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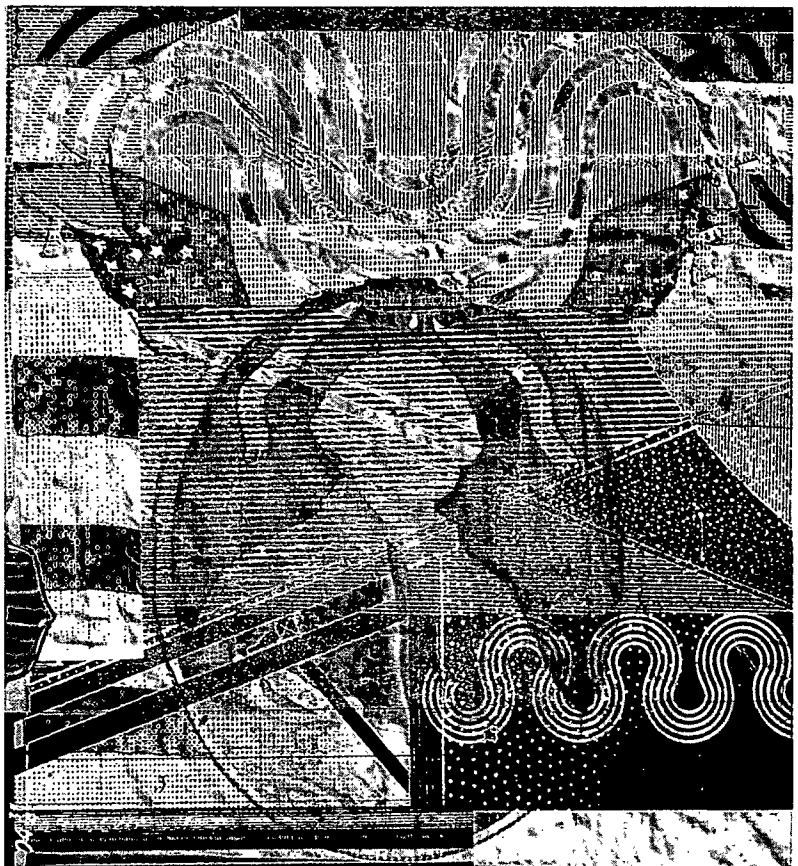
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The quadrennial election of American presidents is the occasion for reflection in this year's annual report, aided by Fred Otnes's collage on the cover.

3 BX 1987 Annual Report

The Depository Trust Company, a service company owned by members of the financial industry, is a national clearinghouse for the settlement of trades in corporate and municipal securities. DTC also performs securities custody services for its participating banks and broker-dealers. In 1987, those Participants delivered \$9.8 trillion of securities through the depository's book-entry system, and securities in its custody exceeded \$2.8 trillion at yearend.

Depository Trust's primary mission is to reduce the cost of securities services offered to the public by its Participants. It does so through its automated systems, its telecommunications links with more than 600 Participants and others, and its relationships with the hundreds of firms that serve as transfer agents, paying agents, exchange agents, and redemption agents for securities issuers.



Highlights



The "master builder of the Constitution," James Madison was one of the nation's smallest presidents, standing only 5-foot-4, and never weighing more than 100 pounds. But Madison was a statesman whose political stature rivaled that of his presidential predecessors. He played a leading role at the Constitutional Convention, speaking on 68 of 71 days. After asking a friend to tug on his coat-tails if he became too wrought up, he talked himself to the point of exhaustion. "Why didn't you pull me when you heard me go on like that?" he asked his friend. "I would rather have laid a finger on lightning," came the reply.

Total for the Year	1987	1986
Book-entry deliveries	<i>(In trillions)</i>	
Market value	\$9.8	\$8.1
Number	<i>(In millions)</i>	
	78.0	66.7
Cash dividend and interest payments	<i>(In billions)</i>	
	\$151.2	\$120.7
At Yearend		
Eligible securities issues	490,620	371,921
Value of securities on deposit	<i>(In trillions)</i>	
Banks	\$2.82	\$2.54
Broker-dealers	\$2.16	\$1.89
Other depositories	\$.62	\$.54
	\$.04	\$.11
Number of shares on deposit	<i>(In billions)</i>	
Banks	92.6	70.3
Broker-dealers	42.3	32.3
Other depositories	49.3	35.9
	1.0	2.1
Principal amount of corporate debt on deposit	<i>(In billions)</i>	
Banks	\$668.4	\$552.0
Broker-dealers	\$548.5	\$420.5
Other depositories	\$102.5	\$ 88.3
	\$ 17.4	\$ 43.2
Principal amount of municipal debt on deposit	<i>(In billions)</i>	
Banks	\$506.6	\$426.3
Broker-dealers	\$393.2	\$319.4
Other depositories	\$101.7	\$ 89.7
	\$ 11.7	\$ 17.2
Participants	604	533
Broker-dealers	421	353
Banks	177	174
Clearing agencies	6	6

A Message from Management

This report once again seeks to describe Depository Trust's role in securities processing and to record its results in the year recently ended. A number of those results highlight developments that are of special significance for DTC.

Leading the list is the October market break, when New York Stock Exchange daily trading volume twice exceeded 600 million shares. Throughout the period, DTC systems worked well, completing, among other things, book-entry deliveries for trade settlements that reached a single-day high of \$91.7 billion. A daily average of 1.7 billion shares were delivered through DTC to settle trades made in various markets during the hectic week of October 19.

The municipal bond industry's adaptation to depository services after only a few short years was apparent in activity for the period. More than 90% of the principal amount of all new long-term municipal bond issues in 1987—\$91.1 billion—was distributed by underwriters through DTC. More than two-thirds of the principal amount of all municipal bonds outstanding was held by the depository at yearend.

Stepped-up acceptance was evident for the book-entry-only form of debt security issuance, in which no certificates are available to investors. Book-entry-only municipal bonds in principal amount of \$26.4 billion were issued last year—an increase of more than 250% over 1986.

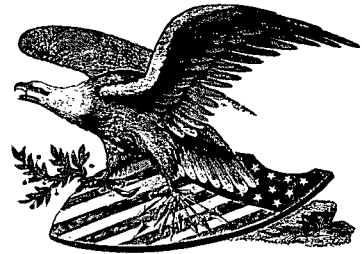
DTC's Same-Day Funds Settlement system was introduced in July. Before then, the depository could make eligible for its services only securities that regularly settle in next-day funds. Expanding slowly and deliberately in its initial months, by yearend this system had settled

more than \$6 billion in book-entry deliveries of municipal notes and other securities.

Another significant 1987 event was the absorption, at the request of The Pacific Stock Exchange, of the bulk of the processing previously performed for it by Pacific Securities Depository Trust Company. As a result of that depository's closing, \$47 billion of securities there were moved to DTC's custody at midyear.

Years of sustained effort achieved even higher proficiency for a depository service that requires the cooperation of others. DTC has long stressed its receipt of corporate cash dividends and interest on payable dates and in same-day funds. Of the almost \$118 billion in such payments received for Participants last year, 97% was obtained on the payable date and in same-day funds, up from 92% and 94%, respectively, in 1986.

With all of the above—and more—in mind, we wish to thank DTC's staff, its Participants, and all industry committee members who gave of their time and talent to help the depository improve industry operating capability in 1987. Last year's volumes could not have been processed without the high degree of efficiency in the interdependent post-trade processing network that serves "the Street" and the broader investment community.



William T. Dentzer, Jr.
Chairman and Chief Executive Officer

Conrad F. Ahrens
President and Chief Operating Officer

History, Ownership, and Policies

The Depository Trust Company originated during the securities industry's paperwork crisis of the late 1960s, when stock-processing problems severely disrupted the financial community.

The initiation of Central Certificate Service (CCS) operations by the New York Stock Exchange (NYSE) in 1968 sought to alleviate these problems by providing a securities depository for NYSE member firms. In 1973, pursuant to plans developed by the ad hoc Banking and Securities Industry Committee, DTC was created to acquire the business of CCS and expand depository benefits to others in the financial industry, particularly banks.

The first sale of DTC stock by the NYSE to depository bank Participants and other self-regulatory organizations representing broker-dealer

Abraham Lincoln had the misfortune of being president during his nation's bloodiest and most tragic era. Lincoln's integrity, resolution, and irrepressible spirit, however, helped him meet his onerous challenge with wisdom and humor.

Midway through his presidency, collections of jokes and anecdotes attributed to Old Abe abounded, as did a thriving grapevine of Lincoln folklore. According to one tale, when Stephen Douglas accused Lincoln of being two-faced, he replied that, if he had another face, why would he wear the one he had on? Though humor served as a tonic for the troubled president, on at least one occasion he confided that often the purpose of laughter was to keep him from crying.

Participants occurred in 1975, after state laws that restricted ownership of a securities depository had been amended. The depository's stockholder base broadened in 1976, when the NYSE acted to permit broker-dealers to own DTC stock directly. These actions established the nature of the depository as a service organization owned by its users or their representatives.



Governance of the Depository

DTC's governing procedures are carefully framed to reflect the need for objectivity in serving diverse users in the financial community. The right to purchase DTC capital stock is based on a formula that considers each Participant's use of the depository during the preceding calendar year. The calculation of Participant use for the 1987 stock reallocation was based 60% on fees paid to the depository during 1986 and 40% on the market value of long securities positions in DTC during that year. In September 1987, the formula's weights were modified to 80% based on fees and 20% on long positions, effective with the 1988 stock reallocation. The purchase price of DTC stock is based on its yearend book value.

The amount of stock each Participant is entitled to purchase is recalculated each year in order to reflect variations in its use of the depository. Participants may purchase any, all, or none of the stock to which they are entitled.

Stock is reallocated before the annual stockholders meeting in late March so that stockholders may vote newly acquired shares in the Board of Directors election, which takes place at that meeting. Elections are conducted under a system of cumulative voting so that no combination of stockholders controlling a simple majority of stock can elect all Directors. Representation on the Board is thereby made available to users from various sectors of the financial community in proportion to their use of the depository.

Elections to purchase DTC stock entitlements in 1987 increased the number of stockholders to 150,

comprising 51 broker-dealers, 93 banks, and six self-regulatory organizations and clearing agencies. Broker-dealer Participants owned approximately 14.2% of DTC stock and bank Participants owned approximately 44.8%. Ownership interests of the self-regulatory organizations, which were required to sell stock to accommodate Participant purchases, declined to approximately 32.4% for the NYSE, 4.3% for the American Stock Exchange, and 4.3% for the National Association of Securities Dealers.

DTC policy prohibits dividend payments to stockholders on the belief that depository ownership should not be viewed as an investment vehicle, but as a means for diverse users to encourage DTC's responsiveness to their needs through exercise of their cumulative voting rights to elect the Board of

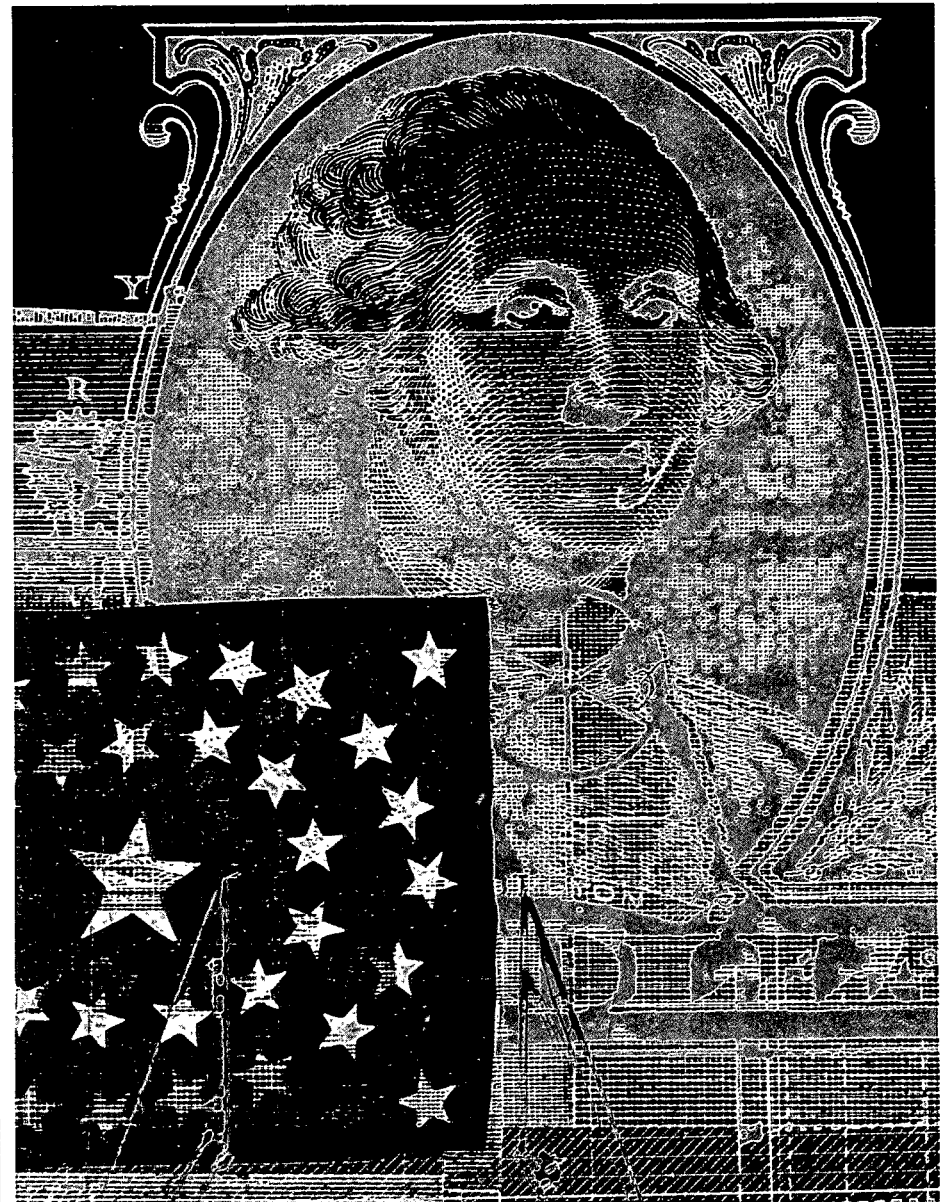
Directors. The makeup of the depository's Board reflects this effort to be responsive to user needs.

DTC policy also limits profits, and returns to users, whether or not they are stockholders, such revenues as the Board of Directors believes exceed the funds required for the depository's operation.

DTC is regulated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended. As a member of the Federal Reserve System and as a New York State limited purpose trust company, DTC is also regulated by the Board of Governors of the Federal Reserve System and the New York State Banking Department.

Though the Founding Fathers had much to debate as they gave birth to the republic, they had little doubt about who should lead it. George Washington was their obvious and unanimous choice as America's first chief executive.

Prompted by Washington's prestige—and by a desire to gain international respect for America—Vice President John Adams and others suggested monarchical addresses such as "His Elective Highness," "His Excellency," and "His Mightiness." Finally, they settled for the title in Article II of the Constitution: President of the United States.



Services

Of the various services Depository Trust performs for its Participants, some are basic to its nature and to an understanding of what a securities depository does.

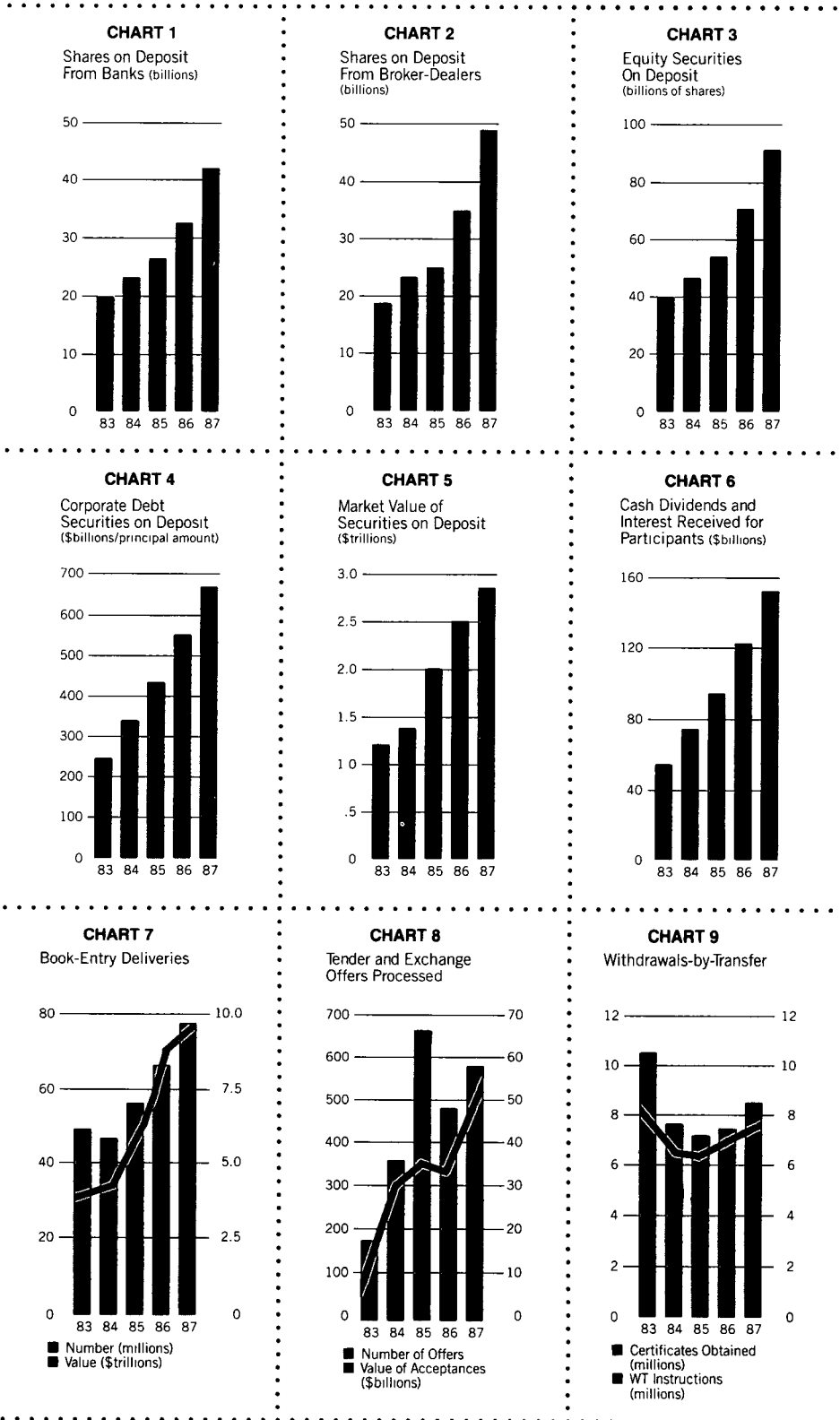
- It accepts *deposits* of eligible securities for *custody*.
- It executes book-entry *deliveries* of securities in its custody through accounting entries recorded on its computer files.
- It records book-entry *pledges* of securities in its custody through similar accounting entries.
- It provides for *withdrawals* of securities from its custody on a routine or an urgent basis.

