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## A UNITED RESERVE BANK OF THE UNITED STATES<sup>1</sup>

PAUL M. WARBURG

THE summary of a recent investigation undertaken by the *Banking Law Journal* discloses the fact that out of 5613 answers given by national and state bankers to the question: "Do you favor a central bank if not controlled by 'Wall Street' or any monopolistic interest?" 59½ per cent were affirmative, 7 per cent were undecided, and 33½ per cent were negative. Almost all the negative answers, as far as published, are based upon the argument that a central bank, if established, could not permanently be kept out of political or "Wall Street" control. Between the opponents and the champions of a central bank plan there is complete unanimity of opinion that such a system should be tried in our country only if the dangers of "Wall Street" or political control can be absolutely averted.

The main question at issue is this: Is it possible to evolve a plan which, while containing these elements of safety, will at the same time be completely practicable?

It is our belief that no progress can be made by meeting the sweeping assertions of those opposed to a central-bank plan by equally sweeping replies, but that advance is possible only by outlining a tangible plan for such a bank. This, on the one hand, will give to those not yet familiar with the actual working of such an institution an opportunity for study, and on the other hand it will force the critics of such a plan, it is hoped, to offer specific and well-defined objections which may lead to some definite results.

It should be stated at the outset that the plan here submitted does not suggest a central bank such as exists in various European countries. It is a scheme based upon conditions peculiar to our country and our form of government. It recognizes the vast territorial area of the United States, the diversity and dissimilarity of interests, and even the traditional, sectional and

<sup>1</sup> A paper first presented on March 23, 1910, before the Finance Forum of the Young Men's Christian Association of New York.

partisan prejudices of the people. In consequence of this, many features which are contained in European plans and which figured, to some extent, in the operations of the first and second banks of the United States have been omitted, while certain features foreign to European organizations have been incorporated. All the underlying principles of safe and intelligent modern banking, however,—principles which must be adopted if we are to obtain a banking system adequate to our present and prospective needs—have been observed and are embraced in the plan. This essay, while advocating the central-bank idea, submits a much modified system, which we should like to designate the “United Reserve Bank of the United States”. The plan does not pretend to be final or complete in all its details; its purpose is to indicate the fundamental principles upon which the solution of the problem depends and to point out one method of solution.

The strongest arguments made against the plan of a central bank in the United States are those advocated by Mr. Victor Morawetz and by Professor O. M. W. Sprague. We have made free to answer these two critics in the second and third parts of this essay, and in endeavoring to refute their arguments have attempted at the same time to meet the principal objections of other critics whose writings have come to our notice.

## I

Let us assume that a United Reserve Bank of the United States be established in Washington with a capital of \$100,000,000 fully paid. Let us assume the United States divided into twenty zones of operation, similar to the currency-association districts now proposed by the Aldrich-Vreeland measure, each zone of operation to contain a voluntary association of banks grouped around a financial and commercial center, in accordance with a plan to be worked out in detail. To form the operating associations, which we shall call banking associations, the banks within each zone should have the privilege of appointing from their own number a board of directors, who in turn may appoint a president or managing director of the association. Certain mistakes which crept into the Aldrich-

Vreeland bill must be avoided. The measure should be drafted so as to permit a bank to withdraw from the association at will; to restrict the obligations of each bank to certain transactions, in each case carefully examined and approved by the associations; and also to enable the associations, with the approval of the secretary of the treasury, to group themselves into subdivisions. One might simplify the formation of these associations by making them stock companies, each bank within a zone of operations having the privilege of subscribing its *pro rata* share, according to its capital and surplus.

In order that the board of directors of the United Reserve Bank in Washington may be thoroughly representative of the various interests and districts of the country, that it may be non-political, non-partisan, and non-sectional, a certain number of the directors, say three-fifths, should be appointed by the banking associations; a further number, perhaps one-fifth, should be elected by the stockholders: while the secretary of the treasury, the comptroller of the currency, the treasurer of the United States and others to be nominated by them, should fill out the remainder of the board. It might be advisable to provide that no director, excepting the *ex officio* members, should serve more than a certain number of years in succession.

In order that commercial interests be adequately represented, provision might be made that the members appointed by the stockholders should not be bank or trust-company presidents, and that these members should be elected preferably from the class of merchants and manufacturers. One would then have a mixed board, of whom three-fifths would be bankers, appointed by the banking associations, while one-fifth would be chosen from the commercial classes by vote of the stockholders, and one-fifth would be *ex officio* government members and the additional members appointed by them.

This board should have the right to elect one or two governors of the United Reserve Bank, who would be salaried officers appointed, like other bank presidents, for an indefinite time, irrespective of political considerations, and remaining in office as long as they render satisfactory service.

The share capital of the United Reserve Bank could be divided

among the banks of the country under a fair plan of apportionment, or the stock could be sold to the public. The dividends on the stock should be limited to, let us say, four per cent. Any profit in excess of this should go to the government. A provision that no one stockholder be allowed to have more than a certain number of votes should be inserted.

The United Reserve Bank should be authorized to perform the following functions:

(1) To accept deposits from the government of the United States and from members of the banking associations only. No interest should be paid on such deposits, but they might be counted as cash by the banks and trust companies making them.

(2) To buy from members of the banking associations, at a discount rate to be published from time to time, commercial paper having not more than twenty-eight days to run, and issued at least thirty days before the date of rediscounting. The aggregate amount which it might buy from each member should be restricted to a certain proportion of the unimpaired capital and surplus of such member, and the aggregate amount issued by one issuer of commercial paper to a member of the banking association and rediscounted with the United Reserve Bank, should also be limited to a certain proportion of such unimpaired capital and surplus.

(3) To buy from member banks, at a discount rate to be published from time to time, commercial paper having more than twenty-eight days to run, but in any case less than ninety days. The aggregate amount to be rediscounted by the United Reserve Bank from each member and the aggregate amount admissible from individual makers of notes should be restricted as under (2). Such paper, however, could be discounted by the United Reserve Bank only with the endorsement or guaranty of the banking association to which the member belonged.<sup>1</sup>

<sup>1</sup> In consideration of such guaranty or endorsement, the banking association would receive from the member handing in paper for re-discount a certain remuneration, let us say  $\frac{1}{4}$  or  $\frac{1}{2}$  of one per cent in the interest rate. The banking associations would, of course, like the clearing houses when clearing-house certificates are issued, have the right to reject any paper which they did not deem it safe or proper to guarantee or endorse.

(4) To buy, at a discount rate to be published from time to time, paper having no more than ninety days to run, drawn by a commercial firm on, and accepted by, a bank, trust company or banker, and endorsed by a bank, trust company or banker. One of these signatures should be that of a member of the banking association. Limits as to amounts of acceptances admissible from time to time for discount with the United Reserve Bank should be fixed by the central board.<sup>1</sup>

(5) To buy bills on England, France, Germany (and such other countries as may be decided upon), such bills to have a maximum maturity of ninety days, to bear one commercial signature, to be drawn on and accepted by a well-known foreign banking house and endorsed by a member of a banking association or a banker in good standing. The United Reserve Bank should have power to resell all bills that it might buy and to do all things necessary for their collection.

(6) To deal in bullion, and to contract for advances of bullion, giving security therefor and paying interest on such advances.

(7) To buy and sell bonds and treasury notes of the United States.

(8) To issue circulating notes, payable on demand in gold; such notes to be secured by bills, bought by the bank under provisions (2) to (5), and by gold to the amount of at least  $33\frac{1}{3}$  per cent of the aggregate amount of outstanding notes.

(9) To establish branches in places where there are head offices of banking associations. Such branches under the direction of the central board of the United Reserve Bank, might do the same business as the head office. Each branch would have a local board, chosen by the board of managers of the local banking association, to which board might be added some members of the commercial classes appointed by the head office in Washington. This local board would supervise the business of the branch bank, and elect its salaried president, subject to the approval of the central board in Washington.

<sup>1</sup> It might be advisable to provide that in case of emergency the central board, with the approval of the secretary of the treasury and the President of the United States, might increase the limits fixed under (2), (3) and (4).

(10) To request banks or trust companies desirous of making use of the services of the United Reserve Bank, to keep with its branches a cash balance commensurate with the amount of business done by them. The United Reserve Bank should have the right to transfer sums of money from the account of one member to that of another upon request.

(11) To join the clearing-house associations of the various cities where the bank and its branches are located.

