

STABILIZATION OF PURCHASING POWER OF MONEY

HEARINGS

BEFORE THE

**COMMITTEE ON BANKING AND CURRENCY
OF THE HOUSE OF REPRESENTATIVES**

SIXTY-SEVENTH CONGRESS

FOURTH SESSION

ON THE BILL

H. R. 11788

TO STABILIZE THE PURCHASING POWER OF MONEY

JANUARY 29, 1923

PART 2

OPPOSITION AND REBUTTAL



**WASHINGTON
GOVERNMENT PRINTING OFFICE
1923**

28544

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HOUSE OF REPRESENTATIVES.

SIXTY-SEVENTH CONGRESS, FOURTH SESSION.

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STABILIZATION OF PURCHASING POWER OF MONEY.

COMMITTEE ON BANKING AND CURRENCY,
HOUSE OF REPRESENTATIVES,
Monday, January 29, 1923.

The committee met in the committee room, Capitol, at 10.30 o'clock a. m., Representative E. Hart Fenn (acting chairman) presiding.

Mr. FENN. Mr. Goldsborough, who will you first introduce this morning?

Mr. GOLDSBOROUGH. I think, Mr. Chairman, Mr. Starr would like to be heard in opposition to the bill; is that correct, Mr. Starr?

Mr. STARR. Yes, sir.

STATEMENT OF MR. WESTERN STARR, REPRESENTING FARMER LABOR PARTY, WASHINGTON, D. C.

Mr. FENN. Please state your full name and whom you represent.

Mr. STARR. I represent the national committee of the Farmer Labor Party. I am a retired farmer, and my address is Washington, D. C.

I have attended the hearings heretofore, which covered four days, in support of the bill, and, so far as I know, I am the only person who has appeared or who expects to appear in opposition to the bill.

This looks like a formidable array of documents, but I do not expect to put the entire contents into the record.

One of the witnesses from New Jersey, a banker of 48 years' experience, who testified in favor of the bill, stated that he had been a banker for 25 years before he had a suspicion that there were any social significance in connection with the business of banking or the money question.

Now, it is only as the bill presents questions which to my mind involve fateful consequences to the social welfare of our people that it has an interest for me. I am not concerned and never have been concerned as to what should be the substance of which the money of the people is manufactured. I have here a little clipping which I will ask to have inserted in the record. I will read the important part of it. It speaks of the early State of Franklin.

Mr. FENN. What is that from?

Mr. STARR. It is from the New York Times of yesterday. "The Governor of the new State of Franklin, now a part of Tennessee, was concerned greatly with reference to a money medium; 'that currency was the blood of the social system,' writes Hugh Pendexter in Adventure Magazine. Of precious metals he had only a negligible store. He could not issue letters of credit on birch bark, though Pontiac had done so, and the French had honored them, giving cash in return. So he had studied the methods adopted by other American communities in meeting the same problem.

"He found that in Massachusetts corn had been used for currency in 1613. A few years later musket balls, 'full bore,' were legal tender in the Bay State. Each standing for a farthing. Hingham, Mass., paid its taxes in milk pails in 1680. Fur, tallow, and hides were used for currency in North Carolina in 1738.

"Tobacco circulated as money in Virginia and Maryland for more than a hundred years. The currency put out by the Colonies during the Revolution was poorly printed on poor paper. Some of it did not even contain any promise of payment.

"Governor Sevier and his advisers decided that 'good flax linen, two linen, wool and cotton linsey' should be used as currency. Also 'beaverskin, 6 shillings; otoskin, 6 shillings; raccoon and fox skin, 1 shilling and 3 pence. Well-cured bacon, 6 pence per pound. Clean tallow, 6 pence per pound. Clean beeswax, 1 shilling per pound. Good distilled rye whisky, 2 shillings 6 pence per gallon. Good peach or apple brandy, 3 shillings per gallon.'

"There was one fly in the ointment. The skin currency was soon counterfeited. The skins were made up into bales and bundles, the protruding tails showing the kind of pelts inside. If the tail of an 'otter' was fixed to the skin of fox or raccoon the counterfeiter made a profit of 4 shillings 9 pence."

So, I say, I am not concerned and I do not think there is any real meaning in the physical substance that goes into the making of money. Gold to-day is going through exactly the same vicissitudes that silver had gone through with in the recent memory of living men; and that is not a new experience by any means; it is as old as human experience.

I want to read from a work which has not received all the consideration it should, by Brooks Adams on the "Law of Civilization and Decay," in which this whole subject is thoroughly discussed, and I shall refer to him again later. I read from page 26 of the work, after discussing what had happened to silver when it was demonetized [reading]:

"Under Trajan, toward 100 A. D., the alloy reached 20 per cent; under Septimius Severus, a hundred years later, it had mounted to 50 or 60 per cent, and by the time of Etlagabalus, 220 A. D., the coin had degenerated into a token of base metal, and was repudiated by the government."

That is with reference to silver.

"Something similar happened to the gold. The aureus, though it kept its fineness, lost in weight down to Constantine. In the reign of Augustus it equaled one-fortieth of a Roman pound of gold, in that of Nero one forty-fifth, and in that of Caracalla but one-fiftieth, in that of Diocletian one-sixtieth, and in that of Constantine one seventy-second, when the coin ceased passing by tale and was taken only by weight."

That is, as provided in this bill. If there was one thing that Professor Fisher demonstrated in his discussion it was that gold is as unstable as water.

The New York Times of yesterday published the following [reading]:

"LONDON MARKET.

"Money in London unchanged at 1½ per cent; short bills up one-eighth, at 2½ per cent; three months' bills up one-sixteenth, at 2¾ per cent.

"Gold bullion unchanged; at 89s. 10d. Taking the British mint standard price of 85s. per fine ounce as par, the market quotation for gold would represent a price of 105½ at London. On the same basis the highest London price for gold for 1922 was 115½ on January 5; highest for this year to date, 105½, on January 18. The highest price since open trading in gold was resumed at London in September, 1919, was 149½, on February 6, 1920; the lowest, 104½, on December 13, 1922."

There is shown a difference of 45 and a fraction per cent in the value of the physical metal gold between September, 1919, and February, 1920.

If there is anything that has been demonstrated by human experience, reaching back 2,000 years, with reference to the use of gold as money, it is that it is as unstable as water, it is as unstable as silver. We can all remember a time when gold and silver were on a parity, with silver having the advantage, at which time it was insisted that all obligations should be paid in silver; and then a little later, through the vicissitudes of the market, when they were turning out silver by the ton from the Molly Gibson mine at a cost of 11 cents an ounce, it became necessary to make gold the standard.

But that is not the kernel of the question. We are talking about fixing the standard of the dollar and fixing prices. I have heard a good deal said about prices, but I have not heard a word said about value. To be pedagogical just for a minute, we know what money is—anything which will circulate as a medium of exchange or a measure of value. But, what is value? Why, value is a numerical relation of the desirability of commodities; and, expressed in money, it is called "price"; and if you undertake to fix prices, you have got to standardize the desires of mankind, which is an utterly hopeless and impossible thing. It can not be done. There is not a human being living whose desires can be limited.

So much for that.

Doctor Wolff, in his illuminating address to the committee, indicated that some of the factors which determined value or which determined price—he did not go into the discussion of cost as an element of price to any extent, but it is an important matter to be considered as to variables and those which are independent variables. Certain things change without changing the price or

having influence or effect upon other things; but you can not affect the price of corn without affecting the price of pork, and you can not affect the price of pork without affecting the price of living. That means wages; that means cost of the products of labor, and that illustrates in a way what I mean by the infinite ramifications through which this problem carries its significance.

Among the things which Doctor Wolff mentioned as having very large import in fixing price was credit. Now, credit, in the modern commercial and banking understanding or practice, is the organized confidence of the people in the stability of their institutions, in the character of the citizenship; faith and belief that the people are honest and will pay their debts; and the only basis, legitimately, philosophically, and economically, upon which credit can be established is the wealth of the country.

The man who has a moral character that is attested can have a personal credit, but any man who has a thousand cattle on his ranch can get a credit because the wealth of the country and the wealth of the man—the cattle he owns are a pledge that his faith and promise will be kept.

To make gold the basis of credit is to make this fluctuating thing, which does not stand from one month to another, and the reason it does not stand is because it is in the control of men to whose interest it is to make it flexible in order to make the ephah great and the shekels small and vice versa. I will bring that up in a moment.

In Homeric and Mosaic times, which were practically coterminous, they understood this question of interest, and they denounced it. Coming down later into Greek history, Solon and Lycurgus denounced it; the organized religion of the world denounced it. I do not denounce it; I believe that interest is a proper proposition, but I do not believe that it should be handled and controlled by private interests, and that is what the Federal reserve act was intended to do—organize, solidify, unite the power to control the fluid wealth of the country at the will of the men whose interest it was to control it for their special benefit.

I want to read another word or two from Brooks Adams, just as an introductory, quoting from page 349 [reading]:

"Since 1873 prices have generally fallen, and the mortgage has tended to engulf the pledge, but from time to time"—

And here is the kernel of the whole proposition—

"But from time to time the creditor class feels the need of turning the property it has acquired from bankrupts into gold, and then the rise explained by Overstone takes place. The hoards are opened, credit is freely given, the quantity of currency is increased, values rise, sales are made, and new adventurers contract fresh obligations. Then this expansion is followed by a fresh contraction, and liquidation is repeated on an ever-descending scale."

One hundred and seven years ago John C. Calhoun was the chairman of this committee. Doctor Wolff referred to something that Mr. Calhoun had said. I want to quote from Calhoun just a little further. Doctor Wolff's quotation is in the record, and it does not need to be quoted. But in discussing this question of the national finance, the power of private individuals to control the use of money and credit. This has been the case, with one or two exceptions, ever since the Civil War, after the bankers of the country had shamefully closed their doors and gone into bankruptcy and refused to assist the Government in its time of need. Then the Government itself coined or issued its own currency, and it fought the Civil War with it; and then, after the war had been won, these same bankers who had shamefully closed their doors came to the Government and said, "You have got to sell bonds, and you can not sell bonds unless you let us issue our notes for the money of the people and make them payable in gold." [Reading:]

"A single illustration may throw light upon this point. Suppose the Government were to take up the veriest beggar in the street and enter into a contract with him that nothing should be received in payment of its dues or for the sales of its public lands in future except gold and silver and his promissory notes, and that he should have the use of the public funds from the time of their collection until their disbursement. Can anyone estimate the wealth which such a contract would confer? His notes would circulate far and wide over the whole extent of the Union, would be the medium through which the exchanges of the country would be performed, and his ample and extended credit would give him control over all the banking institutions and moneyed transactions of the community. The possession of a hundred millions would not give a control more effectual."

It is pathetic to think of the extreme limit of the imagination which Calhoun at that time had, when he limited its power to a hundred millions. We are talking in terms of hundred billions.

"I ask, would it be fair, would it be equal, would it be consistent with the spirit of our institutions to confer such advantages on any individual? And if not on one, would it be if conferred on any number? And if not, why should it be conferred on any corporate body of individuals? How can they possibly be entitled to benefits so vast, which all must acknowledge could not be justly conferred on any number of unincorporated individuals?"

This was Calhoun in 1838. In 1816 he was the chairman of this committee, and from the time he came into Congress in 1811 until he left his mind was consumed with the fire of patriotic zeal to get this question right, and that was his conclusion.

Calhoun was a southerner; he represented the mentality of the old Scotch power of straight thinking which dug these things out of human experience and presented them as the conclusions of his philosophy. He was from the South. The Adams family was a northern family; they came from Massachusetts, and for four generations, probably, had as much to do with the settlement of the form and policy of the Republic as any other one family. The flower of the family was Henry Adams. Henry Adams, unfortunately, died a pessimist. As a matter of fact, the whole four generations were pessimists in the end. They undertook to establish a republican government among men—republican in form, based upon a theocracy. They had the conception that the Deity was an individual with whom they could covenant, and that if they performed their part of the covenant the Deity would perform its part of the covenant. They were disillusioned and disappointed in that, because, having fully performed their part of the covenant, some how or other there was a failure to connect and they became disillusioned, lost faith and confidence in themselves and the nature of things, and the reason for it was as expressed by Brooks Adams, a democracy had not yet acquired power to control its own institutions. [Reading:]

"A long series of investigations comprising many, many countries had forced me to the conclusion that humanity competes in various ways—by war, for example, in which case slavery is apt to follow defeat; and by usury, which takes the form of a struggle between debtor and creditor, when slavery may also be the fate of the vanquished."

And he then quotes the same paragraph which I quoted above.

I want to refer to one other authority which will not be impugned, at least. I have here the Satyricon of Petronius, a scholar, philosopher, and artist, the final judge in matters of all æsthetic arts, who practiced in the courts of Rome, who was a wealthy man and personal associate of the Emperor. He is describing conditions in Rome and the reasons for conditions in Rome at that time. [Reading:]

"So Rome in her deep disgrace was herself both price and prize, and despoiled herself without an avenger. Moreover, filthy usury and handling of money had caught the common people in a double whirlpool and destroyed them. Not a house is safe, not a man but is mortgaged; the madness spreads through their limbs, and trouble bays and hounds them down like some disease sown in the dumb flesh. In despair they turn to violence, and bloodshed destroys the good things lost by luxury. A beggar can risk everything in safety. Could the spell of healthful reason stir Rome from the filth where she rolled in heavy sleep, or only madness and war and the lust wakened by the sword?"

That is the result of private control of credit in Rome. The same happened in Greece.

The power which these organizations and which this private control of credit gives was well illustrated by what took place during the time when one of the most sturdy moral characters, with a courage that was almost recklessness, when Grover Cleveland was President—the Government of the United States had practically to get down on its knees and make bargains with the men who controlled credit in this country to keep their hands off the gold in the United States Treasury, and simply say, "For Heaven's sake, give the Government a chance," because they had a siphon, and this bill repeats the siphon, for pumping gold back and forth from the Treasury of the United State at the will of special interests which control the power of credit.

I maintain, and it is a part of our philosophy, that the credit and power to issue money and to regulate the value thereof imposed upon the Congress

of the United States by the Constitution is as much a public utility as the post office, as much a public utility as a railroad or a telephone or an electric-light system, or a water system in a city, or a street-car system.

We maintain this, Mr. Chairman, that every business activity or industry which depends for its right to exist and for its power to function upon the use of an arm of the Government and upon the use of a Government function—is in its essence and by its nature a Government function and public utility, and that it is infamous, once we know or think we know this, that we would continue to permit private organizations of individuals to use the power of the Government to rob the people who are the Government; that is where we stand. And yet there is a little concrete illustration. We are talking about helping agriculture.

Here is a copy of a bill or report about helping agriculture, doing something for agriculture, lending them more money. Good heavens! The more money you lend them under present conditions the worse they are off. If you want to help the farmer, just step in and prevent the railroads robbing him; just step in and prevent the natural-resource barons from robbing him; just step in and prevent the credit monopolies from continuing to rob him, and he may have enough left out of the products of his toil to care for his family and keep his farm. That is all that you need to do.

not the entire table—this is not a new matter—but in 303 A. D. the Emperor Diocletian found prices getting to a point where the people could not live. The whole program was to advance credits to the man who owned a little piece of land, influence prices, call on him to pay, and when he could not pay, take it away from him and everything he had; then get a deficiency judgment against him, and when he could not pay that, turn him into prison and leave him there 30 or 60 days to give him a chance to find somebody to bail him out; and when he could not do that, make a slave of him and all of his family. That is the way they did those things. We have not gotten that far, but pretty nearly that far, with 40 per cent of our farms operated by tenant farmers and 40 per cent of the tenant farmers during the last one and one-half years quit farming because they could not live.

Diocletian found that condition and he went to work and issued a decree or edict, in which he established the fixed prices at which 800 different commodities should be sold in the markets of Roman cities, and they are all here, not only prices for commodities but prices for everything.

"Teacher of Greek, Latin, geometry, per pupil, per month, 87 cents.

"Teacher of rhetoric, per pupil, per month, \$1.09.

"Advocate or counsel for presenting a case, \$1.09."

What would our lawyers think about that?

"For finishing a case, \$4.35.

"Teacher of architecture, per pupil, per month, \$4.35.

"Watcher of clothes, in public bath, for each patron, 9 cents.

"Hide, Babylonian, first quality, \$2.17."