These core services allow a Participant to deposit securities with DTC for safekeeping, deliver or pledge them conveniently to another party on DTC's books, collect payment from the other party for securities delivered, and obtain certificates for customers who wish to hold them. Also, various other services arise from DTC's custody of its users' securities.

It is the large number of transactions in DTC services that creates the economies of scale that offer low-cost processing and speed to users without sacrifice of security and accuracy. Increasingly, these transactions are in automated form, further reducing labor-intensive work for Participants and DTC.

Deposits

Certificate deposits can be made in eligible securities issues at DTC or at various banks and clearing corporation offices nationwide that cooperate as DTC depository facilities. DTC processed a daily average of 24,900 deposits involving 76,500 registered certificates in 1987.



Bearer municipal bond activity averaged an additional 1,800 daily deposits of 23,900 certificates.

Deliveries

Computerized systems execute book-entry delivery instructions from Participants regarding securities deposited with DTC. These instructions may be with or without an accompanying money payment. DTC processed 78 million book-entry deliveries among Participants in 1987, including those between brokers and clearing corporations. These deliveries totaled \$9.8 trillion. (See Chart 7, page 8.)

Pledges

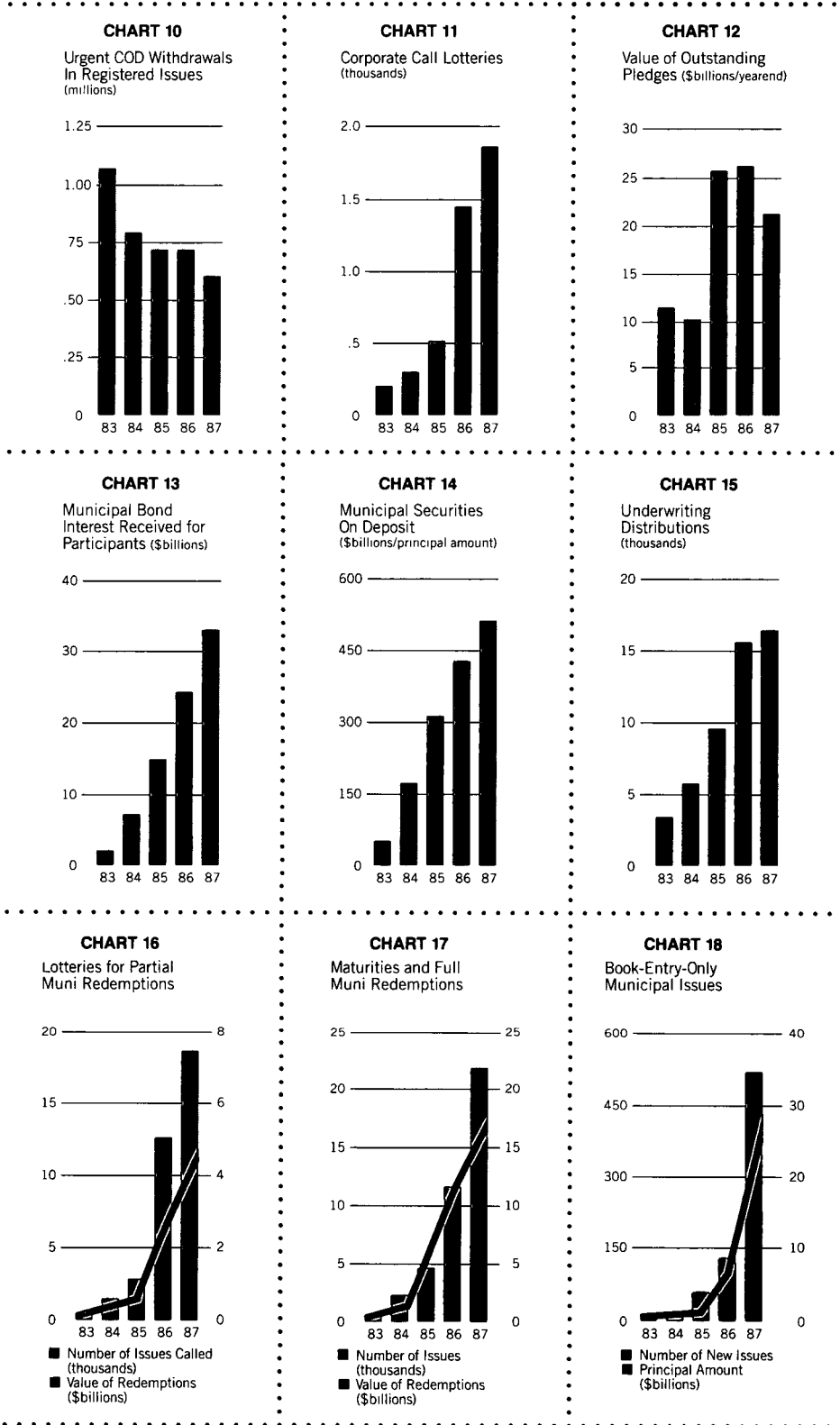
Participants may pledge by book-entry securities on deposit with DTC to banks and other entities that have agreed to accept them as collateral for various purposes.

The value of outstanding pledges at yearend 1987 totaled \$21.2 billion. (See Chart 12, page 9.) This includes \$11 billion pledged as collateral for bank loans and letters of credit; \$6.4 billion pledged by banks and brokers to The Options Clearing Corporation, primarily to meet collateralization requirements on put and call option sales; and \$3.8 billion pledged by banks to the Federal Reserve Bank of New York for the purposes of securing Treasury Tax and Loan accounts, deposits of public money, advances at the discount window, and intraday overdrafts.

Certificate Withdrawals

Certificates can be withdrawn from DTC in either of two ways:

- (1) Withdrawals-by-Transfer (WTs), in which certificates are transferred routinely to the



name of a Participant's customer or another party. Depending on the issue, its transfer agent, and the agent's location, newly registered certificates are generally available one to two weeks after DTC has received WT instructions.

- (2) Urgent Certificate-on-Demand (COD) withdrawals, in which registered or bearer certificates are released directly from the depository.

DTC processed a daily average of 30,100 WTs in 1987, leading to registration of 8.3 million certificates and an average of 2,500 CODs each day for registered securities, satisfied by about 1.7 million certificates. Bearer municipal bond withdrawals, processed as CODs, added on average another 1,000 CODs each day, providing almost 1.9 million certificates.

Despite the large increase in DTC-eligible issues and trading volume, the total number of CODs for all

Shortly after his inauguration in 1913, Woodrow Wilson summoned Congress to a special session, becoming the first president since John Adams to appear before it. The progressive tariff legislation he won then, however, created revenue losses that helped lead to personal and corporate income taxes under the Sixteenth Amendment. Thus, these taxes were a byproduct of the first legislative victory for President Wilson—who would approach Congress with reform measures throughout his administration.

Individuals with incomes of less than \$4,000 in 1913 (about \$47,000 in 1988 dollars) paid no income tax; those with annual incomes between \$4,000 and \$20,000 paid 1%; percentages increased from there, to a marginal rate of 7% for incomes of a half-million dollars or more.

registered issues has continued to decline, reflecting the industry's increasing use of depository book-entry delivery over physical delivery. (See Chart 10, page 9.)

Last year, the number of WT instructions, and resulting certificates, greatly expanded because of extraordinary trading volume during October, new

DTC Participants, and the increased number of eligible issues. (See Chart 9, page 8.)

Because institutional use of DTC has diminished the need for urgent COD withdrawals, DTC began in 1987 to gradually eliminate CODs for corporate securities settling in next-day funds. Participants agreed to the elimination of this same-day COD service, so long as some requests were possible on an exception basis and overnight COD service continued.

Fast Automated Securities Transfer

DTC's Fast Automated Securities Transfer (*FAST*) program provides an alternative method of processing both types of certificate withdrawals.

Under *FAST*, DTC leaves securities with transfer agents in the form of balance certificates registered in the depository's nominee name, Cede & Co. The balance certificates are adjusted daily for DTC deposit and withdrawal activity.

Agents can fulfill normal transfer-turnaround requirements, as well as handle urgent COD withdrawals, by participating in the full *FAST* program. Or they can participate only in the WT portion of the program.

Direct Mail Service

A Participant can speed certificate mailing to its customers or third parties by instructing cooperating transfer agents and DTC to mail newly registered certificates directly, instead of returning them to the Participant for mailing. In the Direct-Mail-by-the-Agent (*DMA*) program, DTC receives registration data by automated means, reformats them, and sends them to transfer agents in machine-readable form. The agents then issue and mail certificates to investors and return



transaction details to DTC for its records and for reporting to Participants. Participants using the Direct Mail service increased to 44 in 1987, from 29 in 1986.

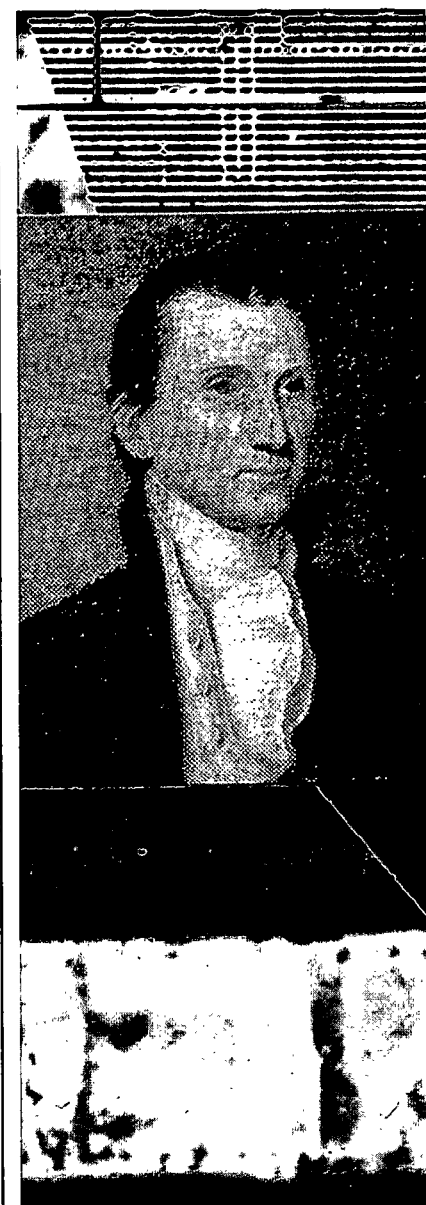
Nine EAST transfer agents participating in the Direct Mail service mailed approximately 388,300 new certificates upon instruction from Participants in 1987, speeding their receipt by Participants' customers by several days. When a Participant wishes all transferred certificates mailed to recipients, DTC assumes mailing responsibility where transfer agents do not provide this service. DTC mailed approximately 621,500 certificates under Direct-Mail-by-the-Depository (DMD) in 1987, a 38% increase from 1986.

In 1987, DTC improved an on-line function that enables Participants to withhold certificates from being mailed in the DMD program, and to have the newly transferred certificates returned to their offices. A similar link has been established with a transfer agent in the DMA program.

James Monroe, most famous for his doctrine proclaiming the Western Hemisphere closed to further colonization by European powers, also played a role in perhaps the shrewdest real estate deal in U.S. history. President Jefferson dispatched Monroe to Paris in 1803 to help negotiate with Napoleon for the purchase of New Orleans. Desperate to regain the vital port, the Americans were prepared to offer \$10 million. But Napoleon surprised Monroe and the U.S. envoys by offering the entire Louisiana territory—an immense wedge of land reaching from the Mississippi River to the Rocky Mountains. Though exceeding their authority, the Americans quickly agreed to pay almost \$15 million for the 800,000 square miles—about three cents per acre.

Transfer Timeliness

Among the steps taken in 1987 to improve the timely receipt of certificates by investors desiring them was the refinement of the Transfer Timeliness Report. This biweekly report, from the Transfer Agent Services Department to over 1,600 transfer agents, monitors their transfer activity with DTC.



Distribution of Underwritings

This growing service provides for book-entry distribution of and payment for securities underwritings of corporate and municipal issues. In 1987, 362 lead managers used DTC to distribute \$339 billion of 16,590 underwritings representing 74,287 issues (CUSIP numbers). This marks a 5% increase over 1986's 15,745 underwritings. (See Chart 15, page 9.) An 11% decrease in total underwriting value, from \$381.5 billion in 1986, reflects the decrease in underwriting volume nationally.

Based on Public Securities Association data, DTC estimates that more than 90% of the value of all new long-term registered municipal bond issues in 1987 was distributed through the depository.

Dividends and Interest

This service spares Participants from collecting dividend and interest payments from many sources. Participants also receive cash dividend and interest payments faster and at less expense through DTC than they could directly.

In 1987, DTC received \$117.8 billion in corporate cash dividends and interest for Participants, representing payments from 1,382 bank and corporate paying agents. Municipal bond interest received totaled \$33.4 billion. (See Chart 13, page 9.) For the year, DTC received approximately 796,000 payments, with over 54,000 on peak days. Stock dividends received for Participants totaled 7.3 billion shares.

With operational arrangements in place describing the depository's requirements for new-issue eligibility,

the timeliness of corporate cash dividends and interest payments to DTC continued to improve during 1987. For the year, the depository received 97% of these funds on payable dates, and 97% of their value in same-day funds. Recent procedures for allocating incoming payments to Participant settlement accounts further improve this service.

With municipal bonds, DTC receives virtually all payments on payable dates and credits Participant settlement accounts on those dates.

Voting Rights

Registration of deposited securities in DTC's Cede & Co. nominee name enables the depository to:

- Promptly determine whether certificates are transferable or whether replacement securities should be required from the depositing Participant.
- Permit retransfer of certificates quickly and simply, when necessary.
- Allocate dividends, distributions, and voting rights to Participants properly and without delay.

Andrew Jackson's inaugural celebration gave new meaning to the term "political party." After delivering his address before thousands of well-wishers, the "people's president" threw open the White House doors and invited the joyous throng to share in his victory bash.

Jacksonian politics, however, was serious. Upon taking office, the president began trimming bureaucratic "fat" from government offices. In all, "Old Hickory" replaced roughly 20% of government employees; and, despite congressional objections, he rotated officeholders to prevent them from acquiring "a habit of looking with indifference upon the public interests..."

While these reasons require it to be the owner of record, DTC's objective is to avoid being a barrier to communications between issuers and beneficial owners. Indeed, in some cases, the existence of DTC may assist a corporate issuer in keeping up with changes in ownership of its voting stock.



Several reports serve issuers: The *Security Position Listing Report* itemizes, by Participant, the number of shares of each issue on deposit. DTC sends this report to each issuer annually without charge, indicating Participant positions as of the record date for the issuer's annual meeting. Issuers may also obtain daily, weekly, monthly, or dividend-record-date listings for a modest fee.

DTC's *Participant Proxy Contact List* specifies each Participant's name and address, and the name and phone number of the person responsible for handling proxies there. The depository updates this list four times yearly, and sends it to issuers without charge.

The *Omnibus Proxy* enables issuers to communicate directly with Participants, and enables Participants to exercise voting rights of securities they hold. The Omnibus Proxy is, in effect, an assignment: Cede & Co., the shareholder of record, assigns each Participant the voting rights of shares in that Participant's DTC account as of record date. The depository forwards the Omnibus Proxy, with a list of Participant assignees, to the issuer, while simultaneously notifying each shareholder Participant that it has sent the Omnibus Proxy and specifying the number of shares the Participant is entitled to vote.

After DTC completes these steps—soon after record date—communication between issuers and beneficial owners occurs as if the depository did not exist. A brochure on this subject, *Shareholder Communications and The Depository Trust Company*, is available on request.

Voluntary Offerings

DTC offers several services related to voluntary offerings, each designed to keep securities immobilized in the depository during periods when Participants or their customers have the right to surrender them for cash and/or other securities. These services include:

Tender and Exchange Offers

DTC's service for processing acceptances of tender and exchange offers reduces many costs and risks for Participants—including those of shipping securities to agents on time and arranging for the return of rejected securities. This program ensures the earliest possible receipt of funds. Moreover, Participants are not required to deal with dozens of tender/exchange agents, including many in remote locations.