Let us now consider the plan, as above outlined, from the following points of view: First, would it be safe? Second, would it be effective? Third, would the vested interests of the banks have reason to oppose or favor it, and can the general prejudice existing against any such plan be overcome?

The chief criticism that has been raised against a central bank is that it is subject to the danger of control either by politics or by Wall Street finance. Would this danger exist under our plan? Could anybody acquire control? Nobody could do so if a provision were made that the stock should be divided among the 18,000 banks of the United States.<sup>1</sup> But even without such provision there would be no danger on this score. A man or a group of men acquiring the whole capital stock of the United Reserve Bank would, after all, acquire the right to appoint only a few members of the board, who would be in a hopeless minority against the combined members of the banking associations of the whole country and those representing the government.

But furthermore it is evident, with the restrictions placed upon the United Reserve Bank as to the transactions in which it might engage, and with the restrictions as to the earning power of the stock, that the control of the United Reserve Bank by one individual or a group would not offer any attraction.

As an investment it would not pay, because any earnings in excess of four per cent would go to the government, and as for securing help for speculative ventures or aggrandizement of

<sup>1</sup>The author is fully aware that there are only about 6,500 national banks now, but it is to be expected that under any new plan all national banks would become state banks or all state banks national banks. It would, however, lead too far to go into this question here.

power, this aim could not be achieved by the control of a bank restricted in its dealings to the purchase of short paper from member banks, and of three-months paper which could be acquired only from the banking associations. Taking into consideration all these safeguards, namely, the method of appointing the board, the restriction of income on the stock, and the limitation of transactions permitted, it is absolutely safe to say that under such a system any fear of undue financial or political control may be dismissed once for all.

Secondly, would the plan be effective? It is easy to devise a plan that would be ultra-safe, and not very hard to create one that would be effective, but to combine safety and effectiveness is difficult. Let us first determine what is the main object of a central bank, and then investigate whether the plan above outlined would fulfill this purpose.

A central bank acts as a central reserve of a nation. Its first duty is to see that a proper proportion is maintained between actual cash reserve and all demand obligations of the nation which are payable in cash at the option of the payee, but of which the majority are habitually paid by exchange of credits. Its duty in this respect is two-fold: on the one hand, to protect and to strengthen the country's holdings of gold, and on the other hand to establish and maintain a perfect system of credit, enabling the general banks to transform cash credits into actual cash with such absolute ease and certainty that the use of the cash credit, instead of the actual cash, will not cease, no matter what may happen. In other words, there must not remain the faintest possibility of hoarding during a crisis, or the system will fail. In order to assure this, cash credit must not only be as good as cash, it must be better than cash! The carrying of cash entails a risk of actual loss as well as of loss of interest; a cash credit is free from this first-named evil and, in addition, investments which can be quickly turned into cash credits bear interest. The general tendency of civilized people in a well-organized country must therefore be to free themselves as rapidly as possible from cash and to transform it into the safer and more economical cash credit or into assets which can be quickly transformed into cash credits. Every idle token of



money must, therefore, under a modern system return without delay into the central reservoir, where it must be unreservedly available for every legitimate demand for cash. There must never arise any doubt that a legitimate demand for cash will be met promptly and that legitimate quick assets can be turned into cash credits.

If quick assets can be promptly and reliably turned into cash credits, and if cash credits can be turned into cash at will, then it is certain that all such credits never will be turned into cash at the same time, because nobody has any use for so much cash and therefore he will not ask for it, as long as he is sure that he can get it.<sup>1</sup> This is the only basis on which our modern system of immense demand gold obligations, built up on a comparatively small amount of cash, is safe.

Let us use an illustration for this fundamental point:<sup>2</sup>

If after a prolonged drought a thunderstorm threatens, what would be the consequence if the wise mayor of an Oriental town should attempt to meet the danger of fire by distributing the available water, one pailful to each house owner? When the lightning strikes, the unfortunate householder will in vain fight the fire with his one pailful of water, while the other citizens will all frantically hold on to their own little supply, their only defense in the face of danger. The fire will spread and resistance will be impossible. If, however, instead of uselessly dividing the water, it had remained concentrated in one reservoir with an adequate system of pipes to direct it where it was wanted for effective use, the town would have been safe.

Ridiculous as these conditions may appear, the parallel with our own financial organization is evident. Our reserves of cash are entirely disconnected; they are insufficient for even a single institution in times of serious stress, and instead of being a protection they are a dangerous weakness, because the consciousness of insufficient protection causes one bank to try to draw on

<sup>1</sup> This applies only to the internal drain. We shall deal later with the demand for gold that might arise from without.

<sup>2</sup> This illustration is taken from the writer's pamphlet, *The Discount System in Europe*, published by the National Monetary Commission. The author begs leave to refer his readers to this article, of which the present essay forms the second part.

the reserves of others, and the very moment these mutual attacks begin, panic inevitably follows.

Our true conditions are, as a matter of fact, even more preposterous than those in the Oriental town, by reason of our law prescribing that a certain proportion of the deposits must be kept in cash,—a law which must be observed if a bank wants to preserve its credit. Not only is the water uselessly distributed into 18,000 pails, but we are permitted to use the water only in small quantities in proportion as the house burns down. If the structure consists of four floors, we are practically forced to keep one-fourth of the contents of our pail for each floor. We must not try to extinguish the fire by using the water freely in the beginning; that would not be fair to the other floors. Let the fire spread and give each part of the house, as it burns, its equal and insufficient proportion of water.

As long as the owners of houses threatened with fire know that the central water supply is well in hand, with one central power, available wherever danger may arise, everybody feels safe and is not frightened by the thought that if all the houses should burn at the same time there would not be enough water to go around. Though there may not be enough water for the last house that might burn down, even the owner of that last house would not ask that some water be kept back for him, because he realizes that unless the fire be stopped before it reaches him, his own little supply of water will not help him.

If, however, a central system does not exist, everybody will hoard water, trying to steal it from his neighbor or from the community by tapping some source in order to create a supply of his own. He will lessen thereby the full supply that ought to be led into the central reservoir, without protecting himself adequately in time of danger.

The main function and object of a central bank is to make every dollar which lies idle return to the central money reservoir to make it available to the fullest extent, wherever and whenever it can do good legitimately, and to provide a system of mains, by which it can be conveyed quickly to any point of danger.

Note issue is not a fundamental, but only a side question, and

it is very important to grasp this fully. If the British government should issue a government loan and use the proceeds to pay into the Bank of England in gold £18,400,000, thereby paying off its present indebtedness to the bank and providing a gold cover for the uncovered portion of the note issue of the bank, the latter could pay off every one of its sterling notes in gold. If this were done, the only change would be a change in pocketbooks, to enable people to carry gold instead of notes. The central-bank system of England would go on absolutely undisturbed. With or without the note-issuing power, the Bank of England would remain the central reservoir of gold. It could continue to protect England's gold holdings and to maintain the proper proportion between the country's demand obligations and actual cash. It would continue to guarantee the prompt transformation of cash credit into cash and of quick assets into cash credits.

This is possible only through the discount system. The banks know that they can, in case of need, rediscount their legitimate bills with the central bank. The central bank, on the other hand, having a large investment in bills of short maturity, can, by increasing its discount rate, withdraw from new investments and thereby strengthen its reserve. Incidentally, by increasing the interest rate of the country, it attracts foreign money, wards off gold exports, and by throwing part of the burden on the general banks brings about a general contraction of business.

Money flows where it can draw good interest in safety. Where credit is firmly established and financial organization sound, money flows easily from one city or country to another, for a difference in interest of a fraction of one per cent. It is humiliating to realize how large a margin in interest rates we must offer to attract money, as compared with our European competitors. This question and the working of the discount system, of which the central-bank system is a part, have been dealt with fully in my previous paper, so that I need not dwell on them here.

Elastic note issue, that is, the power of a central bank to issue notes not fully covered by bullion, is an auxiliary measure.

The central-bank system becomes more pliable and safer by this addition because, the lines being less rigid, the fear of reaching the end of the tether is not so great; and, furthermore, since the result to be reached is not exclusively dependent upon the discount rate, the latter need not be changed so often and so drastically as with an inelastic system.

To return to our metaphor: note issue represents an auxiliary reservoir. Where it does not exist, the men in charge of the central reservoir have to advance the price for water so as to discourage extravagant use whenever the available supply falls below a safe margin. Unsecured note issue enables the managers to use this auxiliary supply, which renders it possible often to provide for the needs without increasing the price for the water, where the increased demand is normal and only temporary.