And then there are prices of sheepskin, lion skin.

"Boots, first quality, for mule-drivers and peasants, per pair, without nails, 52 cents."

Then there are prices for apples, green apples, dried apples, old apples, new apples, wine, and beer.

"Manual laborer, 10.8 cents.

"Bricklayer, 21.6 cents.

"Joiner (interior work), 21.6 cents.

"Driver, for camel, ass, or mule, 10.8 cents.

"Veterinary, for cutting, and straightening hoofs, per animal, 2.6 cents."

It is an interesting cross-section of Roman life you get there. But when you go back to learn why this edict was decreed, it has a present bearing. It only lasted about 10 years. It produced such riots, such destruction of life and bloodshed that it was repealed, and then a little later Hadrian tried to do the same thing. English history is stiff with illustrations of the same thing. Shakespeare gives a direct illustration of it:

"There shall be in England seven half-penny loaves sold for a penny: The three-hooped pot shall have ten hoops, and I will make it felony to drink small beer. All the realm shall be in common and in Cheapside shall my palfrey go to grass."

That was the burlesque of the court, the ridicule cast upon the popular movement at that time by the greatest mind since Plato.

I want to just say a word or two about what has been done and what can be done and what will be done and continue to be done just as long as this thing goes on. Here is an article from the New York Times of yesterday. I am only going to read a paragraph of it—showing the beginning of the awakening among the people who are most vitally affected, speaking about the undertaking on the part of machinists and certain labor organizations to start banking institutions of their own, like the Machinists' Bank here and in Cleveland, like the buying of the Empire Trust Co. in New York, and the establishment of other banks in New York. [Reading:]

"Credit is at the heart of the movement. Most labor leaders have had at least one experience with the quiet, deadly power that lies in credit control. They have seen liberal employers whipped into the antilabor line by a mere crack of the credit lash—a hint of loans called or of borrowing privileges withheld. The idea that labor can crack the same whip is seductive."

Mr. MACGREGOR. Was that an editorial?

Mr. STARR. No; it is a communicated article by Evans Clark, of the Labor Bureau (Inc.).

Mr. MACGREGOR. A labor man?

Mr. STARR. Yes. I do not agree or sympathize with the idea of organized labor starting banks; I do not oppose the cooperative principle, provided the incorporators include all who are affected by the institution. There is a change coming over the spirit of our dream with reference to public finance and the control of credit, and I believe—this is only my own reaction to the situation—that these men are being encouraged to establish outposts that will protect the central citadel when the time of struggle comes; and these cooperative labor men, getting a taste of blood and the sweetness of control of credit and the profits of credit control, they will be hard to jar loose when the time comes.

I can give you the name, if it is necessary, of the man who is concerned with what I am about to say. A Chicago manufacturer, a man of considerable means, but who started his business about 25 or 30 years ago, literally with a postage stamp and who built up to a point where he employed about 75 men manufacturing a specialty greatly used among musical instrument makers, in the fall of 1920, getting ready for the holiday trade, he had borrowed \$10,000 from his bank in order to lay in larger supplies of raw material and to employ more men. The trade did not develop as he expected it would, and he took \$5,000 back to the bank and he said, "Now, I do not know that I am going to need this, but really I want to have an understanding that if I pay off this amount now, in case I shall need it again within the next month, or two or three months, I can have it." "Oh, certainly; surely. Just come in and let us know. You can have all the money you want, only we want to be notified." "All right." He paid off the \$5,000. After the holidays there seemed to be a little rise in the business, because of people who waited until after the holidays for the freshet that naturally followed the high tide of the holiday trade; and he wanted to use that \$5,000, and he went to the bank. The bank told him he could not have it. He said, "Why not? You promised it to me. You told me I could have it." "Yes, sir; I know I did. But conditions have changed. Conditions are very much changed. You see, the fact is we do not believe that labor has been sufficiently deflated yet to justify advances for reviving industry."

In that connection I want to read just another word from the Manufacturers' Record of October 21, 1920, Bulletin No. 2, issued September 27 by the First Federal Foreign Banking Association. That was the first organization to avail itself of the opportunity offered by the Edge Act, and that is what this is:

"The First Federal Foreign Banking Association, which is controlled by the leading banking institutions of New York, states that the League of Nations is carrying on a world campaign 'for drastic credit restrictions through existing central banking institutions.' It also says that measures have been taken in the United States 'to restrict the granting of credits and put up the cost of borrowing,' and that 'our restriction of credit shows far-reaching influences, bringing about reduced production and liquidation of commodities.'"

In the Manufacturers' Record, November 3, 1921, it says:

"The First Federal Foreign Banking Association of New York in its Bulletin No. 13, issued September 30, in reviewing the question of money and credit, says: 'The stranglehold that gold has come from the fact that it has the monopoly of world-wide command-of-purchase at unquestioned parity.' * * *

"Further on in the same financial circular it is said 'there is not gold enough in the world to make current settlements with. If the realization that something must be done promptly isn't vivid now, it certainly will be very soon.'" Then it goes on to say:

"We have tried for several years to warn financiers of the world that with a steadily decreasing gold output and a larger consumption of gold for the arts the world is facing a gold shortage, which, unless there is a change by some better system of financing, will ultimately lead to world-wide panic and world-wide repudiation of debts and bonds, national and corporate. Gold, as it now stands limited to an output with a steadily decreasing supply, has, as stated by the First Federal Foreign Banking Association of New York, 'a strangle hold,' and this strangle hold, unless it is released, will ultimately produce the very things defined by the Century Dictionary, 'to draw tight, to squeeze, to choke by compression of the windpipe, kill by choking, throttle.'"

There is a purpose running through all this. I do not see how a reasonable man can escape the conclusion that the very basis of all responsibility in individual or in social life is the legal and moral principle that a man is supposed to intend the natural consequences of his conduct. There was this to be done: The law of supply and demand has been utterly abolished until the time came to spring the trap, and the word was passed. The prize was a 15 to 20 per cent scalp on \$26,000,000,000 of Government bonds—the equities in \$80,000,000,000 of mortgaged homes and farms, the stocks and bonds of \$50,000,000,000 of corporate industrial and public-utility plants, the daily wages of 40,000,000 industrial workers, and the produce of more than 6,500,000 farms and ranches. It was a matter purely of credit control. Now, we claim that credit control, by virtue of its origin in the use of a power and attribute of sovereignty, is a function of Government, and that a sound public policy will refuse to permit this public power, that more than any other controls prices, to remain the instrument of private profit at the expense of the general welfare of all the people.

But in the matter of credit control, in cause and effect, can any reasonable man, looking at the one and the other, fail to see the connection and the relation?

I had a little experience of my own. I had a friend who wanted an accommodation of \$2,000 or \$3,000 in May, 1920, or maybe a little earlier than that, and he asked me to take certain securities for him up to my bank, which I did. I had \$10,000 worth of securities which had been earning 8 per cent, preferred securities, which never had earned less than 8 per cent, and were quoted from \$112 to \$116. I took them to a banker whom I had been doing business with for a number of years and presented the proposition to him. He said, "You do not need to go any further, Mr. Starr. It is impossible." I said, "I never had any difficulty before"—and I had borrowed many, many times that amount when it was necessary for my own use. He said, "I know; I understand perfectly, and we would be awfully glad to accommodate you. We have got the money and we would be glad to use it. But we can not do it." I said, "Will you tell me why?" Well, he said, "Orders." "Orders?" "Yes; orders." "Is not this your bank?" "We used to think it was, but it does not seem to be." "Where do the orders come from? Who gives you the orders?" "Well, they come from Washington; that is all I can say."

I get the same story from individuals from St. Paul and Seattle and Bismarck—all over the country. I am not going to enter into a diatribe with reference to the maliciousness and what I regard as evil practices of the Federal reserve system—loaning money to the banks of the South at 3 per cent to enable the southern bankers to loan cotton dealers and producers at 87 per cent; I do not care to go into that. But that will be impossible if it was not for the private power for the use and control of a public function.

Mr. MACGREGOR. Did you believe those things?

Mr. STARR. Do I believe those stories were true?

Mr. MACGREGOR. Yes.

Mr. STARR. I had very good authority—John Skelton Williams was my authority. I do not know whether he was reliable or not. But he was Comptroller of the Currency at the time he had access to the books, and I suppose he was telling the truth. If he was not, pray God help this country. If he was not telling the truth, tell me one man in this country you can trust to tell the truth.

I have not a particle of personal feeling about this at all; I am merely giving what I call **official reports**.

Here is something that I do not suppose anybody would question: This is the United States Department of Commerce, Washington, survey of current business August, 1922; No. 12, Bureau of the Census, figures compiled from Government reports: May, 1920, flour and wheat, \$15.03 and a fraction per barrel; in December, \$8.94. That is one of those variables that is not an independent variable; it was the mixed variable, and contingent variable, and it followed all the way down the line.

In 1908 I was in Kansas—I will be frank about it—I was in the campaign until October, 1908, in Kansas. I drove out about 20 miles from Lawrence to make a speech and to listen to other speeches and had to stay there overnight. I stayed at the home of a German who had landed on about 160 acres within 10 days after stepping off the boat at Castle Garden, and had lived on that farm ever since, raised a family and turned them loose—independent, self-supporting men and women. After the exercises of the evening were over and we were sitting around the fire the good wife said, "Mr. Starr, tell me how it comes that last fall we had about 25 hogs; they weighed 340 to 350 or 360 pounds apiece. One Saturday we were offered 5 cents a pound for those hogs, and the next Monday we could not give them away for 1½ cents a pound. Will you tell me why? Tell me what made that; who did it?"

The answer was very simple. The United States Steel Trust wanted to get control of its only competitor, the Tennessee Coal & Iron Co., and they began months before by drawing \$125,000,000 of gold out of London reserves and bringing it over to the United States to protect their position and start the panic on the other side of the ocean. The panic started over there and it came over here. That panic was the most thoroughly segregated in its entire environment and all its circumstances of any that we have had; and we have had 16 of them since we organized this Government; every one of them was caused by exactly the same cause that pulled the credit string on the trap. There was not a hog in America or a chicken or anything that could be offered for sale, nor a day's labor that did not suffer in the same way, though, perhaps, not in the same proportion, all because of the private power of credit control.

In that affair there were \$54,000,000 of United States Government money in the sub-Treasury in New York, to be loaned for just those purposes. Within a week they put in \$35,000,000 more, and by the end of December there were \$154,000,000 of the United States Government's money in there to stop a hole that had been made by a \$6,000,000 loan; and every dollar the Government put in there simply enlarged the aperture and things went to smash. There was a deliberate purpose in it, a direct purpose in it; there is no way of getting away from it. The relation of cause and effect was as obvious as could be.

The gentleman from New Jersey illustrated the relation between money and credit by the door and the hinge. I do not know whether any of the members of the committee who were here at that time are here now, but he could see no other relation except the door and the hinge; and the hinge was the money and the door was the credit.

I have a very different view. For illustration, I regard the money as a little, short—18 or 20 inches long—handle of a dog whip, with a lash 16 feet long, that a man who knows how to use it can cut the eye out of a dog in the front end of the team with any time he wants to; and in that more or less defenseless condition the gigantic credit whip is cracked whenever the powers see fit to crack it.

The clearings for four years, in 1917, 1918, 1919, and 1920, in the New York clearing house show that for every \$1,000 of clearings there was only \$1.87 money involved. Money has ceased to have any function practically except as a measure of value; it is no longer a medium of exchange, except in fractional currency; 98 per cent of all exchanges are settled by credit instruments.

Now, then, I want to talk a little about what credit instruments are. We talked about money a little while ago. There are only two kinds of money in the world—one, actual money, and the other, fiduciary money.

We have created a system under which we use substitutes for money; these substitutes for money are the credit instruments. I am not going into the question of spurious credits, representing water and wind, that are pumped into industrial or other organizations for the purpose of cashing in something for nothing, but the fluid medium by which differences and balances are settled. We have used that system until there are to-day in America over \$125,000,000,000 of debts, national debts, State debts, county and municipal debts, corporate debts, and private debts, saying nothing about the obligations of insurance companies; and they are afloat on a credit that has as its broadest basis,

if all of the gold in the world were piled up here in America to be a basis for it, it would only be \$8,000,000,000, and we have four billions of it, practically—three billion some hundred odd million right here in this country to-day. We think we are a creditor nation; as a matter of fact, we are a debtor nation.

Mr. MACGREGOR. What is the grand total world supply?

Mr. STARR. The total world gold supply is estimated at \$8,000,000,000. The quotation of the London market is: "Money in London unchanged at 1½ per cent; in New York, money: Call money easier; highest 4½, lowest 4½, ruling rate 4½; closing bid 4½, offered 4½, lowest 4½."

We will never be a creditor nation so long as we are paying higher interest rates than they are in some other commercial centers of the world; we are a debtor nation until our interest rates are the lowest in the world.

There is just another thought that I want to refer to. This is from the Washington Herald of this morning, by their financial authority [reading]:

"European capital is seeking safety in American securities. Purchases of our investment issues by foreigners have been particularly noticeable the last six weeks. The money is coming from practically all European countries."

"This statement is made by one of America's foremost bankers—a man who has a thorough knowledge of world finance and economies. It will undoubtedly cause much surprise, coming at a time when the American Nation is showing hesitancy in deciding whether the security markets warrant purchases. It also illustrates a belief by the Europeans that American securities look safest at a time when European political affairs seem to be approaching a crisis.

"This buying of American securities might also account for part of the heaviness of foreign exchange, which is one of the reasons responsible for the hesitancy of America to accumulate stocks.

"Action of Europeans demonstrates that they consider America the safest place in the world for investment"—

And we call ourselves a creditor nation.

I happened to see a note this morning which, unfortunately, I have not with me, but Mr. Kuhn, of the New York banking firm, in answer to a question by a man named Foster, says that it is a very difficult matter to determine—

Mr. GOLDSBOROUGH (interposing). Will you let us know where that quotation is from?

Mr. STARR. This quotation [indicating]?

Mr. GOLDSBOROUGH. Yes, sir.

Mr. STARR. This quotation is from the Washington Herald of this morning. I will leave it here. I have no further use for it.

Mr. Kuhn replied to the question as to whether or not this was a creditor or a debtor nation, and said it was very difficult to tell at this time, but that he did believe that for the immediate present we could be regarded as a creditor nation.

Well, what is the basis for his conclusion I do not propose to go into.

I do not think it is inevitable that the chaos, complete collapse, which has taken place in previous experience is necessary to come here. I believe that we are still in time to change the course of events. I question whether we shall; but I believe there is still time to make the change, but in order to make that change it will be necessary to take away from the power of private individuals opportunities to advance their interests at the expense of the general public.

I have no feeling of ill will toward bankers, and the Farmer Labor Party has no feeling of ill will. It is sometimes difficult to consider these questions around the stove in the corner store or at the little schoolhouse meeting or under the shed when we go to church Sunday, where we stand our horses, without some trace of feeling and some possible trace of bitterness, when we see what has been done, what is being done, and what might be done. We have not any personal grouches and grudges against individual bankers. It is the system that is wrong. We are not talking of individuals. We believe that we are stockholders in this business of the United States Government to the extent of about 60,000,000 of us, men, women, and children. We believe that it is our business; we can not say get away from that. We are not responsible for our being here; we were born here, the most of us, and it is our affair. We have been studying these things, and when we see the organized railroad bloc, the organized bank bloc, the organized coal and oil bloc, and

the organized tariff bloc come up here and swarm through lobbies and the galleries to get what they want, and when we see the chairman and members of great committees, like the Ways and Means Committee of the House, ask petitioners just what they want "Just how much do you think you ought to have?" and to get it, why, then, there is nothing left for the farmer except a reorganization of the whole system. There is nothing left for the producing masses except a remaking of the whole system.

It is not necessary, like the man who was traveling on the wrong road at the fork to go back a whole week's journey to start right. All we have got to do is to start something else. And it is going to be done, Mr. Chairman; do not worry about that. It is going to be done, but whether it is done in such a way, by taking it in time, as to avoid a shock that will be disastrous, depends upon the measure of insight and vision that is indulged by the men who are responsible for the source of our practices, for the formation of our laws.