The only American to have held both the highest executive and highest judicial office, William Howard Taft spent four uncomfortable years in the White House, calling it "the loneliest place in the world." Cautious and tranquil, he was caught in the intense battles between progressives and conservatives, and got scant credit for the modest but respectable accomplishments made during his administration. The happiest years of Taft's life were spent on the Supreme Court as Chief Justice of the United States, a position he held until just before his death. "Presidents come and go," he said, "but the Court goes on forever."

The largest man ever to occupy the White House, "Big Bill" Taft stood over 6-foot-2 and weighed more than 300 pounds. Known to be the politest man in Washington, on streetcars he would rise and give his place to three women.

In 1987, DTC processed 591 tender and exchange offers by book-entry, involving 104 agents. (See Chart 8, page 8.) These offers generated \$52.5 billion in acceptances through DTC and constituted 83% of the total number of offers that could have been accepted at least in part by book-entry procedures.



Conversions

DTC conversion procedures allow Participants to use book-entry to surrender convertible debt and equity securities in their depository accounts for same-day credit in the underlying securities, usually common stock. This reduces Participant processing expense, while eliminating financing costs. More than 280 convertible issues are eligible for this service; approximately \$12 billion of book-entry securities conversions were completed in 1987.

Redemptions

Partial Redemptions

When an issuer calls a portion of an issue held by DTC, the depository conducts an impartial lottery to allocate the called portion among Participants with positions in the issue. (Participants must know the outcome of DTC's lotteries before they can run lotteries for their customers.) DTC redeems the called securities and allocates payment to Participants.

Because of the increase in muni issues eligible at DTC and higher interest rates some years ago, the number of partial calls in 1987 increased substantially over those processed in 1986. As a result, DTC ran 18,825 municipal call lotteries in 1987, a 48% increase over the 12,656 run in 1986, and 1,866 corporate call lotteries, a 28% increase over 1986. (See Charts 16 and 11, page 9.)

Redemptions and Maturities of Certificates of Deposit

Participants have on deposit with DTC approximately \$33.5 billion in principal amount of certificates of deposit (CDs), all in book-entry-only form. They may exercise early redemption options for the CDs by

instructing the depository, which credits proceeds to their settlement accounts. DTC also credits to their accounts proceeds for CDs held to maturity. During 1987, DTC credited payments of \$11.7 billion to Participants' accounts for 2,736 CDs held to maturity, up from \$8.7 billion for 1,591 CDs in 1986.

Redemption of Floating Rate Notes and Rollovers of Government Securities

Participants may redeem floating rate notes and other securities with similar repayment options by instructing the depository, which then credits the cash to their settlement accounts. Participants with maturing U.S. Treasury bills on deposit can also use DTC to reinvest (roll over) the proceeds into new bills issued on maturity date. Although transaction volume is limited, these services reduce exception-processing expenses for Participants.

Units

In 1987, Participants submitted 11,300 unit "swingover" book-entry instructions to combine more than 1.6 billion component shares on deposit in their accounts into approximately 580 million units, and 21,600 instructions to separate 366 million units into more than 1.7 billion component shares. The resulting units and components, such as a stock and warrant or a bond and put option, immediately became eligible for DTC book-entry services. The number of unit issues included in the program at yearend increased to 791, including 186 municipal units.

Dividend Reinvestment

The Dividend Reinvestment Service (DRS) allows Participants

to reinvest all or part of their dividends in a security (when permitted under an issuer's reinvestment plan) without withdrawing the underlying shares from their DTC accounts. In 1987, DRS included 175 participating plans and accommodated almost \$1 billion of new capital for participating issuers.

Without DRS, a Participant would either have to refrain from depositing certain shares with DTC, or withdraw from the depository, prior to record date, those securities in which dividends might be reinvested. In either case, the Participant would have to handle certificates, thereby losing the benefits of certificate immobilization in DTC. In addition, the Participant would have to arrange to reinvest dividends through plan administrators and then handle the certificates for stock purchased and cash in lieu of fractional shares. DRS replaces these cumbersome and duplicative tasks with a more flexible and less costly set of book-entry transactions.

Options

In 1987, more than 180 banks and broker-dealers used DTC's interface with The Options Clearing Corporation (OCC) to pledge securities to satisfy OCC put and call margin or clearing fund requirements. By yearend, the value of securities pledged totaled \$6.4 billion, representing approximately 95% of the value of securities collateral with OCC from all sources.

Third-Party Pledge System

DTC's Third-Party Pledge system offers an alternative to the escrow

receipt method, in which a bank holds securities in an escrow account and issues a receipt that satisfies OCC requirements for the writer's call option. Under the Third-Party Pledge system, banks may pledge to OCC securities on deposit at DTC. Importantly, changes in the quantity of shares pledged do not require release and reissuance of escrow receipts, nor do changes in the option series to be collateralized. In the former, the amount of shares pledged is simply increased or reduced, as required, while in the latter, the pledgor merely submits a rollover form supplied by OCC. This service simplifies processing by eliminating repeated paper movements. Bank Participants may use the pledge method to the full extent that they have securities to pledge.

The Third-Party Pledge system also allows a put option writer to instruct its bank to move T-bills to DTC and then pledge them to OCC for the account of the OCC clearing member carrying the writer's short position. OCC then reduces the clearing member's margin requirements accordingly.

Warrant Subscriptions

The depository's warrant subscription program, which enables Participants to exercise warrant subscriptions by book-entry, expanded significantly in 1987. By yearend, Participants had processed 1,284 subscriptions in 38—of 98 eligible—warrant issues for 33 million underlying shares. This compares with 174 subscriptions in eight warrant issues for 640,000 underlying shares in a pilot program during 1986.

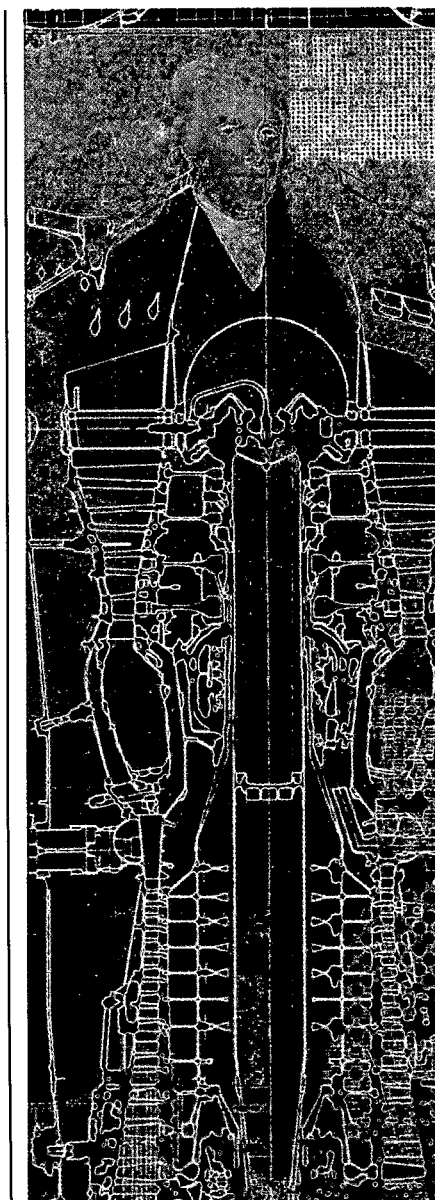
Eligible Issues

The more issues made eligible for DTC services, the more useful the depository is to its Participants.

Including almost 800 issues in DTC's new Same-Day Funds Settlement system, there were 490,620 DTC-eligible issues by yearend 1987, up 32% from yearend 1986. Of this number, 428,243 were municipal securities, comprising 194,552 bearer or interchangeable issues, and 233,691 registered issues, including 546 custodial receipts or units with associated put options. This expansion was part of DTC's plan to apply the benefits of book-entry delivery and certificate immobilization to more Participant securities.

The 62,377 corporate, money market, and U.S. government issues eligible at the end of 1987 comprised 2,952 common and preferred stocks listed on the New York, American, and other stock exchanges; 17,626 equity

issues traded over-the-counter; 13,324 issues of listed and unlisted corporate debt securities; 606 unit issues; 989 warrants; 766 issues represented by American Depositary Receipts; 15,579 unit investment trusts; 9,876 certificates of deposit; and 659 U.S. Treasury and Federal Agency issues.



President John F. Kennedy once welcomed a group of Nobel Prize winners to the White House, saying they were the most exceptional collection of talent and knowledge that had gathered there since Thomas Jefferson had dined there alone.

That witty tribute was more than hyperbole. Aside from two terms as president, Jefferson served as governor of Virginia, minister to France, and secretary of state. He also founded the University of Virginia and was a prolific writer—drafter of the Declaration of Independence and author of a number of books. He was an accomplished musician, engineer, architect, scientist, and gourmet. He studied philosophy, religion, and Indian languages, and was inventor of the swivel chair and dumbwaiter.

Ensuring Eligibility

DTC's *Operational Arrangements* paper, distributed in 1987, outlines criteria that must be met to ensure a new issue's eligibility for depository services. The arrangements, which include call notification standards for municipal bonds endorsed by the Securities and Exchange Commission in 1986, aim to maximize the number of eligible issues while maintaining orderly processing and ensuring timely dividend, interest, principal, and redemption payments. DTC internal planning consultants will help investment bankers and their operations staffs apply the arrangements to new issues during structuring, whether in fully certificated or in book-entry-only (BEO) form, with no certificates available to investors.

Newly Eligible Securities

New securities made eligible in recent years include auction-rate and tender-rate preferred stock and notes, asset-backed corporate notes, variable coupon renewable notes, foreign currency denominated bonds, municipal bonds insured in the secondary market, put bonds, municipal bonds with put options added in the secondary market, and stripped municipal bonds.

Many issues of several of these products have been marketed in BEO form, including all 257 issues of auction-rate and tender-rate preferred stock and notes, with a principal amount of almost \$17.4 billion.

Other securities types were made DTC-eligible during 1987 when the depository extended services to instruments that settle in same-day funds.

Same-Day Funds Settlement System

DTC inaugurated its Same-Day Funds Settlement (SDFS) system in mid 1987, thereby offering depository services to certain types of securities that settle in same-day (Federal) funds, and relieving Participants of the need to process all transactions in such issues with physical certificates. The SDFS system pilot began to accept deposits in June and expanded to full service for 24 municipal note issues in July.

System Benefits

SDFS Participants follow operating procedures virtually identical with those for DTC-eligible issues settling in next-day funds. The system benefits users by:

- Replacing the costly, error-prone process of physical certificate delivery with book-entry efficiency.
- Reducing securities custody costs.
- Permitting automatic trade settlement through DTC's Institutional Delivery system.
- Providing significant control features for trade settlement.
- Extending the book-entry-only option to issuers of securities that settle in same-day funds.

The darkest of "dark horses," Franklin Pierce was not even considered for nomination until the 35th ballot at the 1852 Democratic Convention. Fourteen ballots later, exhausted delegates gave the party's nod to the retired New Hampshire legislator. With a winning smile and a military record in the recent Mexican War, Pierce handily won the presidency. Upon election, he appointed his college classmate, novelist Nathaniel Hawthorne, to a U.S. consulship in England. Hawthorne later lavishly praised Pierce in the dedication to a book of English sketches. Historians are less kind.

System Expansion

DTC expanded SDFS in October by making a second type of security eligible: zero coupon bonds backed by U.S. government securities. A late-1987 upsurge in book-entry deliveries, following the termination of SDFS "pilot" status for almost 200 municipal note issues then eligible, reflected the industry's adaptation to the system. Termination of the pilot phase represented another step toward preparing the industry for self-regulatory organization rules scheduled to become effective July 1, 1988, that

will generally require use of the system by most buyers of SDFS-eligible securities who have the privilege of not paying for the securities until after receiving them. A third security type was added early in 1988, when the first 18 issues of municipal variable-rate demand obligations (VRDOs) became SDFS-eligible. Issues of medium-term notes and collateralized mortgage obligations were scheduled for SDFS-eligibility thereafter, with auction-rate and tender-rate preferred stock and notes to follow.

Highlights

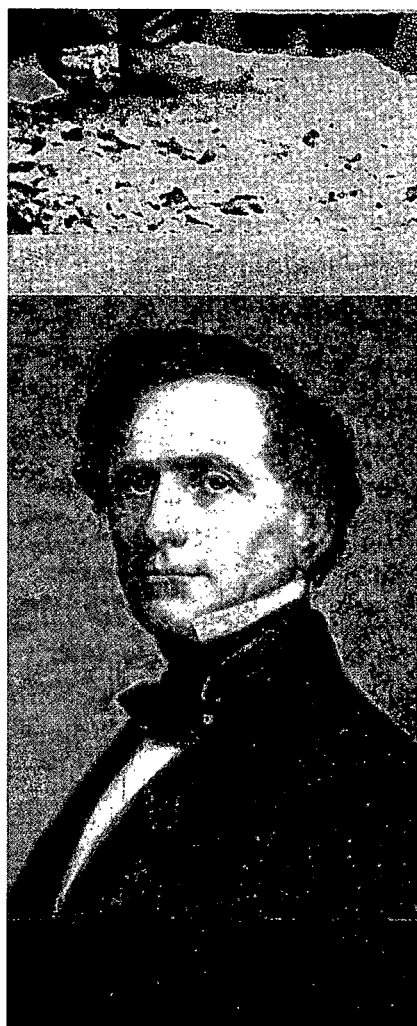
At yearend 1987, the SDFS system included 54 direct Participants, more than 100 indirect participants, and 24 Settling Banks.

Other significant 1987 results:

- SDFS-eligible securities on deposit at DTC had a total principal value of approximately \$11 billion.
- Seven hundred eighty-five CUSIPs were eligible for book-entry settlement through the system.
- Trades valued at over \$6 billion had settled through the system.
- Participants had distributed eight SDFS underwritings through DTC, valued at nearly \$1.4 billion in total principal amount.

Industry Advice

The depository worked closely with an ad hoc joint industry committee to monitor SDFS system progress and provide a forum for industry comment. The committee comprised representatives from the Securities Committee of the New York Clearing House Association and from the Securities Operations Division of the Securities Industry Association.



DTC Growth: A Five-Year Perspective

Eligible Issues	1987	1986	1985	1984	1983
Equities	20,578	17,274	15,560	13,176	11,432
Corporate debt	13,324	10,631	8,492	8,018	6,450
Municipal debt	428,243	321,281	220,054	106,163	48,516
Other	28,475	22,735	17,975	11,941	4,999
Total	490,620	371,921	262,081	139,298	71,397
Selected Services					
Market value of book-entry deliveries <i>(In trillions)</i>	\$9.8	\$8.1	\$5.5	\$3.8	\$3.6
Number of book-entry deliveries <i>(In millions)</i>	78.0	66.7	55.8	48.0	50.0
Value of securities on deposit <i>(In trillions)</i>	\$2.8	\$2.5	\$2.0	\$1.4	\$1.2
Shares on deposit <i>(In billions)</i>	92.6	70.3	54.5	46.6	40.0
Principal amount of corporate debt on deposit <i>(In billions)</i>	\$668.4	\$552.0	\$430.9	\$340.1	\$241.7
Principal amount of municipal debt on deposit <i>(In billions)</i>	\$506.6	\$426.3	\$306.4	\$167.3	\$ 61.5
Cash dividend and interest payments <i>(In billions)</i>	\$151.2	\$120.7	\$ 95.2	\$ 74.3	\$ 54.8
ID system confirmations <i>(In millions)</i>	20.1	17.1	14.0	11.7	11.3
Underwriting distributions through DTC	16,590	15,745	9,817	5,762	3,209
Participation					
DTC Participants	604*	533	517	502	471
Broker-dealers	421	353	338	331	319
Banks	177	174	173	165	146
Clearing agencies	6	6	6	6	6

*Excludes indirect participation in DTC by at least 1,200 banks and 2,000 broker-dealers that are correspondents of Participants.

Municipal Bond Program

Only a few years after DTC extended the range of its services beyond corporate securities to municipal bonds, issuers, brokers, dealers, and custodian banks have become heavy users. At yearend 1987, six years after the depository began its major program in municipals, more than two-thirds of the principal amount of all municipal bonds outstanding was immobilized in DTC's custody.

Municipal issuers' increasing awareness of depository advantages for the distribution of new issues accounts largely for the program's sharp growth. Immobilization of municipal securities and book-entry delivery benefit Participants and their customers by:

- Reducing costs.
- Reducing "fails."
- Sharply diminishing risk of loss during the handling and shipping of bonds.
- Providing for payment of municipal bond interest to DTC Participants on payable date.
- Standardizing redemption processing—including partial call processing—resulting in more efficient transmission of call notifications to owners and more prompt payment of redemption proceeds.

The large and growing number of securities issues eligible for DTC services—more than 490,000 at yearend 1987—prompted the depository to double the size of its largest vault, in Garden City, Long Island. This major expansion also will enable the depository to close two smaller, less efficient vaults elsewhere.

In addition, issues in book-entry-only form, with no certificates available to investors, further reduce underwriting and ongoing costs.

