THE CLASSICAL CONCEPT OF THE LENDER OF LAST RESORT

Within the past ten years, a series of events has raised questions about the soundness of modern financial systems and reawakened interest in what is known among monetary economists as the lender of last resort responsibilities of the central bank. The concept of lender of last resort relates to the question of how a central bank should react to a financial crisis and involves, in particular, a prescription for central bank action to preserve the liquidity of the financial system and to forestall financial panic. The term itself originated in the writings of Walter Bagehot, a leading British writer in banking and finance in the second half of the 19th century. But the idea behind it is of an earlier vintage and several well-specified prescriptions for central bank action to prevent panic can be found, in particular, in the copious literature centering around the problems of the Bank of England in the period 1797 to 1844.

Among the more dramatic of recent events which have revived interest in the lender of last resort function have been the credit crunch of 1966, the credit squeeze in the commercial paper market in 1970 associated with the Penn-Central crisis, and, most recently, the distress and ultimate demise of Franklin National Bank. In each of these cases, the actions of the Federal Reserve and other bank regulatory authorities provoked discussion centering on the following interrelated issues.

1. What is the appropriate response of a central bank in times of financial crisis? Should it try to prevent or forestall an initial bank failure that might trigger a panic? Or should it act only to prevent the primary failure from spreading to other institutions? These alternative responses correspond to two contrasting views of the duty of the lender of last resort. The first holds that the central bank's job is to prevent the occurrence of shocks or at least minimize their initial impact on the financial system. A second view is that the lender of last resort exists not to prevent shocks, but rather to minimize the adverse repercussions of such shocks either by insulating the sound institutions from the distress of the unsound ones or by insuring that the banking system is sufficiently strong and resilient to absorb shocks.

2. Is the lender of last resort's primary responsibility to the individual bank or to the market, i.e., the banking system as a whole? Does this responsibility extend to other sectors of the financial system?

3. How and on what terms should the lender of last resort make aid available? Via open market operations? Emergency loans through the discount window? If the latter, should a penalty rate be charged?

4. Is the central bank's crisis-averting function in conflict with its monetary-control function? Can the bank effectively act as an unconstrained last-resort lender within a policy framework emphasizing stable monetary growth?

5. What is the overriding objective of the lender of last resort? To prevent bank failures **per se**? To arrest a massive forced sale of assets and the consequent collapse of asset values? To insure that financial institutions will be able to meet their loan commitments? Or to prevent panic-induced reductions in the money stock?

6. How has the central bank's lender of last resort function been influenced by (1) the availability of deposit insurance and (2) the FDIC's procedure in handling bank failures?

The current debate over these issues has been confined to a rather esoteric circle of professional experts. It has not produced—nor will it likely produce—anything like the rich literature generated by the running debate over similar issues in 19th century England. For that matter, it appears to have been carried on with little in the way of reference to this earlier literature. One result is that the lender of last resort concept itself appears to have lost some of the clarity and precision of its original formulation, which embodied a specific set of policy rules and precepts. The term "lender of last resort" has been bandied about freely but it is clear that the meaning it now conveys varies, and perhaps widely, from user to user. In particular, the term has not always been used to convey the sense intended by its classical framers.

It should be noted at the outset that the pristine notion of lender of last resort emerged as a prescription for central bank action in an English banking and monetary system that differed markedly from that in the U.S. in the second half of the 20th century. For one thing, the U.S., unlike 19th century Britain, is no longer on the gold standard, the last effective link between gold and the money supply having been severed in 1968. Departure from the gold standard removes one constraint on the lender of last resort,

namely the necessity of protecting the gold reserve and preserving the gold convertibility of paper currency at a fixed rate of exchange. A second difference between the two financial systems was created in the 1930's by the introduction of Federal deposit insurance, an innovation that now protects the U.S. banking system and most depositors. Deposit insurance has removed a chief cause of panics and bank runs, namely loss of public confidence in the banking system's ability to convert demand deposits into cash. Consequently, there is now less danger of the recurrence of old-fashioned cash drains, i.e., those massive, panic-induced withdrawals of coin and currency, which, in fractional reserve banking systems, used to be a chief source of multiple reductions in the money stock. Third, the essentially unit-banking system in this country, featuring literally thousands of banks operating in market areas limited geographically, contrasts with the incipient branch banking system of late 19th century England, in which a relatively small number of banks were beginning to serve an essentially national market. A branch system with its capability of channeling funds quickly from the financial center to outlying areas may have less need for last-resort loans than a unit system in which individual banks or localities lack adequate access to money market supplies of cash. These and other key differences in banking and monetary environments account for many of the variations wrought on the classical lender of last resort concept in this country.

Given the current interest in the lender of last resort function, it is useful to examine the original version of that concept if only for purposes of clarification and historical perspective. This article, therefore, traces the emergence of the classical doctrine of the lender of last resort in 19th century England and discusses the content of that doctrine. The first section of the article extracts from the writings of leading 19th century banking theorists the basic tenets of the classical doctrine. These tenets are then listed in the second and concluding section.

NINETEENTH CENTURY VIEWS OF THE DUTIES OF THE LENDER OF LAST RESORT

Henry Thornton The principal architects of the classical lender of last resort doctrine were Henry Thornton, who wrote at the beginning of the nineteenth century, and Walter Bagehot, whose chief writings appeared during the third quarter of the century. In his 1802 classic, *The Paper Credit of Great Britain,* Thornton expounded on many issues relating to central banking, but four in particular are especially relevant today. The first concerns a possible conflict between the central bank's responsibility as controller of the money supply and its function as lender of last resort. To the extent that the central bank bears the responsibility for providing a stable framework of monetary growth, it must exercise a moderate and continued restraint on the rate of monetary expansion. But coping with unusual liquidity strains through exercise of the lender of last resort function calls for abandonment of this restraint and relinquishing control over monetary growth. Hence, some banking specialists have noted an apparent conflict between these two central banking objectives.

Thornton, however, saw no inconsistency between a policy of stable monetary growth and the sort of action required to deal with liquidity crises. In the following passage, which Joseph Schumpeter has called the Magna Charta of central banking, Thornton distinguishes between the long-run target growth path of the money stock and temporary emergency deviations from the path. The proper policy of the Bank of England, Thornton says, is

> To limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction; in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to afford a slow and cautious extension of it, as the general trade of the kingdom enlarges itself; to allow of some special, though temporary, increase in the event of any extraordinary alarm or difficulty, as the best means of preventing a great demand at home for guineas*; and to lean to the side of diminution, in the case of gold going abroad, and of the general exchanges continuing long unfavourable; this seems to be the true policy of the directors of an institution circumstanced like that of the Bank of England. To suffer either the solicitations of merchants, or the wishes of government, to determine the measure of the bank issues, is unquestionably to adopt a very false principle of conduct. [2; 259]

Thus, to Thornton, the main responsibility of the central bank was to regulate the money stock so that it expands at a steady pace roughly comparable to the long-term trend growth rate of output. But the bank must also counter those severe specie drains that periodically threatened to deplete its gold reserve and force suspension of convertibility. These drains were of two types: (1) external or foreign, composed of exports of gold to cover an adverse balance of payments in the country's international accounts and (2) internal, consisting of panic-induced increases in the quantity of gold held by domestic residents. External drains call for a restrictive policy. In the case of a

* Thornton is here referring to the public's demand for gold coin, the guinea being the name for the standard gold coin in use in England at the time.

panic and internal drain, however, the bank should be prepared temporarily to expand sharply its note issue and its loans in order to satisfy the public's demand for liquidity. There need be no conflict between the monetary control and lender of last resort functions, however, since the first refers to the long run and the second to temporary periods of emergency. If the central bank, in its role as lender of last resort, responds appropriately to the threat of a liquidity crisis, the panic will be averted quickly. Consequently, the deviation of the money stock from its long-run target path will be small, both in magnitude and duration.

The second issue considered by Thornton concerns the extent of the lender of last resort's responsibility to individual banks as opposed to the banking system as a whole. Are these responsibilities strongly interrelated? Are banks so interdependent that the failure of one would endanger all the others? Is it therefore necessary that the lender prevent the failure of even unsound banks, i.e., are rescue operations necessary to preserve the stability of the payments mechanism? Thornton's answer is as follows:

> It is by no means intended to imply, that it would become the Bank of England to relieve every distress which the rashness of country banks may bring upon them: the bank, by doing this, might encourage their improvidence. There seems to be a medium at which a public bank should aim in granting aid to inferior establishments, and which it must often find very difficult to be observed. The relief should neither be so prompt and liberal as to exempt those who misconduct their business from all the natural consequences of their fault, nor so scanty and slow as deeply to involve the general interests. These interests, nevertheless, are sure to be pleaded by every distressed person whose affairs are large, however indifferent or even ruinous may be their state. [2; 188]

Thornton, in this passage, makes four key points. First, the lender of last resort's primary responsibility is to the market ("the general interests") and not to the individual bank. The central bank has no duty to sustain particular institutions. Second, he advises against bail-out operations for banks whose distress arises from "rashness," "improvidence," or "misconduct." By subsidizing the risk-bearing function of poorly-managed banks, such rescue operations, he says, would encourage other banks to take excessive speculative risks without fear of the consequences. In short, individual imprudence should be punished by losses. Only if the financial repercussions of such punishment threaten to become widespread should the lender of last resort intervene. His third point, however, is that even in this latter case, aid should be extended sparingly and on relatively unfavorable terms. Finally, he is skeptical of the claim that economic welfare is inevitably harmed when a bank fails. This argument, he notes, would provide every large bank, no matter how poorly run, with an automatic justification for aid. He is aware that occasionally the public interest may be better served by the demise of inefficient banks, i.e., that the resulting improvements in resource allocation may outweigh any adverse spillover side effects of the failure.

The third issue addressed by Thornton was whether the lender of last resort should try to prevent shocks to the financial system. Here Thornton answered in the negative. The lender of last resort exists, he said, not to prevent shocks but to minimize the secondary repercussions following upon shocks. He argued that a panic could be triggered by any kind of "alarm," e.g., rumors of a foreign invasion, an initial bank failure, etc. The central bank has no responsibility for stopping these triggering events. But it does have a responsibility for arresting the panic and stopping it from spreading throughout the system. In his own words,

> . . . If any one bank fails, a general run on the neighboring ones is apt to take place, which if not checked at the beginning by a pouring into the circulation a large quantity of gold, leads to very extensive mischief. [2; 180]

The proper response, according to Thornton, is not to stop the initial failure, but instead to pump liquidity into the market. In Thornton's view, the actual occurrence of a widespread panic would be properly attributable not to the event of the initial bank failure, but to the failure of the central bank to insulate the economy from the impact of that event. In this regard, he distinguished between the effects of (1) the closing of an individual bank and (2) policy errors of the lender of last resort. The closing of an individual bank, he says, by itself contributes very little to "general distress" or "general commercial difficulty." By contrast, policy errors of the lender of last resort create "a general shock to credit" that "produces Distress through the whole Kingdom." [2; 287-8, 304-5]

Finally, Thornton identified the paramount objective or primary purpose of the lender of last resort. Today, opinion varies as to the lender's ultimate objective, with all of the following being mentioned: (1) preventing widespread bank failures, (2) preserving confidence in the banking system, (3) preventing a massive dumping of assets and the consequent collapse of asset values, (4) guarding against the danger of massive currency withdrawals, and (5) insuring that banks and other lending institutions will be able to meet their loan commitments. Thorn-

ton, however, saw the lender of last resort's overriding objective as the prevention of panic-induced declines in the money stock, declines that might produce depressions in the level of economic activity.