We are not desiring to change the form of our Government. We do not want a revolution. We remember that "A house divided against itself can not stand." We feel that as a State and Nation which in its form, politically, is a democracy, but in its moral and economic substance is an autocracy, is a house divided against itself and it can not stand. It is either going back to a pure political empire or an economic democracy, one of the two.

There are a whole lot of things I want to say. I do not feel as though I ought to impose upon this committee to any much greater extent, but I do want to call attention to a pamphlet which you will find in the library on Banking, Business, and Currency, by H. A. Campbell. This gives an interesting account of the Commonwealth Bank of Australia, where they started a people's bank with the people's money.

The objection to the bill is that it will demonetize gold. That is one objection. I do not object to the demonetization of gold, not at all. I think gold should never have been monetized. We inherited gold as a basis of credit and as a monetary system, a measure of value, as a medium of exchange. Where gold is now exchanged in settlement of differences, it is a pure question of barter, because the gold is not worth what the stamp says it is.

Another reason we object is because the remedy is an *ex post facto* proposition. Under this bill you can never undertake a remedy until after the evil has happened. If prices have arrived at a certain point you exchange the gold. If they fall to another point, you change the gold. Is not that the provision of the bill? If the index number rises 2 per cent, then you put 2 per cent more on the amount of gold that you use in settlement of the differences. The dollar will contain 2 per cent more gold. If the index number falls, you take 2 per cent off of the gold. It will take that much less gold to settle the debts. But the gold remains the basis of credit, and the gold in the hands of the private controller is controlled and the credit based on it is controlled. That is the evil of the situation.

There is not as much reason why the gold should be the basis of credit as wheat should be the basis of credit.

Mr. GOLDSBOROUGH. Your real position, as I gather it, is that you are opposed to the present financial system. It is not so much this particular bill; it is the present financial system that you object to?

Mr. STARR. I am opposed to the present financial system, and I am opposed to the bill because one natural result of it, whether it is the intention or not, is to perpetuate the present financial system. That is why I am opposed to it. Take a billion and a half of gold that is now in the form of money. Gold certificates are issued for it. Demonetize it, and you take that much money out of what we now have. We have only got in all about four and a half billions now in circulation, and every single Federal reserve note in your pocket or mine draws interest; not for the public, where I should not object to its drawing interest, but for a private individual, for a private corporation, to whom the Congress of the United States has turned over the power to issue the money of the people at its own discretion.

Just go back to what Calhoun says: "You can take the beggar off the street and give him power to issue his notes as the money of the people, and he will control every industry in the land. I do not care who owns the farms of the country if I can control the railroads; nor do I care who controls the farm and the railroads if I can control just the terminal facilities; and I do not care who controls the farm, the railroads, and the terminal facilities if I can control the credit of the country, because I will then be the dominating partner in farms, railroads, and the business of great cities."

You can not plant a grain, you can not turn a wheel, you can not move cotton, you can not build a barn or buy a cow without consulting a banker, who takes a rake-off for permission to live on the surface of the earth. The price of admission to the human family depends on the good will of the man who controls the credit of the country.

I do not know whether I have made myself clear or not. I have wanted to. It is the social significance of this thing that has the great importance to me.

STATEMENT OF MR. H. N. LAWRIE, MANAGING DIRECTOR AMERICAN GOLD AND SILVER INSTITUTE, WASHINGTON, D. C.

Mr. GOLDSBOROUGH. Mr. Chairman, as I understand it, Mr. Lawrie does not appear in opposition to the bill, but wants to make certain suggestions in connection with the legislation from the standpoint of the gold producers. Is that correct, Mr. Lawrie?

Mr. LAWRIE. Mr. Chairman, I am managing director of the American Gold and Silver Institute, and while we have examined the provisions of this bill, we do not desire at this time to enter upon a discussion of the merits or demerits of it, except in so far as to point out the effect of its provisions upon the gold-mining industry in this country.

In the first place, the gold mining industry is to-day in a very deplorable condition. I have here a summary showing that condition as represented by the production of gold for the year 1915, which was the high point, and for 1921 and 1922. With the permission of the committee, I would like to insert this table in the record.

Mr. APPLEBY. If there is no objection, the table may be inserted in the record.

(The table referred to is as follows:)

Gold production in the United States, by States, 1915-1922.¹

State.	1915	1921	1922 ²	Decrease 1922 from 1915.	Per cent of decrease 1922 from 1915.	Increase (+) or decrease (-) 1922 from 1921.	Per cent of increase (+) or decrease (-) 1922 from 1921.
Alaska.....	\$16,710,000	\$7,998,500	\$7,871,200	\$8,838,800	52.90	-\$127,300	-1.59
Arizona.....	4,555,900	3,317,800	3,304,800	1,251,100	27.46	-13,000	-.39
California.....	22,547,400	15,061,300	14,829,100	7,718,300	34.23	-232,200	-1.54
Colorado.....	22,530,800	7,347,800	6,518,100	16,012,700	71.07	-829,700	-11.30
Idaho.....	1,170,600	542,200	482,800	687,800	58.75	-59,400	-10.89
Montana.....	4,978,300	1,725,600	1,511,100	3,467,200	69.65	-214,500	-12.46
Nevada.....	11,883,700	3,220,500	3,228,900	8,654,800	72.83	+8,400	+25
New Mexico.....	1,490,100	203,100	332,200	1,157,900	77.26	+129,100	+63.56
Oregon.....	1,867,100	815,600	477,400	1,389,700	74.45	-338,200	-41.42
South Dakota.....	7,403,500	6,523,000	6,711,100	692,400	9.35	+188,100	+2.88
Utah.....	3,907,900	1,894,300	2,226,800	1,681,100	43.01	+332,500	+17.55
Washington.....	461,600	151,100	188,500	273,100	59.09	+37,400	+24.55
Other States and possessions.....	1,558,800	1,266,500	1,414,000	144,800	9.30	+147,500	+11.65
Total.....	101,035,700	50,067,300	49,096,000	51,939,700	51.41	-971,300	-1.94

¹ United States Mint reports.

² Preliminary estimate of the Bureau of the Mint in cooperation with the Geological Survey. Table compiled and computed by H. N. Lawrie, managing director, American Gold and Silver Institute.

Mr. LAWRIE. The production of gold in the United States declined from \$101,035,700 in 1915 to \$49,096,000 in 1922, more than 51 per cent; about \$1,000,000 less than the 1921, and \$2,000,000 less than the 1920 production.

When prices began to decline rapidly in the last quarter of 1920 many domestic gold producers were hopeful that pre-war cost levels would make possible the early resumption of operations in properties which had been closed down during the period of high costs. The wholesale index number of the Bureau of Labor Statistics was 147 in 1921, as compared with 100 in 1913, and wages remained at a still higher level for the reason that retail prices and the cost of living resisted in a greater degree the forces of deflation. Consequently, the cost of production remained considerably higher than the 47 per cent increase over 1913, as indicated by the index number. Any decline in the

cost of production which may have taken place in 1921 was not sufficient to retard the decline in production, which was less in 1921 than in 1920.

The index number was 138 in January, 1922, the lowest since the peak of inflation, but has risen until in November it had advanced 18 points. Recent wage increases in the railroad, steel, and coal industries have forced corresponding increases in the metal-mining districts, with the result of adding materially to the cost of gold production. The rise in the index number and the increase in wages which took place in 1922 is reflected in the production of gold for that year, which was less than that of 1921. The production of gold as a by-product recovered from the base metal ores of copper and lead was greater in 1922 than in 1921, which indicates that the decline in the production of gold from other than by-product sources declined more seriously than is indicated by the figures for total production. A study of interest rates and other economic factors indicates that the price index has not yet reached its height.

Under these conditions the reopening of mines, many of which have been shut down since 1917, must longer be deferred, and even other mines added to this long list. As time passes the cost of reconditioning both mines and plants for operation increases, and unless prompt governmental aid is provided many mines will be permanently abandoned.

The suggestion has been made in testimony that an arbitrary level would be used as the basis of departure for the operation of this act, at some point near the price level at the time it should go into effect. That price level, if taken at the present time, would be over 50 per cent higher than the price level of 1913.

The question naturally arises, that if such a price level were taken as a basis, the money invested in the gold-mining industry in 1913 would be a total loss, if it had not earned more than 50 per cent profit in that year. The history of prices indicates that if nothing is done in the premises to stabilize prices arbitrarily, ultimately, and probably sooner than if the present bill were in effect, there would be a return to the price level of 1913, so that these investors in the gold-mining industry at that time would be able to recover their investments made under the profitable conditions of 1913.

Under the provisions of this bill, the gold producer is to receive less in dollars and cents for an ounce of gold at a time when the price level is rising and production costs increasing. It is plainly evident, therefore, that the provisions of this bill as stated are unjust and inequitable to the gold miner.

It is my thought, having followed the testimony before the committee, that what the proponents of this bill seek to secure, is equity; at least, that must be regarded as fundamentally the object of this legislation.

In order to remove the inequity of the provisions of this bill to the gold miners, it would seem that some provision could be worked out whereby the gold producer, instead of being penalized during a period of increasing costs by being paid less for his gold, could receive a price, increased commensurately with the cost of production. If the gold producer were to receive an increase in price based upon increase in production cost, it would be equitable and fair and he would be able to meet any increase in costs of production, and stability in the gold-mining industry would be insured over a period of rising prices.

Mr. GOLDSBOROUGH. Have you any concrete suggestion to make, Mr. Lawrie?

Mr. LAWRIE. I can offer no suggestion here other than to make an exception of the gold producer, inasmuch as he is supplying gold as the basis of the monetary and credit system; and on account of the social benefits that result from the activities of the gold producer, it would seem that he is entitled to the consideration of being made an exception, so that this iniquity will not become a burden upon the industry.

Mr. GOLDSBOROUGH. I was asking if you had any concrete suggestion to make.

Mr. LAWRIE. My suggestion would be to make an exception of the gold producer. I think that could be readily done without interfering with the operation of the bill. Of course, from a theoretical standpoint, as I interpret it, price movements are supposed to be very much shorter in duration under the provisions of this bill than under present conditions. Nevertheless the investment of money in the gold-mining industry can not be readily shifted, withdrawn, or invested under conditions however brief in duration and which involve such variations in income. So I fear you would not have an assured gold production under the provisions of this bill, which create instability in the industry during periods of rising prices.

There is another fundamental provision of this bill which the gold producers feel should be seriously considered. The exchange function of gold is almost done away with, as it must necessarily be, by the variability in the gold weight of the dollar. So that one of the most important checks which has insured in the past and which should be relied upon in the future to insure sound paper currency—that of instant redeemability in gold coin—is eliminated. That may have a very far-reaching effect, therefore, especially in view of the fact that so many exponents of fiat money have appeared in the last few years urging the issuance of money without regard to its redemption in gold or to its gold covers.

The condition of inflation which we have passed through is regarded by many as having been necessary to finance the war. Neither the inflation up to the armistice nor the still greater inflation which ended in 1920 could have taken place without the inflationary amendments to the Federal reserve act. No such inflation as we have experienced during and since the war would have been possible under the provisions of the original Federal reserve act.

Mr. E. W. Kemmerer, professor of economics and finance, Princeton University, in an article analyzing the causes of inflation due to the Federal reserve act and its amendments, and published in the Chemical Bulletin, New York, September 4 and 11, 1920, made the following statements, reserve computations, etc.:

"An idea of the extent of the reduction in ultimate legal reserve requirements contemplated by the Federal reserve act at the time of its enactment may be obtained by asking ourselves how the law would have affected the ultimate legal cash reserves held against deposits in the case of three national banks—one in a central reserve city, one in a reserve city, and one in a country bank city. It is assumed that each bank had at both dates demand deposits of \$1,200,000, time deposits (payable after 30 days' notice) of \$300,000, and a national bank-note circulation of \$100,000. The situation in 1913, and the situation as it ultimately would have been had the legal reserve requirements of the original act gone into full effect, are shown in the following table:

Ultimate legal cash reserve.

	1913 ¹		After Federal reserve act of 1913 should have gone into full effect.	
	Amount.	Per cent of deposits.	Amount. ²	Per cent of deposits.
Central reserve city bank.....	\$375,000	25	\$156,755	10.5
Reserve city bank.....	234,375	15.6	132,400	8.8
Country bank.....	111,094	7.4	108,018	7.2
All three banks.....	720,469	16.0	397,173	8.8

¹ In computing reserve amounts fractional parts of a dollar have been ignored.

² That part of the legal reserve that the law permitted to be held at the bank's option either as cash in vault or as a deposit with the Federal reserve bank, it has been assumed would have been held half in each form.

"In the central reserve city bank it will be observed the reduction would have been from a reserve representing 25 per cent of deposits to one representing 10½ per cent. In the reserve city bank the corresponding reduction would have been from 15.6 to 8.8 per cent, and in the country bank from 7.4 to 7.2 per cent. The figures show an average reserve for the three banks of 16 per cent before the Federal reserve act was passed and show that the average would have been 8.8 per cent had the reserve requirements of the act in its original form gone into full operation. Some idea of how important this reduction would have been will be obtained when it is noticed that the net deposits in 1913 (August 9) were \$1,619,000,000 for all central reserve city banks, \$1,882,000,000 for all reserve city banks, and \$3,596,000,000 for all country banks. The total net deposits for the three groups of banks com-

bined were \$7,097,000,000. A reduction in ultimate legal cash reserves from 16 per cent to 8.8 per cent on the total net deposits in 1913 would have released \$511,000,000 of reserve money which, taking an 8.8 per cent average reserve as the ultimate legal reserve base, would have been adequate for a deposit expansion of over \$5,800,000,000. Under peace conditions of course an expansion of such dimensions in deposit currency would have been impossible, for a large part of the released reserves would have left the country in the form of heavy gold exports. Some of this gold would have gone into the arts. The gold embargo later prevented the exportation of gold except in very small quantities, but that is a war measure and will be considered later. It may be claimed that a reduction in legal reserve requirements is a very different thing from a reduction in actual cash reserves. No one, however, can study the bank reserve experiences of the United States of recent years without being impressed with the close connection between our legal requirements and our actual reserves. Actual reserves in the United States usually stand very close to the legal minima.¹ The program laid down in the Federal reserve act as originally passed, for the gradual modification of legal reserves until they should reach the limits given above after a three-year period, was never fully carried out. Before that time the war struck us and under the pressure of war demands legal reserves were reduced to a much further extent than was provided for in the act of 1913. Those changes will be considered later. The amount of inflation that would have resulted from the carrying through of the reserve reduction provisions of the original Federal reserve act can not be attributed to the war, although the war probably would have expedited the process of inflation through taking up the slack much more quickly than otherwise would have been the case.

"The other nonwar causes of inflation call for only a brief consideration. The first is the introduction of the new Federal reserve notes. In 1913 the most important item in our paper-money circulation was the gold certificate which was backed dollar for dollar by gold and of which the circulation amounted to almost exactly \$1,000,000,000. The new Federal reserve note called for a legal minimum gold reserve of 40 per cent. Even before our entrance into the war, the Federal reserve bank had adopted the policy of withholding gold certificates from circulation and putting in their places Federal reserve notes. This policy strengthened the gold position of the Federal reserve banks and put into circulation a more elastic form of paper money. It none the less was a cause of inflation; for it substituted in active circulation a form of paper money requiring a 40 per cent legal reserve for one requiring 100 per cent.

"A second war cause of inflation consisted in the reduction in legal reserve requirements of member banks made through the amendments of August 15, 1914, and June 21, 1917, to the Federal reserve act. As a result of these amendments legal reserves against demand deposits were reduced for central reserve city banks from 18 to 13 per cent, for reserve city banks from 15 to 10 per cent, and for country banks from 12 to 7 per cent. Furthermore, all legal requirements for reserves in vaults of the member banks were discontinued, thus making deposits in the Federal reserve banks the only legal reserve. For time deposits the legal reserve requirement for all banks was reduced from 5 to 3 per cent. Provision was also made whereby gold held by Federal reserve banks as collateral against issues of Federal reserve notes should be counted also as part of the gold reserve against these notes—a provision concerning which the Federal reserve board said in its fourth annual report: 'The effective gold holdings of the Federal reserve banks have thus been greatly augmented and their discount power commensurately increased. * * *'

"Referring to the table and making the same computation for ultimate legal cash reserves under these new requirements that we made for them under the previous requirements, we arrive at the following results: For the central reserve city bank the ultimate legal cash reserve required was reduced from \$156,755, representing 10.5 per cent of deposits, to \$62,750, representing 4.18 per cent of deposits; for the reserve city bank the reduction was from \$132,400, representing 8.8 per cent of deposits, to \$50,150, representing 3.34 per cent; for the country bank the reduction was from \$108,018, representing 7.2 per cent of deposits, to \$37,550, representing 2½ per cent; for all three banks com-

¹ See Annual Report of the Comptroller of the Currency, 1913, pp. 278-281; also O. M. W. Sprague, *Crises under the National Banking System*, p. 216.

bined the reduction was from \$397,173, representing 8.8 per cent of deposits, to \$150,450, representing 3.34 per cent.