To decide when to supply water freely, when to warn the consumer to save, and when to limit the supply without ever refusing to comply with legitimate demands, is the duty of the central bank. No automaton—no tax or fixed regulation—can perform it, but the best judgment of the best experts must indicate the policy to be pursued from time to time. In addition, it must be the exclusive care and responsibility of one institution, chartered and constructed for the single purpose of maintaining the proper proportion between demand and supply.

With us the general banks, which are the consumers and represent the consumers, are at the same time the regulators. Where everybody regulates himself, there is anarchy and chaos in times of stress. Money making and the maintenance of a safe proportion between cash and cash obligations are at times distinctly opposed functions, and the performance of these functions should lie in entirely separated bodies. The general banks must remain money-making concerns, administered with the full responsibility of being able to meet all possible cash demands by available cash credit. To guarantee that every cash credit can be met, if desired, by actual cash payment, and to avoid the possibility of such general demand for cash—this is the function of the central bank.

Let us consider whether these aims of a central bank can be

safely and effectively reached under the system above outlined. The great difficulty in the United States is the complete lack of modern bills of exchange, freely endorsed by the banks and passed on from hand to hand, as in Europe. With us there still prevails the old single-name promissory note, which, under our present system, is practically unsalable once it has entered the bank, and which therefore immobilizes our bank holdings.

To permit the banks to rediscount these promissory notes with a central bank would be the easiest way, but the criticism may be justly raised, that in doing so we should open the door to abuse. Hence the inclusion, in a scheme previously outlined by me, of the banking associations, which, having to guarantee the paper before it enters the United Reserve Bank, would carefully examine and sift it. The interjection of the banking associations would make the paper safe beyond peradventure and, if nothing else could be found or agreed upon, this system might well be adopted for the present.

The criticism, however, has been raised against this method, that it would be fairly clumsy and that in normal times the banks would try to do without it. Therefore it would remain only an emergency system, out of touch with the market in normal times. To meet this difficulty, it is proposed in this plan to empower the United Reserve Bank to take bills with not more than twenty-eight days to run directly from members, without the guaranty of the banking associations.

This thought developed from the following observation: Upon examining the report of the Reichsbank one finds that on December 31, 1908, it held in German bills M. 1,032,000,000; of which 44 per cent were payable within 15 days, 17.4 per cent within 16 to 30 days, 24.8 per cent within 31 to 60 days, and 13.9 per cent within 61 to 90 days. This brings out the surprising fact that the maturity of 61.4 per cent of all the bills held by the German Reichsbank was of 1 to 30 days. The average duration of all bills held by the Reichsbank is thirty-four days. A similar proportion could be shown by the Banque de France, where the average duration of all bills held is even less, namely, twenty-four days.

How is this to be explained? It means that if, when making

up its daily balance sheet, a German or French bank finds that on balance it needs money, it will send to the Reichsbank or Banque de France for discount its bills falling due the next following days. These central banks have a complete schedule for each city where they have an office, stating the minimum number of days that will be deducted at the bank rate, without any further charge for collecting the bill. To illustrate this procedure: the Reichsbank in Berlin will charge on a bill beyond M. 5,000 a minimum of four days for bills on Berlin, a minimum of five days on Hamburg, Bremen, Frankfort, and similar cities, a minimum of ten days for smaller bills on small and remote towns. This means that when the rate for call money and the bank rate are about even, a Berlin banker will send his bills on Hamburg to the Reichsbank for collection five days before the bills mature; if he collected them through his own correspondent in Hamburg, he would lose one day's interest at least, which would be consumed by the return trip of the money after the bill had been collected; and the longer the distance, the larger the loss of interest. When money is very easy, it pays the banks to lose that day's interest, and collect the bill themselves, since, instead of submitting to a discount of five days at, let us say, 4 per cent they might pay on call six days at 2 per cent or 3 per cent and still fare better. This illustrates how, by keeping its rate higher than the ruling interest rates, the central bank withdraws its funds from general business and accumulates reserves for times when stronger demands arise. The stronger this demand grows, the longer will be the bills which are being sent for discount to the bank, until they reach the permissible maximum of ninety days.

A consideration of these facts brought up the question as to whether it would not be feasible and conservative to allow such institutions as may be admitted to dealings with the United Reserve Bank to rediscount with it directly, and without the intervention of the banking association, legitimate paper having no more than twenty-eight days to run. It would appear that this could safely be permitted. A bill which has only a few weeks to run embodies a much smaller risk than one having three months to run. General conditions and the standing of

the bank offering the paper for discount, and of the maker of the note, can be judged with a fair degree of safety for a few weeks ahead. The United Reserve Bank would make it a rule not to buy thirty-day notes issued for the obvious purpose of being immediately rediscounted and renewed at maturity, but to acquire only paper originally issued as 2, 3 or 4 months' paper, in accordance with the usages of the trades in question. The bank examiners would be trained to ascertain infractions of the rule and, besides, the United Reserve Bank would notice them immediately when the new bill was offered for discount so promptly after the expiration of the old note. The shorter the maturities of bills, the stronger would be the United Reserve Bank's position.

While this plan would be of immense advantage to the banks, inasmuch as it would enable them without difficulty to turn into cash at once about one-third of the bills which they have discounted, at the same time it would not encourage reckless banking or speculation. No customer and no bank will dare to enter into extended commitments on the strength of an advance of twenty-eight days. What will happen after this lapse of time one does not know, and he must be prepared for possible retrenchment by the United Reserve Bank.

Moreover, some rule would have to be established that the aggregate amount of such short bills sent in for discount by any bank should not exceed a certain percentage of its capital and surplus, and that the aggregate amount of paper sent in for discount issued by one individual or concern should not exceed a certain part of such surplus and capital. This method would appear to be entirely safe; if deemed necessary the twenty-eight-day limit might be reduced to twenty-one days. In the writer's opinion a twenty-eight-day limit is conservative.

We should then have one rate at which the branches of the United Reserve Bank in the banking association cities would take short bills directly from members, and one rate, possibly the same, at which they would take longer bills from members with the guaranty of the banking association.

There remains to be established one more rate, the private discount rate, at which the United Reserve Bank would take

sixty or ninety-day bills, drawn by commercial firms on, and accepted by, a bank, trust company or private banker[as under(4)]. The private discount rate of the United Reserve Bank would be kept very low in the beginning, for the purpose of encouraging shippers at home and abroad to use the credit of American banks, where now they use foreign credit. Shipments of coffee from Brazil to New York and of cotton from Galveston to Boston are now usually financed by long drafts on Europe. Under this plan such banking transactions will be turned over to the United States. Bills will be drawn on American banks and bankers, instead of on London, Paris or Berlin, and instead of being financed by others we may gradually become the financiers of others. Not only will this increase our trade, but most important of all, once we establish the modern banking bill in the United States, its use will grow and our banks will reap the tremendous advantage of being able to invest their deposit money in assets upon which they can quickly realize at home and abroad. As the use of this modern paper increases, so will the financial safety of the banks and the business community.

These bills will be strictly commercial in character and it will be an easy matter to scrutinize the legitimacy of their origin. At least two well-known banks, trust companies, discount companies or bankers must accept or endorse them, and one of these names should be that of a member of a banking association. This is much more than any European central bank requires, and it should be entirely sufficient to provide against any political or financial danger in this respect. On the other hand, the powers given are far-reaching enough to bring about the most important change, *viz.*, the creation of modern American bills of exchange.

There remains to be considered one more field of activity for the United Reserve Bank; that is, its privilege of buying foreign bills having not more than ninety days to run. This power is necessary for obvious reasons. It would afford the United Reserve Bank an opportunity to employ its idle funds in times when the management should decide upon a policy of withdrawing funds from use in the United States, and it would enable



the bank to accumulate an interest-bearing gold reserve; for foreign bills are available for the purpose of drawing gold from foreign countries, and they also serve as a means for warding off withdrawals of gold.

We now have a fair outline of the normal functions of the United Reserve Bank. Though restricted in its dealings to the utmost limit of safety, with respect to its scope of transactions and to its circle of clients, its effect will be most far-reaching.