Significant Results

Results in 1987 bear out continuing issuer and Participant satisfaction with the program:

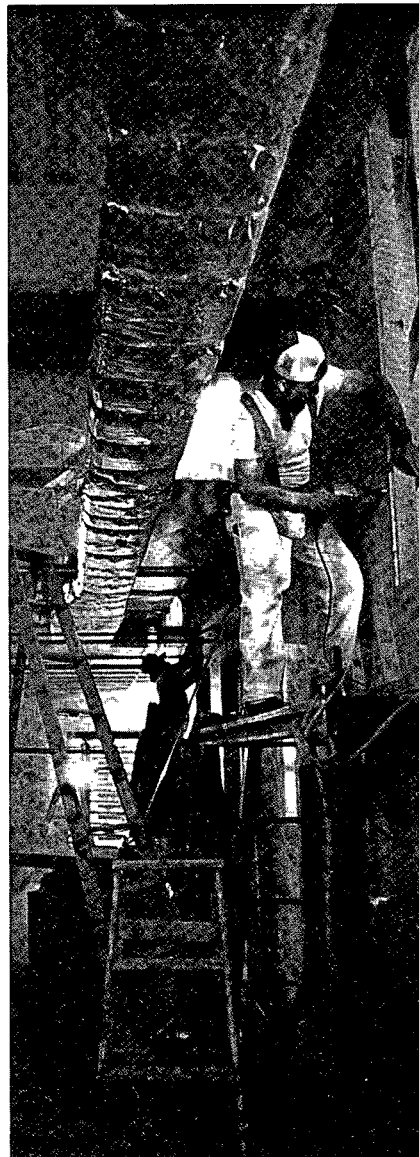
- The face amount of municipal debt on deposit at DTC increased by \$80 billion—or 19%—and

totaled nearly \$507 billion at yearend. (See Chart 14, page 9.)

- Underwriters distributed more than 4,700 new long-term registered municipal bond issues through DTC, comprising over 62,200 separate serial and term bonds. These underwritings totaled \$91 billion in principal amount—more than 90% of the value of all new municipal bond issues in the U.S. in 1987 (as estimated by the Public Securities Association).
- The number of municipal securities (by CUSIP number) eligible for DTC services totaled 428,243 at yearend, a 33% increase over 1986.
- At yearend, municipal transactions through the depository included a daily average of 12,800 book-entry deliveries.
- DTC ran lotteries for partial redemptions in more than 18,825 issues, with approximately \$4.8 billion in call proceeds paid to Participants. This represents a 48% increase in the number of lotteries (see Chart 16, page 9) and a 60% increase in call proceeds over 1986. (See Chart 17, page 9, for maturities and full redemptions.)

DTC continued to work closely with trustees and paying agents to make call processing more efficient by supporting SEC-endorsed standards for call notification and payment procedures.

- By yearend, DTC had cut for presentation to paying agents more than 40 million bond coupons to obtain interest payments due its Participants, compared with 35 million in 1986.



Securities in Book-Entry-Only Form

DTC's book-entry-only (BEO) program for new issues of debt securities continues to gain momentum as issuers find no price penalties in selling them and investors grow more comfortable owning securities without certificates. In 1987, only five years after the program began, issuers distributed through the depository BEO securities totaling more than \$54 billion in principal amount, including five \$1-billion-plus municipal bond issues.

With book-entry-only, no certificates are available to investors. Issuers authorize the deposit at DTC of a single "global" certificate for each issue (each maturity of debt issues). The global is issued in DTC's nominee name and held by the depository for as long as the issue remains outstanding. Changes in ownership are recorded by book-entry on the depository's records and, in turn, are reflected on the records of its Participants and their correspondents. These records are used to allocate income distributions (dividends or interest) and principal redemptions. Transaction confirmations and periodic statements describe for investors the securities activity and balances in their accounts.

BEO Benefits

Since so much of an issue in which investors can obtain certificates is now held by DTC after coming to market—often 80% or more of the outstanding amount—BEO makes great sense to issuers, who realize reduced costs. Others benefit from reduced costs as well, including underwriters distributing the issue and those who trade it. Investors in BEO securities eliminate or minimize the risk, expense, and inconvenience of safekeeping their certificates.

Major 1987 Results

Municipal Securities

- The \$26.4 billion principal amount of book-entry-only municipal bonds distributed through DTC—more than triple 1986's figure—raised the total amount issued to over \$36 billion since the program's inception. (See Chart 18, page 9.)
- Book-entry-only issues accounted for approximately 28% of the total dollar value of new municipal bond issues in 1987, according to *The Bond Buyer*.
- Issuers in 46 states (including 20 states themselves), the District of Columbia, and the commonwealths of the Northern Mariana Islands and Puerto Rico had issued municipal BEO securities by yearend.
- Seven of the nine largest municipal issuers, as ranked by *The Bond Buyer*, were BEO issuers. All seven used BEO predominantly or exclusively. Sixty-eight securities firms and banks lead-managed BEO issues, including 22 of the top 25 underwriters.

Corporate Securities

- Ford Motor Credit Corporation and IBM Credit Corporation responded to the Securities and Exchange Commission's encouragement of conventional corporate debt obligations in BEO form. By yearend, Ford Credit had issued 16 BEO notes, with a total principal amount of \$3.7 billion. In September, IBM Credit distributed through DTC the first BEO security to be listed on the New York Stock Exchange.
- The BEO distribution of several new securities types through DTC in the past few years also

demonstrates the growing popularity of BEO issuance. These instruments include remarketed reset notes, convertible money market preferreds, mortgage-backed securities, auction-rate and tender-rate preferred stock and notes, securities backed by automobile loan receivables, and warrants linked to currency exchange rates.

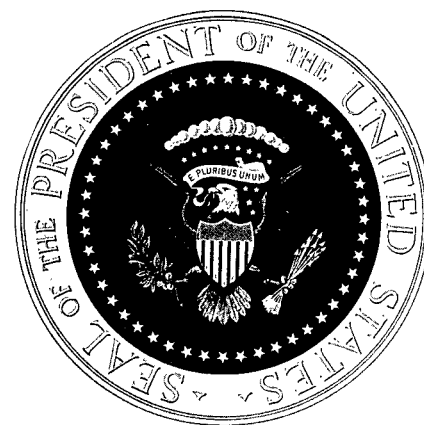
- The depository developed, for inauguration in 1988, book-entry-only issuance procedures for medium-term notes in its Same-Day Funds Settlement system.

Outlook for 1988

The BEO program is expected to continue growing in longer-term debt securities and expand to short-term securities. With Same-Day Funds Settlement system implementation in 1987, depository settlement services for several types of short-term instruments are now available.

Information Available

Growing interest in book-entry-only issuance led DTC to prepare and distribute several publications and a video presentation on the subject. Copies of these materials are available upon request.



Institutional Use of Securities Depositories

Custody of Institutional Assets

Banks and their institutional customers recognize the benefits of depository services. Bank deposits of their own and other institutional assets in DTC increased by \$100 billion in 1987, even as securities prices declined.

Institutional assets in the national depository system amount to over \$2.2 trillion—almost \$2.1 trillion of which is held by DTC. In total, these assets (representing over 98% of all managed trust assets reported in the most recent Federal Reserve study) are in the accounts of over 1,400 U.S. banks that participate in depositories directly or indirectly through correspondents. Moreover, while the remaining 1,600 banks with managed trust assets cannot be readily identified as users of depositories, a number of them also participate in the depository through direct or indirect Participants.

Deposit of Pension Fund Assets

While bank Participants continued to deposit private pension fund

Home of every president since John Adams, the White House was the first public building constructed in Washington, D.C. It wasn't described as the "White House," however, until after white paint was used to cover fire damage caused by invading British troops in 1814.

Though Thomas Jefferson described the White House as "big enough for two emperors, one Pope, and the grand lama," the growing functions of the executive branch eventually required expansions and renovations. These changes, including the addition of the West Wing in 1902 and the East Wing in 1942, completed its majestic 20th century appearance.

assets into their DTC accounts in 1987, most had been placed in the depository in prior years.

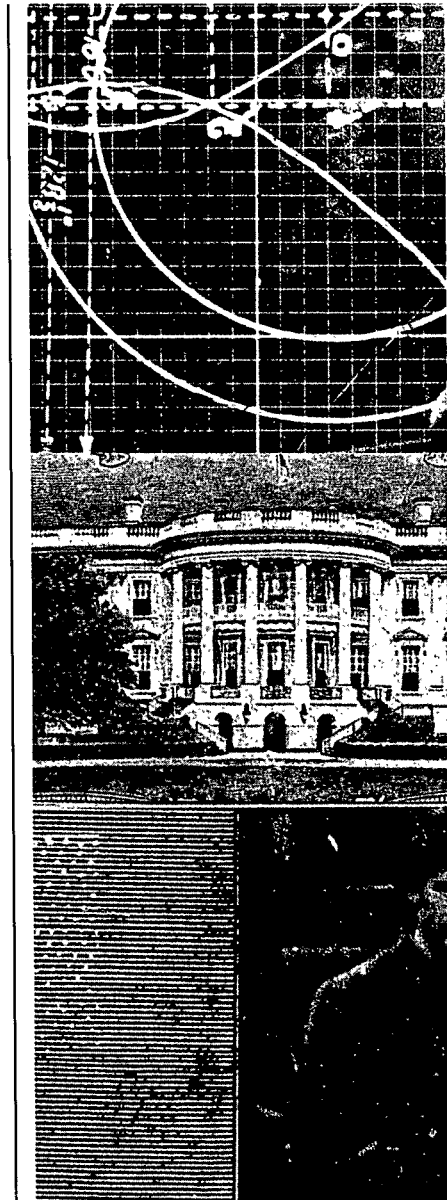
Growth continued in the deposit at DTC of state and municipal retirement system assets. Previously, depository use by state and municipal pension funds often was restricted by state laws or regulations enacted before the

depository system was developed. DTC understands that 49 states currently have no regulatory or statutory bars to the use of the depository system by state pension funds. Indeed, 47 states and the District of Columbia have all or part of their pension fund assets on deposit at DTC through custodian banks. With Arkansas and Texas permitting depository use in 1987 for the first time, DTC understands that only Wyoming requires that public pension fund assets be physically domiciled within state boundaries or kept as certificates wherever they may be domiciled. DTC continues to work to eliminate such restrictions.

Deposit of Insurance Company Assets

As with public pension funds, statutes and regulations in various states often were the obstacle to depository custody of securities owned by insurance companies. Though many states permitted depository use at the state insurance commissioner's discretion, in other states the problem was statutory—typically a requirement that assets be physically domiciled within the state or that they be kept as certificates wherever domiciled.

In 1987, DTC continued to work with the National Association of Insurance Commissioners, the Securities and Exchange Commission (SEC), and others to eliminate these restrictions. Currently, DTC understands that 49 states and the District of Columbia permit their domestic insurance companies to deposit assets out of state. After actions by California and New Mexico in 1987, only Wyoming has laws or



restrictions that require domestic insurers to maintain assets within the state.

Deposit of Investment Company Assets

Virtually 100% of investment company DTC-eligible assets are on deposit. In addition, as more securities become DTC-eligible, particularly municipal bonds, custodian banks can deposit eligible portions of mutual fund debt portfolios.

Movement Toward Book-Entry-Only Issues

Although state restrictions have now waned, DTC still provides issuers with another option: book-entry-only new issues with certificates available only to institutional investors that certify a regulatory need for them. This option may help issuers who desire the cost-savings benefits of book-entry-only issues, but fear that a potential institutional buyer may be barred from purchasing them.

Institutional Delivery (ID) System

The ID system, a method for reporting and settling institutional trades, reduces costs and increases assurance of timely settlement. It introduces a single entity—DTC—to coordinate all settlement activity through automated methods among broker-dealers, institutions, and agents.

Briefly stated, the system works as follows:

- (1) A broker or bank dealer executing an institutional trade furnishes DTC with trade details—such as price, quantity, and date—which the depository passes on as a legal confirmation

to the broker's or bank dealer's institutional customer, the customer's agent, and other interested parties.

- (2) If the ID confirmation accurately reflects the institution's order, the institution sends an acknowledgment (ID affirmation) to DTC. If the confirmation contradicts the institution's order records, the institution can

(3) When the affirmation is received, DTC forwards settlement instructions to the agent and the submitting broker or bank dealer.

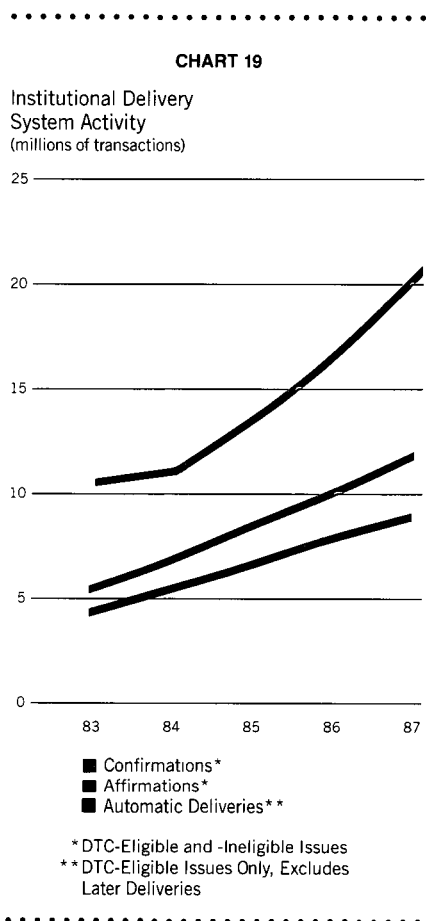
(4) If the deliverer has sufficient securities in its DTC account and authorizes trade settlement, the depository automatically completes delivery by book-entry on the morning of settlement date and processes the related money settlement as directed.

(5) If the security is not DTC-eligible, the deliverer and receiver settle the transaction outside the depository system. In such cases, although delivery must be physical rather than by book-entry, DTC provides instructions to encourage successful completion of delivery on settlement date.

ID in '87

■ The Institutional Delivery system expanded by yearend to include 6,927 institutions, broker-dealers, banks, and agents. Average monthly volume of ID confirmations processed through the system exceeded 1.8 million for the fourth quarter, up approximately 29% from the comparable 1986 period. For the year, over 41 million confirmations, affirmations, and prescheduled deliveries were processed through ID, an 18% increase over 1986's total. (See Chart 19, left.)

■ The industry affirmation rate for corporate debt and equities reached a record 90% at the beginning of 1988, a significant rise from 87% at yearend 1986, since each percentage-point increase represents roughly 12,000 additional confirms affirmed monthly.



act early enough in the settlement cycle so the broker or bank dealer can enter corrections into the ID system. If the broker's or bank dealer's trade details are insufficient to generate a confirmation, DTC notifies the firm so the problem may be resolved for timely settlement.

Part of the affirm-rate success is due to a 10-month *ID* educational campaign aimed at 50 investment managers. The campaign involved visits from DTC representatives to update them on new system procedures. The 50 users' overall affirmation rate, for an average of nearly 90,000 monthly trade confirms, rose to 93% and accounted for nearly 25% of the industry's improvement during the period.

- DTC continued to emphasize improved *ID* use for munis, in connection with Municipal Securities Rulemaking Board Rule G-15, which generally requires that institutional municipal transactions be settled through *ID*-like facilities. Educational programs helped raise the industry's affirm rate for institutional trades in municipals to a record 64% in September. The rate stabilized just below 64% at yearend, up from 50% at yearend 1986.
- The SEC approved rule changes that require use of automated facilities, such as *ID*, for settlement of all delivery-versus-payment/receipt-versus-payment (DVP/RVP) institutional trades of depository-eligible corporate securities.

These actions eliminate an exemption in New York Stock Exchange Rule 387, Section 64

In addition to printed materials, DTC produces videotapes explaining depository services. A recent presentation, featuring testimony by corporate and municipal issuers, describes the essentials of DTC's book-entry-only bond program, as well as its benefits to issuers and investors.

of the National Association of Securities Dealers's Uniform Practice Code, and similar rules in other markets that permitted U.S. settlement of trades in corporate securities by delivery of definitive certificates when the broker-dealer or its DVP/RVP customer was not a direct or indirect depository user. Effective February 11, 1988, the DVP/RVP privilege cannot be extended to the institution by the broker-dealer

unless both parties at least clear their trades in depository-eligible securities through depository users so settlement can occur by book-entry delivery.

- DTC began planning to expand the *ID* system to permit confirmation and affirmation of certain trades in foreign securities executed outside of the U.S. and Canada.

The "International *ID*" initiative stems from foreign trade clearance and settlement problems that result in high costs for brokers, dealers, custodians, and institutional investors. Since the foreign issues considered for International *ID* generally are not DTC-eligible, services for such issues would stop short of DTC book-entry delivery and settlement; such trades would settle in foreign markets between the parties, their custodians, their sub-custodians, or their depositories.

Industry representatives from U.S. banking, brokerage, and investment manager sectors have formed ad hoc committees to work with DTC to develop International *ID*.

- DTC completed its *ID* system redesign, offering users greater processing efficiencies, higher affirmation percentages, and smoother *ID* settlement.

The redesign includes strengthened trade data input controls; new and expanded data fields; an on-line cumulative eligible trade report; and a new payment method indicator that, on all *ID* reports, separates trades that settle in same-day funds from those settling in next-day funds. An educational program helped users adapt to these changes.



Automation of Depository Services

DTC places a high priority on the automation of internal depository operations and of communication links with Participants, other users, and transfer agents. With sophisticated computer systems, the depository reduces its operating costs and, more importantly, Participant processing costs.

DTC has five principal means of automated communication with Participants:

Computer-to-Computer Facility

The Computer-to-Computer Facility (CCF) is used for direct computer-to-computer communications between DTC and system users. It allows the transmission of instructions from user computer systems to DTC's computer system, and transmission of data back from DTC. During 1987, the number of CCF users grew to 530, from 381 at yearend 1986.

