Throughout most of its U.S. history, operation of the securities market has been directed by private associations with very little government regulation or interference.

This situation changed after the Crash of 1929, when an estimated $50 billion stock market loss triggered the Great Depression and ended the government's hands-off attitude.

Since the Depression, Congress has enacted a number of measures, including the Securities Act of 1933 and the Securities Exchange Act of 1934, that have been designed to stabilize the stock market and to protect investors.

Continuing in this tradition, Congress in 1970 passed the Securities Investor Protection Act (SIPA) and established the Securities Investor Protection Corporation (SIPC) as an industry-funded, nonprofit, membership corporation that offers limited protection to investors.

As of year-end 1986, SIPC had 11,305 members, including all firms registered as broker-dealers with the Securities and Exchange Commission (SEC) and all members of the national securities exchanges.

In this Economic Commentary, we shall outline briefly the events that led to the establishment of SIPC, placing an emphasis on the mechanics of securities trading in 1970. We shall then proceed to an analysis of the rationale for such an insurance mechanism by discussing the role that SIPC might be expected to play in response to disruptions in the securities industry. Finally, a comparison with other financial insurance programs leads to an assessment of SIPC's exposure to loss.

**Background**

In the wake of the Great Depression, the securities industry settled into a new, highly regulated environment. The public's indifference towards private financial instruments helped to slow growth in the industry. Despite the rapid increase in the amount of U.S. Treasury obligations associated with the financing of the Second World War, the dominance of the Federal Reserve and commercial banks over the securities market served to limit opportunities for broker-dealers to expand.

The only noteworthy attention received by the securities industry in the postwar years resulted from charges of price-fixing against a few powerful underwriters. For nearly 30 years thereafter, there were no significant disruptions in the industry.

Interest in the securities markets, as measured by equity trading on the New York Stock Exchange (NYSE), resumed at a slow pace in the period following the Second World War. Average daily volume on the Big Board stood at 1,422,000 shares in 1945, at 1,980,000 shares in 1950, at 2,578,000 shares in 1955, and at 3,042,000 shares in 1960.

The increased trade in securities was accompanied by several isolated failures of small dealers and brokers. The first post-Depression failure, in 1960, was allegedly the result of a "partner's illegalities." In 1963, a second failure, a by-product of the "Great Salad Oil Scandal," found the New York Stock Exchange paying $9.5 million in reimbursements to the failed firm's customers.

To maintain confidence in the financial markets, the New York Stock Exchange subsequently established a fund, with initial assets of $10 million and a $15 million line of credit, to compensate customers of failed firms for losses that resulted from theft or fraud. The other exchanges followed the NYSE's lead and also established customer protection funds. The exchanges, however, were under no legal obligation to settle any claims.

By 1965, the average daily volume on the New York Stock Exchange rose to 6,176,000 shares; by 1968, it reached 12,971,000 shares. The dramatic growth in trading volume over this period led to what was referred to as the "paperwork crunch." At that time, securities transactions were processed by hand. Brokerage firms maintained a "cage" in which cash and certificates were physically stored and exchanged, sometimes leading to settlement mismatches as trading volume grew. The level of so-called "fails-to-deliver" incidents, in which a firm fails to deliver securities within five business days (then a rather common occurrence), exceeded $4 billion at the end of 1968.

Responding to the turmoil caused by the increased trading volume and lack of automation, the major exchanges initiated "trading holidays" on Wednesdays throughout the second half of

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2. Firms in New York (and the Federal Reserve Bank of New York) still have cages—certificates of deposit (CDs) and banker's acceptances (B/A) are traded for physical delivery.
3. If accounts are held by one customer in separate accounts, coverage limits apply separately to each account.

4. Many of SIPC's larger members also maintain private trust funds to raise premiums above the limits to several million dollars. This increased coverage applies only to SIPC-type claims, but is not applicable to accounts of its members.

5. During this time, the NYSE was trying to replenish the customer protection fund from its general fund, calling into question the ability of the NYSE's general trust fund to withstand further failures by its members. Many of the failures of that era involved violations of the exchange's net capital requirements; members were required to maintain net capital in excess of 5 percent of their liabilities.

6. In June 1970, Congressional hearings were initiated to investigate the history and adequacy of the NYSE's and the other exchanges' funds. Supported by representatives of the Board of Governors and from the Department of the Treasury, three individuals associated with the NYSE were initiated to investigate the history and procedures shortcomings in the settlement of claims on broker-dealers ever affiliated with the NYSE. The New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX), or the National Association of Securities Dealers (NASD). In most cases, unless the failed firm is merged into an ongoing firm that agrees to assume the liabilities of the customer, the failed firm simply is liquidated. Most liquidations are not performed directly by SIPC, but rather under the direction of a SIPC-appointed or court-appointed trustee.