The cash reserves now scattered and useless will be concentrated into an effective central reserve. The general banks will hold a sufficient amount of till money for their requirements, but as a reserve they must hold a cash balance with the United Reserve Bank, commensurate as at present with the aggregate amount of their deposits. If cash is withdrawn from the general banks, they in turn will draw on the United Reserve Bank for their needs and will replenish their balance by sending to it for discount short or long bills. As a result the dreaded cash withdrawal will lose its terrors for the banks.

If a Chicago bank withdraws its balance from a New York bank, all the latter has to do is to notify the United Reserve Bank's branch in New York, by a transfer check, to transfer the amount in question from the account of the New York bank to that of the Chicago bank. Wherever branches of the United Reserve Bank are established, the wasteful remittances of cash between members will cease. The bank will act like a huge clearing house for the settlement of balances between various sections. Millions are now constantly in transit, moving to and fro, crossing and recrossing one another in opposite directions. Hundreds of millions are kept in scattered balances, which can be centralized under the new system.

While banks now immobilize their assets by buying commercial paper which is legitimately issued, but which is practically non-negotiable, and while they use for quick assets call loans on the stock exchange, that cannot be called in a panic or a time of stringency which falls short of panic, the new system makes commercial paper a quick asset which can be converted into a cash credit or into actual cash. Our present scandalous system, of attempting to regulate the money market of the entire

country by first pouring money into the stock market, and then withdrawing it, creating inflation and exorbitant security prices, followed in due course by stringency and unnecessary price depression, will give place to more orderly movements, as our discount markets develop.

This plan would be incomplete if it did not touch upon, without discussing in detail, the question of the government bonds and the notes issued against them by the national banks. It is certain that this question must be dealt with in a way entirely fair to the national banks. Otherwise they will oppose the plan. Having bought these bonds under the note-issuing privilege, they are entitled to due consideration if this privilege is to be withdrawn. It is most opportune that, whether we want a central bank or not, our miserable system of bond-secured note issue has at last come to a fatal *impasse*. One of the most beneficent influences of the construction of the Panama Canal is that it is opening our eyes to the impossibility of linking together the aggregate amount of the funded debts of a great nation and the aggregate amount of currency in the pockets of the people. There is no doubt that this foolish inflation of our currency and of the price of our government securities must now stop. There is furthermore no doubt that elasticity means expansion *and contraction* and not expansion alone, as results from our present currency system.

In order to secure an elastic currency and a safe basis for a United Reserve Bank, we must reduce our outstanding currency somewhere, so as to substitute the new elastic note issue—an issue that will contract, so that it can expand with safety. One way would be an inverse conversion; that is, a gradual withdrawal of the existing note-issuing power with a simultaneous conversion of our government bonds into obligations bearing a somewhat higher rate of interest, thereby safeguarding the banks against a loss in the price of their bonds. This would bring the price of our bonds to a normal level, like those of England, France and Germany, whose people can afford to hold government securities. The higher interest rate to be paid by the government to the people would be the most wisely spent money in our entire budget. There are several other

ways of dealing with this problem. Suffice it to say here, that to solve this part of the problem does not offer insurmountable difficulties. It will be necessary only to investigate which method is the best, and offers the least resistance.

## II

Let us now turn our attention to the criticisms of those opposed to a central bank system in the United States.

Mr. Morawetz says<sup>1</sup> that the territorial expanse of the United States is too large for such a system, that the bank would be one of too "colossal magnitude" and that it would be necessary to place the central bank in a position to regulate and control financial conditions throughout the country. He furthermore claims that the central bank would either "have the power to discriminate," and therefore "the managers would be placed in the attitude of beneficent dispensers of bank credit and of prosperity" or, if properly restricted, the bank would be "a penny-in-the-slot machine for obtaining credit," the resources of which might be drawn upon too heavily by "banks engaged in speculative business or located in sections of the country where interest rates are high."

The size of the country is an argument not against, but for, a central-bank system. A small and unimportant country could live with a less perfect system, and could lean upon the other central-bank countries in times of need. The immensity of our country, our resources and our transactions renders it absolutely necessary for us to adopt the most efficient system in existence.<sup>2</sup> The greater the area, the more perfect the system must be in order to reach every remote point. The plan here outlined covers the whole country. Each section of the United States, as a matter of fact, will have a central reserve bank of its own, where directly—or indirectly through its correspond-

<sup>1</sup> Victor Morawetz, *The Banking and Currency Problem in the United States*, The North American Review Publishing Co., N. Y., 1909; and *Address on the Banking and Currency Problem and the Central Bank Plan*, delivered at the Finance Forum of the West Side Y. M. C. A., Nov. 24, 1909.

<sup>2</sup> Our weight has become too heavy and threatens, at times, to break the European machinery which we use to make up for the lack of elasticity in our own system.

ents—each bank in the United States will enjoy the advantages offered by the United Reserve Bank. While the general policy will be settled at the head office, in consultation with the presidents of the branch offices and the members of the central board, the actual business will be done by the branch offices, which will act as separate units for each section.<sup>1</sup> There will be this most important difference, however, that, as far as reserves are concerned, they will be united and act as one. The surplus of one section will be available for other sections and the interests of all together will bring about the general policy of the United Reserve Bank. The effectiveness of this plan would not be interfered with by a provision that the discount rates of all the branches need not necessarily be the same. Thus it might be possible to meet undue expansion in one section of the country by increasing the rate of that branch without increasing the rate for other sections.

As outlined here, the United Reserve Bank will not be a “penny-in-the-slot machine,” any more than the European central banks, which discount and advance upon uniform conditions published from time to time. The United Reserve Bank would certainly have the right to refuse any paper that did not appear safe or legitimate. Furthermore, the power to increase or decrease its rate and its circulation would place it in a position amply to protect itself and the country. At the same time, the restrictions placed upon it absolutely preclude any danger of its becoming “a beneficent dispenser of bank credit and prosperity.” The fear that some section, where interest rates are high, might absorb all the available means of the United Reserve Bank, may be dismissed from consideration. The proportion to be fixed between capital-and-surplus and amount admissible for rediscount with the United Reserve Bank would prevent such abuse. Besides, as this facility of rediscount is a most valuable element in the strength of a bank and its real reserve, no conservatively managed institution would go to its full limit in normal times. An institution known to abuse

<sup>1</sup> Even the banks at Washington, D. C., would deal with the United Reserve Bank only through a local branch office, like all the other banks in the country.

its rediscounting privilege would quickly lose standing in the community.

Mr. Morawetz's next criticism is directed against the "control of the bank." It is contended that there would be too much one-man control, or control by a group; that the bank might become involved in political strife or become the issue between contending political parties. The first two points we have already answered at length, and little remains to be added in this respect. The central office would merely indicate the policy; the branches, which practically are under the supervision of the local banking associations, would undertake certain well-defined, safe transactions, into which no element of politics could enter, any more than it enters into our clearing houses. No political patronage whatsoever would be connected with the United Reserve Bank. A conscientious and honest man, not even brilliant, would be required to fill the presidency, at the pleasure of a board which, as we have seen, would be made up of the best men the various banking communities could secure as delegates. There is no reason, despite our critics, why such a board should not work harmoniously and effectively, and whoever examines the plan from an unbiased point of view will see no danger of excessive power being vested in one man.

Mr. Morawetz claims that great disaster would follow if the central reserve bank, once established, should be abolished again. Quite true; but should we hesitate to build a water reservoir, because we feel that it would be a calamity if one day it were to be removed? It is safe to say that if a system were established as safe as the one here outlined, it would develop as our country develops. Its requirements might change; but just as little as we can go back to the old mail coach after the railroad, just so little can we return to our present impossible system, once we have modernized it. If frauds or patronage fill the post office or the custom house or the army and navy or the treasury, we should clean up but not abolish those departments. Though it is difficult to perceive how under our plan abuse could develop, in such a case we should clean the house, but we should not destroy it. Mr.

Morawetz concludes his argument by saying that a central bank should not be tried because if it should fail, the cause of true reform would be postponed for a generation. In so doing, he reminds me of a man who should refuse to be born, for fear that he might die!

Now let us analyze Mr. Morawetz's plan.<sup>1</sup> Under it, Mr. Morawetz provides for a board of managers, to be elected by the banks. This board, in conjunction with the secretary of the treasury, will have the right and duty of dictating to every bank in the United States what percentage of cash it must hold against its outstanding notes.