CCF II, developed in 1986, permits communications with DTC's computer system from IBM and non-IBM mainframes. All output

files currently available through CCF are also available through CCF II, which is now active for 80 user sites. CCF II includes the Multiple Virtual Storage/Bulk Data Transfer facility, which allows transmission of highly compressed data and can reduce transmission time (over comparable CCF line speeds) by as much as 65%.

Participant Terminal System

The depository's Participant Terminal System (PTS) is a

network of computer terminal stations—located in Participants' offices nationwide and in Canada—tied directly to DTC's computers. Participants use their PTS stations to send instructions, inquiries, and other messages to DTC, and to receive messages and reports from the depository.

During 1987, the number of PTS terminals in Participant offices increased to 1,122, from 966 a year earlier. The average daily number of transactions—including inquiries,

A man of limitless vitality and devotion to the strenuous life, Theodore Roosevelt was a conservationist, rancher, and historian.

A decorated war hero, Teddy admired soldierly virtues and wanted to restore "the fighting edge" to the American spirit. As assistant secretary of the Navy, he called for a strong fleet: "Build a battleship in every creek!" One worried citizen begged Roosevelt, as he assumed the presidency, not to let his patriotic passion plunge the country into war. "What!" he cried, "a war, and I cooped up here in the White House? Never!" The country never did go to war under T.R., and, perhaps ironically, after arbitrating a peace treaty between Russia and Japan, he won the Nobel Peace Prize.



messages, and instructions for specific transactions—grew to 644,600 in 1987, up nearly 25% from 517,200 in 1986.

PTS Jr.

PTS Jr., an alternative to *PTS*, is available only to low-volume users. It performs all *PTS* functions at lower cost, though at reduced line speed. *PTS Jr.* requires only a user's compatible personal computer, DTC-supplied software, a modem, and a telephone connection.

By yearend 1987, 131 Participants and 23 Pledgee banks were using *PTS Jr.*

Mainframe Dual Host

In 1987, DTC began phasing in Mainframe Dual Host (MDH), a mainframe-to-mainframe communications system. MDH will eventually eliminate Dual Host *PTS*, which DTC introduced in 1983 as an option for *PTS* users to speed processing of book-entry deliveries.

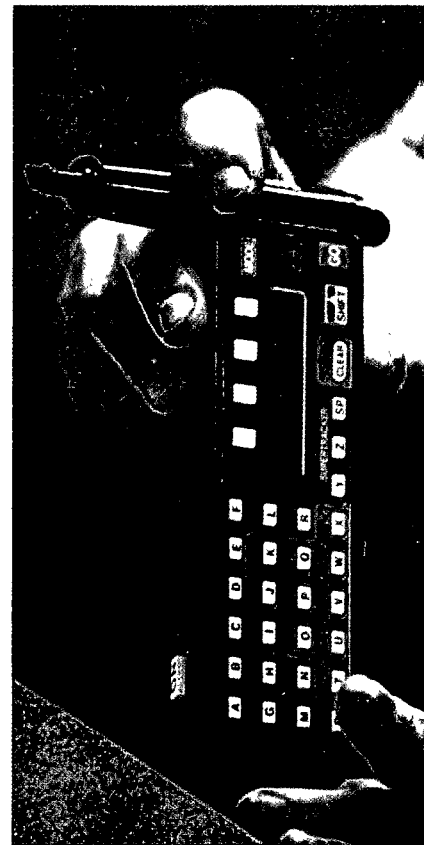
MDH allows users to send and receive machine-readable data between their mainframes and DTC's mainframe in a "real-time" environment. This eliminates the intermediate minicomputer that Dual Host *PTS* requires and reduces costs, as well as potential hardware problems. Participants can use MDH to send and receive data over the same communications line.

Computerized scanners (right) enable an express courier service to update its delivery data base immediately after transfer packages from DTC are delivered to transfer agents in various cities. With this information, DTC's Aging Transfer Department can track the packages and better monitor transfer-turnaround time.

At yearend 1987, 14 Participants were using Dual Host *PTS* and four were participating in a pilot program for Mainframe Dual Host.

Automated Participant Interface

Many DTC Participants have large volumes of depository activity they cannot yet transmit by CCF but whose input by *PTS* would not be economical. The Automated Participant Interface (API) allows them or their data processing service bureaus to enter those instructions directly into DTC's computer system by hand-delivered or electronically transmitted magnetic tape. API capabilities include magnetic tape instructions for routine Withdrawals-by-Transfer, *ID* trades, and *ID* affirmations.



Developments in 1987

The depository's primary emphases and accomplishments in automation during the past year are summarized below:

- More communication between DTC and Participants was placed on CCF, *PTS*, and *PTS Jr.* to diminish the use of paper forms and hand-delivered magnetic tape.
- DTC introduced services that allow *PTS* users to enter reorganization inquiries and dividend inquiries. The system confirms to users the receipt of an inquiry and assigns it a 10-digit control number, which they may later use to check the inquiry's status.
- Acting on the requests of Participants and industry organizations, the depository enhanced CCF and CCF II to allow Participants to submit segregation instructions and segregation release instructions for their fully-paid-for customer securities. This eliminates the need to manually enter instructions through *PTS*.
- In the second quarter, the depository made call lottery information available to Participants via *PTS*, helping them streamline their call lottery processing and research out-of-balance conditions resulting from missing lottery outcomes.
- DTC added several reorganization functions to *PTS*. Unit swingover instructions enable Participants to separate a unit into its components or to combine component shares into a unit. Another function allows Participants to exercise a conversion option for convertible securities.

Interfaces and the National Clearance and Settlement System

DTC's interfaces with clearing agencies elsewhere in the country are a major part of the national securities clearance and settlement system. They are based on the close working relationship between DTC and the National Securities Clearing Corporation (NSCC) that permits several hundred broker-dealers that participate in both NSCC and DTC to conveniently use the trade comparison and clearing facilities of NSCC and the trade settlement and securities custody services of DTC. Through interfaces among the securities depositories and clearing corporations, users of any of them can settle with any other user elsewhere, without requiring physical certificates to be shipped from one geographic region to another.

DTC also maintains interfaces with other institutions and agencies in order to serve its Participants.

Developments in 1987

- In April, The Pacific Stock Exchange Board of Governors decided to close Pacific Securities Depository Trust Company (PSDTC). Thereafter, PSDTC worked closely with DTC and other clearing agencies to ensure that affected broker-dealers and banks would not suffer service disruptions. At the Pacific's request, virtually all eligible securities in PSDTC's custody—valued at \$47 billion—were moved by DTC from San Francisco to New York in May and June.

Thirteen banks and nine broker-dealers that had been participating in both DTC and PSDTC moved their securities positions at PSDTC to DTC. Thirty-two other PSDTC members, not counting Pacific Exchange specialists, elected to

become DTC Participants. The remaining PSDTC users chose either indirect participation in DTC as correspondents of DTC Participants or membership in another depository.

- Action by the U.S. Treasury Department permitted DTC to reopen its book-entry pledge mechanism with the Federal Reserve Bank of New York (FRBNY) for banks securing Treasury Tax and Loan (TT&L) accounts and deposits of public money. At yearend, bank Participants had pledged \$3.8 billion in municipal bonds and other qualifying securities in their DTC accounts to FRBNY for these purposes, as well as to secure advances at the discount window and intraday overdrafts.

DTC is extending its pledge mechanism to other Federal Reserve Banks, since the agreement with the FRBNY for pledges to secure TT&L accounts and deposits of public money applies to all 12 Federal Reserve Districts.

- Plans were made in 1987 to extend the NSCC-DTC link to international transactions processed by the International Securities Clearing Corporation—an NSCC subsidiary—and The International Stock Exchange in London.

Interfaces

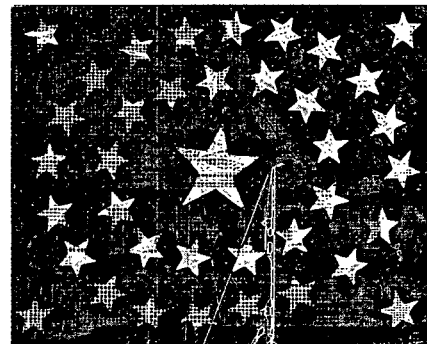
The interfaces between DTC and the Midwest Securities Trust Company and Philadelphia Depository Trust Company permit any member of one depository to settle transactions with any member of any other depository. These interfaces also permit users

of more than one depository to move securities positions, as needed, between their accounts at these depositories. The Pacific depository participated in these interfaces until it ceased operation during 1987. Additionally, DTC uses its Institutional Delivery system to process the institutional trade data reported to other depositories for clearance and settlement through their systems.

To assist settlement of trades on the Boston Stock Exchange, an interface exists between the Boston Stock Exchange Clearing Corp., NSCC, and DTC. A similar arrangement now exists between The Pacific Stock Exchange, NSCC, and DTC to settle trades on the Pacific Exchange.

DTC has a linkage with The Options Clearing Corporation (OCC), whereby banks and brokers may pledge to OCC securities on deposit at DTC. This simplifies processing since there are no repeated movements of paper among parties to pledge transactions.

The Canadian Depository for Securities Limited and DTC maintain an interface to assist some of the Canadian broker-dealers that participate in DTC.



The October Market Break

Since the great bulk of trades on the nation's stock exchanges, in the over-the-counter market, and in municipal bonds settle through DTC, transaction volumes in many depository services reflect this trading activity. And since eight of the NYSE's top 10 trading days occurred in October, many DTC services established new highs by ample margins.

DTC book-entry deliveries spiked at \$91.7 billion on October 26, the settlement day for trades of October 19, the first day more than 600 million shares traded on the NYSE. This compares with a daily average DTC delivery value of \$38.7 billion for the year. On both the 26th and 27th, the depository's systems handled approximately 480,000 book-entry deliveries, compared with a daily average of 308,500 for the year.

Shares delivered by book-entry averaged 1.7 billion daily during the week of October 26, about 55% more than 1987's 1.1 billion share daily average.

During the October market break, the post-trade processing network that serves "the Street" and the broader investment community proved its mettle. Playing a key role within this network, DTC's Settlement Division smoothly handled transaction volumes resulting from unprecedented trading activity. On October 26, settlement day for trades of October 19, DTC book-entry deliveries surged to \$91.7 billion. The daily value of trade settlements for the full week of October 19 averaged almost \$74 billion, about twice the average daily settlement value in 1987.

For settlement days of trades made during the week of October 19, DTC processed instructions resulting in a daily average of approximately 1.1 million updates, or changes, to Participants' securities accounts. Daily average updates in October reached an all-

time high—813,000—versus 765,000, the monthly average for the year.

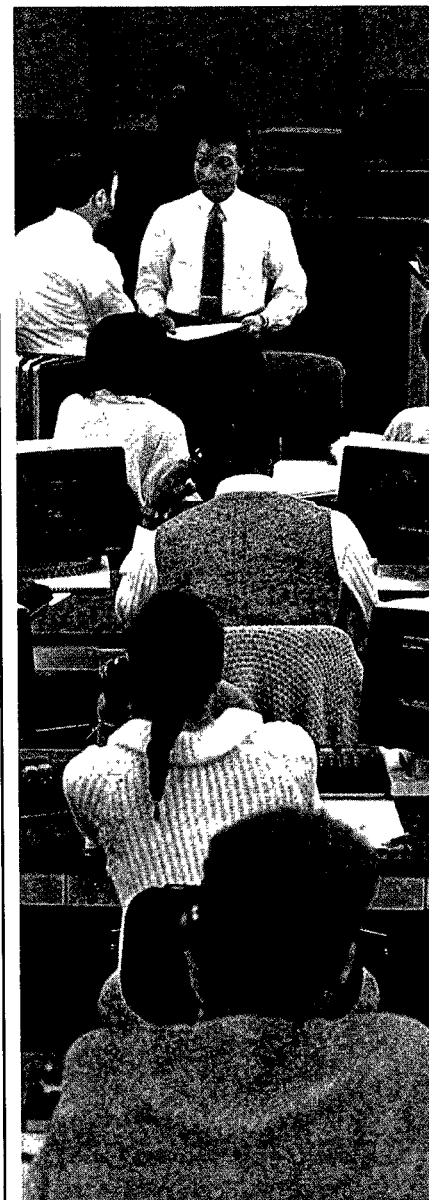
DTC's Institutional Delivery system processed a high of nearly 187,000 trade confirmations on October 21. These confirms averaged more than 100,000 daily during October and 79,400 for the year.

Withdrawals-by-Transfer (WTs) occur when investors want certificates registered in their names. Participants sent DTC a daily record of more than 71,000 WTs on October 30 and a daily average of 44,700 during November, compared with a daily average of 30,100 for the year.

Fortunately, with strong Participant support in recent years for adequate DTC operating capacity, the depository's systems were a match for the task. Also contributing greatly was the National Securities Clearing Corporation's Continuous Net Settlement system, operated by the Securities Industry Automation Corporation, which nets broker-dealer trades before sending "street-side" delivery instructions to DTC.

Were it not for almost two decades of experience at immobilizing securities and delivering them by book-entry, the securities industry would have been inundated with paperwork. This did not occur because of the systems capability developed by and among Participants, DTC, NSCC, other clearing agencies, and many transfer agents.

Though the value of securities on deposit at DTC posted a gain for 1987—up \$300 billion, to \$2.8 trillion—it actually fell from a high of \$3.2 trillion in September. This decrease reflects securities valuation adjustments related to the October market break.



Protection for Participants' Securities

DTC is the world's largest custodian of corporate stocks and corporate and municipal bonds. Its elaborate system of safeguards is widely regarded as the most comprehensive ever developed to monitor the movement and custody of securities.

Internal Controls

DTC records the movement and location of each certificate in its custody, helping to resolve processing errors and facilitate reconciliation and audits.

- An automated certificate-number control system cross-indexes certificates by issue, number, denomination, date of receipt, and—for bearer certificates—for the depositor's identity. This permits the depository to control and rapidly reconstruct paper flow, regardless of volume.
- Upon receipt of registered certificates, quick transfer into DTC's nominee name, Cede & Co.,

Riding the crest of his popularity as a Civil War hero, Ulysses S. Grant took the oath of office at age 46, becoming the youngest president. Grant's administrative naivete, however, was evident during his tenure as chief executive. Although a bold and skillful army leader, as president, Grant's administration was fraught with scandal. But his election in 1868 prompted the drafting of the Fifteenth Amendment—a milestone of his presidency. Ratified in 1870, it forbids denial of the right to vote based on "race, color, or previous condition of servitude"—restrictions that, had they been observed in 1868 by every state, would have shifted Grant's margin of victory to presidential rival Horatio Seymour.

allows for prompt validation of certificates and enhances control over prompt and timely dividend and interest collection.

- "Jumbo" certificates consolidate securities into large denominations, making unauthorized negotiation extremely difficult, as well as conserving vault space.



- Restrictive endorsements on the back of certain jumbo certificates further inhibit unauthorized negotiation.
- Registered certificates remain in non-negotiable form while in DTC custody.
- Microfilm procedures record registered certificates and related data that enter and leave DTC.
- Duplicate computer files of transactions, stored in various locations, permit prompt file reconstruction if processing is interrupted. These and the microfilm records supplement comprehensive files of original documents and production reports.
- Backup computer and communications arrangements help ensure DTC's data processing functions throughout any emergency.

Physical Security

DTC's physical security system combines sophisticated electronic and physical devices with an extensive security force.

- A computerized access-control system restricts entry into sensitive areas to appropriate personnel.
- A closed-circuit television system monitors entry points, vaults, and other securities processing areas.
- Alarm systems, which use such sensors as motion, vibration, light, and heat detectors, are monitored locally and at a central station. Line encryption protects individual control panels from compromise.
- DTC's security force monitors the many systems, and screens persons and packages entering and leaving restricted areas.

- Securities deposited with DTC are held in various locations, with special access requirements and extensive controls.
- Registered securities are in non-negotiable form when delivered to or from transfer agents and other parties.
- Special wastepaper treatment and disposal methods help prevent unauthorized release of certificates or sensitive documents.

Recordkeeping Systems

Double-entry recordkeeping systems help ensure that all Participant input is recorded, that the location of underlying certificates is identified, and that moneys are properly transferred to and among Participants. DTC uses the recordkeeping systems to report to Participants and to research differences detected by Participants or DTC control mechanisms.

User Verifications

User verification of DTC records (users compare their activity records with depository reports) helps ensure the integrity of the

depository's system and encourages maximum operational cooperation. Each morning, Participants and Pledges receive a DTC report that itemizes and summarizes their previous day's account activity. In addition, DTC sends daily reports of cash transactions and a monthly statement showing each Participant's and Pledge's securities positions.

DTC rules require Participants to report differences between their records and DTC statements; Participants and Pledges must also confirm the accuracy of their monthly position statements. DTC's research staff helps reconcile differences.

Internal and External Audits

DTC's internal auditors and its independent accountants, Price Waterhouse, review internal controls.

- The internal audit program reviews and tests controls in key operating areas and in automated systems (including those being developed). Certificates in selected issues are counted daily, using random sampling techniques.

- Price Waterhouse examines DTC's financial statements, and annually performs a study and evaluation of the internal accounting control system. Price Waterhouse's report on the system is available to Participants, Pledges, and their accountants, upon request.
- The Audit Committee of DTC's Board of Directors oversees the General Auditor and the Auditing Department. It reviews the scope of the Price Waterhouse audits and meets with them periodically to discuss their findings. In addition, the Board of Directors receives results of the New York State Banking Department's and the Federal Reserve Bank of New York's annual regulatory examinations of DTC.