7. The size of SIPC's reserve fund is a constant factor in SIPC's recent experience. A time-series plot of the fund's 1972 year-end balance. The fund's 1972 year-end balance. The relatively large number of proceedings in SIPC's early years has been offset somewhat by the small number of yearly failures over the past decade. The 1977 failure rates of 4.5 and 1980, respectively, are somewhat understated, however, reflecting the fact that several proceedings were not completed. The absence of large firm failures may have created a certain amount of complacency about the adequacy of SIPC's resources.
any single large member, let alone the liabilities from more than one large member, would constitute at least prima facie evidence that premium collections have been too small or that protection limits have been too great. It is to the securities industry's advantage, after all, to minimize disruptions associated with a loss of public confidence, which could be potentially manifested as "runs" on securities dealers.

Government involvement might be justified if one could show that disruptions would inevitably lead to a severe bear market instead of simply being limited to certificate withdrawals. Though causation is difficult to determine, past experience suggests that broker-dealer failures may actually be associated with bear markets.3

Drawing the argument to a conclusion, opponents of public assistance to SIPC might say that the maintenance of investor confidence is best accomplished by establishing strict rules of conduct and by extensive self-policing. Industry-funded insurance schemes, such as SIPC, would be expected to operate with a minimum of public-sector involvement or support. Thus, government assistance to SIPC might be desirable and convenient, at least from the perspective of the member firms, but it is not always necessary from the perspective of the broad public interest.

The position in favor of extensive self-regulation partly reflects the spirit of the Securities Exchange Act of 1934. Specifically, the SEA stresses self-regulation on the part of the securities industry. Because the exchanges and NASD already had sufficient supervisory capability, the SEC was created to provide regulatory oversight. Beyond reducing redundancy, this system also served to protect the Treasury's exposure to loss in the industry.

Among the dangers associated with an investor protection plan is that uninformed investors might mistakenly think that coverage extends to the market value of their securities, thereby encouraging insufficient investor scrutiny of broker-dealers and reckless behavior on the part of the firms. This is a variant of the moral hazard argument used against insurance protection in general, and against deposit insurance protection in particular. Moreover, this type of protection may allow inefficient firms to survive longer than would be the case with unfettered markets.

SIPC and Federal Deposit Insurance

The insurance provided by SIPC differs in many respects from that provided to commercial bank or savings and loan (S&L) depositors either by the Federal Deposit Insurance Corporation (FDIC) or by the Federal Savings and Loan Insurance Corporation (FSLIC).

First, the FDIC and FSLIC either have regulatory powers themselves or have affiliated authorities, such as the Federal Home Loan Bank Board, that have such powers and that maintain close supervision of their members. SIPC, on the other hand, must rely on the SEC or its members' self-regulatory organizations for supervision and regulatory control.

Second, when a bank or thrift institution fails, the federal deposit insurer typically acts as the receiver, supervising the liquidation or, possibly, the merger of the failed firm with a healthy one, often with financial assistance from the insurance fund. Such failures usually occur, for instance, when an institution's loan portfolio has an excess of problem loans, when it faces severe liquidity problems, or through management fraud or neglect.

More importantly, federal deposit insurance funds guarantee (currently up to a stated maximum coverage of $100,000 per account) the full value of insured deposits in the event of a covered institution's insolvency. The determination of the insurer's residual liability usually is straightforward because banks and S&Ls carry deposit liabilities, and most assets on their books, at par value. The protection afforded by SIPC, on the other hand, is offered simply against missing securities owed to the customers of a failed broker-dealer. The value of a customer's claim, however, is determined by current market prices, which change as often as market conditions change. SIPC coverage does not protect customers from changes in the market value of their securities after a member firm's failure.

Furthermore, the deposit insurance premium charged to an insured institution is computed as a percentage of its total deposit base, unlike the revenue-based (or flat-rate) premium charged to SIPC members. The FDIC, for instance, charges members a rebatable onetwelfth of one percent of total deposits. Finally, the federal deposit insurance funds claim to be backed by the full faith and credit of the federal government. SIPC has to avoid making this particular claim.6

Fund Exposure

One of the difficulties encountered in comparing SIPC-type coverage and deposit insurance is in determining the insurer's exposure to risk. The value of total insured deposits approximates the level of a federal deposit insurance fund's exposure. In practice, however, many general creditors of depository institutions have been granted de facto 100 percent insurance in recent years, so that the true exposure of the deposit insurance funds is somewhat greater than the total of insured deposits. SIPC, on the other hand, rarely extends its coverage to noncustomers, as determined either by itself or by a court.