We grant that such a board could be so constituted as to be

<sup>1</sup> [At the request of the editor, Mr. Warburg has left this section as written in the spring of 1910, though Mr. Morawetz has since modified his plan in some particulars. — Ed.] Mr. Morawetz's plan provides for so-called "note-issue associations," embracing practically all the national banks of the country. The banks will appoint a board of managers, who in conjunction with the secretary of the treasury will have authority to establish branches wherever they deem it advisable, the main office of the association being at Washington.

The main function of the central office and the branches will be to regulate the issue and redemption of notes. Each national bank will be entitled to issue against its general assets an amount of notes equal to its capital stock. The board of managers, however, has the right to increase the amount of note issues of the banks to some fixed percentage of the capital stock of the banks, and this board also has the power to reduce such increase as it may have authorized. Each bank having taken out notes will be required to keep on deposit with the association, as redemption fund for their payment, a sum of lawful money equal to such percentage of the notes as may be prescribed from time to time, by the board of managers and the secretary of the treasury. The required percentage of the redemption fund will be fixed from time to time by general order applying equally to all the banks, but the required percentage will never be less than twenty per cent of the outstanding notes. It is left open for further discussion in the plan whether each bank shall receive a special note issue and shall keep a separate redemption account, or whether it will be practicable to have one joint issue and one joint redemption account.

The general idea of the plan is that when notes are issued, they shall be covered by a substantial amount of cash to be set aside in the redemption fund, let us say forty to seventy per cent. The board of managers will have the power, in times of stress, to allow a reduction of this reserve in the redemption fund, which, however, may not be lower than twenty per cent, and in times of easy money, the central board may decree that this redemption fund be increased up to one hundred per cent, so as to withdraw the notes, finally, from circulation.

The plan provides for the withdrawal of all national-bank notes secured by government bonds. Some provision has been made to protect the bonds owned by the banks.

safe; but every argument raised by Mr. Morawetz against the dangers of political or one-man control of the central-bank board, can be applied with equal force to his board of managers. However, the power of this board of managers is more far-reaching and of broader scope and therefore more dangerous than that of the board of the United Reserve Bank. While the central bank is a passive institution, Mr. Morawetz's board of managers is an active institution. The central bank establishes rates at which it is willing to do business, but it does not force anybody to do business with it. If the bank rate should be 5 per cent, banks in the south may find it to their advantage during the cotton-crop movement to rediscount with the United Reserve Bank, while banks in New England may for the time being dispense entirely with its services, and therefore not be affected. If, however, the board of managers, under the Morawetz plan, issues its command that all banks must increase their reserve against notes from 30 per cent to 40 per cent, it is a direct interference with the business of every individual bank in the country, no matter if money is easy in Boston and tight in New Orleans. Expansion and contraction is ordered, whether it is needed or not, for every one at the same time. How about "expanse of territory" in this case? Is it possible to regulate all the varying demands of the varying sections of our immense country at the same time by one "You must!"? It is Mr. Morawetz's "You must!" against the United Reserve Bank's "You may!" This difference is most important.

Furthermore, while the United Reserve Bank is enabled to perform its functions by the freest return of idle money into the central reservoir, thus avoiding its being needlessly held in separate reservoirs, Mr. Morawetz would force every one at the same time to withdraw more cash and to lock it up as special collateral for new notes. This power to influence money rates, vested in a few men, would, from Mr. Morawetz's own point of view, form a grave danger of abuse.

Leaving aside this phase of the question. the system is unsound for these further reasons:

(1) Our examination of modern systems has shown that note

issue is only a side question. It is a poor plan, therefore, to try to solve the main problem by attacking an auxiliary part of it. It is just as unsatisfactory as the attempt to repair a broken-down dynamo by readusting the storage battery attached to it only as an auxiliary emergency device.

(2) Notes issued by banks must be considered as demand deposits, since for both, payment in cash may be demanded. It is an unfair and unscientific plan to secure one depositor by 50 per cent or 60 per cent of cash, while the other must be satisfied with 20 per cent.

(3) It is a faulty system that will change practically the whole outstanding currency carried in the pockets of the people into money which the banks may not hold when it is paid in to them.

(4) It is an anomalous and unsound system that allows a bank to pay its creditors in notes which it may not carry as reserve, or that forbids it to carry as reserve against a deposit, notes the very receipt of which may have created such deposit.

(5) The Morawetz plan tries to solve the problem exclusively by issuing more or less currency. But it is cash credit, not currency, which is required most frequently. The two are not identical.

(6) A bank is safe in granting time loans against time money which it may have taken; the excessive granting of time loans (loans and discounts) against call loans (deposits) is dangerous and often the cause of financial disturbances. A bank already overextended, makes its condition more dangerous by granting further accommodation through note issue. For increased note issue means an increase of demand obligations, while rediscounting of paper with a United Reserve Bank means an outright sale of assets. That is, cash credit or cash becomes available without the creation of a new and dangerous demand obligation.

(7) The vicious system of separated, disconnected and competing reserves remains the same.

This is only an outline of the main arguments against Mr. Morawetz's plan. It would lead too far to follow up in detail every simple point.



What would the effect of this system be? There were in the United States in 1908, according to the report of the comptroller of the currency :

	Nat'l Banks.	State B'ks.	Trust Co's.	Sav. B'ks.
Number	6,853	11,220	852	1,453
Cap. Stock. .	\$921,000,000	\$502,000,000	\$278,000,000	\$36,000,000
Surplus. . . .	566,000,000	217,000,000	370,000,000	244,000,000
Cash. . . . .	889,000,000	308,000,000	118,000,000	44,000,000
Deposits. . .	4,374,000,000	2,937,000,000	1,866,000,000	3,479,000,000

Under the Morawetz plan, the 6,853 national banks, which are money-making concerns, competing against one another, with deposits of \$4,374,000,000, would have to bear the burden of regulating not only their own conditions, but also those of the other institutions, having deposits of \$8,282,000,000. But let us suppose the state banks all turned into national banks. We should then have 18,073 banks, with a capital of \$1,423,000,000; surplus \$783,000,000; cash \$1,197,000,000; deposits \$7,311,000,000. In order to bring the state banks up to the standard of the national banks, figuring only a twenty-per cent reserve, a cash reserve of \$1,462,000,000 would be required, being an addition to bank cash that must be withdrawn from circulation of \$265,000,000. Every bank will have the right to take out notes to at least the amount of its unimpaired capital, and the board of managers may authorize larger issues. Let us take the minimum, \$1,423,000,000, and a reserve of only forty per cent. This would mean an additional withdrawal of cash of \$568,000,000, or a total of \$833,000,000. This means that two and three-fourths times the amount of cash held at present by all state banks, or about the total aggregate amount of cash now held by all the national banks would have to be withdrawn from circulation and be replaced by bad notes—bad because they cannot be used by the bankers as reserve money. Taking the above figures as a basis it means that there would be in the hands of the public about \$1,400,000,000 of national-bank notes, while the circulation of such notes under our present system amounts to about \$700,000,000.

When there is a demand for more currency, and not for more

credit, the plan may work for a while, though weakening the currency; but when there is currency enough in the pockets of the people, while demand for additional credit continues, every note issued will return at once through the redemption fund and must be paid in cash. Every bank will then try to accumulate legal-tender notes, to strengthen its power of granting credits, and will therefore at once present for redemption the national-bank notes that it receives.

Crises have frequently arisen because people believed that the top wave of demand for accommodation had passed, and all means had been spent in this expectation, when the main pressure had not yet begun. If during such critical times gold withdrawals from abroad should begin, it is difficult to see how under this plan reserves could be strengthened, for it is to be expected that in such case the reserves would already be at the lowest point. Then we should again witness the critical times when one bank, by refusing to renew its call loans and thus throwing the burden on the others, creates a credit balance for itself in the clearing house, thus strengthening its cash balance at the expense of the others. Retaliation would follow, and panic would be in sight in the future just as it has been in the past. The weakness of our present system in this respect would remain unchanged.

This plan would leave the treasury money either wastefully piled up and withdrawn from circulation, or it would leave to the secretary of the treasury arbitrary power to dispense favors by depositing the funds wherever he may prefer. It would leave promissory notes as immovable in the future as in the past, with no hope of ever developing a modern system of bills of exchange. I have no hesitation in saying that it would be a most reckless experiment, on entirely new and untried lines, and it would in my opinion lead to certain disaster.