The threat of a panic, he argued, tends to cause substantial shifts both in the public's preferences regarding the forms in which money balances are held and bankers' preferences concerning the volume of monetary liabilities—notes and deposits—they are willing to create per unit of reserves. Financial crises or other alarms shake the public's confidence in the ability of the banking system to convert its note and deposit liabilities into gold. Consequently, individuals suddenly desire to hold a larger proportion of their money balances in the form of gold or equally safe liquid assets such as Bank of England notes. The rise in the desired cash ratio (i.e., desired gold holdings as a proportion of other types of money balances) induces widespread attempts on the part of the public to convert notes and deposits into gold or its equivalent. Simultaneously, commercial banks, finding their solvency threatened, will contract their note issues sharply in an effort to raise the reserve ratio. Bankers will want to bolster their reserve ratios both to meet the likely heavy cash withdrawals and also to allay public suspicion of financial weakness.

The result of the rise in the currency and reserve ratios is a contraction in the money stock, unless the central bank introduces compensating changes in its note issue. And if the money stock contracts, Thornton argued, output and employment will be adversely affected. To prevent the onset of depression, therefore, the lender of last resort must temporarily increase its note issue to offset the impact of the rising currency and reserve ratios on the money stock. In short, by preventing panic-induced contractions in the money stock, the lender of last resort contributes to the stabilization of real economic activity.

Walter Bagehot The classical lender of last resort doctrine received its fullest development in the writings of Walter Bagehot. In his seminal 1873 volume, *Lombard Street,* Bagehot stressed many of the same points made earlier by Thornton. Following Thornton, he distinguished between the appropriate response to internal versus external cash drains. An internal drain, he said, should be countered by a policy of lending freely and vigorously so as to erase all doubt about the availability of bank accommodation. An external drain, however, should be met by a sharp rise in the central bank's lending rate, the high interest rate serving to attract foreign gold and encouraging the retention of domestic gold. This latter action, Bagehot thought, was necessary to protect the nation's gold reserve, i.e., the gold component of the monetary base. Thus he stressed that

> . . . the first duty of the Bank of England was to protect the ultimate cash of the country, and to raise the rate of interest so as to protect it. [1; 155]

A sufficient gold reserve, of course, was necessary both for the preservation of the gold standard and for the maintenance of public confidence in the gold convertibility of paper currency. Regarding public confidence, he argued that "a panic is sure to be caused" if the gold reserve falls below "a certain minimum which I will call the 'apprehension minimum.' " [1; 156-7] It follows that the lender of last resort should strive to keep its gold reserves above this critical threshold.

Bagehot thought that a persistent external drain would trigger an internal drain as the public, observing the diminution of the gold stock, would seek to convert deposits and country bank notes into gold. "Unless you can stop the foreign export," he said, "you cannot allay the domestic alarm." In this most likely case where "periods of internal panic and external demand for bullion commonly occur together," the lender of last resort must

> . . . treat two opposite maladies at once—one requiring stringent remedies, and especially a rapid rise in the rate of interest; and the other, an alleviative treatment with large and ready loans. [1; 27]

Therefore, "the best remedy . . . when a foreign drain is added to a domestic drain" is the provision of "very large loans at very high rates." [1; 27, 28] Here is the origin of the famous Bagehot Rule— "lend freely at a high rate."

Like Thornton, Bagehot stressed that last-resort lending should not be a continuous practice but rather a temporary emergency measure applicable only in times of banking panics. And, in perfect accord with his predecessor, Bagehot argued that if the central bank responded promptly and vigorously, the panic would be ended in a few days, by implication an interval not long enough for the money stock to depart significantly from its appropriate long-run growth track.

Bagehot also viewed the lender of last resort as a primarily macroeconomic concept. The central bank, he said, bears the responsibility of guaranteeing the liquidity of the whole economy but not that of particular institutions in the economy. He prescribed last-resort lending as a remedy solely for pervasive general emergencies affecting the entire banking system. He did not prescribe the remedy for isolated

emergency situations affecting an individual bank or a few specific banks. Nor did he intend it to be used to prevent very large or key banks from failing as a consequence of poor management and inefficiency. As shown below, he did not think that support of such distressed key banks was necessary to forestall panics. Like Thornton, he emphasized that the task of the central bank was not to prevent initial failures but rather to prevent a wave of failures spreading through the system.

Bagehot also followed Thornton in arguing that the lender of last resort exists not to prevent shocks but to minimize the secondary repercussions following upon shocks. His views on this point are contained in his analysis of panics. A panic, he said, can be triggered by a variety of exogenous events—"a bad harvest, an apprehension of foreign invasion, a sudden failure of a great firm which everybody trusted." [1; 61] But "no cause is more capable of producing a panic, perhaps none is so capable, as the failure of a first-rate joint stock bank in London." [1; 29] The shock of this initial failure must be contained before it gets out of hand, for "in wild periods of alarm, one failure makes many." The problem is how to "arrest the primary failure" that causes "the derivative failures." Bagehot's solution, quoted below, stresses the liberal provision of liquidity to the whole system rather than loans to the distressed bank.

> A panic, in a word, is a species of neuralgia, and according to the rules of science you must not starve it. The holders of the cash reserve must be ready not only to keep it for their own liabilities, but to advance it most freely for the liabilities of others. They must lend to merchants, to minor bankers, to 'this man and that man,' whenever the security is good . . . . The way in which the panic of 1825 was stopped by advancing money has been described in so broad and graphic a way that the passage has become classical. 'We lent it,' said Mr. Harmon, on behalf of the Bank of England, 'by every possible means and in modes we had never adopted before; we took in stock on security, we purchased Exchequer bills, we made advances on Exchequer bills, we not only discounted outright, but we made advances on the deposit of bills of exchange to an immense amount, in short, by every possible means consistent with the safety of the bank, and we were not on some occasions over-nice. Seeing the dreadful state in which the public were, we rendered every assistance in our power.' After a day or two of this treatment, the entire panic subsided, and the 'City' was quite calm. [1; 25]

Conspicuously absent is any mention of the need to channel aid to specific institutions, as would be implied by bail-out operations. Bagehot's emphasis is clearly on aid to the market rather than to the initially distressed bank. He obviously did not think it necessary to prevent the initial failure at all costs.

Up to this point, Bagehot has been depicted largely as a follower or disciple of Thornton. But Bagehot did more than just elaborate, refine, and coordinate Thornton's analysis. He also contributed several original points that added substance to the lender of last resort doctrine and advanced it beyond Thornton's formulation. At least five of these points deserve mention.

First, Bagehot distinguished between the central bank's extending support to the market after a crisis began and its giving assurance of support in advance of an impending crisis. He argued that the lender of last resort's duty did not stop with the actual provision of liquidity in times of crisis, but also involved making it clear in advance that it would lend freely in all crises. As he put it,

> . . . the public have a right to know whether [the central bank]—the holders of our ultimate bank reserve—acknowledge this duty, and are ready to perform it. [1; 85]

This assurance alone, he thought, would dispel uncertainty about and promote confidence in the central bank's willingness to act, thus generating a pattern of stabilizing expectations that would help avert future panics.

Second, he advocated that last resort accommodation be made at a penalty rate. Borrowers should have relief in times of crisis, but they should be prepared to pay a price that implied a stiff penalty. The central bank has a duty to lend, but it should extract a high price for its loans. A penalty rate had the appeal of distributional equity, it being only fair that borrowers should pay handsomely for the protection and security afforded by the lender of last resort. Distributive justice aside, the penalty rate, Bagehot claimed, would produce at least three additional beneficial results. First, it would encourage the importation and prevent the exportation of specie, thus protecting the nation's gold reserve. It would achieve this result (1) by attracting short-term capital from abroad, and (2) by exerting a deflationary influence on the level of economic activity and domestic prices, thus improving the external balance of trade. Second, the high rate of interest would reduce the quantity of precautionary cash balances that overcautious wealth-holders would want to hold. Without the high rate to deter them, these cashholders might deplete the central gold reserve. As Bagehot put it, the penalty rate would serve as "a heavy fine on unreasonable timidity," prompting potential cashholders to economize on the nation's scarce gold reserve. [1; 97] In this connection, he advocated that the penalty rate be established

. . . early in the panic, so that the fine may be paid early; that no one may borrow out of idle precaution without paying well for it; that the Banking reserve may be protected as far as possible. [1; 97]

Last and most important, the penalty rate would provide an incentive for banks to exhaust all market sources of liquidity and even develop new sources before coming to the central bank. By encouraging individual banks to develop better techniques of money management and the capital market to develop new channels to mobilize existing liquidity, the penalty rate would promote allocative efficiency in the financial system. In short, the penalty rate would protect the gold reserve, strengthen the free market, discourage reliance on the central bank, and insure that recourse to the latter's lending facilities was truly a last resort.

Bagehot's analysis, it should be noted, implies still another use for the penalty rate, namely that of providing a test of the soundness of distressed borrowers. A penalty rate set a couple of percentage points above the market rate on alternative sources of funds would encourage illiquid banks to turn to the market first. Success in obtaining accommodation at the market rate would indicate that lenders judge these borrowers to be a sound risk. The borrowers and their assets would pass the market test. On the other hand, resort to the central bank would tend to indicate weaknesses in the borrowing institutions. The banks may be unable to borrow in the market at the lower rate. Fearing default, lenders may demand a risk premium in excess of the difference between the market and the penal rate. The risk premium would force the stockholders of the banks to make a decision either to close the banks, to arrange a merger with other banks, or to resort to the central bank's lending facility. Either way, the penalty rate will have provided a test of the banks' soundness.

Bagehot's third contribution was his specification of the types of borrowers the lender of last resort should accommodate, the kinds of assets it should lend on, and the criteria it should use to determine acceptability of those assets. Regarding the types of borrowers, Bagehot stated that the Bank of England should be willing to accommodate anyone with good security. Last resort loans, he said, should be available "to merchants, to minor bankers, to this man and that man." The objective of the central bank in time of panic is to satisfy the market's demand for liquidity. It makes little difference, said Bagehot, whether this objective is accomplished via loans to merchants, to bankers, or to whomever.

Concerning the type of collateral on which the central bank should lend, Bagehot's answer was clear. The Bank should stand ready to lend on any and all sound assets, or as he put it, "on every kind of current security, or every sort on which money is ordinarily lent." Besides the conventionally eligible bills and government securities, acceptable collateral should include "all good banking securities," and perhaps even "railway debenture stock." In another passage he makes the point that the "*amount* of the advance is the main consideration . . . not the nature of the security on which the advance is made, always assuming the security to be good." The basic criterion was that the paper be indisputably good in *ordinary or normal times*. The latter qualification is important. It implies that the lender of last resort should not be afraid to extend loans on assets whose current market value is temporarily below book value owing to depression in the securities market.

To summarize, Bagehot felt that few restrictions should be placed on the types of assets the central bank might lend on, or the kind of borrowers it might accommodate. This position was consistent with his advocacy of price as opposed to non-price rationing mechanisms. He recommended that the central bank eschew qualitative restraints—eligibility rules, moral suasion, administrative discretion and the like—and instead rely on the penalty rate to ration borrowing.

Fourth, Bagehot provided a precise delineation of the extent of the lender of last resort's responsibility to individual banks as distinguished from the banking system as a whole. Concerning the question of whether this responsibility included assistance to insolvent banks, Bagehot's answer was an unequivocal no. The central bank's duty, he said, is not to rescue "the 'unsound' people" who constitute "a feeble minority." Such businesses, he said, "are afraid even to look frightened for fear their unsoundness may be detected." [1; 97] In short, the job of the central bank is not to prevent failure at all costs but rather to confine the impact of such failure to the unsound institutions alone.

