959	15,908	6,495	12,811	12,465	109	5.36	104	109	109	101	92
1960	16,628	6,764	12,486	13,047	117	5.62	106	110	98	104	102
1961	17,839	8,002	13,676	15,146	125	5.46	108	115	95	108	111
1962	20,344	7,336	13,836	17,144	141	5.50	113	123	98	111	100
1963	22,915	6,651	14,179	18,942	157	...	117	129	102	112	117
1963											
May	21,246	7,262	13,828	17,967	152	...	116	129	96	112	141
June	21,604	7,293	13,959	18,101	153	5.53	116	127	97	116	129
July	21,761	7,059	14,044	18,290	158	...	116	128	95	115	107r
August	21,890	6,958	13,990	18,334	162	...	117	132	102	116	105r
September	22,236	6,968	14,102	18,409	166	5.47	117	125	105	113	105r
October	22,387	6,698	14,106	18,727	167	...	118	127	108	112	104p
November	22,673	6,730	14,272	18,923	170	...	118	130	106	110	114p
December	22,915	6,651	14,179	18,942	167	5.47	118	136	111	110	112p
1964											
January	23,256	6,575	14,332	19,342	163	...	119	135	115r	111	116p
February	23,544	6,832	14,222	19,520	168	...	119	137	114r	115	123p
March	23,763	6,893	14,287	19,685	166	5.47	119	133	114	113	136p
April	23,953	6,559	14,243	19,773	170	...	119p	134	...	111	143p
May	24,102	6,541	14,170	19,813	167

¹ Adjusted for seasonal variation, except where indicated. Except for banking and credit and department store statistics, all indexes are based upon data from outside sources, as follows: lumber, National Lumber Manufacturers' Association, West Coast Lumberman's Association, and Western Pine Association; petroleum, U.S. Bureau of Mines; steel, U.S. Department of Commerce and American Iron and Steel Institute; nonagricultural employment, U.S. Bureau of Labor Statistics and cooperating state agencies.

² Figures as of last Wednesday in year or month. ³ Total loans, less valuation reserves, and adjusted to exclude interbank loans. ⁴ Total demand deposits less U.S. Government deposits and interbank deposits, and less cash items in process of collections. ⁵ Debits to demand deposits of individuals, partnerships, and corporations and states and political subdivisions. Debits to total deposits except interbank prior 1942. ⁶ Daily average. ⁷ Average rates on loans made in five major cities, weighted by loan size category. ⁸ Not adjusted for seasonal variation. p—Preliminary. r—Revised.