"This was a large reduction in ultimate legal reserve requirements, coming, as it did, less than four years after the great reduction authorized in the original Federal reserve act. For the three banks combined the new requirements average only slightly more than one-fifth of the requirements prior to the Federal reserve act, and they average less than two-fifths of what they ultimately would have been under the act as originally passed. These reductions were made under war conditions, and the public has never fully realized their importance. Whether justified or not by the war emergency—and personally I believe they were excessive—they were a great factor in the progress of inflation.

"Rapidly thereafter the ultimate cash reserves declined in the direction of these new legal minima, and they are still tending in that direction. From 1913 to 1919 the average ultimate cash reserve against deposits in our commercial banks (exclusive of bankers' balances) declined as follows: 1913, 11.7; 1914, 11.7; 1915, 11.9; 1916, 10.7; 1917, 10.6; 1918, 7; 1919, 6.6. A rough idea of the potentialities for expansion that this reduction involved may be obtained by applying these figures to the amount of net deposits in national banks as of the approximate date of the passage of the second amendment, namely, June 21, 1917.

"On June 20, 1917, the net deposits against which a reserve is required for the banks of the three central reserve cities were \$2,825,000,000; a reduction of average ultimate legal reserve on this sum from 10.5 to 4.18 per cent would release \$178,500,000 of reserve money, which, at the 4.18 per cent reserve ratio, would be sufficient for a deposit expansion of \$4,270,000,000.

"On the same date the corresponding net deposits of reserve city banks were \$2,956,000,000. On this sum a reduction of average ultimate legal reserve from 8.8 to 3.34 per cent would release \$161,500,000 of reserve money, which, at a 3.34 per cent reserve ratio, would be sufficient for a deposit expansion of \$4,835,000,000. For country banks on June 20, 1917, the net deposits amounted to \$4,302,000,000. On this sum a reduction of average ultimate legal reserve from 7.2 to 2.5 per cent would release \$202,200,000 of reserve money, which, at the 2.5 per cent reserve ratio, would be sufficient for a deposit expansion of \$8,090,000,000. For all three classes of national banks combined the amount of reserve money released would therefore be \$542,200,000, and the potential deposit expansion thereby created, assuming the existence of the gold embargo, would be \$17,196,000,000.

"The fact that similar reductions also applied to numerous State banks and trust companies, which were members of the Federal reserve system and which computed their legal reserves on the same or essentially the same bases as the national banks, would greatly increase these figures.

"Of course the fact that all banks need some till money, even though that money can not be counted as legal reserve, prevents ultimate reserves from reaching the legal reserve minima unless through action of the Federal Reserve Board the normal legal reserve minima are reduced to meet emergency demands. To a large and increasing degree, however, till money itself is being made up of Federal reserve notes which themselves carry a legal reserve of only 40 per cent."

There is ample gold in the Federal reserve system at the present time to enable it to return to the reserve status provided in the original act. The financial condition of the country is essentially sound. These amendments, which were enacted only because of the anticipated necessity for enlarging the credit facilities of the Government to finance the war, should now be repealed. An effective check can best be provided to an inflation more extensive than the one we have just experienced because of the surplus gold resources now held.

The temptation further to lower the discount rate and thereby encourage the larger use of the available credit resources of the Nation can be greatly lessened by the decentralization of the gold reserves of the system which would result by the repeal of these amendments.

I am bringing up this subject particularly at this time because prices have been ascending since January, 1922. How can the inflation now in progress be definitely checked is the question of greatest moment.

Mr. GOLDSBOROUGH. That is what this bill is for.

Mr. LAWRIE. Exactly; this bill may expedite the achievement of this desirable result, the elimination of extraordinary inflation, but the question is

* See Kemmerer, "Inflation," *American Economic Review*, June, 1918, pp. 253-256.

whether it would not be necessary to repeal these amendments to the Federal reserve act as a preliminary to the operation of your bill.

Another point which I would like to have the proponents of this legislation answer is this: Suppose the system were in effect, and an amendment should be enacted by the Congress to lower the gold reserve against the Federal reserve notes in circulation, we will say, to 20 per cent. There is nothing in this bill that would specifically limit the inflation that would arise from lowering the gold reserve ratio to the Federal reserve note circulation.

Mr. GOLDSBOROUGH. If this legislation were in effect, do you think Congress would occupy the contradictory position of allowing this legislation to remain on the statute books and at the same time make the reduction to 20 per cent?

Mr. LAWRIE. The pressure of circumstances might even compel Congress to consider such a reserve reduction.

Mr. GOLDSBOROUGH. I do not see that.

Mr. LAWRIE. What has Congress done? It enacted the Federal reserve act, in which it created substantially a Government credit currency and lowered the gold reserve cover of the Federal reserve note to 40 per cent. Is that not true? And had it not been for that, would this inflation through which we have passed been possible? The effect was immediately to increase the credit-expansion possibilities of the gold reserve held as cover for the Federal reserve-note circulation two and one-half times.

Mr. GOLDSBOROUGH. Congress did not do that at a time when the legislation proposed by this bill was a part of the law of the land.

Mr. LAWRIE. The mere enactment of any legislation is not going to impose any restrictions upon Congress.

Mr. GOLDSBOROUGH. You think Congress would deliberately enact legislation which is essentially contradictory, one piece of legislation going in one direction and the other piece going in the other direction?

Mr. LAWRIE. No; it may not be contradictory; there is at least one condition under which it may not be contradictory.

Mr. GOLDSBOROUGH. It would be contradictory if the condition arises which you have in mind, where the reserves would be lower. It would necessarily be contradictory.

Mr. LAWRIE. There might be a condition which would compel the lowering of the gold reserve ratio. That was the point I emphasized previously. Suppose you have lessened the amount of the gold reserve by weighting the dollar to such a point that the reserve ratio has declined to 40 per cent of the Federal reserve notes in circulation. The legal limit under the Federal reserve act is 40 per cent. Should another weighting of the dollar be necessary or a loss of reserve gold for export take place, it would then become necessary to reduce the reserve ratio below 40 per cent or suspend the operation of your bill.

Mr. STARR. Do you know about the bills now pending before this committee, one of which puts a premium upon gold coined after the date of the passage of the act and the other penalizing the use of gold in the mechanic arts?

Mr. LAWRIE. I am familiar with that bill.

Mr. STARR. There are such bills pending.

Mr. LAWRIE. I think there is a bill pending in the Senate, but it does not contain any provision for taxing gold used in the arts.

Mr. STARR. There are two bills pending before this committee, one of which is to penalize the use of gold in the mechanic arts.

Mr. LAWRIE. That was not introduced in this session of Congress.

Mr. STARR. It was introduced a year ago in the House.

Mr. LAWRIE. It was before this Congress.

Mr. STARR. The desire is to stabilize the value of gold-mining investments; that is one of the purposes.

Mr. LAWRIE. The object was to compensate the gold producer for increased production costs and to lessen the indirect benefit which the industrial consumer of gold was receiving by purchasing gold from the mint at less than the cost of production.

Mr. STARR. How about shoemakers? Do you not think it would be a good thing to have a premium on shoemakers' work?

Mr. LAWRIE. Shoemakers' work varies in price.

Mr. STARR. So does gold.

Mr. LAWRIE. In price?

Mr. STARR. Yes. I read just this morning of a change of 45 points in two months.

Mr. LAWRIE. That is not a change in the gold price of gold; that is a change in the depreciated paper currency price of gold.

Mr. STARR. The gold price of gold is simply the price that obtains in swapping one piece of gold for another piece of gold. There is not any merchandising in that.

Mr. LAWRIE. The prices to which you refer are in terms of sterling exchange. The sterling-exchange quotations are measured in depreciated paper sterling currency.

Mr. STARR. Does not that mean depreciated gold?

Mr. LAWRIE. No; it means depreciated paper currency.

Mr. STARR. Professor Fisher says that gold only runs 26 per cent of what it was in 1913.

Mr. LAWRIE. That is on the purchasing-power basis.

Mr. STARR. That is the only way you can test the value of it and what it costs to produce it. I recognize this is an attempt to do for gold exactly what they tried to do for silver in the purchase act. It is to give a special privilege to the men who are mining gold on the theory that gold is a vital necessity for society, which I deny.

Mr. GOLDSBOROUGH. Mr. Chairman, Mr. Lawrie says he is through, and in view of the fact that there is no one else to be heard by the committee in opposition to the bill, and since Professor Fisher is here, I would suggest that the committee hear what he has to say in reference to the various objections which have been made to this measure. He says it will take him about an hour to complete his statement. I do not know whether the committee prefers to proceed now or to take a recess and hear Professor Fisher later in the afternoon.

Mr. APPELBY. If there is no objection, we will hear Professor Fisher at this time.

ADDITIONAL STATEMENT OF PROF. IRVING FISHER, PROFESSOR OF POLITICAL ECONOMY, YALE UNIVERSITY, NEW HAVEN, CONN.

Professor FISHER. Mr. Chairman, I was very much interested in what Mr. Lawrie said, with a good deal of which I am sure we can all agree.

In the first place, it is perfectly clear that the Great War, through inflation, did injure the gold miners tremendously. They are included among the many people who are injured by unstable money. In my previous testimony I tried to show how the debtor and debtorlike classes and creditor and creditorlike classes are alternately injured by change in the purchasing power of the dollar, and how, in the long run, both are injured and production is crippled and class war is stimulated, and how all the other evils, primary and secondary, come about.

I did not mention the particular case of the gold miners, and I am very glad for that reason that Mr. Lawrie has done so.

The gold miner is doubly a victim of unstable money. In the first place, he is a victim in the same way that we all are victims, in that he is a debtor or a creditor, an employer, or whatever he may be. In the second place, he is a victim in the special way that Mr. Lawrie referred to, through this particular inflation which the war has brought.

I would like to analyze this latter point a little and make it perfectly clear how it all comes about. It does not come about by any change in the price of gold, for the price of gold has remained the same since 1837, and will always remain the same as long as we have a fixed gold dollar weight. The price of gold is (roughly) \$20 an ounce for pure gold, simply because a dollar is (roughly) one-twentieth of an ounce. But that fixity of price is only nominal stability, and instability really affects him as it does everybody else; this appears in his costs. When we have inflation the gold miner does not have his price go up as others go, but he has his costs go up, and figuring in the bookkeeping way in which we are all accustomed to figure, he simply says that business has become expensive for him to conduct; he has not been able to raise his price. That is the way he thinks of it, and so a profit has been turned into loss.

But if we look at it from a broader, economic point of view, we can express the same thing in a somewhat different way. Instead of figuring in terms of our unstable dollars, if we figure in terms of an ideal commodity unit, I would say that what has happened to the gold miner is that the value of

gold, the purchasing power of gold, the relation of gold to commodities, has depreciated, and it has depreciated because gold in America has become a glut on the market. It has become a glut on the market for two reasons.

In the first place, it has been imported in enormous quantities. Before the war we had 20 per cent of the world's gold, and now we have 46 per cent. We acquire that gold because Europe has filled its channels of trade with paper, and gold has flowed, as it always does under those circumstances, except as it is impounded by banks or Governments, to a country that has a gold standard. So we have had an enormous gold inflation in this country.

Secondly, for the reason Mr. Lawrie mentioned, we have had other means of inflation in this country. We have had inflation due to the establishment of the Federal reserve system, which, as I pointed out, and others did in testimony before the Committee on Banking and Currency when the Federal reserve act was under consideration, was bound to have that effect, in spite of its other virtues. And not only that, but through the amendment which Mr. Lawrie referred to, providing for the reduction of legal reserves, there has been made possible further inflation, the inflation of Federal reserve notes and the inflation of credit.

So the inflation of gold in this country, the inflation of Federal reserve notes in this country, and the inflation of credit in this country have all three made gold a glut on the market. It is not only the quantity of gold thrown on the market which reduces its value but the quantity of substitutes for gold, exactly as it is not only the Dakota wheat that makes the price of wheat but it is the India wheat and the Argentine wheat and all other wheats, and even all other cereals. So the value of gold depends not only on the supply of gold but on the supply of all substitutes for gold, including Federal reserve notes and credit. The result was that the war really cut the value of gold in two, and more.

That is really the calamity that has befallen the gold producers. That is, gold lost more than half of its value during the war. Naturally, therefore, the gold miners—or at least a good many of them—can not produce any longer at a profit the quantity of gold produced before.

So much for my agreement with what Mr. Lawrie has said, which, of course, is fundamental in his business.

The gold producers have been victimized by inflation, which is another way of saying that they have been victimized by our unstable dollar, not only in the general way in which we have all been victimized but in a particular way, because they are the producers of the product out of which our dollar is made.

MR. MACGREGOR. If you increase the price of gold you would not change the situation?

PROFESSOR FISHER. No. I am coming to that point now. If we could increase the price of gold by passing a law which would supersede the law of 1837, lowering the weight of the dollar so as to cut the dollar in two, or raising the price of gold, so as to double the price of gold, which would be the same thing, so that gold brought to the mint would bring \$40 instead of \$20 and odd an ounce, the net effect, while it would raise the price of the product of the gold mined, would be to raise their costs also. There would thus be no gain to the gold producers from cutting an ounce up into 40 pieces, each called a dollar, instead of 70, as now.

I have talked this whole matter over with John Hays Hammond, who is, I suppose, the leading mining engineer of the world, and so far as this point is concerned, he says, quite properly, it is as broad as it is long. John Hays Hammond is thoroughly in favor of stabilization, and in favor of my plan.

Mr. Lawrie, I thought, had some misconception in regard to how this bill would work. If we should stabilize at the present price level, I believe that, by stopping the inflation that now seems to be impending, the effect of the bill would be to save the gold producers a very considerable further loss, which I think is now in store for them, if we should leave matters to drift.

I think I indicated at the last hearing that it is my guess that unless the action of the Federal Reserve Board, or the passage of this bill, or some other extraneous circumstance that I can not predict now shall intervene to prevent inflation, the stage is now set for inflation. We have already begun it. Prices have risen at the rate of 1 per cent a month for a year, which is the most rapid rate of inflation we have had in this country, with the exception of what took place during the Great War and the Civil War. That is a remarkable fact which very few people appreciate. I really feel terrified at what may happen during the next two years.

It can be stopped by the passage of the Goldsborough bill; it could be stopped by a drastic policy on the part of the Federal Reserve Board; it might be stopped by some extraneous circumstance. But if things are left to drift, I expect a very rapid rise in prices.

I am now publishing a weekly index number for 200 commodities, which is published in 70 newspapers with 6,000,000 circulation. That is the only general index number published weekly in the world. I have devised in my book on index numbers a short cut for working out an index number by which it is possible to get an index number within a few hours after the data are provided. You will find in to-morrow's New York Times this index number. It shows that the price level last week, ending on Friday last, was 157 per cent of the 1913 price level, which is the same thing as saying that the purchasing power of the dollar last week was 63.5 cents. The week before it was 63.8 cents; the week before that it was 64.1 cents; and the week before that it was also 64.1 cents. So it has shrunk a little even within the last few weeks, and at that rate, if it is continued during the rest of the year, which seems quite possible, it will give us a 50-cent dollar before the end of the year.

Now, the gold-mining interest is, of course, a very small factor as compared with the interests of the great debtor and creditor classes of the whole world, and I therefore did not mention the gold miners at the last hearing. But inasmuch as their representative is here to-day, I would just like to emphasize the fact that they, as well as the rest of us, will suffer tremendously as a consequence of such inflation.

Mr. MACGREGOR. I am curious to know what the procedure is by which you get this weekly index number. Of course, the average prices in New York and San Francisco are not the average prices in the whole world.