Bagehot meant for his strictures to apply even to those key banks whose failure, in the absence of central bank action, could shatter public confidence and start a falling-dominoes chain-reaction sequence of financial collapse. Thus, he acknowledges that if

owing to the defects in its government, one even of the greater London joint stock banks failed, there would be an instant suspicion of the whole system. One *terra incognita* being seen to be faulty, every other *terra incognita* would be suspected. If the real government of these banks had for years been known, and if the subsisting banks had been known not to be ruled by the bad mode of govern-

ment which had ruined the bank that had fallen, then the ruin of that bank would not be hurtful. The other banks would be seen to be exempt from the cause which had destroyed it. But at present the ruin of one of these great banks would greatly impair the credit of all. Scarcely any one knows the precise government of any one; in no case has that government been described on authority; and the fall of one by grave misgovernment would be taken to show that the others might as easily be misgoverned also. And a tardy disclosure even of an admirable constitution would not much help the surviving banks: as it was extracted by necessity, it would be received with suspicion. A skeptical world would say 'of course they say they are all perfect now; it would not do for them to say anything else.' [1; 129]

Even in this case, however, Bagehot did not think it appropriate for the central bank to extend aid to poorly-governed key banks. Rather it is "the 'sound' people, the people who have good security to offer" who constitute "the majority to be protected." The lender of last resort function should not be interpreted to mean that unsound banks should not be permitted to fail. Instead it implies that failure should not be allowed to spread to sound institutions. To Bagehot, the distinction is crucial. In his words, "no advances indeed need be made" on assets on "which the [central] Bank will ultimately lose." Again, in another passage he offers assurance that if the lender of last resort "should refuse bad bills or bad securities" it "will not make the panic really worse." To arrest a panic, he says, it is sufficient that the Bank guarantee to provide liquidity to the "solvent merchants and bankers" who comprise the "great majority" of the market. This policy assures that "the alarm of the solvent merchants and bankers will be stayed." [1; 97]

Finally, Bagehot warned against undue reliance on the lender of last resort and stressed the need to strengthen individual banks. The central bank, he pointed out, was not meant to be a substitute for prudent bank practices. Consistent with his laissez-faire, free market philosophy, he argued that the basic strength of the banking system should rest not in the availability of last resort accommodation but rather on the resources and soundness of the individual banks. In this connection he stated that

. . . we should look at the rest of our banking system, and try to reduce the demands on the Bank [of England] as much as we can. The central machinery being inevitably frail, we should carefully and as much as possible diminish the strain upon it. [1; 36]

He described in glowing terms the self-reliant character of "the natural system of banking," composed "of many banks keeping their own cash reserve, with the penalty of failure before them if they neglect it." [1; 160] Elsewhere he pointed out that "under a good system of banking . . . a large number of banks, each feeling that their credit was at stake in keeping a good reserve, probably would keep one; if any one did not, it would be criticized constantly, and would soon lose its standing, and in the end disappear." [1; 52] In relying on its own soundness rather than the resources of the central bank, such a system, he noted, "reduces to a minimum the risk that is caused by the deposit. If the national money can safely be deposited in banks in any way, this is the way to make it safe." [1; 53]

One final observation should be made concerning Bagehot's views on the most appropriate panic-combating instrument of the central bank. Today many banking experts regard open-market operations rather than discount-window accommodation as the most effective way to deal with systemic liquidity crises. Bagehot probably would have agreed. True, he consistently prescribed loans rather than open-market purchases of assets as the means of stopping panics, but only because the latter weapon was not widely used in his day. Had the technique of open market operations been highly developed at that time, he undoubtedly would have approved of its use, at least in those cases where there was no danger of the gold stock being depleted by a foreign drain. On these occasions, Bagehot was for resorting to the most expeditious means of stopping an internal cash drain. Open market operations are quite consistent with his dictum "that in time of panic" the central bank "must advance freely and vigorously to the public . . . on all good banking securities; and as largely as the public ask for them." [1; 96-7] Moreover, open market operations also would have appealed to his preference for market-oriented allocation mechanisms. He would have approved of this particular policy instrument, which regulates the total amount of money but not its allocation among users or uses.

Shortcomings of the Classical Concept A picture of the classical doctrine as a consistent and fully self-contained set of policy rules is not altogether correct, for the doctrine does contain several weaknesses.

First, it offers little in the way of specific guidelines for distinguishing sound from unsound institutions. Yet this is precisely the kind of knowledge the lender of last resort needs in deciding whether to grant or withhold aid. What criteria should the central bank use to determine whether a bank is solvent or insolvent? How does one decide which assets are good and which bad? Unfortunately the classical doctrine does not say.

Second, the classical doctrine shows insufficient awareness of the complexities involved in determining the condition of distressed banks. Neglected is the fact that the activities of examination, auditing, investigation, and analysis—all required for a proper determination of a bank's condition—are necessarily time-consuming processes. In the simplistic classical view, unsound banks are quickly and irrevocably revealed as bankrupt and are allowed to fail at the outset. In the real world, however, things are seldom that simple. In particular, it may be necessary to extend last-resort loans to distressed banks simply to purchase the time required for the authorities to make an informed judgment of the condition of the banks.

The third and perhaps most serious shortcoming of the classical doctrine is its failure to specify the lender of last resort's role in protecting the depositors and noteholders of failed banks. When a poorly-managed bank fails there is good reason for the stockholders and management to be punished by losses. But there is less justification for the depositors and noteholders having to bear the consequences of management errors. Hence it may be desirable that some mechanism be established to transfer the deposit and note liabilities of the failed bank, together with matching assets, to other institutions. Such arranged mergers may take time, however. During the transition period the central bank may have to make loans in order to permit the merger to be accomplished in an orderly fashion. Unfortunately, there is no recognition of this possible merger-facilitating role for the central bank in the classical doctrine.

KEY COMPONENTS OF THE CLASSICAL DOCTRINE

This article has sketched the development of the classical concept of the lender of last resort in 19th century England and pointed out several of the shortcomings of that concept. The principal conclusions can be stated succinctly. The classical doctrine that emerged during the 19th century was a predominantly market-oriented, macroeconomic, penalty-rate concept that stressed the following points:

(1) Assuming the central bank acts appropriately in a crisis, there need be no conflict between its monetary control and lender of last resort duties. Prompt and vigorous action will stop any panic before the money supply has gotten too far off track.

(2) The lender of last resort's responsibility is to the entire financial system and not to specific institutions.

(3) The lender of last resort exists not to prevent the occurrence but rather to neutralize the impact of financial shocks. The lender must prevent the spread of shock waves through the financial system.

(4) The lender's duty is a twofold one consisting first, of lending without stint during actual panics and second, of acknowledging beforehand its duty to lend freely in all future panics.

(5) The lender should be willing to advance indiscriminately to any and all sound borrowers on all sound assets no matter what the type.

(6) In no case should the central bank accommodate unsound borrowers. The lender's duty lay in preventing panics from spreading to the sound institutions, and not in rescuing unsound ones.

(7) All accommodation would occur at a penalty rate, i.e., the central bank should rely on price rather than non-price mechanisms to ration use of its last-resort lending facility.

(8) The overriding objective of the lender of last resort was to prevent panic-induced declines in the money stock (Thornton) or at least the gold-reserve component of the monetary base (Bagehot).

(9) The basic strength of the banking system should rest not on the availability of last resort loans but on the resources and soundness of individual banks. Sound and prudent banking, rather than reliance on last-resort accommodation, is the hallmark of a secure banking system.

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Financial Highlights: 1974

While 1973 was generally viewed as a year of renewed excitement and somewhat unusual developments in financial markets, by 1974 standards it was placid. Looking back over the past year at monetary and fiscal policy and developments in the money and capital markets, one is struck by the intensity of the economic and market pressures that interacted to mold 1974 into an unusual year when judged by historical patterns of market behavior. A few key developments stand out as singularly characteristic of 1974. Pressures in the farm and construction sectors persisted throughout the year, resulting in substantially increased Agency borrowing and restructured patterns of savings flows and mortgage rate behavior. Moreover, continued inflationary pressures along with soaring short-term market rates precipitated a shift in investor preference from long- to short-term securities. Prodded upward by monetary policy expectations, persistent inflation, and liquidity pressures, short-term rates exceeded 1973 highs, shifting the patterns of investment behavior as rate spreads adjusted to market forces.

Monetary Aggregates M_1, currency outside commercial banks plus private demand deposits, measured on an end-month-of-quarter basis, expanded at a seasonally adjusted annual rate of 5.5 percent in the first quarter of 1974. This increase represented a nearly 2 percent jump in growth over the same period a year earlier. Measured on a quarterly average basis, however, M_1 expansion slowed from its pace a year earlier, posting a 5.8 percent increase. Although the quarterly average method of reporting M_1 is more nearly comparable with the measurement of other economic aggregates, the end-month-of-quarter basis is a more sensitive indicator of short-run movements in the money stock. Table Ia shows quarterly M_1 and M_2 growth for 1973 and 1974, reported both ways for comparative purposes. For the remainder of this discussion, however, the end-month-of-quarter rates will be used.

As usual the monthly growth rates of M_1 showed wide fluctuation throughout the first 3 months of 1974. In January M_1 declined at an annual rate of 2.7 percent as a holiday-related accumulation of foreign bank deposits that had raised M_1 in December reversed itself. For February and March, M_1 showed sharp gains of 9.7 and 9.2 percent, respectively. The pronounced increases in the last two months of the quarter can be attributed to sizable income tax refunds and a net redemption of maturing Treasury debt that combined to shift the ownership of demand deposits from the public to the private sector. M_2, time deposits other than large CD's plus M_1, advanced at a 9.3 percent annual rate in the first quarter compared to 10.8 percent in the previous quarter. Rapidly rising bank time and savings deposits boosted M_2 growth throughout the quarter.

Measured on both a quarterly average and end-month-of-quarter basis, growth of the narrowly defined money stock (M_1) accelerated in the second quarter. High U. S. money balances held by foreign official institutions and foreign commercial banks accounted for much of the M_1 growth. In April, the expansion of M_1 slowed somewhat from a month earlier, posting a 6.1 percent annual rate of growth. Over one-third of this rise was accounted for by the growth of foreign official and foreign commercial bank demand balances. By May, when the growth of money balances had eased considerably, the narrow money supply expanded only 4.3 percent. This fig-

Table Ia

GROWTH RATE OF THE MONEY SUPPLY

(seasonally adjusted annual rates)

		M_1		M_2	
		M	Q	M	Q
1973	I	3.4	6.8	7.3	9.1
	II	11.3	7.3	10.6	8.6
	III	0.6	5.5	5.6	7.7
	IV	8.7	5.0	10.8	8.9
1974	I	5.5	5.8	9.3	9.6
	II	6.5	7.2	7.7	8.2
	III	1.6	3.6	4.6	6.2
	IV	4.0	3.3	6.8	6.4

M: Annual rates of growth calculated from average levels in the final months of the quarters.

Q: Annual rates calculated from average levels in all three months of the quarters.

Source: Board of Governors, Federal Reserve System.

ure jumped to 9.1 percent in June with transfers of funds to the oil-exporting countries distorting the money stock figures temporarily, as demand balances bulged briefly before funds were passed on to foreign recipients. Over the second quarter, M_2 grew at a fairly rapid 7.7 percent annual rate, substantially off the pace a year earlier and slightly slower than the first quarter growth. The time and savings component of the broad money supply grew at nearly 8.6 percent over the period. While this growth was slower than in the first quarter, it was still noticeably rapid given the high level of market rates.