Participants Fund

The Participants Fund's largest component is a fund exceeding \$200 million deposited by Participants and maintained to satisfy any uninsured loss or liability of DTC related to the function of its Next-Day Funds Settlement (NDFS) system. DTC

Cartridge-tape computer technology enables DTC to store and recover critical data efficiently. These capabilities are vital to backup computer and communications arrangements designed to ensure that DTC could continue to provide its post-trade processing services despite disablement of its data center. Recently, the depository conducted successful contingency tests with SunGard Recovery Services. The network simulation—recognized as the largest network restoration to date in the disaster recovery industry—linked DTC Participants nationwide to SunGard's alternate site facility in Philadelphia.



Insurance Coverage

DTC's insurance coverage program for securities—one of the most extensive programs of private institutions in the financial industry—provides coverage in the following amounts:

Losses occurring on premises:

<i>Amount</i>	<i>Coverage</i>
\$100 million	Primary and Excess Blanket Bonds
\$100 million	All Risk Securities Excess
\$ 5 million	Lost Instrument Bond Premium Policy (for premiums for purchases of lost instrument bonds for securities losses in excess of \$200 million)

Losses occurring in transit by messenger or armored car carrier:

<i>Amount</i>	<i>Primary Coverage</i>
\$500 million	In-Transit (by carrier's insurer)
\$100 million	Primary and Excess Blanket Bonds (for securities lost by messenger)
<i>Amount</i>	<i>Excess Coverage</i>
\$100 million	Primary and Excess Blanket Bonds (for securities lost by carrier)
\$ 20 million	Excess In-Transit Bond (for losses exceeding \$100 million when securities are in messenger's custody, and in excess of \$600 million when in armored car carrier's custody)
\$ 5 million	Armored Car and Messenger Policy (for losses exceeding \$120 million when securities are in messenger's custody, and in excess of \$620 million when in armored car carrier's custody)
\$ 5 million	Lost Instrument Bond Premium Policy (for premiums for purchase of lost instrument bonds for securities losses exceeding \$125 million when in messenger's custody, and in excess of \$625 million when in armored car carrier's custody)

Losses occurring in the mail:

<i>Amount</i>	<i>Coverage</i>
\$ 15 million	Mail Policy (covers non-negotiable securities sent via registered or express mail)
\$ 1 million	Mail Policy (covers non-negotiable securities sent via first-class mail, or negotiable securities sent via registered or express mail)

rules provide that any such loss may be charged against undivided profits or retained earnings, or to the Participants Fund, at the election of the Board of Directors.

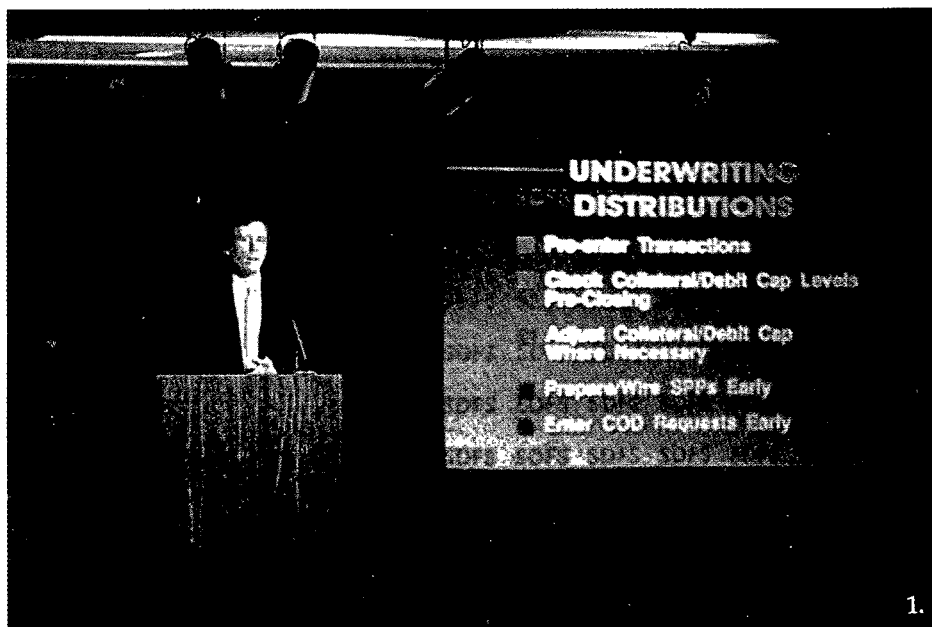
Should DTC suffer a loss because of a Participant's failure to satisfy obligations to the depository, DTC would first charge such loss to that Participant's deposit to the Fund. Should the loss exceed that Participant's deposit (or should it be sustained for reasons other than Participant failure), DTC might then charge (pro rata) the excess to other Participants' deposits to the Fund. Should DTC make a charge against a Participant's deposit to the Fund (pro rata or otherwise), the Participant must make an additional deposit to the Fund in an amount equal to the charge.

There has never been a pro rata charge to the Fund.

The other component of the Participants Fund is the Same-Day Funds Settlement (SDFS) system Fund. This Fund would be used to satisfy any uninsured loss or liability of DTC related to the function of the SDFS system. The required minimum deposits to the Fund of all SDFS Participants are available for this purpose and, as with the NDFS Fund, are subject to increases, if necessary, to meet losses.

Other Protective Procedures

Additional procedures protect Participants by minimizing the possibility of loss arising from a Participant's unexpected insolvency. If DTC becomes aware of a possible operational or financial inadequacy, it carefully monitors that Participant's activity and takes protective steps as events warrant.



1. Before the Same-Day Funds Settlement (SDFS) system began—and throughout its early days—Vice President Donald F. Donahue and other DTC representatives held educational sessions to familiarize Participants and others with the system's operating procedures. In early 1988, more seminars helped users prepare for securities industry rule changes that, beginning on July 1, 1988, will generally require Participants to settle transactions in DTC-eligible securities that settle in same-day funds through the depository's SDFS system. Through April 1988, almost 800 representatives from approximately 150 Participants had attended these seminars.

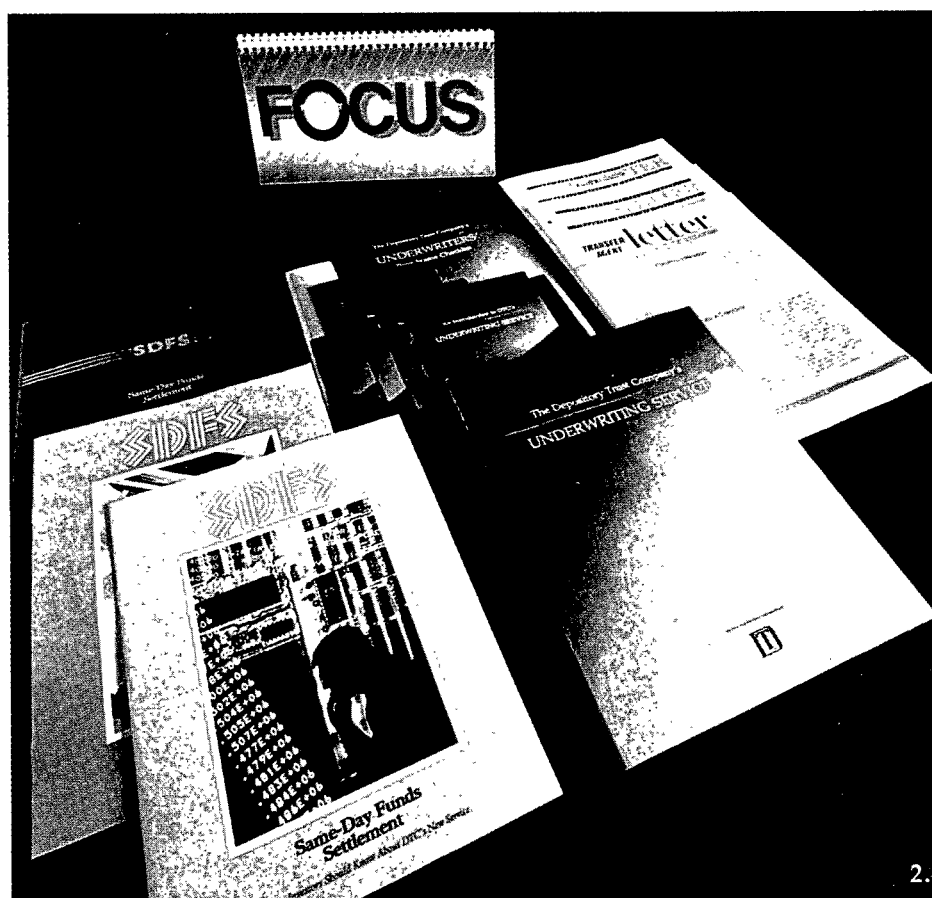
2. DTC emphasizes communication with Participants and others in the financial industry. Information about the depository and its services can be found in various publications, available upon request.

3. Officers of the Bank Depository User Group 1988 Steering Committee.

4. Because of its growth, DTC is always looking for talented people. Representatives from the Employment Section, such as Patricia Epifanio, Senior Recruiter, and Michael Longo, Employment Supervisor, visit college campuses and job fairs to meet with potential candidates and describe the opportunities offered at DTC.

5. Considering the development of DTC's International ID system: (from left) DTC's Charles J. Horstmann, Vice President; Vincent A. Walsh, Senior Vice President, Instinet; Timothy B. Harbert, Vice President, State Street Bank and Trust Company; DTC's Russell J. Ferro, Project Leader, and Neil F. Brander, Vice President; and Patrick J. Murphy, Vice President, The Chase Manhattan Bank, N.A.

6. To speed up the process by which certificates are registered in the names of Participants' customers, DTC began using express courier services during 1987 to send certificates and instructions to hundreds of transfer agents. These agents have no facilities in New York City and do not accept automated transmissions from DTC. This new procedure shortens transfer-turnaround time for Participants and their clients by three to five days.





Chairman William F. Lackner
Vice President
Mellon Bank, N.A.



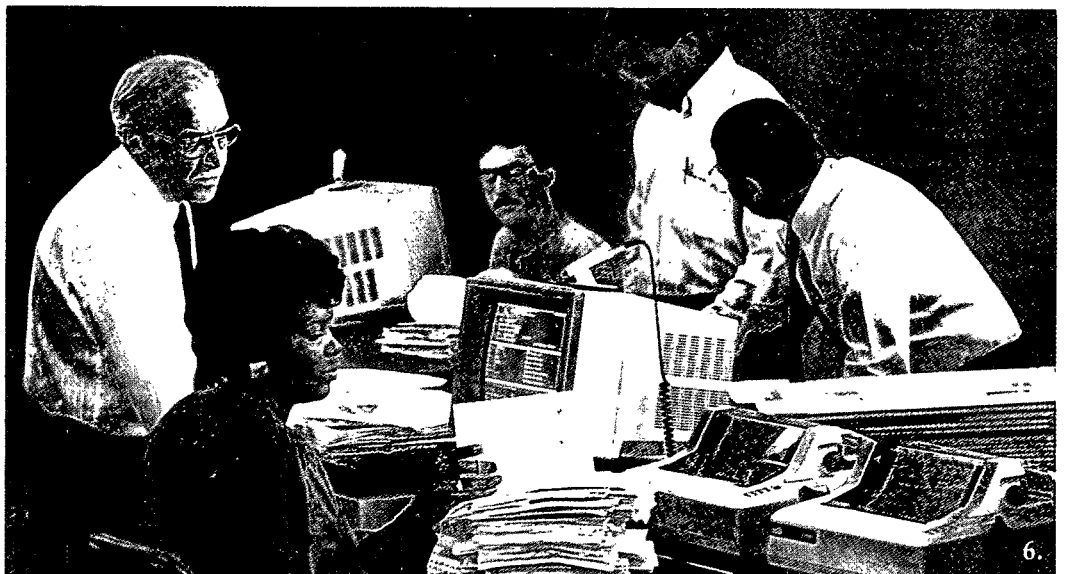
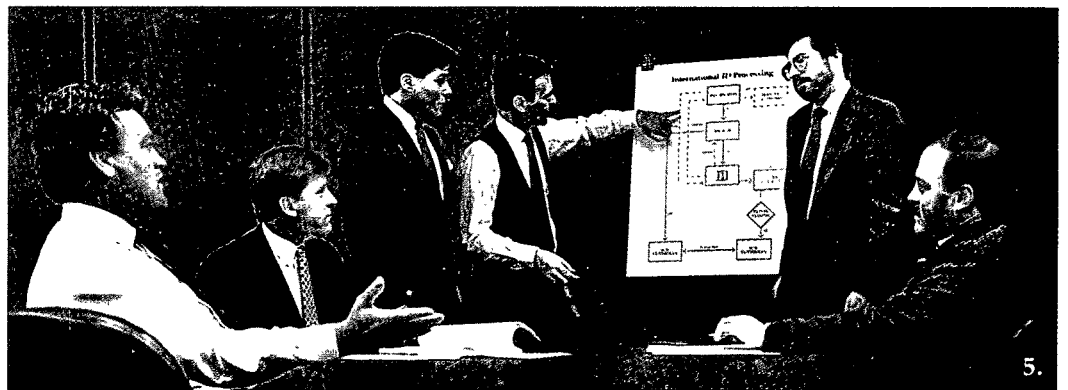
Vice Chairman Joseph Stout
Assistant Vice President
Merchants National Bank
& Trust Company of Indianapolis



Secretary Vincenza Rardin
Vice President
State Street Bank
and Trust Company



Treasurer Kathleen C. Scanlon
Vice President
Norwest Technical Services Inc.



**Officers of
The Depository
Trust Company**



William T. Dentzer, Jr.
Chairman and Chief Executive Officer



Conrad F. Ahrens
President and Chief Operating Officer



William F. Jaenike
Executive Vice President



Thomas J. Lee
Executive Vice President



John P. Crowley
Senior Vice President



Arnold Fleisig
Senior Vice President



Dennis J. Dirks
Senior Vice President



Michael Fedorochko
Senior Vice President



Glenn E. Mangold
Senior Vice President



Richard B. Nesson
General Counsel



Edward J. McGuire, Jr.
Secretary

Vice Presidents

- Michael A. Agnes
- Nicholas J. Arrigan
- Joseph J. Bellantoni
- Neil F. Brander
- John J. Colangelo
- Raymond R. DeCesare
- Donald F. Donahue
- Stuart A. Fishbein
- Ronald A. Garguilo
- Charles J. Horstmann
- James Koster
- Vincent A. Mauro
- Michael T. Mullen
- Richard J. O'Brien
- Frank Petrillo
- James V. Reilly
- Martin J. Rizzi
- John L. Scheuermann
- Kenneth M. Scholl
- Clifford A. Vangor

Comptroller

Gary J. LaCara

Treasurer

Philip E. Plasencia

Assistant Secretary

Jane C. Klueger

Assistant Treasurer

Leonard A. Miele

**Committees of the
Board of Directors**

Nominating Committee

Thomas C. Schneider, *Chairman*
John F. Lee
Richard S. Pechter
H.J. Runnion, Jr.

Audit Committee

John J. Evans, *Chairman*
James T. Flynn
Sandra S. Jaffee
Peter E. Madden*
Richard F. Morrison
Mario J. Nigro

*Succeeded Edward A. O'Neal, Jr. during 1987

Compensation Committee

Richard S. Pechter, *Chairman***
John J. Evans
Robert A. Friedman
Thomas C. Schneider

**Succeeded Joseph R. Hardiman as Chairman during 1987

The Board of Directors

William T. Dentzer, Jr.
*Chairman and Chief Executive Officer
 The Depository Trust Company*

Conrad F. Ahrens
*President and Chief Operating Officer
 The Depository Trust Company*

William F. Aldinger
*Executive Vice President
 Wells Fargo Bank, National Association*

John J. Evans
*Vice Chairman
 Manufacturers Hanover Trust Company*

James T. Flynn
*Executive Vice President
 Morgan Guaranty Trust Company of New York*

Robert A. Friedman
*Partner
 Goldman, Sachs & Co.*

Sandra S. Jaffee
*Executive Vice President
 New York Stock Exchange, Inc.*

C. Richard Justice
*Executive Vice President
 National Association of Securities Dealers, Inc.*

John F. Lee
*Executive Vice President
 New York Clearing House Association*

Peter E. Madden
*President and Chief Operating Officer
 State Street Bank and Trust Company*

Richard F. Morrison
*Senior Executive Vice President
 Shearson Lehman Hutton Inc.*

Mario J. Nigro
*Senior Vice President
 Merrill Lynch & Co., Inc.*

Richard S. Pechter
*Chairman
 DLJ Financial Services Group*

H.J. Runnion, Jr.
*Senior Executive Vice President
 Wachovia Bank & Trust Company, N.A.*

Thomas C. Schneider
*Executive Vice President and Chief Financial Officer
 Dean Witter Financial Services Group Inc.*



William T. Dentzer, Jr.



Conrad F. Ahrens



William F. Aldinger



John J. Evans



James T. Flynn



Robert A. Friedman



Sandra S. Jaffee



C. Richard Justice



John F. Lee



Peter E. Madden



Richard F. Morrison



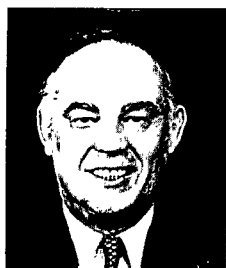
Mario J. Nigro



Richard S. Pechter



H.J. Runnion, Jr.