Professor FISHER. I will put in, by way of a parenthetical expression, an answer to that question. I made arrangements with Dun's Weekly Review by which I get the advance proof of their page where they give in convenient form the prices of about 200 commodities on one page. Then I multiply those prices by certain factors called weights, in such a way as to arrange the importance of farm products, food products, metals, and various other things in proper proportion, corresponding very much to the Bureau of Labor Statistics index number, which includes 404 commodities. My index number is not as good as that of the Bureau of Labor Statistics, because it includes only half as many commodities, and because it is confined practically to prices in New York. But you would be surprised to realize how little difference there is between having 200 commodities and 400 commodities; how little difference it makes between New York prices and other prices, although I think my index number is probably the most accurate index number in the world to-day, with the exception of that of the United States Bureau of Labor Statistics.

The short cut I referred to simply consists in the mechanical routine for the calculation involving in particular the use of round numbers, where it would make no substantial difference to the result. I have tested that out so that I know my results are, in general, within one-half of 1 per cent of what they would be if I used exact weights. It is shown in this book of mine that you may vary the weights used in constructing an index number very greatly without changing very greatly the index number itself. For instance, the difference between using a weight of 7.36 and using a weight of 10 is negligible. If you applied a factor of 7 or a factor of 10 the result would be just the same.

Mr. BLACK. Will you object to one question with reference to an observation you made about the recent rise in the index number and the inflation which you say portends?

Professor FISHER. Not at all.

Mr. BLACK. If I recall correctly, in reading the recent statistics from the Bureau of Labor Statistics, the reason was given, or, rather, the statement was made that most of this rise was due to the rise in the prices of farm products. That is to say, a great portion of it was due to that reason. The complaint I hear—and I think it is a very sound one, from observations which I have been able to make—is that the prices of farm products have fallen in so much greater proportion to the prices of other commodities, such as railroad rates, prices of coal and steel, and other products of better-organized industries, that unless they are brought back into a better proportion we can have no return of prosperity to the farmer. Speaking for myself, when the war period of readjustment came around I had the theory that the price of coal would be reduced and the price of transportation would be reduced in proportion to this other reduction and in that way a balance between these different

things would be brought about so that we could proceed on a normal basis. But as I see it, you can not reduce the price of labor involved in the production of coal, and, probably, you can have no more reduction in the price of labor or the price of transportation. The only way in which I can see that the farmer can be brought back to anything like normal prosperity is for the price of his products to be increased, and it occurs to me if Congress should undertake to take any steps that would help things at the present level, agriculture, which is certainly one of our basic industries, would be severely penalized. I would like to have your views on that.

Professor FISHER. I would hold the opposite opinion if the rise is from inflation. The farmer will not gain by a rise in prices under our present system, in the end, any more than the gold producer would gain in the way we just discussed. If prices go up by reason of inflation, it means nothing to the farmer, in the end, except instability, as a result of which he loses.

Mr. BACK. Would you think that the increase of the index number would necessarily mean inflation? Is that your opinion about it?

Professor FISHER. Pretty nearly. I was going to say, under our present system an increase in prices which is due to a general rebound from the deflation we have just had, and which is, I believe, primarily a matter of inflation, would not help the farmer, because his costs go up in the end. I think it would help him in the beginning somewhat, perhaps, but not in the end, because in the end he is bound to have the same jolt we have just had and the same experience we have all gone through.

But he would be greatly benefited by the passage of the Goldsborough bill, because when you once get stability then you have the readjustment of the farmer's and the other interests. That is what the farmer needs, readjustment of his prices. The farm prices are very unstable anyway because of crop conditions and all sorts of things.

The farmer is one of the great risk-taking groups of people in the United States, and even after you have stabilized his prices you have not stabilized his business, because there is a good deal in his business that is unstable besides the purchasing power of the dollar. But in this bill you have gone a long way toward stabilizing his business, and you have enabled him to have his prices readjusted to other prices.

I would like to remove from everyone's mind the idea that by the passage of this bill you are galvanizing the prices of farm products or any other individual commodity. You are simply fixing a general level. If the farm products are below the average of that level, they will come up to where they belong and other things will go below, and there will be a relative readjustment, so they will arrive at the situation where they normally belong.

I can not conceive of any greater boon to the farmers than passing this stabilization act, and I will back that up by saying that only during the last Christmas holidays in Chicago, at the meetings of the various organizations there, including the American Economic Association and some agricultural organizations, I had a long talk with Henry M. Wallace, jr., the son of the Secretary of Agriculture, and the editor of Wallace's Farmer. We went over the whole subject. He is so enthusiastic about the good it will do to the farmer to stabilize the dollar that he is promoting the idea of the passage of this Goldsborough bill in his own journal, and in every way he can he is trying to help this movement in the interest of the farmer.

That is by way of answer to these questions that were interjected.

Now, coming back to what I wanted to say in answer to Mr. Lawrie, I would like to refer to his suggestion that we are going to get back to a prewar price level some way, some time, and that the gold producer will be advantaged by that, whereas the passage of the Goldsborough bill would interfere with it.

Now, I, myself, see no prospect whatever that in the lifetime of any man in this room there will be any change by which we shall get back to the price level of 1913. Of course, it is possible; we do not know what is in store. If Europe could ever balance its budget, which it has not done yet—no country in Europe, even England, which comes closest to it, is yet paying all its expenses out of taxes—we would be able to make some progress. According to recent figures France is only paying 45 per cent of its expenses out of taxes and Germany only 33 per cent. Under those conditions they just keep on inflating, and therefore they are not going to suck gold from us. If, by some magic, you could stabilize Europe and her government finances so they could afford to deflate, they might suck away gold from this country. It may be, and probably will be, that England

will do that, in a mild degree fairly soon, but I can scarcely imagine that you are going to have any condition that will equal the situation which existed before the war.

That is a long story, and I will not go into it here, but I would like to state it as my opinion that we are not headed in that direction, but in the opposite direction.

So the Goldsborough bill, so far as it affects the interests of the gold miner by preventing any greater inflation at present, would be an advantage to him rather than prevent any deflation.

Mr. LAWRIE. May I again state that in the event of a movement back to the 1913 price level, the pendulum swinging back in the direction of deflation, swinging in response to normal economic influences, would probably arrive at the 1913 level prior to the time it would arrive with the Goldsborough bill in effect.

Professor FISHER. I do not think we are ever going to have that.

There was one other point Mr. Lawrie made which I want to refer to, Mr. Chairman. He spoke about the possible increase in cost under the Goldsborough bill. If the gold-mining industry expenses are typical of prices in general, there will be no increase in cost, because stabilization takes away that element of increase in cost that we call inflation. Of course, if there were any special scarcity of steel out of which you make your cranes, or anything else of that kind, it would tend to raise prices in that prices would be going up and down.

So far as the effect of the Goldsborough bill is concerned, it would put a stop to the major part of an upward movement of your costs.

Mr. LAWRIE. In the event that the costs did increase during the period of rising cost, the gold producer would be receiving less for his commodity.

Professor FISHER. It would depend on which way the value of the gold changed. If the value of gold tended to decrease, it would put the market down, even if there were a Goldsborough bill in effect. As it is now, gold can get very scarce and dear and yet its price will remain at \$20.67. If it goes down and becomes very abundant, then it does not show in its price. It only shows in the rise in the price of everything else. Whether you could have in the future a change or a decrease in the cost or the price of gold depends entirely on whether its real value increases or decreases. What you would have under the Goldsborough bill would be a stabilization of costs, just as the average costs throughout the country would be stabilized. Your costs might be lower, but there would be a tendency toward stability of all costs, and the average would be almost absolutely stable. Without doubt the gold miners would have the advantage of that stability. The price of your product would be subject to supply and demand, going up and down like anything else. There would be no inherent tendency of the Goldsborough bill to disturb the balance between price and cost. That is something that relates to the gold market.

Mr. LAWRIE. Of course, under present conditions, the gold producer is receiving a certain fixed amount for gold, whereas under the provisions of the Goldsborough bill, he would receive a less amount during a period of rising costs.

Professor FISHER. What do you mean by the period of rising costs?

Mr. LAWRIE. You would not weight the dollar unless you had a rise in the price level.

Professor FISHER. The weight is to prevent a rise.

Mr. LAWRIE. But you would not do that until after the rise occurred.

Professor FISHER. Oh, it does it almost immediately; it would never get more than 1 or 2 per cent away from the average. I would like to make that very clear, because some people here talked about the price level going from 100 to 200 per cent. The Goldsborough bill would make that impossible. The index number at the new par, if you start at present at 100, would stay at 100 within 1 or 2 per cent. The price level, instead of going up to 157, or going down to 48, would go to 100, or 101, or 102, or back to 100, and down to 99, or 99½. It would always be near par. That would apply in less degree, but in considerable degree in the gold-mining industry, as in the case of everything else.

If I may change your question, let me put it this way: If gold is depreciated (not if prices are going up) then the price of gold would go down. That same thing is true in the case of silver. That would put you in exactly the same position as any other mining industry.

Mr. LAWRIE. That is assuming that the depreciation is wholly due to credit and currency conditions. But suppose there should be a very widespread effort on the part of industrial groups to so restrict production as to force a price

increase, and a continuous price increase would conceivably take place, it would require repeated checkings by weighting the dollar over a considerable period, in which case gold-production costs would correspondingly increase and the price paid for gold would decrease.

Professor FISHER. In making that statement you used the word "conceivably." It is conceivable, but it is not probable. You will find, if you look into the history of this subject, that while that situation is conceivable it practically never occurs. So far as a general scarcity through limitation of production or otherwise comes about, we have scarcely ever any such thing. The tendency is all the other way, and very gradually, even, the other way. There is, gentlemen, a tendency for the per capita production in this country to increase. So far as the effect on the price level is concerned, it would be to make it lower rather than higher. In general, you may say there is not much tendency in either direction, almost none in the direction you mentioned as conceivable.

To come back now to your original question as to whether the price level is always due to inflation or deflation, I would say almost always, yes, although theoretically that is not necessarily so. It would be quite possible to have alternate droughts or a famine, or a plethora of goods, which would naturally cause changes in the price level. But as a matter of fact, I would say that the volume of production runs very steadily, and under stabilization it would be similarly steady, because a large part of the lack of steadiness is due to the alternate commercial credit crises that arrest production. So far as the physical machinery is concerned, it is always constant.

Mr. LAWRIE. But there is a very marked tendency on the part of industrial groups to resort to combinations to restrict production and to take full advantage of the resultant price rise.

Professor FISHER. There also, I think, is a mistake.

Mr. LAWRIE. Would that tendency expand under the Goldborough bill, or would it not be lessened?

Professor FISHER. I do not think it would have any effect in one direction or the other. So far as monopoly is concerned, I have never made a very thorough study of that, but those who have studied it have reached the conclusion that the net effect of monopolies on prices is not to increase prices. Take the Standard Oil and other monopolies and study the history of the oil industry and you will find that what has really happened is that there has been economy of cost. Of course, they are after profits, but they find when they can cut down costs they can make their enormous profits more by lowering prices than by raising them, not corresponding to the cost but lowering them a little while the cost goes down a lot, because in that way they get a larger volume of sales. While there are undoubtedly monopolies which have raised prices, those who have studied the question have reached the conclusion that monopolies have not on the whole been a price-raising agency, and sometimes they have been a price-lowering agency.

Mr. WOLFF. I want to ask you a question with regard to sales monopoly, where there is an active sales organization. Where there is such an organization, would that have the result of creating a monopoly which would tend to increase the price?

Professor FISHER. I have not seen any report on that; I shall have to say I do not know.

Mr. STARR. As a matter of experience during the last few years, I would like to ask if it is not true that all those products produced by monopoly took advantage of the inflation, or at least followed the same course with regard to inflation that all other commodities did, but that when deflation began it affected only and most severely those products which were not under the control of organized monopoly. Is that not true?

Professor FISHER. I should expect it to be true, but I could not say it is true on the basis of any study of mine.

I do not think I will take a great deal of time, Mr. Chairman, to answer the points Mr. Starr has made, because most of them were directed against our present financial system, which this bill has no idea of changing. It is changing merely the abuses of our present system.

So far as he took up the bill itself, I think there were only two points. One was that the bill demonetizes gold. It does not. Gold would still remain the mechanism; it would still be that in terms in which our money was ultimately redeemed. Some people ask me whether my plan is not an abandonment of the gold standard. I dislike even to say that. I say "it is putting the standard into

the gold standard." It is changing the gold standard in the sense of its being a fixed weight of gold, but not changing the gold standard in the sense that it is the physical backing of the system. The mere fact that gold coins are no longer to be minted is of no consequence itself. Even at present we have very little of that. So I would object to saying that under this bill there is any demonetization of gold.

The other point was in reference to the fact that corrections in the price levels were ex post facto, as Mr. Starr expressed it. That is true, but the statement is apt to mislead if one does not study it a little bit statistically and in the light of the calculations that are made in my book on stabilizing the dollar. You realize it is exactly the same thing in steering a bicycle or steering an automobile. You can not go in a perfectly straight line in steering an automobile. You have to wait until you are off your course and then correct it. It is always ex post facto. You can not set your machine and say "this is going to run me right down the center of the street." If you do you will soon find yourself running into the curbstone. But you simply watch your course and gradually you become so expert that you can scarcely get an inch out of a straight line before almost automatically you touch the wheel and turn it the other way and then you find you are an inch off the course the other way. You do it so quickly and so naturally that you think of yourself as steering a straight course, although there is no such thing. Everything in this life is determined by "trial and error." We always wait until we are out of the course, and that is the signal for getting back. It is on that principle that this bill operates. This price level will not stay 100 per cent perfectly true. The prices will rise to 101 and that little difference of 1 per cent becomes the signal. It is announced by the computing bureau to the mint bureau and the mint bureau immediately rectifies it by adjusting the price of gold. It may not do it enough or it may do it too much, but in the next adjustment period you know and you correct it, exactly as after you change your wheel you may have done it too much or you may not have done it enough, but you know in a second or two and then you make another adjustment. So the fact that this is ex post facto makes only an infinitesimal limitation.

Moreover, as compared with our present system, the difference is as between a mountain and a plain. As it is at present the system gives us a price level jumping from 100 to 200 and 300, and going down to 50 or above. Our dollar between 1865 and 1896 increased in value threefold, and between 1896 and 1920 it increased nearly as much, but between that date and the present it has increased by about 50 per cent.

Now, Mr. Goldsborough handed me to-day a memorandum of some objections that have been presented to him suggesting that they might be discussed. If I am not taxing the patience of the committee too much and they desire me to do so I will be glad to go through them. These are objections which are the strongest objections that could be urged, apparently by some people of ability and standing who have been watching this matter and have been studying it in a special way.

"The following are the principal objections to the stabilized dollar as advocated by Professor Fisher:

"1. The plan, even assuming its economic soundness, would be of no value in solving the present international currency problems because its adoption on an international scale is absolutely out of the question for the following reasons."

So far as that is concerned, of course, it is true that we can not expect any international solution of our currency problems for a considerable time in the future, and the Goldsborough bill would not help that situation. On the other hand, it does not hurt that situation. It does not destabilize the currencies abroad, but it stabilizes the currency in one country. Europe can not stabilize until it can balance its budgets. Now, the following reasons are given:

"No foreign country is in a position to obtain the gold reserves necessary for the working of the Fisher plan, which are far above the amount required for the gold standard."

I would say that while, as it is stated, no country abroad except England, Holland, and Switzerland could now stabilize, or in the immediate future; that when the other countries are ready to get to the position where they can, I would not be so sure that there will not be the necessary gold reserves there. It all depends upon what the weight of their new coins may be, what the volume of the currency which they are going to issue against it may be. They

can get along with the gold they have over there. Germany² has a gold reserve that will go a long way toward buying up the gold marks that are in circulation, the paper marks being so worthless, and if they were willing to stabilize that gold mark, an infinitesimal amount compared with what it has reached, they could get along through using their gold reserves. So that statement "that no foreign country is in a position to obtain the gold reserves necessary for the working of the Fisher plan" is or is not true, according to where they stabilize. He goes on in that same statement and says that the gold reserves which will be needed in the working of the Fisher plan are far above that required for the gold standard. To that I would reply that I do not think the plan under the Goldborough bill would require appreciably more gold than the present plan, and no reason is given for thinking so. [Reading:]

"(b) It would be most difficult, if not impossible, to agree on an international index number owing to differences in the relative importance of commodities in various countries and the multiplicity of factors affecting price levels."