In part because of increased upward pressure on money market rates in the preceding months, monetary aggregate growth slowed noticeably in the third quarter. Growth of the narrow money stock decelerated sharply over the period, showing only a 1.6 percent annual rate advance from July to September. The slowdown resulted, in part, from a delayed response to sharp increases in interest rates that occurred during the first half of the year. It also partly reflected a System attempt to cool the fairly rapid monetary aggregate expansion that characterized the first half of 1974. The 1.6 percent third quarter growth of M_1 was down significantly from the 6 percent rate of expansion experienced in the first half of the year; and for the first nine months of 1974, M_1 averaged a 4.5 percent annual rate of growth, contrasting rates of expansion of 8.5 and 6.0 percent in 1972 and 1973, respectively. The broad money stock also experienced slower expansion in the third quarter, posting a 4.6 annual growth rate.

Growth of the aggregates picked up gradually in the fourth quarter from the depressed level of the previous quarter. M_1 grew in October at a 3.8 percent annual rate. The decline in interest rates that began in early October did not exert full influence on M_1 until November when the aggregate expanded at a 6.0 percent annual rate. Influenced by a sharp rise in commercial bank time deposits other than large CD's, M_2 growth spurted at an 8.3 percent annual rate through October; and in November, M_2 expanded at a 9.3 percent annual rate, the highest since June.

The expansion of the aggregates that characterized the first two months of the fourth quarter waned in December as M_1 growth slowed to a 2.1 percent annual rate. Most of the growth was in the currency component with demand deposit balances little changed, a condition true of most of the period since mid-year. M_1 expansion over the second half averaged 2.8 percent, and for the year M_1 posted a 4.5 percent annual rate of growth, off 1½ percentage

Table Ib

MONETARY AGGREGATE GROWTH RATES

(seasonally adjusted annual rates)

		M_1	M_2	ABCP
1974	January	–2.7	6.9	12.3
	February	9.7	11.1	2.9
	March	9.2	9.7	9.2
	April	6.1	8.0	29.6
	May	4.3	4.3	16.9
	June	9.1	10.5	13.6
	July	2.1	5.4	9.2
	August	1.3	5.2	6.4
	September	1.3	3.2	3.9
	October	3.8	8.3	–0.2
	November	6.0	9.3	6.1
	December	2.1	2.5	7.6

Source: Board of Governors, Federal Reserve System.

points from a year earlier. The slowed growth of M_1 and commercial bank time deposits other than large CD's combined to limit M_2 expansion in December to 2.5 percent, reducing M_2 growth for 1974 to 7.1 percent, down from 8.6 percent in 1973.

Another variable that should be mentioned in conjunction with any discussion of monetary aggregates is the adjusted bank credit proxy (ABCP). A complicated network of interacting relationships exists between M_1, M_2, and ABCP. As the total of all member bank deposits subject to reserve requirements plus nondeposit sources of funds such as Eurodollar borrowings and the proceeds of commercial paper issued by bank holding companies or other affiliates, ABCP is a sensitive measure of the volatility of bank liabilities. The total volume of negotiable and non-negotiable CD's outstanding, while only partially included in M_2 figures, are totally included in ABCP and have had a significant impact on money and credit markets over the past few years.

The growth of large CD's accelerated sharply in the first quarter of 1974, growing at a seasonally adjusted annual rate of 31.2 percent after declining 23 percent in the previous quarter. The pattern of growth reflects, in part, the lowering of the marginal reserve requirement on CD's from 11 to 8 percent in December 1973, thus making CD's a less expensive source of bank funds. With short-term rates generally falling during the first quarter, banks could lower their rates and still attract sufficient funds. Toward the end of the quarter, however, as banks began to market CD's aggressively to help meet the burgeoning demand for credit, rates rose dramatically. The rapid expansion of CD volume triggered

an expansion of adjusted bank credit proxy. Showing substantial acceleration over the previous quarter, ABCP advanced at a seasonally adjusted annual rate of 8.1 percent in the January-March period. All components of the proxy, with the exception of Government deposits, showed gains.

Attempting to continue to satisfy the expanding loan demand, banks competed aggressively for CD's throughout the second quarter, to the extent that the volume of CD's outstanding grew at an astonishing 92 percent annual rate over the period. This enormous surge combined with the other ABCP components to account for the 20.0 percent annual rate of credit proxy growth between April and June.

The growth of CD's slowed sharply in the third quarter from the explosive expansion of the previous period. High interest rates and a moderation of the demand for loans precipitated the decline in volume. Even with the sharp third quarter decline in CD volume, on a seasonally adjusted basis, the dollar volume of CD's outstanding rose more in the first nine months of 1974 than in any preceding entire year. Toward the close of the quarter, the 3 percent marginal reserve requirement on CD's with a maturity of more than 4 months was removed in an effort to encourage banks to lengthen the maturity of their liabilities.

The decline in the growth of CD volume, along with slowed demand deposit growth, caused the rate of growth of ABCP to decelerate to a 6.5 percent seasonally adjusted annual rate in the third quarter. Following on the heels of 8.1 and 20.0 percent ABCP growth rates in the first and second quarters, respectively, this deceleration represented a significant turnaround in credit market behavior.

The adjusted bank credit proxy expanded at a 4.5 percent annual rate over the fourth quarter. October figures were slightly distorted due to the failure of Franklin National Bank, which caused a brief inconsistency in the series. For November and December, the credit proxy expanded 6.1 and 7.6 percent, respectively, resulting in a second half growth rate of 5.5 percent. Compared to the first half's rapid acceleration of 14.1 percent, the second half figures represent a significant slowdown. A decline in the rate of growth of demand deposits and CD's precipitated the decelerated credit proxy growth.

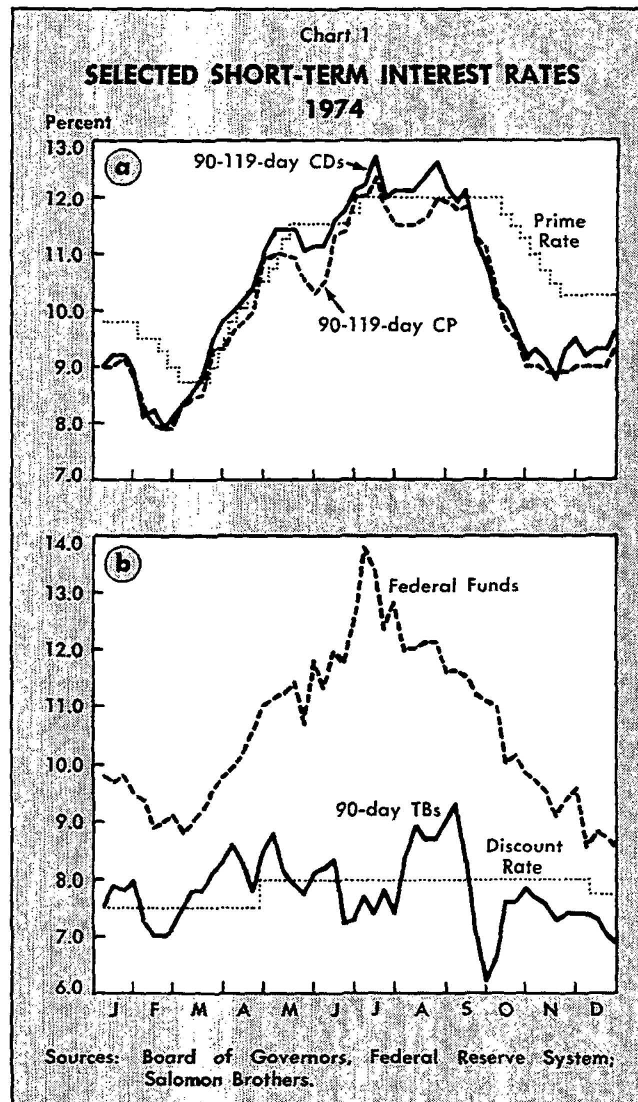
Bank Credit and the Money Market In the market for short-term funds, a combination of circumstances developed that produced an alignment of lenders and borrowers somewhat different from established historical patterns. Traditionally, certain businesses have concentrated their short-term borrowing at commercial banks, while others have preferred to rely on the commercial paper market. Although some shifting between these two sources of funds has occurred in the past, the quantity and extent of such shifts were unusually large on several occasions during 1974 in order for businesses to take advantage of changing interest rate spreads.

Following four consecutive months of sluggish growth, total loans and investments of commercial banks expanded rapidly in the first quarter of 1974, at a seasonally adjusted annual rate of 17.3 percent. The composition of bank credit shifted as the quarter progressed. Prior to a sharp jump in business loans in March, bank credit growth was buoyed by substantial seasonally adjusted increases in bank holdings of U. S. Treasury securities. The exceptional late-quarter surge in business loans, however, provided the major thrust to the rapid expansion of bank credit. Much of the surge in business loans was due, in part, to the need to finance large inventories at higher prices and also to finance some inventory accumulation in anticipation of rising material prices, raw material shortages, and gloomier inflationary expectations. Not all components of bank loans advanced over the first quarter. For example, the growth of both real estate loans and consumer loans continued to slide. The weakness of these latter two loan categories reflected the declines in the consumer durables and residential construction markets that accounted for much of the first quarter decline in real GNP.

As measured by the sum of bank commercial and industrial loans and nonfinancial commercial paper, total short-term business borrowing surged from January to March at an average annual rate of 22 percent. The requirements for financing inventories and accounts receivables played a major role in the exceptional business credit expansion. Another factor that put upward pressure on short-term credit demands late in the quarter was the increased postponements and cancellations of planned bond issues in the face of rising long-term rates. By late March, as increases in the prime rate lagged behind commercial paper rate gains (Chart 1A), the weight of business credit demand shifted out of the paper market toward commercial banks. This surge in short-term credit demands worked to push rates on short-term instruments toward 1973 peak levels. During the first quarter most short-term rates moved in a U-shaped pattern, declining 1¼ percentage points in the first half of the period, then rising in the latter half, with little net change over the period.

From early April through June, commercial banks continued to extend huge amounts of credit, as business loan demand showed continued strength. The volume of business loans outstanding advanced at a 23 percent annual rate over the quarter, with total bank credit expanding only 11.8 percent. Unsettled conditions in the commercial paper market, combined with a favorable spread between the commercial paper rate and the prime rate in late April and early May and again at the end of June, pushed the demand for business loans to record levels, as borrowers withdrew from money and capital markets. Market reaction to the financial difficulties of two large banks —one foreign and one domestic—and a large public utility company aggravated the shift of investor interest toward only the highest quality securities. Borrowers with less than a prime rating found themselves unable to market new commercial paper or to roll over existing debt. The new emphasis on quality instruments worked to increase the already heavy demand for business loans, precipitating sharp increases in the prime rate during the quarter. Commercial banks raised their prime lending rates in ten ¼ percentage point steps to a record level of 11.75 percent by late June. A key factor contributing to the prime rate increases was the need for banks to raise offering rates on CD's to obtain funds to cover their burgeoning loan demands. Rates on most other private short-term debt instruments also surged sharply upward and by the end of the quarter most short-term rates stood at record levels. Firm monetary policy, continued intense inflationary expectations, and the historically high level of business loan demand combined to push rates up further. The news of isolated instances of liquidity problems also aroused tensions throughout the short-term market. For the period, the Federal funds rate rose over 2½ percentage points to close the quarter at nearly 12 percent (Chart 1B), while the 3-month commercial paper rate jumped 2¾ percentage points and ended June at 25 basis points above the prime rate.