Mr. Morawetz's plan contains two suggestions: one, as we have seen, being the regulation of reserves against note issue, and the other being the creation of sectional reserve banks. It is greatly to be regretted that Mr. Morawetz has emphasized the first scheme and touched only slightly upon the second. It is sincerely to be hoped that he will work out in detail this plan

for sectional reserve banks, which he desires to be at all times in a position to furnish reserve money to the several banks in their sections by paying checks drawn against the deposit accounts of the banks or by rediscounting paper offered by them for that purpose.

I am confident that Mr. Morawetz will soon reach the conclusion that these sectional reserve banks must be endowed with all the powers and charged with all the duties given under our plan to the United Reserve Bank branches; otherwise they will be nothing but safe-deposit vaults, which will have to hold for each bank the exact amount of cash received from it for safe keeping. They can not go a single step further without incurring the gravest danger unless they have some central bank to fall back upon, or unless they are themselves central banks, that is to say, disconnected central-bank branches. Mr. Morawetz tries to cover the weakness of decentralized reserves by providing that the several sectional reserve banks be authorized to make arrangements with one another in order to facilitate exchanges between different sections of the country. But there must be more than this authority to make arrangements with one another with a view to facilitating these exchanges. These sectional reserve banks must in the end act as a unit. Otherwise we shall have a recurrence of our experiences at the end of 1907, when one reserve center closed itself against the others, when enforced credit was established *within* each financial center, indeed, but when New York, Chicago, Philadelphia, Boston, Pittsburgh, and all the others, would not accept even the joint obligation of all the banks of their sister cities. Obligations between cities remained payable in cash, and distrust among these centers brought about the actual phase of the gold premium and the long period of general suspension of cash payments. Should a common foe attack Boston and New York, would Illinois keep her soldiers at home, or would she differentiate between Boston and New York? The knowledge that all will stand together gives a feeling of confidence and safety. It is the same with our financial reserves: they must be held united under one direction, to be thrown where they are needed and to be withdrawn from places where they are superfluous.

The joint credit of the nation must stand behind the reserves, insuring unlimited confidence that nothing will be able to shake.

There must be one big reserve, one note-issuing power, one big bank, which will be neutral, administering impartially and economically the funds of the treasury of the United States, and issuing notes that are good enough not alone for the people, but also for the banks to be counted as cash. Instead of 20,000 institutions carrying an average of 8 per cent cash against their deposits and notes, what we need is one big institution with a capital of \$100,000,000, acting as reserve for all and maintaining a normal reserve for its notes and deposits alike of probably 80 per cent instead of 8 per cent. By following the central bank plan and adapting it to our conditions, we know with certainty that we are following along lines which have been thoroughly tested elsewhere and have led to success everywhere. Therefore, even with equal advantages otherwise, the central-bank plan should prevail.

In fairness to Mr. Morawetz it ought to be stated that he has never denied the superiority of the central-bank system. In fact, he advocates its adoption wherever it can be done with safety, but he believes that our peculiar conditions render it impossible to evolve a plan which will be at once safe and effective. Fear of a dangerous centralization of power has led him to prefer an attempt to control a scattered note-issuing power and has induced him to advocate separate sectional reserve banks rather than an actual unification of reserves.

The object of this essay has been to show that these half measures will not afford adequate relief and that they invite, and even to a larger degree, the very dangers which are supposed to be inherent in the central bank plan. On the other hand this essay has been designed to prove that it is possible to evolve, on the sound principle of a central bank, a plan which will not only be effective but at the same time meet the difficulties which Mr. Morawetz has so forcibly pointed out. Through his criticism he has helped us gradually to perfect the present scheme, and now that we have perhaps succeeded in meeting his objections, we trust that he will continue to help, not only by criticism, but by coöperation in further developing the scheme on lines which he himself has recognized as at least ideally the best.

## III

Professor Sprague has published an article entitled "The Proposal for a Central Bank in the United States: A Critical View."<sup>1</sup> The conclusions which the author reaches in this essay are as follows:

A central bank does not appear to be either required or well suited to relieve our financial difficulties. On account of the absence of branch banking it would not be able to handle the government funds in a satisfactory fashion, or to provide an elastic note issue. *Branch banking is an essential preliminary, if we are to have a Central Bank of anything like the European type*, and there are powerful objections to such a change, the discussion of which does not fall within the scope of this essay.

Neither from the historic nor from the practical point of view is this conclusion correct. Effective central-bank systems existed in Europe before the branch-banking system was evolved. The Bank of England was organized in 1694, the Banque de France in 1800, the Bank of the Netherlands in 1814, and the Bank of Austro-Hungary in 1815. In all these countries the central banks performed their duties effectively during a period when banking concentration in the modern sense had not begun and when private banking firms were still transacting the main banking business. The phenomenal growth of the joint-stock banks, the absorption of private firms, and the all-embracing development of the present branch-banking system are an evolution which has taken place in Europe almost entirely within the last thirty years, and which reached its present predominating importance only within the last twenty years. The evolution of branch banking is not incidental to a central-bank system, nor is the central-bank system the outgrowth of branch banking. Branch banking, in its present form, is incidental to the unlimited power of expansion and concentration which followed the evolution of the modern stock company, the corporation.

From the practical viewpoint it is a mistake to think that branch banking is a preliminary step essential to a central-

<sup>1</sup> *Quarterly Journal of Economics*, vol. xxiii, May, 1909.

bank system. The influence of the central bank is stronger with a system of small and disconnected banks than with enormous branch-banking organizations which, singly or combined, are so powerful that at times they are able to pursue a policy of their own in contravention of that of the central bank. While it is true that when these banks coöperate with the central bank, the latter may accomplish more immediate results, the fact remains that these larger institutions are able, at times, to emancipate themselves entirely from the influence of the central bank and that when in the end they are forced by circumstances to fall back upon the reserves of the central institution, the sudden weight is such that the central bank finds it difficult to carry the burden.

Enormous banking concentration has been watched by the managers of central banks with a feeling of concern rather than with a friendly attitude. The central banks look upon the independent and smaller institutions as their most loyal followers, and the central banks stand, as a matter of fact, as protectors for the smaller institutions against the aggression and the overpowering influence of the larger ones. However, the jealousy between the large banks and the central banks, sometimes prevailing in Europe, need not exist with us, since in Europe the central banks compete, to a certain degree, with the general banks; a situation which would be avoided by us under the present plan. One might dissolve to-day all European branch banks into the many independent banks and banking firms which originally constituted these big concerns, and the central bank system would not suffer in efficiency from such a change. One might eliminate all the branches of the central bank, and the central-bank system would still remain efficient though it would achieve its results in a somewhat slower, less direct and hence less economical manner. On the other hand, the elimination of the central-bank system in England, France or Germany would force the smaller independent banks to surrender at once to the big banks. Without the protection of the central bank they could not survive.

*The basis of the central bank is the centralization of reserves and what Professor Sprague calls "the fluidity of credit."*

*Eliminate these two, and the central-bank system must fail.*  
Professor Sprague says in respect to this:

The fluidity of credit is absent in this country, and will remain absent while we wisely continue to prefer banks managed by persons with extensive local knowledge to branch banks subject to bureaucratic managers, acting under general rules laid down at a distant head office. For this reason we cannot expect our money markets to be subject to the comparatively slight and distant influences exerted by a central bank. It would be necessary to concentrate bank reserves to such an extent that every banker would feel that his safety depended upon the situation of the central bank.

To begin with the last sentence of Professor Sprague's observations, it has been shown in the previous chapters of this essay that the absolute concentration of banking reserves into one central reservoir is the very foundation on which a modern structure should rest, and there can be no doubt that every banker in the United States would be satisfied as to the absolute safety of reserves under such a system of centralized reserves, for which, as a matter of fact, the credit of the entire United States would be pledged.

Professor Sprague's suggestion that fluidity of credit is based upon branch banks cannot be admitted. What does fluidity of credit mean? The very expression points to a credit that is liquid; it means the very thing to which I have so often and so insistently drawn attention, the question of rendering liquid the assets of a bank. Whether we had branch banks or not in the United States, the present system of issuing and handling American bills, which form non-liquid assets in the hands of the banks, would stand in the way of fluidity of credit. A central bank in the United States, even with a fully developed branch-banking system, can not effectively perform its duties unless we find some way of making these immovable promissory notes movable instruments of credit. The object of this essay is to show how a central-reserve-bank system, as here proposed, could fill the present need in this respect and pave the way for further development in the right direction. Professor Sprague's main arguments are based upon the mistaken idea

that a central bank in our country would need thousands of branches in order to *deposit* equably all over the country its own and the government's moneys and in order to *distribute* impartially its notes among the banks.