That, I think, is altogether wrong. In my book on the subject, page 443, there are two curves—

Mr. GOLDSBOROUGH (interposing). Will you not give the name of the book?

Professor FISHER. The Making of Index Numbers. It is just out and is published by the Houghton Mifflin Co. for the Pollak Foundation for Economic Research, and it is a book on which I have been working for a number of years. On this page is a curve which I would like to have you see, and I will hand it around. There are two diagrams, in fact, and in each diagram there are two curves, one showing the effect of doubling a price number and the other the effect of doubling a weight of the 36 commodities concerned—bacon, barley, beef, butter, etc. The thing to which I want to call your attention is that if you double the price of any commodity it affects the index number appreciably, but if you double its weight or importance it makes almost no difference to the price level. It would take a long time to go into details and give you an absolute contrast between the two curves, one of which changes a good deal and the other of which changes very little. You will see that the one that changes very little is the one that—

Mr. MACGREGOR (interposing). What do you mean by "weight"? I think you have a definition for it.

Professor FISHER. Taking the simplest possible case, so as to make the explanation short, suppose you had two commodities—let us say wheat and sugar. Let us suppose that the index number of sugar was 104 and that the index number of wheat was 110. Now, if you count them as equally important and as having equal weight, the index number of the two, by simple arithmetical average, would be 107, midway between 104 and 110; but suppose that sugar were twice as important or considered twice as important, then that would amount to counting 104 twice and we say that two is the weight of 104 for sugar as compared with the 110 taken only once. Now, if you count the 104 twice, then you get the average from 104, 104, and 110, which is 106.

Mr. MACGREGOR. Who determines the weight?

Professor FISHER. The weights that are to be attached to these different commodities are assigned by the United States Bureau of Labor Statistics in accordance with the census figures of 1919. They have studied the census figures of 1919 as to the production of hogs, petroleum, and everything else. They take those figures for so many pounds of meat, so many barrels of petroleum, and so on, and they attach those quantities which apply to the prices, so that they get the aggregate of what the total production is worth in dollars by these weights, and that gives you the value of a certain budget of commodities, so to speak. Now, they take that same budget, with the same weights, at different dates and apply the different prices, and that tells you what that same collection of goods would cost at several different dates. If it is more, then your price level has risen; and if it is less, then your price level has fallen. That is the way the index number is constructed by the Bureau of Labor Statistics. I take my weights from the statistics of the War Industries Board.

Mr. MACGREGOR. You were answering those questions when I interrupted you.

Professor FISHER. Now, this man is under a misapprehension when he says, "It would be most difficult, if not impossible, to agree on an international index number owing to differences in the relative importance of commodities in various countries." As a matter of fact, the index numbers in different

countries with the same gold standard agree very well, as the diagram shown by me in the first hearings show. They would agree still better if the same methods were used such are now used by the Federal Reserve Board for different countries. [Reading:]

"2. Professor Fisher admits that his plan would not work in the case of a national emergency, such as an important war, unless the nations decided to cover the entire cost by taxation."

That is substantially true. I have admitted that this plan would not work when a Government could not balance its budget. As a matter of fact, no plan would work, and I think it is very unreasonable for people to demand of my plan what they do not demand of the present gold standard or anything else. People say, "Your plan is of no use because in a great war it will break down." Every plan has broken down in a great war; it broke down in England and abroad. It is like saying that the automobile is of no use because I can not run it into a stone wall without hurting it. That is true of every automobile. [Reading:]

"If the Fisher plan had been in effect at the outbreak of the war there is good reason to believe that the United States would not have succeeded in preserving the gold standard."

Well, it is a question whether we could have stabilized in this country during the war; I am satisfied no other country could, but I think it is possible we might have. We would have had to tax more, as he says, but if we could have we would have been far better off and would have escaped the crises that we have gone through. We might have lost the gold standard if we could not have balanced our budgets otherwise, although we could have saved ourselves, if it were important to preserve the gold standard, by simply calling a halt on the stabilization process at any period. If we found it was impossible to get the money with which to prosecute the war without inflation it would have been possible to have simply called a halt at any time. [Reading:]

"The British pound would have been much further removed from its parity than it is at present."

Well, nominally, that is true, but in terms of commodities, which is the only real test, the British pound is now, even when it gets back to the average, considerably off from what it was before the war for the very reason, as Mr. Lawrie has pointed out, that the value of gold has changed.

Doctor WOLFF. Is not that a misinterpretation of the question? Is not the question put there trying to bring out the fact that if we had undertaken to finance the war without inflation it would have increased the disparity of the British pound, they conducting their war by the inflation process?

Professor FISHER. Oh, yes; I see, and I think that is what he means.

Doctor WOLFF. And is it not true that one of the arguments given for our inflating was to bring about a parity as between our basis of value and the European basis of value? That was actually cited as one of the arguments for inflation, was it not?

Professor FISHER. Yes. It is a pretty weak argument to claim that because the other countries inflated we should do the same in order to keep on a parity with them.

Doctor WOLFF. We could not have traded with them unless we did.

Professor FISHER. That would not be true, and we could probably have traded with them better. [Reading:]

"The tremendous rise in prices resulting from the war would, under the Fisher plan, have involved a very heavy burden on the various countries in obtaining sufficient additional gold to maintain the currency unit in accordance with the new price level."

As I said, I do not think it would have been possible for the other countries to have stabilized. [Reading:]

"3. The Fisher plan involves an overestimate of the effect of gold on the price level. Credit, which is only limited by gold, is of far greater importance, and as, under the Fisher plan, changes in the banking system are contemplated, there would be comparatively little restraint exercised by the modifications in the gold content of the dollar."

That was all discussed in the previous hearings, and we saw that there would be a restraining influence on the price level if the Goldborough bill, as it is now written, should pass, because the deposits of a bank must be in relation to the reserve; and when the reserve is regulated you indirectly regulate the

deposits. Nevertheless, it was pointed out that it would add to the smooth working of the plan if there were some more direct control of the deposits in order to prevent the great inflation and deflation of credit such as we recently had. [Reading:]

"The utmost claimed for the plan is that it would eliminate fluctuations in the price level due to fluctuations in the gold reserves."

I want to say in regard to that that regulating the price level by adjusting the weight of the gold dollar does not confine the regulation to those fluctuations which are due to gold primarily. Just as in steering a bicycle you correct for every influence, whether it is a stone you go over or the wind that affects you, or whatever it is, so in regulating the gold dollar you correct for the effects of every wind that blows on the price level, including the effect of credit, but it would help to have the credit regulated sympathetically at the same time. [Reading:]

"But since, from present indications, there is no likelihood that the United States will lack, for some years to come, gold reserves sufficient for the legitimate needs of the country, the plan would be of very little value to the United States."

It seems to me that is a non sequitur. The plan would be of great value to the people of the United States by preventing the evils of inflation and deflation. It is not intended to adjust the gold reserve as such, but to regulate the price level. [Reading:]

"The Fisher plan, if effective, would probably hinder the present deflation process and serve to maintain for a longer period the inflated price level."

The writer seems to anticipate that we are going back to the price level of 1913, which, as I said, seems to me to be quite out of the question. Moreover, if we are on the road toward the 1913 price level I think the Goldsborough plan should be commended for preventing any further deflation. Deflation is too costly a process, and does not serve any real purpose of social justice or anything else. [Reading:]

"5. The adoption of the stabilized dollar by the United States alone would add to the complications of foreign exchange as regards the settlement of international commercial accounts on a gold basis, and would also, of course, still further complicate the credit situation."

As far as trade with gold-standard countries is concerned, that is perfectly true, and that is the weakest point about the Goldsborough bill and about this plan. If the rest of the world is on a gold standard and we are on a stabilized standard, the adoption of a stabilized standard, while it would give us stability in all of our internal commerce, would produce at least the appearance of instability in our foreign commerce, because the foreign exchange would fluctuate, and while I do not think the real injury to business from that would be appreciable it would be an apparent injury so explicit that the interests affected would doubtless complain to Congress of the plan, just as when India and England were on a different basis there was great complaint from those who traded between England and India.

While this is a weakness of the plan, that it would destabilize foreign exchange with another gold-standard country, I think there are several answers. In the first place, we have almost no countries in the world that are on a gold basis to-day, so that the injury would be very small, and our foreign trade is only a small fraction of our total trade anyway, 5 or 10 per cent. In the second place—and this is the real answer, I think—if America, through the passage of the Goldsborough Act, should stabilize, I believe all the other countries would follow our example, just as, after the other great war, the Napoleonic war, when England went on a gold basis all the other countries followed suit, and therefore the real effect would be quite the opposite of what is anticipated here, if my guess is correct, because it would not only result in all other countries coming to a common basis, but I believe they would come on to that common basis more quickly than they will ever to-day come to the common basis of the old-fashioned gold standard. Take France, for instance. France will not come to the old-fashioned gold standard for many, many years because of national pride. They see England trying to get on to the gold standard on the basis of the old weight of the sovereign, and England is going to do it.

As was pointed out, she was only 5 or 6 per cent off last December, so that she has not much further to go, and England, we may be fairly sure, is going to do it. But France can not do it because she has 60 per cent to go. Her paper franc is only worth about two-fifths of the gold franc; consequently she

is off the gold standard and she can not use her gold; she has a lot locked up in the Bank of France, and she is theoretically waiting until she can do what England has done and get back to the old franc but, as a matter of fact, she can not do it and all the economists there know she can not do it. The secretary of the Bank of France had me at dinner at his house, or in the bank where he lives, and with him was one of the leading economists of France, now a member of the Chamber of Deputies, Adolph Landry. I asked the secretary of the Bank of France if they were ever going to get back to the gold basis, and he said, quite bravely, "Yes; we surely are." I said, "You know you can not do it; you know it is absolutely impossible, and if you do, it will bankrupt France and multiply the public debt by two and a half and you know she can not carry it as it is, and it will bankrupt the business men of France. If you do, you will pay a terrible price for a result that will not be worth anything at all, for it will do more injustice than just ce." Mr. Landry backed me up and said, "Of course, you know it can not be done." Nevertheless the French pride is such that they have in their heads this picture of the old franc or the old weight as though there was something sacred about it and that they have to get back to it.

As long as they have that picture in their minds they will simply not do anything at all but will stay on the paper standard. However, if you adopt a scientific standard, which is not so much a gold standard as a commodity standard—if you get that scientific standard established, with the weight in gold changing, then the sacredness of a fixed weight passes out of men's minds and memories, and the French will then say, "Why, it is very easy now to get back to the American standard. All we need to do is to devalue and make it practical; there is no sense in going back to the old franc; for if we did we would not stay there. We have gotten rid of the fixed weight idea altogether, so we will get some other standard to start with." Then the psychology of the situation would be such that their national pride would not be offended by doing a practical thing, that of starting off with a weight for the franc that is very much less than the old weight of the franc. Moreover, the fact of having a scientific standard here would be infectious; other countries would see the point and would come on to our standard. I believe France would do it through what they call the gold standard, with their gold reserve in New York instead of in Paris, just exactly as India went on the gold standard in that way and had its gold reserve in London instead of Bombay or Calcutta.

Mr. APPLEBY. It is now 20 minutes to 2. How much longer do you want in order to finish?

Professor FISHER. A very few minutes. I am sorry to have taken more time than I said I would take, but it has been because of questions.

"6. It would be extremely difficult to decide on an index number to serve as a basis for determining the gold content of the dollar. Among the difficulties may be mentioned the selection of a representative list of commodities, the difficulty of providing for changes in the relative importance of commodities, the lag between wholesale and retail prices, the selection of a 'par' period," etc.

That, to a large extent, I have already answered, and I think you will find that the difficulties in deciding on an index number in selecting commodities and in selecting weights are largely imaginary. So far as the lag between the wholesale and retail price is concerned, that lag only exists when you have instability. Under our present system wholesale commodities move first and retail commodities lag. When you see prices rising you find the wholesale prices going up first and then the retail prices are pulled along by a loose rope, and then when they reverse the slack is taken up the other way. But if you stabilize the wholesale prices, the retail prices once being pulled along on the same track, will stay there, and you have no lag.

As to the selection of the par at which you stabilize, there will undoubtedly be some practical difficulty in getting this par. That is a matter of statistical study of what the situation demands. I myself believe that the level to stabilize that would be a little above where we are now, but only a little—165 perhaps, and we are now at 157. That figure—165—I got at roughly as a sort of par period of levels at which contracts now in existence were started, so that by that level you would come nearer being just to existing contracts than in any other way. It seems to me that is a consideration which should be taken into account. You do not want to take the pre-war level, because that would be very unjust to all contracting parties who had made contracts, particularly to the United States with regard to its Liberty bonds of 1917, with a price level of 175; and if you used the old war price level of 250, or 248, I think it was,

in May, 1920, that would be equally unjust to those whose salaries—Government employees, and so on—were fixed largely on the pre-war basis. You have got to split the difference in order to be just to all parties, and I think that can be done by getting the center of gravity, which is about 165.

Mr. STARR. I want to make a statement with reference to the ex post facto feature. This is what I had in mind and which I fear Professor Fisher did not get: The power of credit control is the dominant factor in the changing of prices, and advance knowledge and the power to use this instrument to affect the prices gives men an opportunity to trade on their information at the expense of the people of the United States. That is what I wanted to have understood.

Professor FISHER. That is all answered in my previous testimony. There would be no speculation in gold disadvantageous to the Government. Is that what you have in mind?

Mr. STARR. I have this in mind: If I have the power to affect the index number, I know what is going to happen and I can get my bill in before the rest. Then you have the same old days of Gould and Fiske, when people were speculating in gold, and which Grant had to go in and break up. That is the point I wanted to make on that.

Professor FISHER. One of the great points about stabilization is to eliminate the two things that Mr. Starr has in mind—speculation and credit control. A large part of his testimony was directed against credit control. Now, of course, you can use the words "credit control" to describe what we want to have done by the Federal Reserve Board, but this is misleading if it is taken to mean that some sinister private interest can take away credit and produce deflation. We want to stop that very thing. We have had that terrific deflation between May, 1920, and a year and a half later, and it was, to some extent, a deliberate policy. However, I do not believe it was from sinister interests. I believe these people thought they were doing something which would help the people of the United States, but they did not know enough about the evils of deflation to realize the terrific injuries that were being done and, as a matter of fact, the interests which we might naturally think would be benefited by it I do not believe were benefited. In fact, it actually ruined some of them. Through this stabilization we want to put a stop to that very thing and bring about a situation where credit will always be available to one who can pay the interest rate that the situation of supply and demand creates, and so a man can get a loan without a bank arbitrarily saying, "We won't lend you." My own idea is—and it will be promoted immensely by the passage of this bill—that you ought to be able to buy credit as you can buy sugar.

The price of sugar is allowed to be settled by supply and demand, so that anyone can get sugar at any time if he pays the price. If you should artificially change the price some people could not get it. In credit that situation exists all the time and banks regulate artificially the amount of credit and they ought not to do that for any individual. But if you stabilize the amount of credit for the country, so as to keep the price level fixed, then by supply and demand the rate of interest would be so adjusted that anyone at any time who had the wherewithal to buy credit could do so.

Mr. LAWRIE. May I ask a single question? Considering the inflationary provisions of the Federal reserve act and amendments now in force, do you feel that the provisions of the Goldsborough bill can be relied upon exclusively to check the inflation now in progress?

Professor FISHER. I think that if the Goldsborough bill were passed just as it stands that for several months it would be hampered in producing stability, because there is that great big gold reserve menacing us, but gradually month by month as the dollar is enlarged that gold reserve would be brought down to 40 or 45 per cent. I think it would greatly strengthen the Goldsborough bill if you could also incorporate an amendment to the Federal reserve act which would authorize and direct them to cooperate.

Mr. LAWRIE. That is what I wanted to bring out.

Mr. GOLDSBOROUGH. Professor, do you want the privilege of inserting anything else as a part of your remarks?

Professor FISHER. I did have in mind, besides answering these questions, telling the committee a little something about the movement for stabilization and the interests that have helped it along—the authorities, economists, bankers, business men, chambers of commerce, etc., through various resolutions. We have been debating this on its merits right straight through. I have not said a word about how much backing it has and I do not think you realize how far this movement has gone. It does not get on "the front page" yet,

but there are a great many thousand people in the United States who would be immensely pleased if the Goldsborough bill were passed.