Conditions in the money market quieted somewhat in the third quarter. Bank credit expansion eased considerably, expanding at only a 5.6 percent annual rate compared to an 11.8 percent advance the previous quarter. Banks sold off heavy amounts of U. S. Treasury securities during the quarter, while their other investment holdings remained relatively stable. The major factor influencing the slowed growth of bank credit was a sharp fall in business loan demand. On a seasonally adjusted basis, the volume of business loans rose less than 1 percent in September, following a 21 percent gain in July and August. For



the quarter as a whole, business loans grew at a seasonally adjusted annual rate of 14.2 percent, which, though high by historical standards, was 10 percentage points off the growth rate for the first six months of the year. A shift of borrowers out of the bank credit market into the commercial paper market, as paper rates fell below the 12 percent prime rate, nurtured the slowed business loan growth. Most private short-term rates rose sharply at the beginning of the third quarter as concern over inflation, firm monetary policy, and the continued strong demand for funds permeated short-term credit markets. In September, however, several developments effected a dramatic turnaround in rates. First, the Federal funds rate began to decline, indicating to market participants that an easing of monetary policy was in progress. Second, a reduction in the marginal reserve requirement on large CD's of more than four months matur-

ity was interpreted by the market as another sign of an easing in policy. Third, the excessively strong business loan demand eased as the spread between the paper rate and the prime rate returned to a more traditional alignment.

Reflecting the continuing decline in short-term market rates, the lagged response of bank prime rates, and generally stringent bank lending policies, total loans and investments at commercial banks were unchanged in October and expanded at only a 4 percent annual rate in November. The growth of business loans continued to decline through November, as many prime borrowers shifted their interest to the short-term securities markets to take advantage of the favorable spread between short rates and the prime rate. Business loans grew at about a 6 percent rate over the September-November period, well below the 14 percent third quarter expansion.

U. S. Government and Agency Markets In addition to the impact of corporate and municipal borrowers on long-term credit markets, the U. S. Treasury also had a substantial influence on market behavior during 1974. The financial needs of the Treasury in any given period are dictated by the excess of current Federal expenditures over current Federal revenues. Also, the Treasury must refund or retire those previously-issued securities that reach maturity during the period.

Early in 1974, the deficit for the fiscal year ending in July was forecast to be in the $4 to $6 billion range, with spending of about $273 billion and revenues in the neighborhood of $268 billion. By May, however, the budget deficit prediction was down to between $3 and $4 billion with spending reduced to just over $269 billion and receipts at $266 billion as budget cuts accompanied the fight against inflation. The final Federal budget deficit for fiscal 1974 was $3.5 billion, substantially below the $14.4 billion deficit a year earlier.

Late in January the Treasury announced plans for its first refunding operation of the year. This refunding would provide funds for retiring the $4.5 billion publicly held notes and bonds maturing February 15 by auctioning 3 issues to the public: (1) $2.25 billion 3¼-year notes at 6⅞ percent, (2) $1.5 billion 7-year notes at 7 percent and, (3) up to $300 million of 19½-year bonds at 7½ percent. The total package represented a pay down of $0.5 billion, thus arousing a positive market sentiment. Although interest in the refunding package was initially mixed, by the time of the auctions all the issues attracted good interest and were sold at prices above par.

After auctioning $1.5 billion of tax anticipation bills (TABs) on February 26, the Treasury next came to market with a $4 billion new cash borrowing in late March, consisting of $2.5 billion of 85-day tax anticipation bills and $1.5 billion 2-year 8 percent notes. The financing was well received, at least partly reflecting commercial banks' ability to pay for the bills by crediting Treasury Tax and Loan Accounts.

As the second quarter opened in April a cautious atmosphere prevailed in the Treasury market, partially due to relatively firm conditions in the money market, the announcement of a sizable Agency offering, and the close proximity of the May Treasury refunding. Terms of the refunding were designed to refinance $5.6 billion of publicly held securities maturing May 15. $4.1 billion would be retired by auctioning three issues to the public. $2 billion of 25½-month notes and $1.75 billion of 4½-year notes would carry a coupon rate of 8¾ percent, while $300 million of 25-year bonds would be placed at 8½ percent. The Treasury would use available cash balances to cover the remaining maturing issues. The terms of the refunding aroused substantial interest, especially from the small investor in view of the $1,000 minimum denomination. In addition, the Treasury announced plans to increase its weekly bill auction by $200 million each week for five weeks beginning mid-May.

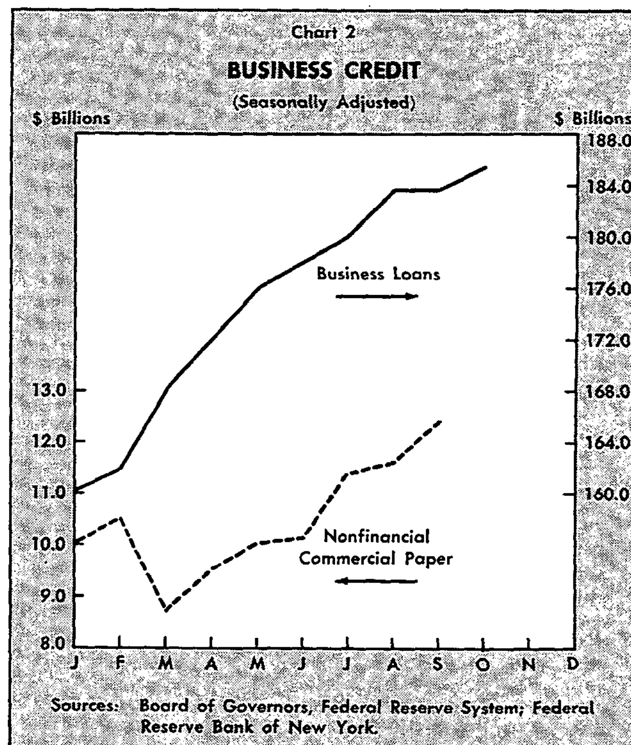
Toward the end of the second quarter the Government securities market benefited from the growing concern of market participants over liquidity problems that had recently come to light. Many participants were eager to shift part of their portfolios into the "safer" Treasury securities; thus, an $800 million strip auction of bills to raise cash in late May was well received by both large and small investors. For most of the remainder of the second quarter the Treasury market was shielded from the inflationary worries plaguing other sectors of the securities markets. Investors, including foreign official institutions from oil producing countries, showed a strong preference for Treasury obligations, especially bills. By the last half of June, 3-month bill rates averaged a record 4 percentage points below rates on CD's or commercial paper of the same maturity, considerably above the normal 1 percentage point spread (Chart 1). A substantial part of the demand for bills came from foreign central banks, but continued interest from individuals who found yields on bills more attractive than those on alternative investments also contributed to the strong demand.

The high level of short-term rates, bulging business loan demand, and deteriorating conditions in the

capital markets caused apprehension in the long-term Treasury market at the start of the third quarter. Yields on Treasury issues soared in August as new bill offerings bulged and gloomy price statistics were reported. As the Treasury approached the August refunding, the announced terms attracted intense interest from the small investor. The offering was structured to refund $4.3 billion of publicly held notes and to provide $100 million to cover part of the Treasury's short-term cash needs. At the same time the Treasury increased the regular weekly bill auction of 3- and 6-month issues by $200 million to $4.7 billion. Terms of the refunding included $2.25 billion of 9 percent 33-month notes, $1.75 billion of 9 percent 6-year notes, and $400 million of 8½ percent bonds maturing in 1999. Interest in the two note issues, particularly from the small investor, was unprecedented. Noncompetitive allotments for the two issues accounted for 55 percent of the total volume. Both the 9 percent rate and the availability of $1,000 minimum denominations attracted the small investor. Not since November 1970 when the Treasury started using the auction technique for note issues had the noncompetitive subscription been so large. Demand for the final $400 million of bonds was dampened by a rapid rise in wholesale price figures and the issue was sold at a price below par to yield 8.63 percent. As additional bills came to market later in August, dealer inventories bulged and bill rates soared until early September. As the month progressed, the continued strength of noncompetitive tenders at the weekly bill auctions combined with easing in the money market and continued strong demand for bills by foreign official institutions and other investors with a preference for high quality issues to drive rates on auctioned bills well below those on outstanding issues of comparable maturity. By the end of September rates on 3-month bills had dropped to the lowest level since May 1973 (Chart 1B). Yields on Treasury coupon securities also fell at the close of the third quarter in response to the sharp declines in the short end of the market.

After a small upswing in short-term bill rates in October, rates on most Treasury issues moved irregularly downward over the fourth quarter. Even though issue supplies were abundant throughout the quarter, market expectations of a broad decline in interest rates buoyed investor sentiment, and demand was generally strong. Declines in both the Federal funds and discount rates reinforced this belief.

Heavy financing activity dominated the Government securities market during the fourth quarter.



The Treasury raised $1 billion in new cash at the regular weekly bill auctions in October. In addition the Treasury undertook a $2.5 billion cash refinancing program, auctioning $1.5 billion of 7½-month bills and $1 billion of 4½-year notes at 7.93 and 7.89 percent, respectively. Late in October the terms of the quarterly refunding were announced with three issues making up the package. Treasury plans included refunding $4.3 billion publicly held notes and bonds maturing November 15 and raising $550 million cash by auctioning $2.5 billion of 3-year notes, $1.75 billion of 7-year notes, and $600 million of 8½ percent 25-year bonds. The 3-year notes were restricted to a $5,000 minimum denomination in an effort to reduce pressure on thrift institutions. Strong market interest in all three issues resulted in yields of 7.85, 7.82, and 8.21 percent, respectively.

In addition to the refunding package and the extra $200 million of bills auctioned weekly, the Treasury came to market with bills on three occasions in November. $2.25 billion of April 1975 tax anticipation bills were priced to yield 7.43 percent; $1 billion worth of additions to outstanding short-term bill series were offered November 21; and $1.25 billion of June 1975 tax anticipation bills were auctioned at 7.52 percent. Banks were not permitted to credit their Treasury Tax and Loan Accounts as payment for purchases in either of the TAB auctions.

The market for Government securities was highlighted by two separate occurrences in December that reflected the "encouraged" market tone. (1) The Treasury did not raise new cash at the third weekly bill auction for the first time in 10 weeks, and (2) in the regular monthly auction the average issue rate dropped to 6.63 percent, the lowest level since March. The Treasury came to market with two note financings at the close of the quarter, a $2.3 billion 2-year note issue and a $1.25 billion 7⅞ percent issue maturing in May 1979. Proceeds of the two auctions were to redeem $1.9 billion of debt maturing at year-end and to raise $1.65 billion of new cash.

A factor that must be dealt with in any discussion of the Government securities market, especially in a year such as 1974, is the market for Federal Agency securities. Although active in the past, the Agency market blossomed during 1974 as pressures in a wide variety of market sectors, particularly the farming and construction markets, caused increased demand for Agency funds to be used in support operations. As investors became nervous over the liquidity problems that came to light around mid-year, Agency issues began to look even more attractive because of their high quality status. The market for Agencies benefited from and reacted to many of the same pressures and stimuli that affected the Government market throughout the year. A good tone or moderate investor resistance in either market permeated the other, so the prevailing pressures will not be reiterated in this discussion. It is helpful, however, in understanding the impact of Agency financings to look at some specific issues that came to market.