To quote his argument in this particular :

The manner of putting this vast sum (being the balances of the United States government) into general use would be equally without precedent. Without doubt there would be a general demand that the deposits be used with a general degree of approximation to population and the supposed needs of different parts of the country. At this point an insurmountable obstacle would be encountered. To lend directly to the business community would require an impossible number of branches. Lending at the relatively small number of branches which we have assumed might be established would not accomplish the purpose.

In order to distribute its funds widely, the central bank would be obliged to lend to at least as many banks as there are localities ; and, since the selection of a single bank would give rise to charges of favoritism, the bank would be certain to lend to all the banks. The central bank would be obliged to decide between the claims of 15,000 or more banks.

This shows an entirely erroneous conception of the activities of a central bank in general and of our United Reserve Bank in particular. Under our plan, the central institution would neither deposit moneys nor distribute notes ; it would discount paper and collect discounted bills as they fall due. Depositing moneys is an operation in which the initiative would rest with the central bank and in which the danger of favoritism might be lurking. For the operation of discounting bills at a published rate, the initiative rests with the general banks and, within certain limits, with all banks alike. The United Reserve Bank does not reach the banks, but the banks reach the United Reserve Bank ; and the organization as here proposed would enable each bank in the country, directly or indirectly, to reach the central institution.

While as a matter of safety, economy and efficiency, a number of branches as proposed in our plan would certainly be advisable and feasible, there is no need for thousands of



branches to reach every single point where banks are in existence. Professor Sprague evidently does not appreciate the spreading power of the discount rate. When promissory notes or "bills" become "bills of exchange," money for safe and legitimate purposes flows easily from one end of the country to the other, and the higher the development of the discount system, the more the spreading power of money will be felt and the safer our system will become. While our plan does not attempt to provide the highest degree of fluidity for the present, it will create conditions under which the spreading power of the discount rate will be felt at once, and that will ensure efficiency for the United Reserve Bank and safety for the country.

We cannot imagine that the prices for staples will ever vary greatly between New York and San Francisco in spite of their territorial separation. The maximum difference would probably be the cost of transportation between the two cities. This is explained by the fact that we have established certain brands or standards as the basis of our dealings, which enable us to purchase and sell by letter or telegram without negotiating for individual bags or boxes which we sample and select. Without this method we should deal with necessities as we deal with luxuries, paying for each article a fancy price, which price may differ widely in the various parts of the country, though the quality be the same. In this respect the bills receivable of an American bank are like a collection of curios, selected with care and pride by the president of each institution, but difficult of sale unless another collector is found who happens to be interested in the same article, and who does not possess too many of the same kind already. Bills receivable in Europe are like so many bales of cotton, bushels of corn, or bags of coffee, standardized, homogeneous articles, which can be sold at once. The discount rate of the central bank, on the strength of which the general discount market develops, is a potent factor in bringing about the creation of standardized bills of exchange. This evolution in the United States also will follow the establishment of a United Reserve Bank, which from the beginning, even with our present conditions, will be able to provide a fluidity of credit sufficient to make the plan effective.

When we conceive clearly the fundamental ideas underlying the working of a central-reserve banking system, we see the lack of force in Professor Sprague's argument that "our difficulties would appear, as in the case of government deposits, as soon as the attempt was made to place the notes where they were really needed,—in agricultural sections of the country," in view of the difficulty which he foresees, that the banks generally would be too eager to secure these notes and use them as reserves. Under our plan a balance with the United Reserve Bank is equivalent to cash in hand, and therefore there will not be an eagerness to secure any notes, except as they may be required for actual circulation.

Professor Sprague appears inclined to think that a further danger inherent in a central-bank scheme would lie in the direction of increased expansion. Under existing conditions, in his opinion, the risk of undue expansion could be averted and "normal seasonal variations in credit requirements could be readily met if our banks were less given to the habit of lending to the full extent of their resources in months when the course of business gives them an abundance of cash." His final recommendation is that the six largest New York national banks should hold reserves of 30 per cent in times of financial quiet, and that they should use these reserves freely, without considering the 25-per-cent limit, in times of financial disturbance. Incidentally the suggestion is made that reserve banks and central-reserve banks be not allowed to pay interest on bankers' balances. These suggestions are coupled with a curious panegyric, praising the use of the clearing-house certificate, with a somewhat disguised recommendation of partial suspension of payments as a legitimate means of meeting extraordinary demands, and with an attack on the New York banks on account of the "ignorance of our bankers of the only method which experience in other countries has shown to be uniformly successful in allaying financial panics." The method here referred to by Professor Sprague consists in meeting unreservedly, by freely paying, any demand for cash made upon the banks. In this respect he makes the following statement:

We already have far more centralization of banking power in New York than is generally realized. Before the crisis of 1907 the six largest New York national banks held net bankers' deposits of \$305,000,000 out of a total of \$410,000,000 of such deposits held by all the national banks of the city. It is somewhat disconcerting to find that these banks, which held a reserve of \$140,000,000 in August, 1907, still held \$110,000,000 in December, 1907.

No stronger argument can be made in favor of a central bank than is contained in this statement. Once a panic begins under our present system of decentralized reserves, there is no other means of salvation for reserve and central-reserve banks than to stop payments. In their anxiety the country banks, which held \$305,000,000 of balances in New York, would have withdrawn the entire \$140,000,000 available in New York in August, 1907, and while this process of diminishing reserves in New York was taking place, it stands to reason that the demand for cash within New York by the other depositors of the New York banks would have increased at the same dangerous rate. A system of decentralized reserves without any provision for transforming cash credits readily into cash must inevitably come to grief in a period of distrust, no matter whether the New York banks keep reserves of 30 per cent or 25 per cent in easy times.

Professor Sprague does not appreciate the difficulty these six banks would have in realizing when conditions for legitimately decreasing the reserves actually prevail. These banks are primarily money-making concerns; if, during times of strong demand for accommodation, they should refuse to grant it and call-money rates should rise to extraordinary heights—as they inevitably must under our present system—these Wall Street banks would be accused at once, as they always have been in the past, of greed and manipulation. If they should meet the demands, yielding to such clamors, their reserves would soon diminish, and conditions would remain as heretofore. When the panic came, as come it inevitably would, it is more than probable that the reserves of the banks would already be below 25 per cent.

Furthermore, if we carried out Professor Sprague's sugges-

tion, that the central-reserve banks should not allow interest on deposits by other banks, the immense balances kept by country banks in New York would cease, and the restrictive power which Professor Sprague wants to apply to these banks would thereby become void. These large amounts are not kept in New York for the sole purpose of acting as a safe reserve, but they are sent to New York to act as "on call" assets which at the same time earn interest. It is for this reason that Professor Sprague's remarks are not justified, when he says: "The failure to adopt proper methods seems to be due not so much to inability as to a failure to recognize the responsibility of their position by the New York banks which hold bankers' deposits." Country bankers demanding interest on their balances cannot expect to have them kept in cash.

It is strange that a writer searching for remedies on the lines of the above suggestions should find fault with the central-bank plan, for the reason that, as he believes,

it would not be able to exert a restraining influence upon the expansion of credit, because it would have no means of carrying out a precautionary policy. Is it not certain that, in the eager search for funds in times of active business, the other banks would resort to it for heavy loans? Doubtless a considerable measure of accommodation would have been thus granted if we had possessed such a central bank in the years before the crisis of 1907, even though it had been managed with far more conservatism than we have any reason to be certain of securing at certain times. Every dollar thus borrowed would have been an addition to the extension of credit at a time when restraint was needed, not expansion.

The central bank would have been creating a certain amount of credit expansion, which its later power of contraction could certainly not have exceeded, and probably could not have equaled, because the volume of credit cannot be largely diminished without serious disturbances. The power to issue notes by a bank of this kind would be a positive evil unless it were strictly reserved for use only upon occasions of actual emergency.