Thomas C. Schneider

Retiring from the Board during 1987 at the end of his term was Edward A. O'Neal, Jr., Group Executive, Chemical Bank. Also retiring from the Board during the year were Richard S. White, Jr., Chairman and President, RepublicBank Trust Company, and Joseph R. Hardiman, Managing Director, Alex. Brown & Sons, Inc., upon his election as President of the National Association of Securities Dealers.

Report of Independent Accountants

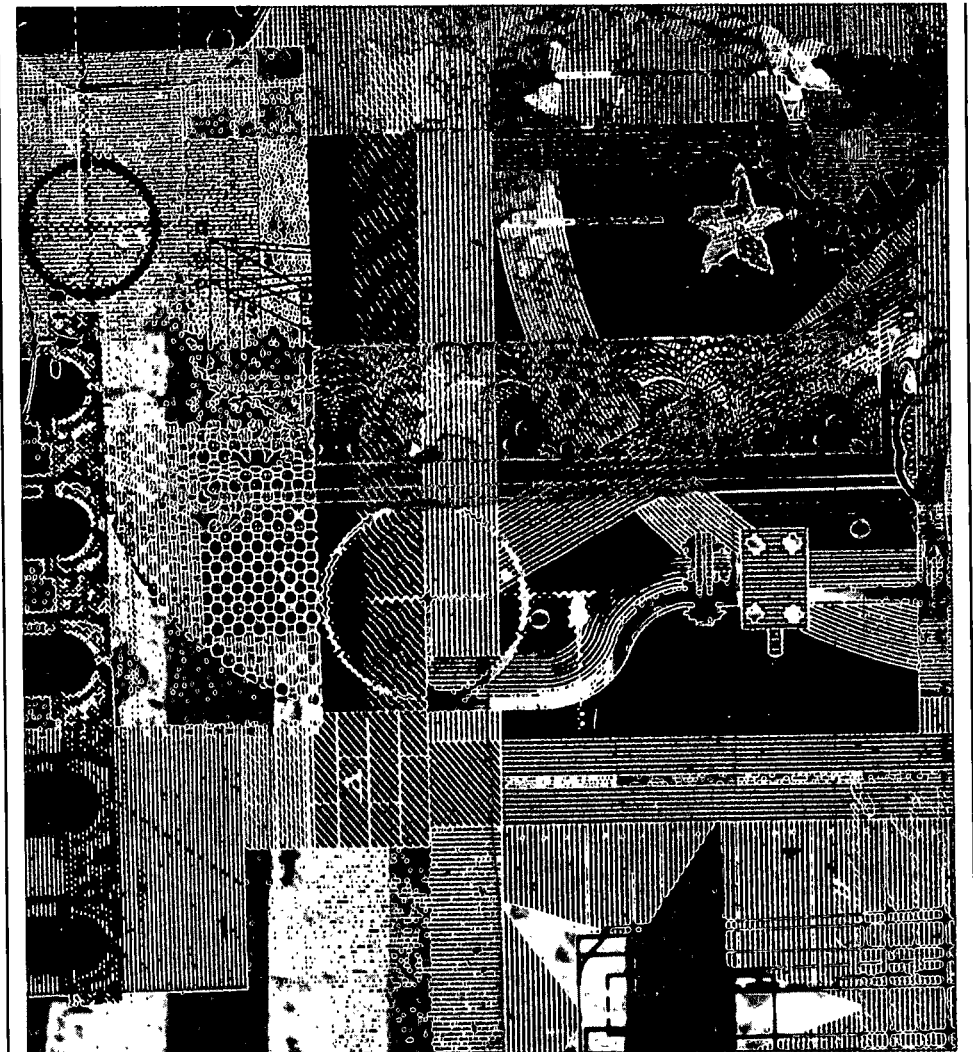
To the Board of Directors And Stockholders of The Depository Trust Company

In our opinion, the accompanying statement of condition and the related statements of revenues and expenses and undivided profits and of changes in financial position present fairly the financial position of The Depository Trust Company at December 31, 1987 and 1986, and the results of its operations and the changes in its financial position for the years then ended, in conformity

with generally accepted accounting principles consistently applied. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Price Waterhouse

153 East 53rd Street, New York, NY
February 1, 1988



Statement of Condition

December 31,

	1987	1986
	<i>(Dollars in thousands)</i>	
Assets		
Cash and money market accounts (Note 2)	\$ 144,980	\$ 622,255
Repurchase agreements (Note 2)	1,053,871	1,612,157
U.S. Government securities (Note 2)	—	10,278
Receivables:—		
Participants:		
For settlements	4,089	44,950
For services	21,105	20,012
Dividends, interest and other (Note 4)	275,180	376,244
Deferred income taxes (Note 6)	7,796	4,315
Prepaid expenses	2,421	2,177
Equipment and leasehold improvements, less accumulated depreciation of \$32,994,000 in 1987 and \$24,428,000 in 1986 (Notes 2 and 7)	47,274	36,487
Leased property under capital leases, less accumulated amortization of \$7,494,000 in 1987 and \$6,906,000 in 1986 (Notes 2 and 8)	825	1,414
Contributions to Participants Funds, callable on demand (Note 3)	205,396	197,990
	<u>\$1,762,937</u>	<u>\$2,928,279</u>
Liabilities and stockholders' equity		
Liabilities:—		
Drafts payable (Note 2)	\$ 986,147	\$2,042,802
Accounts payable and accrued expenses (Note 5)	54,084	31,194
Payable to Participants:		
For refunds	22,447	19,156
On settlements	725	16,513
On receipt of securities	101,881	104,569
Dividends and interest received (Note 4)	350,826	482,021
Notes payable, including \$3,774,000 in 1987 and \$4,507,000 in 1986 due within one year (Note 7)	6,105	10,599
Obligations under capital leases, including \$1,089,000 in 1987 and \$969,000 in 1986 due within one year (Note 8)	1,515	2,484
	<u>1,523,730</u>	<u>2,709,338</u>
Participants Funds (Note 3):		
Deposits received	18,778	6,010
Contributions callable on demand	205,396	197,990
	<u>224,174</u>	<u>204,000</u>
Stockholders' equity:		
Capital stock—authorized, issued and outstanding, 18,500 shares of \$100 par value	1,850	1,850
Surplus	950	950
Undivided profits	12,233	12,141
	<u>15,033</u>	<u>14,941</u>
	<u>\$1,762,937</u>	<u>\$2,928,279</u>

The accompanying notes are an integral part of the financial statements.

T H E D E P O S I T O R Y T R U S T C O M P A N Y

**Statement of Revenues
And Expenses and
Undivided Profits**

	<i>For the years ended December 31,</i>	
	1987	1986
	<i>(Dollars in thousands)</i>	
Revenues:		
Services to Participants	\$231,013	\$200,163
Interest income	69,358	66,604
	<u>300,371</u>	<u>266,767</u>
 <i>Less—Refunds to Participants (Note 1)</i>	 66,534	 74,335
	<u>233,837</u>	<u>192,432</u>
 Expenses:		
Employee costs (Note 5)	131,873	108,685
Rent, maintenance and utilities	27,093	22,358
Data processing rentals and supplies	15,175	14,746
Professional and other services	14,530	12,455
Depreciation and amortization	9,154	6,845
Interest (Notes 7 and 8)	1,061	1,617
Other expenses (Note 6)	34,859	23,468
	<u>233,745</u>	<u>190,174</u>
 Excess of revenues over expenses and refunds	 92	 2,258
Undivided profits, beginning of year	12,141	9,883
	<u>\$ 12,233</u>	<u>\$ 12,141</u>

The accompanying notes are an integral part of the financial statements.

**Statement of Changes
In Financial Position**

	<i>For the years ended December 31,</i>	
	1987	1986
	<i>(Dollars in thousands)</i>	
Financial resources were provided by:—		
Operations:		
Excess of revenues over expenses and refunds	\$ 92	\$ 2,258
Charges (credits) not affecting resources—		
Depreciation and amortization	9,154	6,845
Provision for uncollectible dividend receivables	5,247	4,367
Pension and deferred compensation	1,237	557
Deferred taxes	(3,651)	(1,315)
Provision for abandonment costs	2,583	—
Resources provided from operations	<u>14,662</u>	<u>12,712</u>
Decrease in dividends, interest and other receivables	96,347	—
Increase in drafts payable	—	1,143,539
Increase in payable to Participants	—	154,674
Decrease in receivable from Participants	39,768	92,405
Increase in accounts payable and accrued expenses	18,540	5,286
Capital lease obligations incurred	—	679
Increase in Participants Funds	20,174	4,000
	<u>189,491</u>	<u>1,413,295</u>
Financial resources were used for:		
Increase in dividends, interest and other receivables	—	319,115
Purchase of equipment and leasehold improvements	19,352	10,451
Note and capital lease payments	5,463	5,170
Decrease in drafts payable	1,056,655	—
Increase in contributions to Participants Funds and other, net	7,480	4,831
Decrease in payable to Participants	146,380	—
	<u>1,235,330</u>	<u>339,567</u>
Net (decrease) increase in cash and money market accounts, repurchase agreements and U.S. Government securities during the year	(1,045,839)	1,073,728
Cash and money market accounts, repurchase agreements and U.S. Government securities, beginning of year	<u>2,244,690</u>	<u>1,170,962</u>
Cash and money market accounts, repurchase agreements and U.S. Government securities, end of year	<u>\$1,198,851</u>	<u>\$2,244,690</u>

The accompanying notes are an integral part of the financial statements.

Notes to Financial Statements

December 31, 1987 and 1986

Note 1—Business and Ownership:

The Company is a limited purpose trust company providing central securities depository and related services to the securities, banking and related industries. At December 31, 1987, New York Stock Exchange, Inc. owned approximately 32% of the capital stock of the Company, with the remainder owned by the American Stock Exchange, National Association of Securities Dealers and certain Participants or their representatives. A Stockholders Agreement provides for an annual reallocation of the entitlement to purchase outstanding capital stock by eligible Participants or their representatives based on relative depository activity of Participants during the prior year.

Pursuant to a policy adopted by the Board of Directors, the Company does not pay dividends to stockholders, but refunds to all of its Participants each year revenues in excess of current and anticipated needs. In 1987, this refund amounted to \$27,500,000 (1986—\$39,050,000). The Board of Directors also adopted an additional refund policy to provide for a monthly refund to Participants of income earned from the overnight investment of cash dividend and corporate interest and reorganization payments to the Company for Participants, reduced by certain related expenses. Such net monthly refunds totaled \$39,034,000 in 1987 (1986—\$35,285,000).

Note 2—Summary of Significant Accounting Policies:**A. Securities on deposit:**

Securities held by the Company for Participants are not recorded in the accompanying financial statements. Cash dividends and interest received or due on such securities and in process of distribution or awaiting claim are recorded in the statement of condition.

B. Short-term investments:

Repurchase agreements represent U.S. Government and U.S. Government Agency securities purchased under agreements to resell at predetermined prices, generally over periods of three days or less. These

agreements are recorded at cost and interest is accrued as earned. U.S. Government securities are recorded at amortized cost, which approximates market value.

The Company invests available federal funds in repurchase agreements and money market accounts and at the same time makes disbursements to Participants in clearinghouse funds. The resulting book overdrafts are included in drafts payable and are eliminated the next business day when the repurchase agreements and money market accounts are converted back to cash.

C. Equipment and leasehold improvements:

Equipment and leasehold improvements are recorded at cost. Equipment is depreciated over estimated useful lives (generally five to eight years), using principally accelerated methods. Leasehold improvements are amortized on the straight-line method over the lives of the related leases or the useful lives of the improvements, whichever is less.

D. Income taxes:

Provision is made for deferred income taxes applicable to revenues and expenses reported in the financial statements in periods which differ from those in which they are subject to taxation. Investment tax credits in 1986 were applied, when available, under the flow-through method as a reduction of the income tax provision when the related property was placed in service.

Note 3—Participants Funds:

Participants in the depository are required to contribute to one or both of two Participants Funds amounts which relate to their activity in the depository. The Funds are available to secure the Participants' obligations to the Company, and certain uninsured losses, if such should occur, could be charged to the Funds. Required contributions are received in cash or are callable on demand and secured by securities of the United States Government, its agencies or instrumentalities, states and political subdivisions and certain eligible nonconvertible registered corporate debt securities.

Note 4—Dividends and Interest on Securities on Deposit:

The Company receives cash and stock dividends and interest on securities registered in the name of its nominee and interest on bearer securities which it distributes to its Participants for the owners of the securities. Amounts received on registered securities withdrawn before the record date but not transferred from the name of the Company's nominee cannot be distributed unless claimed by the owners of the securities through a Participant or other financial institution.

At December 31, 1987, cash dividends and interest payable amounted to \$350,826,000, of which \$112,518,000 was awaiting distribution to Participants and \$238,305,000 was held pending claim on behalf of the record date owners of the applicable securities. Stock dividends payable and unclaimed are not recorded in the accompanying financial statements. Unclaimed cash and stock dividends and corporate interest received prior to July 1, 1984, have been transferred to New York State in accordance with abandoned property laws.

Cash dividends and interest receivable at December 31, 1987, amounted to \$271,584,000 (1986—\$375,664,000) and have been reduced by allowances of \$4,900,000 (1986—\$2,585,000) for possible losses. Stock dividends receivable are not recorded in the accompanying financial statements.

Note 5—Pension Plan:

The Company has a noncontributory defined benefit pension plan covering substantially all full-time operational, professional, administrative and other employees. Plan benefits are based on a formula percentage of annual earnings for each year of continuous participation. The Company's funding policy is to contribute annually the maximum amount that can be deducted for federal income tax purposes.

The table below sets forth the plan's funded status and amounts recognized in the Company's statement of condition at December 31:

	1987	1986
	<i>(Dollars in thousands)</i>	
Plan assets at fair value, primarily equity securities and an immediate participation guarantee contract	\$27,277	\$25,761
Accumulated benefit obligation for service rendered:		
Vested	13,745	11,509
Non-vested	1,326	1,464
	15,071	12,973
Additional amounts related to projected compensation increases	7,074	6,743
Projected benefit obligation for service rendered	22,145	19,716
Plan assets in excess of projected benefit obligation	5,132	6,045
Unrecognized net asset existing at the date of initial application of FAS No. 87	(11,247)	(12,050)
Unrecognized net loss from past experience different from that assumed and effects of changes in assumptions	284	1,102
Unfunded accrued pension cost included in accounts payable and accrued expenses	(\$ 5,831)	(\$ 4,903)

The discount rate used in determining the actuarial present value of the projected benefit obligation was 9.25% (1986—8.50%). The assumed rate of future compensation levels was based on anticipated inflation and merit increases. The expected long-term rate of return on assets was 10.25%. The unrecognized net asset that existed when Statement of Financial Accounting Standards No. 87 was adopted, as of January 1, 1986, is being amortized over 16 years.

Net pension costs for 1987 and 1986 included the following components:

	1987	1986
	<i>(Dollars in thousands)</i>	
Service cost—benefits earned during the period	\$2,517	\$1,896
Interest cost on projected benefit obligation	1,774	1,417
Actual return on assets	(2,025)	(3,458)
Net amortization and deferral	(1,338)	138
Net periodic pension cost	<u>\$ 928</u>	<u>(\$ 7)</u>

Note 6—Income Taxes:

Income taxes are included in other expenses. The net income tax provision for 1987 and 1986 is summarized as follows:

	1987	1986
	<i>(Dollars in thousands)</i>	
Current:		
Federal	\$2,987	\$1,969
Investment tax credits	—	(467)
State and local	1,072	555
Deferred:		
Federal	(2,700)	(698)
Investment tax credits	—	(364)
State and local	(951)	(253)
	<u>\$ 408</u>	<u>\$ 742</u>

The primary differences between pretax accounting income and taxable income are related to provisions for abandonment costs associated with the closing of two vaults and related office areas and possible losses on cash dividends and interest receivable in 1987 and to provisions for possible losses on cash dividends and interest receivable in 1986. Abandonment costs of \$1,717,000 and \$2,583,000 are included in depreciation and other expenses, respectively.

In December 1987, the Financial Accounting Standards Board (FASB) issued Statement No. 96, "Accounting for Income Taxes." While the actual effects of adopting FAS No. 96 have not yet been determined, it is anticipated that the adoption, which is required by 1989, will result in a reduction of the deferred income tax asset and a corresponding reduction of undivided profits.

Note 7—Notes Payable:

The Company has notes payable totaling \$6,105,000, of which \$2,175,000 is collateralized by leasehold improvements and equipment with comparable book value and \$3,930,000 is unsecured. The notes are being repaid in monthly installments. The interest rate applicable to approximately \$2,466,000 of such notes is fixed at a weighted annual rate of 10.2%, while \$808,000 bears interest at the prime rate and \$2,831,000 bears interest, based upon periodic elections by the Company, at either the prime rate or the London interbank offered rate plus .375%.

Aggregate maturities of these notes payable are summarized as follows:

	1988	1989	1990	1991
	<i>(Dollars in thousands)</i>			
Year ending December 31:				
1988	\$3,774			
1989		973		
1990			985	
1991				373
Total notes payable				<u>\$6,105</u>

The Company also has available short-term lines of credit with three commercial banks of \$50,000,000, \$5,000,000 and \$5,000,000, each at rates approximating the prime rate. A commitment fee of .125% is required on the \$50,000,000 line of credit, which is available to support the Same-Day Funds Settlement system. These lines were not utilized during 1987.