The Agency market in the first quarter was dominated by farm and mortgage related issues. There were offerings by three major farm credit agencies during January and February. Federal Land Banks came to market with $300 million of 5-year bonds at 7.10 percent, $360 million 30-month bonds at 7.05 percent, and $389 million 5½-year 7.15 percent bonds. The Banks for Cooperatives and Federal Intermediate Credit banks marketed bond issues of $556 million and $753 million, respectively, in January and came back to the market in March with $251 million and $608 million bond issues. Around mid-quarter, a $600 million Federal home loan bank issue was offered and met with enthusiastic investor response. The offering represented a net pay down of $650 million of debt, reflecting reduced dependence of S&L's on Federal home loan banks as a source of advance funds as the growth of savings deposits resumed and mortgage demand slackened.

Throughout the second quarter, the major farm credit agencies marketed over $2 billion worth of bonds with varying maturities, as strong support for the farming sector continued. Although investor reaction was somewhat mixed around mid-quarter, most issues sold out well. On the housing front, support operations picked up over the quarter as evidence of withdrawals from thrift institutions mounted. Federal home loan banks came to market with a total of $3.5 billion of bonds in two separate issues. Of this total, $2.5 billion was new capital, and both issues met enthusiastic investor response. The Federal National Mortgage Association (FNMA) also marketed a large package totaling $1.5 billion and consisting of three separate debenture offerings. $750 million of this was to raise new cash as the mortgage market tightened.

At the start of the third quarter, in late July, the Federal Financing Bank held its first auction, selling $1.5 billion of 8-month bills at 8.05 percent. Bearing all the characteristics of Treasury bills, the bills were auctioned with full tax and loan account privileges. By coordinating the borrowing activities of several Federal agencies, the Financing Bank hoped to reduce financing costs. The proceeds of this first offering repaid $1.4 billion of advances from the Treasury and covered some current advances to the agencies.

In addition to this marketing, farm credit and housing related agencies continued their high level of offerings throughout the third quarter. In July Federal Land Banks, Federal home loan banks, Banks for Cooperatives, and Federal Intermediate Credit Banks came to market with $3.6 billion worth of bonds with varying maturities, mostly intermediate-term. During August a whopping $4.6 billion housing and farm credit related debt was marketed. Expectations of future heavy financings coupled with already large dealer inventories and the surge in Treasury yields weakened the Agency market somewhat during August. Prices of Agency securities moved up at the close of the third quarter with new issues generally well received. Housing and farm credit agencies continued their heavy volume of offerings, with the Federal home loan banks raising $1.7 billion of new capital.

The Agency market was characterized by strong investor interest and declining yields during the fourth quarter. Both housing and farm credit agencies continued to come to market with large offerings, some of which were to raise new cash. On November 26, the Federal National Mortgage Association sold $1.2 billion of debentures in a three-part pack-

age, raising $500 million new cash. Yields ranged from 7.50 percent on the debentures maturing September 1976 to 7.95 percent on the 9¾-year debentures. The Federal home loan banks marketed three offerings over the quarter: (1) $1.5 billion of bonds varying in maturity from 2 to 7 years and yielding an average 8.63 percent; (2) $500 million of 2¼-year 8.05 percent bonds and $500 million of 5-year 8.15 percent bonds, representing a net redemption of $216 million; and (3) $500 million of 5-year bonds for new cash at a yield of 7.5 percent.

The farm credit agencies came to market in each month of the quarter with a total of $4.2 billion consisting of several issues of varying maturities. The offerings raised about $580 million of new cash, were generally well received, and carried steadily lower yields as the quarter progressed.

Corporate and Municipal Securities The volume of securities offered by corporations during 1974 far exceeded the 1973 level (Chart 3). The average monthly volume of new corporate debt securities issued during 1974 was $2,111 million; for all of 1973, new issue volume averaged $1,075 million per month. On the other hand, the average monthly voltime in the tax-exempt sector was only slightly more expansive at $1,879 million than in 1973 when the average monthly offering was $1,865 million.

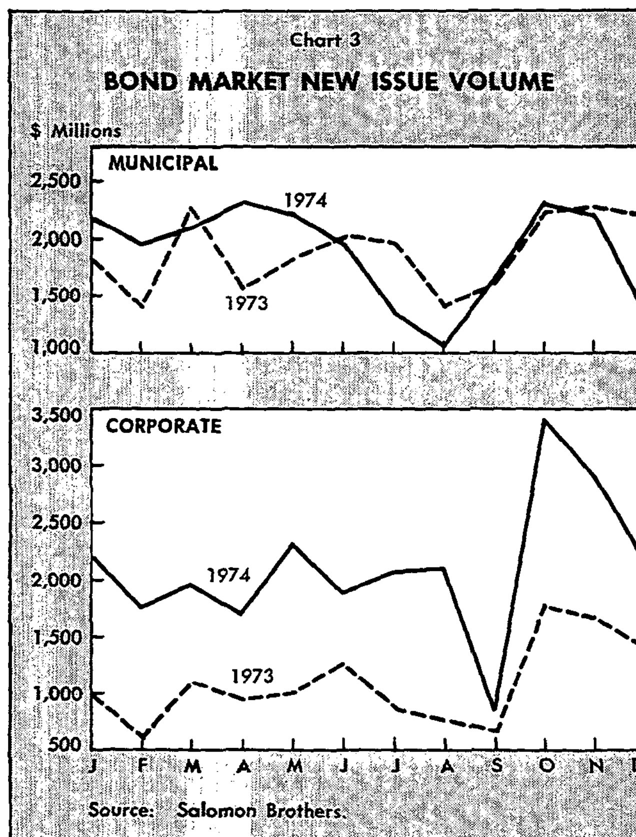
Yields on long-term bonds increased on balance over the first quarter of 1974. By the end of March, yields in the corporate sector were at their highest level in more than 3 years. Seeking to finance capital outlays and improve liquidity ratios, corporations placed heavy demands on the capital market during the first quarter, issuing $5.9 billion in debt. Offerings would have been even higher if some scheduled issues had not been canceled as interest rates rose in late February and March. State and local governments were also heavy borrowers in the first quarter, although the $6.2 billion of municipal bonds offered was down somewhat from the large fourth quarter 1973 volume. Rates on municipals did not rise as noticeably as corporate rates. As sharp price rises pushed individuals into higher tax brackets, tax-exempt issues became more popular thereby holding rates down.

Capital market new issue volume remained high into the second quarter. Yields were up 70 to 90 basis points, with the sharpest gains experienced in June. After showing continued strong investor demand in the early part of the quarter, the long-term market firmed around mid-May. A large public utility's liquidity problems, combined with rising short-term rates, caused many investors to resist all but the most creditworthy issues, greatly increasing spreads between yields on high and low quality bonds. Rates on lower quality debt rose to unacceptable levels and issues were postponed or canceled. Corporations turned increasingly to banks for funds as conditions in the market deteriorated at the close of the second quarter. In addition, new stock issues dropped to the lowest seasonally adjusted quarterly volume since 1968, with stock prices falling to their lowest point in 3 years. In contrast, the volume of tax-exempt issues remained high throughout most of the quarter with good investor reception in spite of higher interest rates. A record-sized New York City bond issue artifically inflated municipal bond volume figures for the second quarter, but even without this issue, volume remained near a record high level. Late in the quarter some cutbacks in offerings were announced as the available rate terms exceeded statutory ceilings.

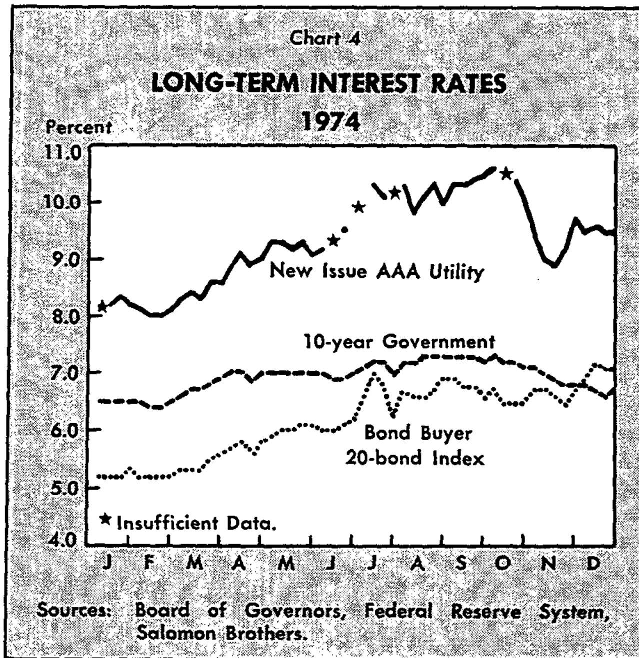
Corporate bond volume dropped only slightly over the third quarter. The new issue volume that was lost through postponement of utility issues was offset by 10 floating-rate note offerings. A newcomer to the capital market, these notes offered a fixed return for a specific period after which the rate was equal

Chart 3

BOND MARKET NEW ISSUE VOLUME



Source: Salomon Brothers.



to the 3-month Treasury bill rate plus a premium. The notes offered good call protection along with periodic redemption opportunities at par after a set period of time.

Throughout all of the quarter, long-term market participants showed preferred interest in high-quality, intermediate-term credit issues. Volume in the tax-exempt market dropped off sharply through September as a large number of issues were postponed because rate ceilings precluded acceptance of any bids. Yields in both sectors of the capital markets rose, on balance, over the quarter. Buffeted by the ill winds of inflation and investor pessimism, the equity market skidded through the third quarter as uncertainty over the future course of the economy continued to pervade investor outlooks. Stock prices fell nearly 25 percent over the quarter with the volume of margin credit outstanding moving down to the lowest point since 1971.

In the fourth quarter tax-exempt yields rose on net while corporate yields fell (Chart 4). The Bond Buyer 20-bond index reached a record 7.15 percent for the week of December 13 before declining slightly by year-end. A lack of demand for tax exempts by institutional investors and a net decline in tax exempts at weekly reporting banks during the quarter were two factors that contributed to the yield disparities. Both corporate and municipal bond markets suffered from a congestion of new offerings throughout the fourth quarter. Corporate volume rose to an astounding $8.5 billion while tax-exempt new issue volume was up only slightly over the previous quarter at $5.9 billion. Investor interest was fairly steady over the quarter, with selectively better response to the high quality issues.

Equity markets improved gradually and irregularly from the start of the fourth quarter through mid-November. The downward slide in the Dow Jones index that began the third week in November ended with the index closing December 6 at 577.50, its lowest level in 12 years. A steady improvement in the index followed and by year-end it was above 600 at 602.16. The cost of equity funds remained relatively high, however, so no dramatic upsurge in stock issuance occurred.

Thrift Institutions and the Mortgage Market

Over the first quarter, thrift institution deposits continued to grow at a moderate pace. Deposits at savings and loan associations and mutual savings banks grew at a seasonally adjusted annual rate of 8.7 percent between December and March, essentially the same rate of gain as in the previous 3-month period. Higher yielding certificate deposits accounted for all the deposit gains as passbook account balances remained substantially below early 1973 peaks. Early in the quarter, during January and February, thrifts were able to decrease their debt and increase their liquid asset holdings, thus halting a year-long downswing in mortgage commitments outstanding. As market rates began to rise sharply in March, net inflows of savings slackened and borrowing from the Federal home loan banks picked up. The higher interest rates on market instruments attracted individual savers, as indicated by the expansion in the number of noncompetitive tenders at the weekly Treasury bill auctions. The volume of such tenders rose to its highest level since 1970.

Net mortgage debt formation remained near the reduced rate of the previous quarter when measured

Table II

MORTGAGE INTEREST RATES*

	1973	1974		1973	1974
January	7.68	8.52	July	7.87	8.96
February	7.70	8.62	August	7.94	9.09
March	7.68	8.64	September	8.17	9.19
April	7.71	8.67	October	8.31	9.17
May	7.71	8.74	November	8.39	9.32
June	7.79	8.85	December	8.49	—

* FHLBB series for effective rate on purchase of newly built homes.