It is evident that a central bank managed with the single object of watching expansion and contraction, and of maintaining the safe proportion between cash and cash obligations, a

bank which cannot be swayed in its policy by any prospect of gain, and a bank the management of which is not subject to the immediate pressure brought to bear by the customer in need of accommodation, will be in a vastly better position to form a clear opinion concerning the larger point of view of the country's financial conditions than a local money-making bank. The central bank would not be subject to the same temptations nor to the same attacks, in case it should deem it necessary, in order to force general contraction, to insist on higher discount rates; but, incidentally, its very existence would prevent the exorbitant rates which from time to time are inevitable under our present system.

Professor Sprague's argument that "the central bank would bring about exclusively further expansion of credit," would be sound only if we did not provide for contraction at the same time and from the very beginning. A substitution of notes of the United Reserve Bank for either the bond-secured currency or the greenbacks presupposes from the outset that into our present ever-expanding currency we should inject a large amount of currency which will contract and which must return to the United Reserve Bank the moment that this institution, in easy times, decides to collect its short bills without renewing its investment in them.

No European system provides, as our plan would do—as a logical development of existing conditions—that banks should maintain so substantial a proportion of their deposits as a cash balance with the central bank. This in itself is a regulator; and even if, on the other hand, owing to our present conditions, the United Reserve Bank did not have the same power as that enjoyed by the European central banks, thanks to the importance of the European discount markets, the combination of balances to be kept and transactions to be made with the United Reserve Bank in order to maintain these balances would give it a certain restrictive and regulative power, the possibility of which Professor Sprague denies.

From the practical viewpoint there can be no doubt whatever that the basis for a healthy control by a central bank must exist in a country where regular seasonal requirements cause,

with almost absolute regularity, acute increased demands for money and accommodation. A country of this kind will require at given periods certain additional accommodation to avoid stringencies as now experienced by us from time to time, and will stand without disturbance the withdrawal of the additional funds after the seasonal demand has subsided. Because our present currency system is expansive only, and lacks the power of contraction, we experience the difficulty of meeting unusual demands whenever they arise. Why should we assume, on the one hand, that the best men to be found, when placed at the head of such an institution, would be unable to cope with the problem, and at the same time be ready to place the burden on the shoulders of the managers of the six largest Wall Street banks,—the very men whom Professor Sprague accuses of having proved entirely unable to meet the needs of the hour in 1907?

The same argument holds good with respect to the treasury funds. While denying, on the one hand, the ability of the central-bank management to deal with the large funds of the treasury in the guarded and safe way in which a United Reserve Bank disposes of such funds, Professor Sprague is evidently willing to let the secretary of the treasury continue as heretofore to dispense his favors as well as he can.

As to the wisdom of allowing the United Reserve Bank to issue "unsecured notes," the writer believes that under the plan here outlined it is not probable that for many years to come unsecured notes will be issued to any considerable amount, if at all. But it appeared advisable to endow the United Reserve Bank with this privilege, so as to imbue the country with the fullest confidence that cash will always be forthcoming. This confidence will be the very means of rendering unnecessary a large issue of unsecured notes.

It is impossible to reply to every single point enumerated by Professor Sprague. I have therefore singled out these fundamental arguments that needed refutation. But, in closing, let us touch upon one more point raised by Professor Sprague. It is evident that one of the functions of the United Reserve Bank would be to accumulate, in easy times, large amounts of foreign

bills of exchange to hold them as a gold reserve against emergencies. Professor Sprague believes that this would create anxiety in Europe. An accumulation of foreign bills of exchange would, indeed, give fair warning to the European central government banks that in case of a stringency arising with us they must be prepared to meet a sudden demand from the United States. But the foreign government banks would vastly prefer this danger, which amounts to nothing more or less than the perfectly legitimate collection of debts incurred by their own countries, rather than be subject to the violent attacks to which all Europe is now exposed when a panic is raging with us. There can be no doubt that the unwelcome presentation of a bill payable to the United States, but instrumental in avoiding a panic in the United States, would be much more satisfactory to Europe than a general suspension of payment with all the consequent terrors at home and abroad.

It is a rather amusing coincidence that in this controversy the rôles have apparently been exchanged. One would expect that the professor's and lawyer's point of view would be that nothing can be sound in practice which is unsound in theory, while the banker's attitude might be expected to express itself rather in an attempt at patching up existing conditions by practical measures without much concern about the theory. The banker's view in this case is summed up by asserting unequivocally that no monetary reform will be sound and effective which neglects the theory of centralized reserves and fluidity of credit.<sup>1</sup>

#### IV

Some critics have raised the objection that a bank as here outlined would not earn its dividends. There cannot be any doubt that the United Reserve Bank will without difficulty earn a return on its capital in excess of 4 per cent per annum. But

<sup>1</sup> Just as this essay is going to press, Professor Sprague has begun the publication of a new series of contributions in the *Quarterly Journal of Economics*, vol. xxiv, no. 2. He has here somewhat modified his recommendations, but before dealing with them, it will be necessary to await the appearance of the further chapters which are announced. What has been said of Mr. Morawetz, at the end of page 328, however, applies equally to Professor Sprague.

we should bear in mind that this question of earning power is of very minor importance. If we want a bank which is not to be run for profit, but for the general weal; if we want to cede to the United States any profit in excess of 4 per cent net; and if, at the same time, we want the stockholders to be satisfied with a 4-per-cent investment, we should be fully justified in proposing that the United States guarantee a return of 4 per cent to the stockholders. Or, to express it in a happier way, it might be suggested that in consideration of the profits to be turned over to the United States by the United Reserve Bank and in consideration of the savings to be made by the United States in transferring the various disbursing and collecting functions from the treasury to the United Reserve Bank, the government of the United States should contribute to the running expenses of the United Reserve Bank such lump sum as will enable it to pay to its stockholders a dividend of 4 per cent per annum. It is safe to expect that, once established, the United Reserve Bank will become a permanent source of revenue to the government, and that important savings in its present budget will be effected.

One more word in closing. The thought is general, with people who have not studied the question, that a central bank is a step towards monopoly. The reverse is the truth. Wherever a central bank exists, it is the backbone of the independent institutions in their fight against the overpowering influence of the large stock banks, as they exist in England, France and Germany. It should be clearly understood that the United Reserve Bank, by creating safe conditions, would make the small banks independent, where they now have to rely, and are dependent, on the goodwill of their big sisters or the often doubtful ability of the secretary of the treasury to help. A central-reserve bank properly organized is not an oligarchic but a democratic institution; it would mean safety for all, hardship for none.

There is no good reason why the existing banks should oppose it. Wherever a central bank has been established the vested interests at first tried to prevent its creation. They saw only the danger of a change in business conditions which, though



bad in general, had been profitable to them. They recognized only later that by the change they were enabled to transact their business in safety and that therefore they could do a much larger business. There is not one of these countries, in which opposition ran high against a central bank, where today a move to do away with the central-bank system would meet with the slightest support. Neither the socialist nor the capitalist would dispense with it; it has become one of the fundamental parts of the economic life of modern nations, like the telegraph or the railroad.

Would it be repugnant to the so-called American spirit? Is it an un-American institution? Our opinion is that it is a slur and a slander upon the American people to say that they are morally or politically so utterly unfit that they cannot afford to adopt a system for which Russia, Japan, the Balkan States, and some of our South American sister republics, have proved adequately prepared and which even China is seriously thinking of establishing in the near future. We believe that the people will wake up to the humiliation of present conditions and that they will demand in no uncertain voice a thorough modernization of our system. We are inclined to think that ignorance about what a central bank would really mean has been more responsible for the popular antagonism to such a system than has the ghost of Andrew Jackson. Good American citizens, who lived two generations nearer than we do to the dissolution of the last Bank of the United States, and were more familiar with its history than are the people of today, did not consider it an un-American institution. In this respect Abraham Lincoln's first political speech, which he delivered at New Salem in 1832, may be of interest. He said:

*"Friends and Fellow-Citizens :*

"I am plain Abe Lincoln. I have consented to become a candidate for the legislature. My political principles are like the old woman's dance—short and sweet. I believe in a United States Bank ; I believe in a protective tariff ; I believe in a system of internal improvements, and I am against human slavery. If on that platform you can give me your suffrages, I shall be much obliged. If not, no harm done, and I remain respectfully yours,

" ABE LINCOLN."

It is seventy-seven years ago that this simple man from the woods, with his never-failing instinct, laid down this remarkable program, of which only one single part, "a United States Bank", remains to be carried out. Let us hope that it will be the pride of our generation to have achieved this step in the onward march of the United States.