The total exposure of a financial insurance mechanism, however, is only one determinant of the adequacy of its resources. On an actuarial basis, it is necessary for the present value of future premiums to at least equal the present value of expected future claims. The role of the insurance fund is to allow for deviations from expected payouts. An insurance system faced with a claims stream with a high variance will need a larger fund than a system facing a less volatile payout stream.

Ideally, the insurer's revenues rise when the industry experiences strong growth — and is therefore most able to finance the fund's needs — and fall during difficult periods. This pro-cyclical premium strategy minimizes the overall burden of the insurance mechanism. The revenue-based premium of SIPC members, though perhaps unrelated to the risk involved, has fallen precipitously just as the industry is experiencing enormous growth and increased risk.

Furthermore, not all financial insurance mechanisms are designed to protect against the same type of risk. A bank depositor may depend on the backing of an insurance mechanism because the use of deposited funds is completely relinquished. In the absence of insurance, the depositor would be subject to the underlying risk of the institution's assets.

5. SIPC's 1985 annual report cites its origin in the difficult years of 1968-70, when "the paperwork crunch, brought on by unexpectedly high volume, was followed by a very severe decline in stock prices."

6. We should note, however, that Congress has not yet made a legally binding commitment to provide the necessary funds to fully guarantee the ailing FSLIC.
Designated as primary dealers by the Federal Reserve Bank of New York, although there were only 21 firms with this particular designation (as of June 1986), they are among the largest securities dealers. Primary dealers facilitate the implementation of monetary policy through open-market operations in government securities and help to meet the huge borrowing needs of the federal government. Just as with DTC's data, we cannot distinguish between holdings for customers and positions taken for the primary dealers' own trading accounts.

Estimates of nonbroker-dealer positions in government securities currently are not available. Several recent failures of previously unregulated government securities dealers led Congress to enact the Government Securities Act of 1986, covering participants in this market. As a result, a large number of government securities dealers will be required to register with the SEC. At present, however, there is no way of knowing just how many dealers will choose the registration option that automatically would make them members of SIPC, and that would automatically increase the risk-level of its insurance fund.

The data at our disposal indicate an almost eighteen-fold increase in the potential exposure of SIPC on an 11-year period during which the SIPC insurance fund balance only quadrupled. It should be noted that this period partially covered the planned buildup of the SIPC fund to its old statutory minimum of $150 million. On the basis of our estimates and assumptions, the level of the SIPC fund at year-end 1986 represents only 0.06 percent of its potential exposure.

The implications of the repurchase and reverse repurchase agreements ruling for SIPC go beyond the absolute increase in exposure to the higher risks associated with these financial contracts. Poor record-keeping and fraud has led to several failures of unregulated government securities firms in the past. Congress responded to these conditions by imposing tighter regulations on all government securities firms, though several provisions of the Government Securities Act of 1986 have yet to be implemented.

The annual average levels of the two types of agreements are presented for illustrative purposes only, since there are no published estimates of the aggregate value of securities holdings for customers by all SIPC members. A proxy for this figure that may serve as an upper bound to the insurance fund's exposure can be constructed from data maintained by the Depository Trust Company (DTC) and the Federal Reserve Bank of New York.

The Depository Trust Company is a participant-owned corporation that serves as a securities depository for a major portion of the financial industry. DTC is regulated by the SEC, the New York State Banking Department, and the Federal Reserve. DTC holds actual securities and issues its own book-entry certificates for all changes of DTC receipts facilitate the change in ownership of securities. DTC also provides securities registration or ownership information, to publicly traded firms and to others. DTC traditionally accepted only corporate bonds and shares of stock for deposit. Since 1981, however, its operations have been expanded to include municipal bonds and shares of stock for deposit. Since 1981, similar records are kept for banks (DTC's largest participant group) and for clearing agencies. Presented in figure 3 are the year-end balances (at market value) of all corporate and municipal securities held at DTC for nonbank broker-dealers. By contrast, aggregations may overestimate SIPC's potential exposure.

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Special importance to this analysis is the implication of last year's ruling on the status of counterparties with whom member firms have engaged in repurchase agreements. It appears that SIPC had considered such agreements as forward repurchase agreements or the like. As with DTC's data, we cannot distinguish between holdings for customers and positions taken for the primary dealers' own trading accounts.

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