Source: Board of Governors, Federal Reserve System.

on a seasonally adjusted annual basis. The increase in mortgage holdings in most of the first quarter reflected a run-off of some of the heavy mortgage commitments made during the first half of 1973 when housing demand was quite strong. The relative strength of deposit flows at thrift institutions early in the quarter helped to cushion mortgage rates from the impact of sharply rising market rates. In recognition of the eventual rise in mortgage rates, however, ceiling rates on FHA and VA mortgages were raised ¼ percentage point to 8½ percent in April.

Reflecting the continued rise in interest rates on most market instruments, deposit growth at nonbank thrift institutions slowed sharply during the second quarter. Total deposits at savings and loan associations and mutual savings banks grew at a seasonally adjusted annual rate of 4.2 percent from April to June. Mutual savings banks bore most of the burden of slowed deposit expansion, experiencing only a 1 percent deposit expansion over the quarter and a net deposit outflow during May. Under pressures of disintermediation, savings and loans covered their mortgage commitments by borrowing from the Federal home loan banks, reducing their liquid asset holdings, and tapping established credit lines at commercial banks.

Net mortgage debt formation at thrift institutions, however, rose substantially over the second quarter at a seasonally adjusted annual rate of 9.9 percent, reflecting the eased money market conditions and strong deposit flows of the first quarter. The rise in mortgage debt formation was also spurred by direct and indirect financing from Federally sponsored credit agencies. The advance in mortgage lending was accompanied by rising interest rates. The average effective rate on conventional mortgages, as reported by the Federal Home Loan Bank Board, climbed to a record 8.85 percent by the end of the second quarter. To align FHA and VA mortgages with the prevailing market, ceiling rates on such mortgages were raised in two steps from 8½ percent in April to 9 percent in early July.

Following the trend established in the second quarter, thrift institution deposit growth decelerated further in the third quarter. Slowing to a seasonally adjusted annual rate of 2.6 percent, deposit growth was down 1½ percentage points from the rate of deposit expansion in the second quarter. Such factors as the keen interest in the Treasury's August refunding, the initially well-received new floating-rate securities, purchases of money market mutual funds, a decline in personal savings, and the continued high level of market interest rates combined

Table III

FEDERAL NATIONAL MORTGAGE ASSOCIATION TOTAL MORTGAGE ACTIVITY

($ millions)

		Mortgage Volume			Mortgage Volume
1966		4,396	1974	April	25,263
1969		10,950		May	25,917
1971		17,791		June	26,559
1972		19,791		July	27,304
1973		24,175		August	28,022
				September	28,641
1974	January	24,424		October	29,139
	February	24,529		November	—
	March	24,875		December	—

Source: Board of Governors, Federal Reserve System.

to aggravate declining deposit flows. Mutual savings bank deposits grew more slowly than deposits of S&L's. For the 9-month period ending in September, MSB deposits expanded at a seasonally adjusted annual rate of 2.2 percent, while S&L deposits grew at a 6.4 percent rate. Although below the growth experienced in the final half of 1973, thrift institution deposits showed more rapid growth through the first three quarters of 1974 than during the periods of slow deposit growth in 1966 and 1969. Moreover, the base of deposits is currently more than double that in either 1966 or 1969. The third quarter level of deposits at savings and loans stood at nearly $240 billion compared to $110 billion in 1966 and $134 billion in 1969. Another factor to be considered, however, is that the level of mortgage commitments at S&L's ranged around $12 billion through the first 9 months of 1974, against only $2 billion in 1966 and $4 billion in 1969. Even with the substantial deceleration in the growth of mortgage holdings over the third quarter, it still exceeded the growth of deposits over the same period. To finance the lending thrifts borrowed heavily from Federal home loan banks.

Interest rates well below late summer and early fall highs precipitated increased savings inflows at thrift institutions throughout the fourth quarter. Preliminary data indicate that total thrift institution deposits closed the year at $341.1 billion on a seasonally adjusted basis, with the fourth quarter posting the sharpest rate of expansion. The tone of the mortgage market improved as the fourth quarter progressed; however, net mortgage debt formation continued to slacken throughout the quarter with no apparent upswing in commitments evident.

B. Gayle Ennis

FORECASTS 1975

Will the "Year of the Hare" Outrun the Hounds?

The process of economic forecasting is usually misunderstood and often maligned by the public at large. Each year the Federal Reserve Bank of Richmond compiles various forecasts of the economy's performance for the coming year. These forecasts, published by leading business and academic economists, are not really attempts to foresee the future. Professional forecasters can only evaluate the implications of current trends, and—given certain assumptions about future events—extend these trends into the future. If unforeseen events occur, the "prediction" does not come about, and, unfortunately for the forecasters, the one certainty in forecasting is the unforeseen events *always* occur. The economic forecast of the 1974 economy could not have incorporated the effect of a Presidential resignation. Even astrologers missed on that one. Nor could the economist have been expected to foresee another relatively poor crop year, skyrocketing sugar prices, and the full extent of the liquidity crises both here and abroad.

There is a legitimate area for debate about forecasting performances if the forecasters seemed to miss the implications of development that were in existence when they made their forecasts. For example, the 1973 forecasts underestimated the rate of increase of prices in 1974 by a large margin. Viewing 1974 from hindsight, the inflationary trend, which was well entrenched by the time that the forecasters made their forecasts, might have been expected to worsen considerably. In late 1973 and January 1974, however, when the forecasts were published, the economy was slowing; and forecasters expected this slowing to affect the rate of price increase much more than it did. Thus, debate about their price predictions should revolve around the question of whether they were justified in expecting a slowing in prices based upon their knowledge at the time.

Last year the forecasters underestimated the actual GNP total for 1974 by only $2.4 billion. They were considerably off target, however, for real GNP, or GNP measured in constant 1958 dollars. The estimate was for a rise in the aggregate of 1.2 percent; instead, it fell approximately 2.1 percent.

This year the principal forecasting problems have been whether the economy will recover in 1975, and if so, when and by how much? The forecasters were not able to take account of the President's economic package. Nevertheless, the consensus that was reached is that recovery can be expected in the second half of the year. Some of the reasons that have been advanced to explain the second half upturn have been:

1) A reduction in the rate of inflation,
2) A decline in the price of oil,
3) Recovery in productivity,
4) Recovery in automobile sales,
5) A rebound in housing starts, and
6) The inventory correction ending by midyear.

The reduction in the rate of inflation is expected to have a favorable impact upon the financial sector of the economy, leading to lower interest rates and generally easier credit conditions. Also, it is expected to stop the deterioration in real spendable earnings for consumers. As employers have already begun to lay off hitherto unproductive workers, output per man-hour should improve substantially, leading to more slowing in price pressures. Automobile sales are expected to recover by midyear, if only because of the aging of the current stock. Housing starts are expected to begin their recovery in the spring, because of easier credit conditions and improving real incomes for consumers.

Many forecasters view the current sharp downturn as an inventory correction. Fueled by the boom, many industries, not only automobile and related, but also consumer durables in general—textiles, apparel, and furniture—and housing saw increases in their inventories in 1974 as their unit sales fell off. The forecasters think that these excess inventories will have been worked off by the middle of next year, and firms will cautiously begin to rebuild their stocks.

The consensus of our forcasters is that current dollar GNP will increase 8.3 percent in 1975. Price increases, however, are expected to account for the entire gain, so real GNP is expected to remain approximately the same as it was in 1974. The con-

sensus has the unemployment rate averaging 7.3 percent for the year, an increase of approximately 1.7 percentage points from the 1974 average.

The consensus of our quarterly forecasters also shows recovery in the second half. Gross national product measured in 1958 dollars is projected to decline in the first quarter by $1 billion, increase in the second by $3 billion, followed by increases of $7 billion in the third and $9 billion in the fourth.

This article attempts to convey the general tone and pattern of some 50 forecasts received by the Research Department of this Bank. Not all of them are comprehensive forecasts, and some incorporate estimates of future behavior of only a few key economic indicators. The consensus of the annual forecasts differs from the consensus drawn from the quarterly forecasts, since different forecasters were applying their skills. Since there were varying assumptions in the individual forecasts regarding events in 1975, the general tone and pattern may not necessarily be based upon the more accurate assumptions, but only the most prevalent.

This Bank publishes also a Business Forecasts *booklet, which is a compilation of representative business forecasts with names and details of the various estimates.* No summary article can begin to be as informative as the actual forecasts themselves, so serious readers are urged to look at the individual forecasts in more detail in *Business Forecasts 1975.*

The views and opinions set forth in this article are those of the various forecasters. No agreement or endorsement by this Bank is implied.

1974 FORECASTS IN PERSPECTIVE

The consensus forecast for 1974 GNP, published in last year's March/April ECONOMIC REVIEW called for an increase of 7.6 percent over 1973. The forecasts for increases in GNP ranged from a low of 5.6 percent to a high of 9.3 percent. Using the revised 1973 GNP figure of $1,294.9 billion, the consensus forecast for 1974 GNP would have been $1,393.3 billion and the range, from $1,367.4 billion to $1,415.3 billion. Increasing prices were predicted to account for most of the 7.6 percent gain in GNP. GNP measured in constant dollars, or real GNP, was expected to rise by only 1.2 percent.

Latest estimates by the Department of Commerce indicate a 1974 current dollar GNP total of $1,395.7 billion, which is only $2.4 billion higher than the consensus forecast of business and academic economists. Historically speaking, this forecast was very close to the mark. However, the forecasters were far away from the target on real GNP. Instead of increasing 1.2 percent as they predicted, the constant dollar measure of output is currently estimated to have fallen by 2.1 percent. Consistent with their performance in past years, the forecasters made their mistake in underestimating the rate of price increase. The implicit deflator, which is the price index for items included in the GNP, was forecast to increase 6.4 percent during 1974; in fact, it increased 10.2 percent. The large underestimate of price increases is understandable, for double digit inflation has been, at least until recently, almost unthinkable. But the forecasters, nevertheless, worsened their already poor performance in predicting price changes.

The consensus of quarter-by-quarter forecasts for 1974 was for current dollar GNP to rise by approximately $19.8 billion in the first quarter, $19.0 billion in the second quarter, $24.5 billion in the third quarter, and $28.1 billion in the fourth. The realized increases came to $14.8 billion, $25.0 billion, $32.5 billion, and $7.7 billion for the four quarters, respectively. The quarterly projections for real GNP were for changes of —$0.9 billion, —$0.5 billion, +$4.0 billion, and +$5.6 billion. For the four 1974 quarters, however, GNP in constant dollars actually fell by $15.2 billion, $3.4 billion, $4.0 billion, and $19.2 billion, respectively. Thus, the consensus path forecasted for the economy in 1974 turned out to be inaccurate. The recovery that was forecast for the

RESULTS FOR 1974 AND TYPICAL FORECAST FOR 1975

	Unit or Base	Preliminary 1974	Forecast 1975*	Percentage Change 1973/1974	Percentage Change 1974/1975
Gross national product	$ billions	1,396.7	1,511.5	7.9	8.3
Personal consumption expenditures	$ billions	877.0	963.1	9.2	9.8
Durables	$ billions	127.8	134.9	—1.5	5.3
Nondurables	$ billions	380.2	414.4	12.8	9.1
Services	$ billions	369.1	410.8	9.7	11.2
Gross private domestic investment	$ billions	208.9	211.2	—0.3	1.4
Business fixed	$ billions	149.6	161.2	9.2	8.2
Residential structures	$ billions	46.0	43.8	—19.2	—4.3
Change in business inventories	$ billions	13.4	3.0	—	—
Government purchases	$ billions	308.8	341.8	11.5	10.9
Net exports	$ billions	2.0	—5.0	—	—
Gross national product (1958 dollars)	$ billions	821.1	816.3	—2.0	—0.6
Plant and equipment expenditures	$ billions	112.17	125.6	12.5	12.0
Corporate profits before taxes	$ billions	140.9	127.3	18.4	—9.7
Private housing starts	millions	1.39	1.52	—32.2	9.6
Automobile sales	millions	8.87	8.45	—21.9	—5.5
Rate of unemployment	percent	5.6	7.3	—	—
Industrial production index	1967=100	124.3	123.9	—0.8	—0.3
Wholesale price index	1967=100	160.2	179.4	18.9	12.0
Consumer price index	1967=100	147.8	161.8	11.0	9.5
Implicit price deflator	1958=100	170.2	185.5	10.2	9.1

* Figures are constructed from the typical percentage change forecast for 1975.

second half of 1974 did not materialize. In fact, the recession deepened. The rate of price increase, which the forecasters also expected to improve in the second half of the year, also worsened.