Mr. GOLDSBOROUGH. How long would it take, do you think, to get that material together and incorporate it as a part of your testimony? We only want to know so that we can have the hearings printed.

Professor FISHER. Well, I am sorry to say I could not do it very promptly, but I should think within two or three weeks.

Mr. GOLDSBOROUGH. Mr. Chairman, I suggest that the printing of these hearings be deferred for three weeks until Professor Fisher can get his supplementary matter in.

Mr. APPLEBY. If there is no objection, it is so ordered.

Mr. GOLDSBOROUGH. Mr. Chairman, Prof. E. W. Kemmerer, of Princeton University, was very anxious to attend this hearing and present his views, but he has been engaged by a South American government on some monetary work which will carry him out of the country within the next few days, so that he could not get here. He would like, in response to a suggestion from me, to incorporate his views in the record, if there is no objection on the part of the committee.

Mr. APPLEBY. Are they unreasonably long?

Mr. GOLDSBOROUGH. No.

Mr. APPLEBY. Just a fair length?

Mr. GOLDSBOROUGH. Just a fair length; yes.

Mr. APPLEBY. Is there any objection? If there is no objection, his views will be allowed to form a part of the record in these hearings.

(There being no objection, the statement of Professor Kemmerer is herewith incorporated as follows:)

THE STABILIZED DOLLAR.

[Lecture delivered by Prof. E. W. Kemmerer at Princeton University January 22, 1923.]

The "stabilized dollar" is the term commonly used to designate various closely related plans for keeping the value of the monetary unit comparatively stable through raising its gold content as the price level rises and lowering it as the price level falls.

Proposals of this general type looking toward the stabilizing of the unit of value have been made from time to time for upward of a hundred years. In 1892 Mr. Aneurin Williams, of England, worked out such a plan in considerable detail. "If we could by magic increase the weight of gold in a sovereign," he said, "just in proportion as the purchasing power of a single grain of gold decreased, and decrease the weight just as the purchasing power of the grain increased, we should keep the total purchasing power of the sovereign constant." This he proposed to do through varying the amount of gold in the sovereign with the ups and downs of an official price index number. According to his plan this variable amount of bullion sovereigns would circulate only by proxy in the form of paper notes, against which the proposed sovereigns would be held in reserve.³

Little interest was taken in these schemes when they were proposed, and down to the close of the first decade of the present century they were for the most part unknown except to a handful of scientific economists. At about that time (1911) Prof. Irving Fisher worked out such a plan independently, and published it in broad outline in chapter 13 of his book on *The Purchasing Power of Money*. Since then Fisher has developed the plan in further detail and through his writings and speeches has aroused a widespread interest in the subject. The Fisher plan in its essentials is the same as that proposed by Williams, except for the provision by Fisher of a brassage charge to prevent undue speculation in changes in the bullion content of the monetary unit. The most recent and most comprehensive presentation of the plan is that contained in Fisher's book *Stabilizing the Dollar*, published in 1920; and it is upon this presentation that the following description is largely based. The book contains a bibliography on the subject covering articles both favorable and unfavorable to the plan.

³ See Aneurin Williams, A "Fixed Value of Bullion" Standard, *Economic Journal*, 1892, pp. 280-289; also *Economic Journal* of 1892, pp. 463-471 and 747-749.

Our present unit of weight is a definitely fixed weight, the pound or the gram, our unit of liquid content is a definitely fixed content, the quart or the liter, our unit of length is a definitely fixed length, the foot or the meter. In early times, these units of measurement however were indefinite and variable. The foot was the length of a man's foot and the cubit the length of his forearm. "Once the yard was defined in a rough-and-ready way as the girth of the chieftain of the tribe and was called a gird. Later it was the length of the forearm of Henry the First and still later the length of a bar of iron in the Tower of London. To-day we have at Washington a Bureau of Standards where the modern yardstick is determined by a bar of metal alloy kept in a room of constant temperature, under a glass case, and not approached by the observer, lest the warmth of his body should cause it to vary, but sighted by a telescope across the room,"⁴ "What is needed," says Fisher, "is to stabilize, or standardize the dollar just as we have already standardized the yardstick, the pound-weight, the bushel-basket, * * * the horsepower, * * * and all the units of commerce except the dollar."

The dollar is a fixed unit of weight (23.22 grains of fine gold) masquerading as a fixed unit of value. Its value is continually changing but its weight remains unchanged. Fisher's contention is: That the dollar being the unit of value should be constant in value and that to this end, the weight of the dollar should be so changed from time to time that the dollar would always buy approximately the same quantity of goods, in other words, as expressed in its purchasing power, would be constant. The dollar, in order to be kept constant in its purchasing power over goods in general, should "represent a composite of those very goods in general. We should therefore make our gold dollar correspond in value to an imaginary composite goods-dollar." As an example of such a composite goods-dollar, Fisher suggests certain quantities of 28 different articles of which the following are typical:⁵ One-fortieth of a bushel of wheat, one-fourth of a pound of steers, 15 pounds of coal, one-half of a pound of sugar, one-sixth of a pound of cotton, one-fourth of a pound of steel, and one-sixth of a gallon of petroleum. These quantities of the 28 different articles "happen to be roughly the relative quantities of some of the commodities used by the United States Bureau of Labor Statistics in making up its index number of prices. The entire list, of which the articles specified are the more important, is actually worth about one dollar to-day.

"If we could in some way make our gold dollar equivalent to such a market-basket dollar, * * * that composite basketful of commodities—or 'goods-dollar,' let us call it—would evidently have to be worth a dollar at all times; and the cost of living—at least the cost of the representative assortment in that basket—could not rise or fall. That assortment, however widely its constituents might vary in price among themselves, would always cost a dollar simply because a dollar was equivalent to that assortment."⁶

This goods-dollar at the beginning would be made equivalent to a dollar of United States gold, and it would be kept so equivalent by the Government's varying from time to time—not the size of composition of the goods-dollar but the weight of fine gold in the gold dollar or bullion dollar, as it would be called.

The use of gold coins would be discontinued, but gold-bullion dollars would circulate through the use of gold certificates or "yellow backs" as gold coin does chiefly to-day. Back of every dollar of gold certificates in circulation there would be held in the gold reserve at the beginning a bullion dollar, namely, a goods-dollar's worth of gold bullion, which at the time the plan were inaugurated would be the amount of gold in the present gold dollar; that is, 23.22 grains of fine gold.

The Government would maintain, probably through the Bureau of Standards at Washington, a carefully prepared series of index numbers of wholesale prices covering the principal articles of trade—the articles that would enter the composite basketful of commodities which has been called the goods-dollar. At stated regular periods, perhaps every two months, this index number would be published and the amount of bullion in the bullion dollar would be increased or decreased according as the index number rose or fell. If, for example, at the end of the first bimonthly period, the index number had risen from 100 to 101, so that it would then take \$101 to buy the composite basketful of commodities that \$100 would have bought two months previously, this would mean that

⁴ Fisher, "Stabilizing the dollar," p. 83.

⁵ *Ibid.* p. 86.

⁶ *Ibid.*, pp. 86-87.

the bullion dollar had depreciated approximately 1 per cent and that, in the interest of stability, its value ought to be increased. Accordingly the bullion dollar would be increased, say, 1 per cent, namely, from 23.22 grains to 23.45 grains. If by the end of the next bimonthly period the index number had risen one-half per cent further, the bullion dollar would be increased one-half per cent to 23.57 grains of gold, and so on each time until the index number should be brought back to 100.

On the other hand, if the index number should fall below 100 at the end of any bimonthly period, the amount of bullion in the bullion dollar would be correspondingly reduced, and these reductions would be continued at the end of each bimonthly period until the index number would be brought back to 100.

"How can we know," asks Fisher, "that if the index number is 1 per cent above par a 1 per cent increase in the weight of the gold dollar will be just sufficient to drive the index number back to par? The answer is we do not know any more than we know when the steering wheel of an automobile is turned, that it will prove to have been turned just enough and not too much. Many things may interfere in the period elapsing between adjustments. But if the correction is not enough, or if it is too much, the index number when next computed will tell the story. Absolutely perfect correction is impossible, but any imperfection will continue to reappear and can not escape ultimate correction."⁷

The Government would purchase gold bullion, paying for it gold certificates, at its reserve-fund offices, at the rate of one certificate dollar for each bullion dollar; and, on the other hand, would sell bullion dollars on demand for certificate dollars at a price slightly higher than one certificate dollar for one bullion dollar. This difference or brassage charge between the Government buying rate for bullion dollars and its selling price it is proposed at the beginning should be 1 per cent. If, for example, the bullion dollar at a particular time should be 25 grains of gold, the Government would give a \$10 gold certificate for 250 grains of gold, but would sell only 247½ grains of gold for a \$10 certificate.

This brassage charge of 1 per cent is Fisher's device for preventing dangerous speculation in anticipation of a rise or fall in the gold content of the bullion dollar. He would not raise or lower the bullion dollar at any one period by over 1 per cent, and this 1 per cent brassage charge would eat up all the profit a speculator might otherwise make by buying gold from the Government just before an anticipated reduction in the size of the bullion dollar and selling it back after the reduction; or by selling gold to the Government just before an anticipated rise in the bullion dollar and buying it back after the rise. Fisher believes that the expenses and risks involved in any extensive speculating in bullion dollars for a longer period than two months would not be justified by the probable gains.⁸

When the size of the bullion dollar was increased to counteract a rise in the general price level, the increase would immediately set into operation forces that would tend to contract the currency supply and to hold prices down. Persons desiring more gold certificates—the basic reserve money of circulation—would be required to give more gold for them and this would reduce the rate of expansion of basic currency; on the other hand, persons presenting gold certificates to the Government for bullion dollars would get for each certificate dollar a larger amount of bullion than before. The market price, in certificate dollars, of gold bullion per ounce would decline, and the circulation of certificates would decline, or at least if it increased, would increase at a slower rate than would have been the case had the size of the bullion dollar not been increased. Gold being thus made more plentiful in the American market, and therefore cheaper, would tend to flow out of the country. The supply for export would in part be gold obtained from the Government by the presentation and therefore retirement of gold certificates, and in part, be gold that would otherwise have been turned over to the Government in the purchase of certificates.

A declining or relatively declining supply of gold certificates in circulation would tend to reduce bank reserves and, as a result, to cause a curtailment of bank loans and therefore of deposits. This reduction, or relative reduction, in the circulation of money and deposit currency would tend at once to check the upward movement of prices and would ultimately force a decline.

⁷ *Ibid.*, 397.

⁸ For opposite views of this subject see Fisher, *ibid.*, pp. 139-146, and B. M. Anderson, *The Fallacy of the Stabilized Dollar*, Chase National Bank, New York City, pp. 9-11.

How long a time would be required for such changes in the size of the bullion dollar, working through the money and deposit currency supply, to reduce the price level, say, 1 per cent, is a debatable question. The period of lag would probably vary with different conditions in the money market both at home and abroad. How quickly the index number responds to a change in the money supply has never been fully demonstrated. Prof. J. Shield Nicholson, plotting the English war currency and index number of prices at quarterly intervals, found that the behavior of the price level seemed to correspond to that of the currency in the previous quarter rather than to that in the same quarter, thus suggesting a lag between cause and effect of one quarter of a year. His figures did not admit of a closer analysis.

A lag about half as great seems to exist in the United States between the changes in the money in circulation—i. e., in pockets, tills, and banks other than in Federal reserve banks—and the index numbers of Dun or Bradstreet or the United States Bureau of Labor Statistics. The specially responsive index number which I have had calculated seems to show a still shorter lag, namely, about one month.⁹

Experience alone will tell what this lag will be and how much of a change in the size of the bullion dollar will be required to produce a given effect under different conditions. Possibly a change at bimonthly periods limited to 1 per cent as a maximum may not be sufficient, in which case the maximum rate of change—as well as the brassage charge—would be raised to a higher figure. Possibly the usual lag may be longer than Fisher anticipates—I am inclined to believe that it will. This, however, would not be likely to be serious so long as increasingly strong forces were being put in operation which were working in the right direction, and which the public realized would be kept working increasingly in that direction until the desired change in the price level should be brought about.

This adjustment of the price level could, of course, be hastened by Government action through the sale or purchase by the Government of Government securities, thereby decreasing or increasing the supply of certificates in circulation, or through changes in legal reserve requirements of banks or other similar measures. Such manipulation of the currency supply, however, should not be employed except as a last resort, and it would probably rarely if ever be necessary.

Since Fisher first put forth his plan in 1911 there has been a large amount of controversy over it, a partial bibliography of which will be found in his *Stabilizing the Dollar* (pp. 294-296). Many criticisms of the plan are discussed by Fisher in Appendix II of his book. Into the details of this controversy it would be inappropriate to go in a general text on money and banking. A few points, however, call for brief mention.

The first relates to the difficulty of maintaining an adequate reserve. Suppose a country should begin the system with a billion dollars of gold certificates supported by a 100 per cent reserve in gold bullion, the initial bullion dollar being equivalent to the present gold dollar of 23.22 grains of fine gold, giving a total reserve of 23,220,000,000 grains of gold.

Suppose that the price level should tend rapidly upward, as it did, for example, in England from 1849 to 1856 (under the influence of the Californian and Australian gold discoveries), and suppose that this upward tendency of the price level necessitated repeated increases in the weight of the bullion dollar, with the result that in seven years it should rise to 30 grains. This would reduce the original reserve from 1,000,000,000 bullion dollars, representing 100 per cent of the certificates outstanding, to 774,000,000 bullion dollars, representing only 77.4 per cent of this original billion dollars of certificates. Obviously the longer this process should continue the weaker would be the reserve backing of the certificate circulation.

Even here, however, certain counterforces should be noted. If population and trade increased during this period more certificates would be needed in circulation, and these certificates would be purchased by the public at ever-increasing prices, rising to 30 grains for certificate dollar at the end of the period, so that in the illustration the percentage reserve against the total amount of certificates outstanding would be substantially higher than 77.4 per cent. Then, again, the Government's brassage charge of 1 per cent would yield some profits to the reserve. Despite these counterforces, however, the percentage reserve would continually decline as the size of the bullion dollar increased.

⁹*Ibid.*, pp. 152-153.

On the other hand, when the price level tended downward and the weight of the bullion dollar was being continually decreased the percentage reserve would rise. From 1873 to 1896 the price level in England fell 45 per cent. Under circumstances like those then prevailing the size of the bullion dollar might fall, say, to 14 grains, in which case the initial 23,220,000,000 grains of gold in the reserve would give a bullion dollar reserve of approximately \$1,649,000,000 against the initial circulation of \$1,000,000,000 of certificates. Of course if the volume of trade increased during this period additional certificate dollars would have been purchased at the price of continually smaller bullion dollars, so that the percentage reserve would not have increased for the total amount of certificates in circulation by the full 64.9 per cent shown above. At any rate there would have been an enormous increase in the percentage reserve, and the reserve would be strongly bulwarked to meet the onslaughts of a possible long period of rising price tendencies and increasing weight bullion dollars.

As a matter of fact, the world's experience with the gold standard has shown alternate periods of rising prices and falling prices, and such alternating tendencies may reasonably be expected in the future. It is therefore probable that under a stabilized dollar plan the reserve losses of periods of increasing-weight bullion dollars would be offset largely by the reserve gains of periods of decreasing-weight bullion dollars.

Should this not be the case, however, at any time, and should the percentage reserve fall unduly low, the Government would of course be compelled to tide over the period until the tendency of prices should turn downward, by strengthening its reserve through loans or taxes. This is what governments do now under the gold standard when their reserves are unduly depleted. The United States floated loans to obtain gold for returning to the gold standard in the later seventies of the last century, and floated loans again to maintain the gold standard during the trying time of the crisis of 1893-1895. The contingency is a rather remote one, and should it prove a reality the price would be well worth paying if the country could be assured a stable unit of value.¹⁰

Much has been made of the claim that the stabilized dollar could not stand the shock of a great war. Possibly this is true, but the same is also true of the gold standard. Nearly every important nation of the world gave up the gold standard under the pressure of the Great War—neutrals as well as belligerents—and had the war lasted much longer the gold standard in the United States would probably also have succumbed. During the latter days of the war our gold reserve ratios were rapidly declining, our banks were being surfeited with the Government debt, there was an embargo on gold exports, a taboo on domestic gold circulation, and a slight premium on gold on the Pacific coast. The gold standard was preserved to us chiefly by reason of the flood of gold that came to the United States from Europe in payment of war supplies before we ourselves entered the war, and by reason of the fortunate circumstance that the Federal reserve system was put into operation at a most opportune time. Through its greatly reduced legal reserve requirement and through the other economies it effected in the use of gold, the Federal reserve system created a vast amount of slack just as the war strain came on. We gave up the gold standard during the War of 1812, and again during the Civil War.