The consensus 1974 forecast projected personal consumption expenditures for the year to increase 7.0 percent to $861.0 billion. Current estimates place personal consumption expenditures much higher, at $877.1 billion. Gross private domestic investment, on the other hand, forecast to increase 4.8 percent to $219.4 billion, actually fell 0.4 percent to $208.3 billion. Thus, 1974 had considerably more current dollar consumption than the forecasters expected and considerably less fixed investment. One of the principal reasons for the overestimate of investment was the forecasters' failure to anticipate the severity of the decline in construction activity in 1974. Residential structures were expected to decline somewhat, from the $57.2 billion total in 1973 to $52.1 billion in 1974. Actually residential structures totaled only $45.8 billion. The seers were relatively accurate in predicting Government expenditures, however, anticipating a 10 percent growth in Government purchases versus an actual increase of 11 percent. Net exports were expected to total $5 billion, but they actually amounted to only $1.2 billion.

All-in-all, it would appear that few kudos should be extended to last year's forecasters for their relatively accurate forecast of current dollar GNP, since the forecasts for the components of GNP were so far off target. The GNP estimate came close only because the errors in estimating the components tended to offset one another.

Surprisingly, however, and not consistent with the forecasters' tendency to predict a better performance from the economy in 1974 than the one that actually materialized, they predicted the rate of unemployment quite accurately. The unemployment rate, estimated to average 5.5 percent in 1974, actually averaged 5.6 percent.

In other areas, the 1974 forecasters overestimated the index of industrial production. The index fell 0.9 percent for the year, against a forecast of a 1.1 percent gain. Corporate profits before taxes were predicted to fall slightly to $122.4 billion, but they actually rose a whopping 14.9 percent to $140.9 billion in dollar terms. The consumer price index, like the implicit price deflator for GNP, was substantially underestimated. Consumer prices were expected to increase 6.8 percent; they actually rose 9.5 percent.

1975 FORECASTS IN BRIEF

Gross National Product Forecasts for 1975 current dollar GNP center around $1,511.5 billion. This consensus forecast represents an approximate 8.3 percent yearly gain, which is slightly more than the 7.9 percent increase registered in 1974. Prices, however, are expected to increase by 9.1 percent and thus to account for more than the entire rise in current dollar GNP. GNP measured in constant dollars, or real GNP, is expected to fall in 1975, but only 0.6 percent, compared to a 2 percent fall in 1974. Estimates for increases in current dollar GNP ranged from a low of 6.2 percent to a high of 10.8 percent. The typical quarterly consensus this year indicates that a recovery will begin in the second quarter and pick up steam throughout the year. The typical quarterly estimates indicate that GNP should increase $26.0 billion in the first quarter of 1975 and $31.0 billion in the second. The recovery is then expected to accelerate, and the increases in the third and fourth quarters are expected to be $38.0 billion and $40.0 billion, respectively.

Personal consumption expenditures are expected to total $963.1 billion for 1975, up 9.8 percent from 1974. Forecasters estimate that expenditures for durable goods will increase least rapidly, showing an increase of only 5.3 percent for 1975, but expenditures for nondurables and services will increase 9.1 percent and 11.2 percent, respectively. The slower rate of expansion of durable goods expenditures is expected to stem primarily from a sluggish pickup in purchases of big-ticket items. The increases in nondurables and services expenditures are expected to reflect price increases, in large measure, but to allow for some increases in unit sales.

Government purchases of goods and services are projected to total $341.8 billion. This estimate represents a 10.9 percent increase over the 1974 total, which is somewhat smaller than the large 11.5 percent gain of the previous year. The 1975 forecasts range from increases of 7.5 to 12.2 percent.

Gross private domestic investment is expected to rise by about 1.4 percent in 1975. This estimate is somewhat higher than the 0.3 percent decline in 1974. Both are considerably slower than the 13.0 percent 1973 pace. Residential construction is expected to decline from the 1974 *average*, but only modestly. Inventory investment, however, is expected to decline by more than $10 billion. Business fixed investment, the only source of relative strength in the investment sector, is expected to increase 8.2 percent. The forecasters are predicting a recovery

TYPICAL* QUARTERLY FORECAST FOR 1975

Quarter-by-Quarter Changes in Billions of Dollars Unless Otherwise Noted

	I	II	III	IV
Gross National Product	26.0	31.0	38.0	40.0
Personal Consumption Expenditures	19.0	20.0	22.0	26.0
Gross Private Domestic Investment	−1.0	4.0	9.0	9.0
Net Exports	—	−1.0	−1.0	−1.0
Government Purchases	8.0	8.0	9.0	9.0
Gross National Product (1958 dollars)	−1.0	3.0	7.0	9.0
Implicit Price Deflator†	8.0	7.2	6.6	6.4
Rate of Unemployment (%)	6.8	7.0	7.2	7.3

† Percentage changes at annual rates.
* Median.

for residential construction in the second half of the year, so it seems somewhat surprising at first glance that they are predicting the year's performance to average out as a 4 percent decline. It is important to remember that residential construction at year-end 1974, however, was in considerably worse straits than the *average* 1974 figure would indicate. The forecasters were, as is often the case, less consistent in their investment forecasts than in any other aggregate. The predictions for residential structures range from a 14.9 percent decline to a 10.5 percent increase. Those for business fixed investment range from increases of 3.0 percent to 12.4 percent. And investment in business inventories, which had a consensus of $3.0 billion, had a range of forecasts from —$4.3 billion to $10.5 billion.

Industrial Production The typical forecast for the Federal Reserve index of industrial production (1967=100) is 123.9, a fall of 0.3 percent, which is approximately equal to the 1974 performance. The index of industrial production ended the year, however, at 118.3, so a 1975 average of 123.9 indicates some improvement over that level. Anticipated gains are in the production of heavy machinery, automobiles, and construction related items.

Housing The construction industry is expected to recover somewhat from its dismal 1974 performance. It will remain sluggish, however, compared to 1972 and 1973. Private housing starts, which totaled 2.38 million in 1972, slowed to 2.04 million in 1973 and 1.39 million in 1974, are expected to amount to 1.52 million units in 1975. Considering that housing starts closed the year at a 1.0 million unit annual rate, 1.52 million units in 1975 is a significant improvement. The recovery is expected to come about mainly because financing is expected to become easier and less costly for home buyers. The easier conditions in the mortgage markets are expected because the slowing economy is supposed to exert downward pressure on interest rates.

Corporate Profits The concensus forecast indicates that this year should be considerably less profitable for corporations than 1974, with pretax corporate profits expected to decline 9.7 percent to $127.3 billion. Considering their forecasts for a 9.1 percent increase in the price deflator, a decrease in profits of 9.7 percent is a sizable decline.

The 18.4 percent increase in 1974 corporate profits, however, resulted in large measure from changes in inventory valuation. In an inflationary period, firms can profit on the value of the inventory held, although the profit is largely illusory because firms must pay the higher price to replace the inventory. Some industry spokesmen have argued that it is not fair for them to be taxed on such inventory gains and, in order to avoid such taxes, have advocated changing to the lifo method of valuing their inventory. This method—last in, first out—causes the inventory valuation to more nearly reflect replacement cost. Many firms in fact have recently adopted lifo, which has the effect of lowering their reported or accounting profits by removing the "illusory" inventory gain. The forecasters took this changeover into account in making their 1975 profit projections, so the predicted profit drop in 1975 is not as large an actual turnaround as it might seem to be from a cursory examination. The most pessimistic forecaster expects a 25.9 percent profit decline; the most optimistic a 9.8 percent decline.

Unemployment Most forecasters are predicting a large increase in the rate of unemployment for 1975. The typical forecast for the year is around 7.3 percent, which is 1.7 percentage points above the 5.6 percent average for 1974. Most of the projections had already been completed before the 7.1 percent figure for December 1974 was announced.

Prices This year the forecast indicates a slight decline in the rate of advance of prices. The implicit GNP deflator, which rose 10.2 percent in 1974, is expected to increase 9.1 percent. The consumer price index is also expected to increase less rapidly, 9.5 percent compared to 11.0 percent in 1974. The wholesale price index, still expected to increase at

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double-digit rates, is expected to rise by 12.0 percent, which is considerably less than the 18.9 percent rate of advance registered in 1974 but still phenomenal.

Net Exports The nation's trade position, which showed a $2.2 billion surplus in 1974, is expected to be in deficit in 1975 (—$5 billion). The forecasters, however, were not able to evaluate President Ford's energy package in making their projections. The estimates for net exports ranged between —$7.8 billion and +$20 billion.

Quarter-by-Quarter Forecasts Fifteen forecasters made quarter-by-quarter forecasts for 1975. As indicated by the accompanying table, these forecasters generally expected a slow economy in the first half of the year and recovery during the second. To illustrate the diversity of the quarterly estimates, however, the typical forecast for real GNP in the first quarter, a decline of $0.1 billion, was drawn from forecasts that ranged from a decline of $10.0 billion to a rise of $4 billion. Only two of the fifteen forecasters predicted two consecutive quarters of negative growth in real GNP, and only one failed to predict consistently increasing rates of growth throughout the year. By the fourth quarter, they were predicting real growth ranging from $5 billion to $15 billion. The quarterly consensus for the unemployment rate is considerably different from the annual consensus. This divergence results in part from different expectations on the part of the forecasters, but mainly from the fact that the quarterly forecasts are less current and the forecasters were less able to evaluate the November and December 1974 unemployment figures.

Summary According to the majority of forecasters, the economy should begin to recover from its downturn late in the second quarter of the year. Moreover, the rate of price increase should subside throughout the year. Price advances will continue to be high, by historical standards, but double-digit inflation should be behind us, at least at the consumer level. Thus, barring further adverse energy developments and poor crop yields, the stage should be set for a healthy and growing economy in 1976. Thus 1975, which is the "year of the hare" according to the Chinese calendar, is predicted to be milder than 1974, which was the "year of the tiger." Also, it will be characterized by improving, albeit sober, expectations on the part of consumers, investors, managers, and workers.

William E. Cullison

BUSINESS FORECASTS 1975

The Federal Reserve Bank of Richmond is pleased to announce the publication of *Business Forecasts 1975,* a compilation of representative business forecasts with names and details of estimates for the coming year. The booklet is available free of charge from this Bank. Please address requests to Bank and Public Relations, Federal Reserve Bank of Richmond, P. O. Box 27622, Richmond, Virginia 23261.