On this subject Fisher says: "A friend insists that a stabilization system must be devised which will withstand any war. One might as well say that an automobile should be built to withstand any collision."¹¹ And again, "It is true that war is apt to put a strain on whatever monetary system exists at the time. It does so when the fiscal needs of the belligerents require or seem to require resort to inflation. It is also true that there would be more strain on a system which combats inflation than on one which yields to it. Inflation affords the cheapest [?] and easiest, although the worst, way to pay for a war. It is, therefore, inevitably the resource of war finance when all others fail. * * * If the dollar is to be kept stable, it will be necessary to raise the whole revenue of the Government in ways other than by inflation (i. e., by taxes or by loans out of the savings of those who make the loans). If the Government or the banks or the people who finance the Government can not or will not finance it completely without resort to inflation, stabilization

¹⁰ Fisher has developed four possible alternative plans for meeting the reserve difficulty. See *Stabilizing the Dollar*, pp. 132-139.

¹¹ *Ibid.*, p. 227.

will have to be sacrificed. * * * Stabilization and inflation are mutually incompatible. * * * When the emergency comes choice between the two must be made. * * *

"In all ordinary wars stabilization would be adequate. Wars in which it would not be adequate are now extremely unlikely. In such an emergency the system might still work 'at half speed,' which would be better than nothing. Or it could, if necessary, be suspended, which would leave us no worse off than under the present system."¹²

In the judgment of the writer any plan for stabilizing the monetary unit to be successful should be international in its scope, including at least three or four of the leading commercial nations and more if possible. For one country to adopt the plan alone would throw its exchanges entirely out of adjustment with those of gold-standard countries (and also of silver-standard countries), and would give rise to all the evils of widely fluctuating exchange rates. It would, moreover, lead to dangerous speculation on the ups and downs of exchange rates, resulting from continual changes in the gold value of the bullion dollar.

The compilation of a satisfactory international index number of prices, where the relative importance of different commodities differs so widely in different countries, would involve many obstacles, but they would probably not be insuperable. A perfect index number could not be obtained, but probably a workable one could. It should never be forgotten that the gold standard for which the stabilized dollar is offered as a substitute is far from perfect.

The strongest difficulties in the way of the adoption of a stabilized-dollar plan are political rather than economic. It is not easy for the average man to understand the plan. Its adoption would involve a big break with existing methods, and the average successful business man and banker—men who wield a great influence in such matters—is ultraconservative. Most of the world is at the present time intensely occupied with the work of economic and financial reconstruction, and it seems highly improbable that any international agreement for such an advanced plan as a stabilized monetary unit can be obtained until economic and political conditions become more settled, and until after the gold standard itself is reestablished in the leading countries of the world and prices are again shaken down to a world equilibrium.

None the less, sooner or later the world must have a stable unit of value as it has a fixed unit of weight, of length, and of content, and the establishment of such a unit will probably be along some such lines as those proposed for the stabilized dollar. In some way the purchasing power of the monetary unit must be fixed. The problem is a large one, beset with many difficulties, and the more it is studied and debated the sooner it will be solved.

ADDITIONAL MEMORANDUM OF PROF. IRVING FISHER ON THE STABLE MONEY MOVEMENT.

I. CHANGES IN THE PURCHASING POWER OF MONEY STIMULATE EFFORTS TO MEASURE THOSE CHANGES.

Every step of progress toward stable money has come from the stimulus of unstable money. In the first place it has always been the instability of money which has stimulated efforts to measure its changes through index numbers of prices.

In 1707 Bishop Fleetwood, in England, estimated that "the decrease of the value of money" during two and a half centuries had been in the ratio of 6 to 1, since the prices of corn, meat, drink, and cloth had all increased about sixfold.

In 1738 Dutot constructed the first (very crude) index number as an average of the price changes of different commodities in France.

In 1747 the first practical application of an index number to contracts was made. This was by the Colony of Massachusetts. This colony, to guarantee its creditors against the effects of further depreciation of its paper money, issued bonds which, while payable in money, were payable "in a greater or less sum, according as five bushels of corn, sixty-eight pounds and four-seventh parts of a pound of beef, ten pounds of sheep's wool, and sixteen pounds of sole leather shall then cost more or less than one hundred and thirty pounds current money."

¹² Ibid., pp. 226-228.

In 1822 Lowe and in 1833 Scrope in England proposed the "tabular standard of value" to correct debts disturbed by changes "in the power of money in purchase," not knowing, apparently, that Massachusetts had actually employed such a standard.

In 1863 Professor Jevons in England wrote on "A serious fall in the value of gold" as a consequence of the great gold discoveries in California and Australia. He measured the changes in the value of gold by means of an index number much more scientific than any previous index numbers. Jevons may properly be called the real father of index numbers.

In 1869 the London Economist began the first regular publication of index numbers.

In 1896 Bradstreet's began the first regular publication of index numbers in the United States.

In 1923 the first general weekly index of prices (for 200 commodities at wholesale) was begun, and is now being published, by me.

To-day there are at least 130 current index numbers, of which 30 are in the United States, the rest being in 29 other countries. Most of these index numbers are of very recent origin, having been instituted to measure the great price disturbances following from the World War.

Besides this intensified interest in index numbers of prices has come a great interest in "the business cycle." Commercial services have been organized to forewarn business men of what the future holds in store. Babson's, Brookmire's, the Alexander Hamilton Institute, the Standard Statistics Corporation, the American Institute of Finance, and the Harvard Committee of Economic Statistics publish forecasts of the business weather.

In all of these the purchasing power of money plays a central rôle. In fact, the business cycle is at bottom largely the alternation of inflation and deflation.

In my former testimony I described the chief effects of price movements. Among these I wish here to emphasize and formulate the effects on public opinion. Broadly speaking, these effects are of two chief kinds, according as their nature is or is not understood.

II. CHANGES IN THE PURCHASING POWER OF MONEY STIMULATE RADICALISM AMONG THOSE WHO DO NOT UNDERSTAND.

Great or prolonged changes in the purchasing power of money being inevitably misconceived, lead inevitably to ill-considered radical "remedies" for fancied wrongs.

The French had a saying, "After the paper-money machine the guillotine." Recently Lord D'Abernon went so far as to assert that nine-tenths of the Bolshevism in Europe was due to depreciated money. The long fall of prices between the Civil War and 1896 resulted in Populism and Bryanism ("16 to 1"), almost overturning our monetary system. The destruction of the Bank of the United States by President Jackson came after a fall of prices and was in response to public sentiment in behalf of debtors (doubtless suffering from the fall of prices) accusing the bank of being a severe creditor.

In the same way the recent attack on the Federal reserve system grew out of rapid deflation. It threatened to overturn the system and did actually displace the governor of the Federal Reserve Board.

In the same way unstable money leads to political overturns. It nearly did so in 1896 on the complaint of low prices and did so in 1912 on the complaint of a high cost of living and again, partly at least, in 1920 on the same complaint. In that year the Republican platform specifically attributed the high cost of living to inflation and demanded deflation. The deflation was accomplished, only to step on other toes and nearly defeat (in 1922) the political party which recommended it.

The political party which stabilizes the dollar will add enormously to its chances to stay in power; for it will escape the stigmas either of depression and unemployment or of the high cost of living and so escape the increasing desire to "turn the rascals out" under whose administration these evils were experienced.

III. CHANGES IN THE PURCHASING POWER OF MONEY STIMULATE PROPOSALS FOR STABILIZATION AMONG THOSE WHO DO UNDERSTAND.

The French Revolution, the Napoleonic wars, and the American Revolution impressed on men's minds the evils of depreciated paper money. In France

Napoleon was so impressed that he refused, even when in financial straits, to allow his finance minister to resort to inflation.

The English investigated the subject in the famous bullion report, showing that the high price of bullion might better be considered a low value of paper money. It was about this time also that the first known proposal on the principle in the Goldsborough bill was made. This was by John Rooke in 1824.

Shortly after followed the gold standard in England and later in other nations.

In America the lessons of the unstable "continental" money led to the provision in the Constitution of the United States forbidding States to "emit bills of credit."

The Civil War was financed by inflation in the form of "greenbacks." After the war came deflation and resumption of specie payments in 1870. The distress caused by the fall of prices between 1865 and 1896 led to controversies over "greenbackism," bimetallism, and free silver, in each of which controversies both sides claimed to champion just and stable money. In this period several writers independently proposed the plan of the Goldsborough bill, namely, Simon Newcomb, the astronomer and economist, in 1879; Alfred Marshall, of Cambridge, England, still living, the dean of English-speaking economists, 1887; Aneurin Williams, M. P., 1892; Prof. A. Allen Smith (now dean of the University of Washington), 1896; D. J. Tinnes, merchant, of Hunter, N. Dak., 1896.

Between 1896 and 1914 the tide turned the other way, and complaints grew over the so-called "high cost of living." The Goldsborough bill principle was rediscovered by William C. Foster in 1909, by Prof. Harry G. Brown in 1911, by Henry Heaton in 1911, and by myself in 1911.

The World War led to inflation throughout the world and broke down the gold standard, except in the United States, where gold accumulated while gold reserve requirements were reduced (by the Federal reserve act and its later amendments). The rapid inflation during the war and deflation in many countries shortly after the war greatly increased the interest in stable money. In particular these inflations and deflations opened the eyes of many people to the fact that inflation and deflation do exist as an element in prices, in addition to the elements of supply and demand. Consequently we find many attempts to remedy or palliate changes in the purchasing power of money, more, in fact, than in all previous history.

In England over 3,000,000 employees have had their wages adjusted by an index number, thus reapplying, only far more scientifically, the plan first crudely employed by Massachusetts in 1747, and proposed by Lowe and Scrope in the early nineteenth century.

Ever since the war Europe has been considering how to stop inflation. Only in Japan, England, America, Czechoslovakia, and a few other small countries has much deflation occurred. Stabilization has usually been thought of superficially as relative to gold, but often as relative to commodities.

Among the most prominent advocates of true stabilization in Europe are Lord D'Abernon, now British ambassador to Germany; Professor Cassel, of Sweden; Professor Keynes, of England; and Hon. Reginald McKenna, formerly Chancellor of the Exchequer and now president of the London City and Midland Bank, the largest bank in the world.

Reginald McKenna, in at least three of his annual addresses to shareholders, has stressed the need of stability as against inflation and deflation.

The greatest steps toward stabilization in Europe are the recent reports on stabilizing the mark made by a committee of foreign experts—Keynes, of England; Cassel, of Sweden; Jenks, of the United States; the actual stoppage of inflation by Czechoslovakia, and later by Austria; and the Brussels and Genoa conferences.

In the Brussels conference (1920) the experts present, with the exception of Cassel, seemed timid on the subject, saying the time was not ripe for a solution, but recommending further consideration by a committee of the League of Nations. This committee, however, did little more than echo the Brussels conference.

The Genoa conference (1922), on the other hand, in a remarkable series of resolutions recommended an actual stabilization of not only paper money relatively to gold, but also of "the value of gold" itself relatively to commodities. This stabilization was to be obtained through appropriate action by the great central banks, much in accordance with the proposals of Mr. Goldsborough

relative to our Federal Reserve Board. This action of the Genoa conference marks a real epoch in the history of the stable money movement.

IV. THE PRESENT MOVEMENT IN THE UNITED STATES.

Several bills relating to stabilization had been introduced in Congress prior to the Goldsborough bill, notably those of Congressmen Husted and Dallinger, and also those of Senator King, to inquire whether the high cost of living represented inflation, and of Senator McCormick, in 1920, to inquire why the Federal Reserve Board did not deflate.

In 1921 was organized the Stable Money League, now the National Monetary Association for Safeguarding the Purchasing Power of Money. This organization is as yet committed to no particular plan or program, but only to the object of stabilization. Its research council is studying the question of plans. The first president of this organization was Prof. J. W. Jenks, and the next Prof. John R. Commons. The vice presidents are H. A. Wallace and W. F. Gephart; the chairman of the executive committee is Waddill Catchings. The honorary vice presidents include Hon. Sydney Anderson, Frederick H. Goff, Dr. Arthur T. Hadley, J. B. Larnier, Hon. Thomas R. Marshall, Wallace D. Simmons, Dr. William A. White, Thornton Cooke, John P. Frey. The research council includes Dr. William T. Foster, Carl Snyder, H. Parker Willis, Prof. Warren M. Persons, President David Friday, Prof. E. W. Kemmerer, Prof. Wesley C. Mitchell, Prof. Allyn A. Young.

Henry M. Wallace, son of the Secretary of Agriculture and editor of Wallace's Farmer, who is one of the vice presidents of this league, is constantly supporting the idea editorially.

Resolutions favoring legislation to stabilize the dollar—in many cases specifying the same method as that of the Goldsborough bill—have been passed during the last few years by—

Committee on the Purchasing Power of Money in War Time (of the American Economic Association), consisting of B. M. Anderson, jr., Prof. E. W. Kemmerer, Dr. Royal Meeker, Prof. Wesley C. Mitchell, Prof. Warren M. Persons, and Prof. Irving Fisher.

- New England Association of Purchasing Agents.
- Society of Polish Engineers and Merchants in America.
- Scientific and Technical Section of Federal Employees' Union No. 2.
- Schoolmasters' Association of New York City.
- New England Association of Colleges and Secondary Schools.
- Southern Sociological Congress.
- Housekeepers' Alliance of Washington, D. C.
- Washington branch of the Association of Collegiate Alumnae.
- District of Columbia Field Division of Food Production and Home Economics,
- Department of the Council of National Defense.
- Federal Club of Washington, D. C.
- Foreign Trade Club of San Francisco, Calif.
- San Francisco Sales Managers' Association.
- Rochester (N. Y.) Chamber of Commerce.
- New Haven (Conn.) Chamber of Commerce.
- Providence (R. I.) Chamber of Commerce.
- Bridgeport (Conn.) Chamber of Commerce.
- Waterbury (Conn.) Chamber of Commerce.
- Mission Business Men's Association of San Francisco.
- California Industrial Association of San Francisco.
- Automotive Equipment Association of Chicago.
- Southwestern Business Congress.
- Democratic State Convention of 1920 of Washington.
- Butler County, Ohio Farm Bureau.
- Agricultural Conference at Washington.
- International Photo-Engravers' Union of North America.
- American Federation of Labor.

The resolutions of many of the above-named bodies are printed with the previous hearings.

As to my own small part in the stable-money movement, my own plan for stabilization was first published in my "Purchasing Power of Money," in 1911, first presented to the general public before the International Chamber of Commerce in Boston in 1912, and first fully elaborated in "Stabilizing the Dollar," in 1920.

STATEMENT OF MR. WILLIAM C. LEE.

Mr. LEE. Mr. Chairman and gentlemen: I do not want to take much of your time. I used to be a four-minute speaker and now I want to be a two-minute speaker. The tendency which Mr. Starr has pointed out is very much to be deprecated; that is to say, the concentration of wealth through the control of credit. But it may be noted very briefly that this Goldsborough bill would prevent them controlling credit by means of manipulation of gold. It would not permit them to control credit directly. It would prevent gold manipulation and it would not aid them at all in their manipulations. So it is negatived in that respect and that was an example of some of the objections that are made to the proposition. Professor Fisher did mention in his previous testimony some of the great number of indorsers of this bill, economists, bankers, and business men, etc. The objections which are made all come down to this: That the plan will not completely cure the evils of the present system. No; it will not completely, but it will help very much. It is somewhat like woman suffrage. I was a woman suffragist for many years, and I recognized that the strenuous objections made to woman suffrage also applied to man suffrage equally, so that all the objections made to this bill apply to the present system and everything else that is proposed.

Thereupon the committee adjourned.