Note 8—Leases and Other Commitments:

The Company has entered into leases for office space and data processing and other equipment. Leases for office space and various data processing and other equipment are classified as operating leases. The leases for office space provide for rent escalations subsequent to 1987. Rent expense in 1987 was \$19,920,000 (1986—\$15,620,000) for office space and \$12,752,000 (1986—\$12,475,000) for data processing and other equipment.

Certain data processing and other equipment leases are classified as capital leases. Assets under capital leases are amortized using primarily accelerated methods over the lease terms or asset lives, as applicable, and interest expense is accrued on the basis of the outstanding lease obligations.

Following are the future minimum lease payments, by year and in the aggregate, under capital leases and under operating leases having noncancelable lease terms in excess of one year as of December 31, 1987:

<i>(Dollars in thousands)</i>		
	Capital Leases	Operating Leases
1988	\$1,229	\$ 32,783
1989	389	27,726
1990	60	24,956
1991	—	22,390
1992	—	19,569
Thereafter	—	136,218
Total future minimum lease payments	1,678	\$263,642
Less—Amount representing interest on capital leases	163	
Present value of net minimum lease payments for capital leases	\$1,515	

The above table excludes future minimum lease payments aggregating \$3,195,000 relating to the anticipated abandonment of vault space and related office areas. Provision for the present value of \$2,583,000 is included in other expenses.

At December 31, 1987, the Company was in the process of constructing a vault. Equipment and leasehold improvements includes approximately 43% of the vault's total estimated cost of \$4,800,000.

Participants †

Banks

Advisory Bank & Trust Company
 Amalgamated Bank of New York (The)
 American Security Bank, N.A.
 AmeriTrust Company
 AmSouth Bank, N.A.
 Bank IV Topeka, National Association
 Bank IV Wichita, National Association
 Bank of America National Trust
 and Savings Association
 Bank of Bermuda International Limited
 Bank of Boston Connecticut
 Bank of California (The)
 Bank of Montreal, New York Branch
 Bank of New England, N.A.
 Bank of New York (The)
 Bank of Nova Scotia (The), New York Agency
 Bank of Oklahoma, N.A.
 Bank of Tokyo Trust Company (The)
 Bank One Trust Company, N.A.
 Bankers Trust Company
 Barclays Bank PLC
 Barnett Banks Trust Company, N.A.
 Bessemer Trust Company
 Boston Safe Deposit and Trust Company
 Brown Brothers Harriman & Co.
 California First Bank
 Canadian Imperial Bank of Commerce—
 New York Agency
 Cape Ann Savings Bank ‡
 Centerre Bank, N.A.
 Central Bank of Denver
 Central Bank of the South
 Central Fidelity Bank, N.A.
 Central Trust Company
 Chase Lincoln First Bank, N.A.
 Chase Manhattan Bank, N.A. (The)
 Chemical Bank
 Citibank, N.A.
 Citizens and Southern National Bank (The)
 Citizens Fidelity Bank and Trust Company
 City National Bank
 Citytrust
 Commerce Bank of Kansas City, N.A.
 Commercial National Bank of Peoria
 Connecticut Bank and Trust Company (The)
 Connecticut National Bank (The)
 Continental Illinois National Bank
 and Trust Company of Chicago
 Crestar Bank
 Crestar Bank, N.A.
 Custodial Trust Company
 Daiwa Bank, Limited (The), New York Agency
 Denver National Bank
 Dominion Trust Company
 Equitable Bank, National Association
 Exchange National Bank of Chicago (The)
 Fidelity Bank, National Association
 Fiduciary Trust Company of Boston
 Fiduciary Trust Company of New York
 Fifth Third Bank (The)
 First American Bank, N.A.
 First City National Bank of Houston
 First Fidelity Bank, National Association,
 New Jersey
 First Interstate Bank of Arizona, N.A.
 First Interstate Bank of California
 First Interstate Bank of Denver, N.A.
 First Interstate Bank of Oregon, N.A.
 First Interstate Bank of Washington
 First Jersey National Bank (The)
 First Kentucky Trust Company (The)
 First National Bank and Trust Company
 of Tulsa (The)
 First National Bank of Boston (The)
 First National Bank of Chicago (The)
 First National Bank of Cincinnati
 First National Bank of Colorado Springs (The)
 First National Bank of Maryland (The)
 First National Bank of Minneapolis
 First National Bank of Omaha
 First Pennsylvania Bank, N.A.
 First Republic Bank Dallas, N.A.
 First Tennessee Bank N.A. Memphis
 First Trust Company, Inc.
 First Trust Corporation
 First Union National Bank
 First Union National Bank of Florida
 Fleet National Bank
 Florida National Bank
 Fort Wayne National Bank
 Framingham Trust Company ‡
 French American Banking Corporation
 Frost National Bank
 Harris Trust & Savings Bank
 Hibernia National Bank
 Hong Kong and Shanghai Banking
 Corporation (The)
 Huntington National Bank (The)
 IBJ Schroder Bank & Trust Company
 Imperial Trust Company
 Indiana National Bank (The)
 Industrial Bank of Japan Trust Company (The)
 International Central Bank & Trust Corporation
 Investors Bank and Trust Company
 Irving Trust Company
 Kellogg-Citizens National Bank
 Key Bank of Oregon
 Key Trust Company
 LaSalle National Bank
 Liberty National Bank and Trust Company
 of Louisville
 Lincoln National Bank & Trust Company
 of Fort Wayne
 Lloyds Bank Plc
 M&I Marshall & Ilsley Bank
 Manufacturers and Traders Trust Company
 Manufacturers Hanover Trust Company
 Manufacturers National Bank of Detroit
 Marine Midland Bank
 Marine Trust Company, N.A.
 Maryland National Bank
 Mellon Bank, N.A.
 Mercantile Bank National Association
 Mercantile—Safe Deposit and Trust Company
 Merchants National Bank & Trust Company
 of Indianapolis
 Michigan National Bank—Grand Rapids
 Midlantic National Bank
 Morgan Guaranty Trust Company of New York
 NCB National Bank of North Carolina
 National Bank of Commerce
 National Bank of Detroit
 National Bank of Washington (The)
 National City Bank
 National Westminster Bank PLC
 National Westminster Bank USA
 New Jersey National Bank
 Northern Trust Company (The)
 Norwest Bank Minneapolis, N.A.
 Norwest Bank of Casper, N.A.
 Old Kent Bank and Trust Company
 Peoples National Bank of Washington
 Philadelphia National Bank (The)
 Provident National Bank
 Rainier National Bank
 Republic National Bank of New York
 Rhode Island Hospital Trust National Bank
 Riggs National Bank of Washington, D.C. (The)
 Rockland Trust Company ‡
 Royal Bank and Trust Company (The)
 Santa Barbara Bank & Trust
 Sanwa Bank California
 Savings Banks Trust Company
 Seattle—First National Bank
 Security Pacific National Bank
 Shawmut Bank of Boston, N.A.
 Signet Trust Company
 Society National Bank
 Southeast Bank, N.A.
 Sovran Bank, N.A.
 State Street Bank and Trust Company
 Stock Yards Bank and Trust Company
 Sumitomo Bank of California
 Summit Bank
 Summit Trust Company (The)
 Swiss Bank Corporation—New York Branch
 Texas American Bank/Fort Worth
 National Association
 Texas Commerce Bank National Association
 Toledo Trust Company (The)
 Toronto Dominion Bank (The)—
 New York Branch
 Trust Company Bank
 Trust Services of America, Inc.
 Union Bank, Los Angeles
 Union Bank of Switzerland
 Union Planters National Bank
 Union Trust Company
 United Bank of Denver, National Association
 United Missouri Bank of Kansas City, N.A.
 United States National Bank of Oregon
 United States Trust Company of New York
 Valley National Bank of Arizona
 Wachovia Bank & Trust Company, N.A.
 Wells Fargo Bank, National Association
 Wheeling Dollar Savings & Trust Co.
 Wilmington Trust Company
 Zions First National Bank

† As of December 31, 1987

‡ Boston Stock Exchange Sponsored Account

Broker-Dealers #

ABD Securities*
 ABD Securities Corporation
 AGF Securities Inc.*
 Adams-Fastnow Company Inc.*
 Adams, Harkness & Hill, Inc.
 Adler, Coleman & Co., Inc.
 Advest, Inc.
 Agora Securities, Inc.
 Alexander (J.) Securities, Inc.*
 Alger (Fred) & Company, Incorporated
 Allen & Company Incorporated
 Alpine Associates
 American Municipal Securities, Inc.
 American Securities Corporation
 Andras Canavest Hetherington Limited*
 Arnhold and S. Bleichroeder, Inc.
 Asiel & Co.
 B&S Financial Services
 BHF Securities Corporation
 BSE Specialist Account*
 Baer (Julius) Securities Inc.
 Baird, Patrick & Co., Inc.
 Baird (Robert W.) & Co. Incorporated
 Barr Brothers & Co., Inc.
 Barrett & Company
 Bateman Eichler, Hill Richards Inc.*
 Baum (George K.) & Company
 Bear, Stearns & Co. Inc.
 Beckman & Co. Inc.*
 Benton & Company
 Bernstein (Sanford C.) & Co., Inc.
 Bidwell & Company*
 Blackmore & Co., Inc.*
 Blair (Charles M.) & Co., Inc.*
 Blair (William) & Company
 Blinder, Robinson & Co., Inc.*
 Bodell, Overcash Anderson & Co., Inc.*
 Bradford (J.C.) & Co.
 Branch, Cabell & Co.
 Brokerage Clearance Services Inc.
 Brounoff, Claire, & Co., Inc.
 Brown (Alex.) & Sons, Inc.
 Brown & Company Securities Corporation*
 Brown, Lisle/Cummings, Inc.
 Buell Securities Corp.*
 Bunting (Alfred) & Co. Limited*
 Burke (P.R.) & Co.
 Burns Fry and Timmins Inc.
 Burns Fry Limited*
 Burns, Pauli & Co., Inc.
 Butler (K.R.), Inc.*
 Cable Howse & Ragen
 Campbell (D.A.) Co., Inc.*
 Campbell, Waterman, Inc.*
 Cantella & Company (Retail)*
 Cantor Fitzgerald & Co.
 Cantor Fitzgerald & Co., Inc.*
 Cantor Fitzgerald Corporate Brokers, Inc.
 Cantor Fitzgerald Municipal Brokers, Inc.*
 Cantor (S.B.) & Co., Inc.*
 Capital Shares, Inc.*
 Carolina Securities Corporation
 Carr & Thompson, Inc.*
 Carr (Robert C.) & Co., Inc.*
 Carr Securities Corporation
 Carroll McEntee & McGinley Securities, Inc.
 Cazenove Incorporated
 Cenpac Securities Inc.*
 Challenge Securities Inc.
 Charles-Bush (JW) Securities, Inc.
 Chicago Corp. (The)*
 Chicago Corporation (The)
 Clayton, Polleys & Co.*
 Coast Options, Inc.*
 Conklin, Cahill & Co.
 Connor, Clark & Co. Limited*
 Coughlin and Company, Inc.*
 County Securities Corporation USA
 Cowen & Co.
 Craig-Hallum, Inc.
 Craigie Incorporated
 Cresvale International, Limited
 Crews & Associates, Inc.
 Crowell, Weedon & Co.*
 Dain Bosworth Incorporated
 Daiwa Securities America, Inc.
 Darier Canada Inc.*
 Datek Securities Corporation*
 Daugherty, Cole Inc.*
 Davenport & Co. of Virginia, Inc.
 David Lerner Associates, Inc.
 Davidson (D.A.) & Co., Inc.*
 Davidson Partners Limited*
 Davis (Shelby Cullom) & Co.
 Deacon, Morgan, McEwen, Easson, Limited*
 de Cordova, Cooper & Co.
 Deltec Securities Corporation*
 Deragon Langlois Ltd.*
 Deutsche Bank Capital Corporation
 Diamant Investment Corp.*
 Dillon, Read & Co. Inc.
 Dillon Securities Inc.*
 Disnat Investment Inc.*
 Doft & Co., Inc.
 Dominick Corporation of Canada Limited*
 Dominick Investor Services Corporation
 Dominion Securities Pitfield Inc.
 Dominion Securities Pitfield Limited*
 Donaldson, Lufkin & Jenrette Securities Corp.*
 Donaldson, Lufkin & Jenrette
 Securities Corporation
 Doyle (F.W.) & Company*
 Drake (Clifford) & Company, Inc.*
 Drexel Burnham Lambert Incorporated
 Easton & Co.
 Easton & Co.*
 Eberstadt Fleming, Inc.
 Edwards (A.G.) & Sons, Inc.
 Egan, Marrin & Rubano Inc.*
 Einhorn & Co.
 Engler & Budd Company*
 Eppler, Guerin & Turner, Inc.
 Equity Securities Trading Co., Inc.*
 Ernst & Co.
 Essex Company
 EuroPartners Securities Corp.
 Evans & Co., Inc.
 Exchange Services, Inc.*
 Execution Services Incorporated
 Fagenson & Co., Inc.
 Fahnstock & Co., Inc.
 Fairweather (George R.) Securities, Inc.
 Fechter, Detwiler & Co., Inc.*
 Fernandez, Bartsch & Mirra
 Financial Clearing & Services Corporation
 First Albany Corporation
 First Birmingham Securities Corporation*
 First Boston Corporation (The)
 First Canada Securities Corporation*
 First Financial Group Inc.*
 First Jersey Securities, Inc.
 First Manhattan Co.
 First Marathon Securities Limited*
 First of Michigan Corporation*
 First Options of Chicago, Inc.*
 First-Southwest Company
 First Wachovia Brokerage Service Corporation
 Fossett Corporation*
 Frank (Walter N.) & Co.
 Frankel (Wm. V.) & Co., Inc.*
 Freeman Securities Company, Inc.
 Freeman Welwood & Co., Inc.
 Fried (Albert) & Co.
 Fundamental Corporate Bond Brokers, Inc.
 Gage-Wiley & Company, Inc.*
 Gant (J.W.) & Associates, Inc.*
 Garat & Co.*
 Gardiner Group Stockbrokers, Inc.*
 Geoffrion, Leclerc & Co. Ltd.*
 Geoffrion, Leclerc Inc.*
 Gintelco, Inc.
 Goldberg Securities, Inc.*
 Goldman, Sachs & Co.
 Gordon & Co.
 Gordon Capital Corporation
 Gowell Securities Corporation (Retail)*
 Gradison & Company Incorporated
 Greenfield Partners
 Gruss (Oscar) & Son Incorporated
 Guardian Trust Company*
 Halcyon Investments
 Hanifen, Imhoff, Inc.*
 Hartfield (J.F.) & Co., Inc.*
 Heitner Corporation (The)*
 Henderson Brothers, Inc.
 Herzog, Heine, Geduld, Inc.
 Hill, Thompson, Magid & Co., Inc.*
 Hilliard (J.J.B.), Lyons (W.L.), Inc.
 Hirshon, Roth & Co.
 Hoelscher (Shiels) & Co.*
 Hopkins, Harbach & Co.*
 Hopper Soliday & Co., Inc.
 Hough (William R.) & Co.
 Howard, Weil, Labouisse, Friedrichs
 Incorporated
 Hummer (Wayne) & Co.
 Hutchinson, Shockey, Erley & Co.
 Hutton (E.F.) & Company Inc.
 INC Trading Corporation*
 Icahn & Co., Inc.
 Illinois Company Incorporated (The)
 Ingalls & Snyder
 Instant Funds Incorporated*
 Interstate Securities Corporation
 InvestNet Corporation
 Investors Discount Corporation*
 Jacobson (Benjamin) & Sons
 Jamie Securities Co.
 Janney Montgomery Scott Inc.
 Jefferies & Company, Inc.
 Jefferies & Company, Inc.*

Jesup & Lamont Clearing Corp. Inc.
 Johnson, Lane, Space, Smith & Co., Inc.
 Johnston, Lemon & Co., Inc.*
 Jones (Edward D.) & Co.
 Josephthal & Co. Incorporated
 Judah (S.A.) & Co., Inc.*
 Kalb, Voorhis & Co.
 Kaufmann, Alsberg & Co., Inc.
 Kavanewsky & Associates*
 Kawano (H.) & Co., Inc.*
 Keeley (K.J.) & Co., Inc.*
 Kellner, DiLeo & Co.
 Kemper Financial Services, Inc.
 Kenny (J.J.) Co., Inc.*
 Kidder, Peabody & Co. Incorporated
 Kimball & Cross*
 King (C.L.) & Associates Inc.
 Knox (W.L.) & Company
 Koonce Securities, Inc.*
 Krieger (Henry) & Co.
 LaBranche & Co.
 Lafer Amster & Co.
 Lafferty, Harwood & Partners Ltd.*
 Larkin (Emmet A.) & Co., Inc.*
 Lasker, Stone & Stern
 Laterman & Co.
 Lawrence (Cyrus J.) Incorporated
 Lawrence, O'Donnell & Co.
 Lazard Frères & Co.
 Lebenthal & Co., Inc.
 Legg Mason Masten Inc.
 Legg Mason Wood Walker, Inc.
 Levesque, Beaubien Inc.*
 Lewco Securities Corp.
 Lewis (S.B.) & Company
 Linsco Corporation*
 Loewen Ondaatje, McCutcheon
 & Company Ltd.*
 MKI Securities Corp.
 Mabon, Nugent & Co.
 MacAllaster Pitfield Mackay, Inc.
 MacDougall, MacDougall & MacTier, Inc.*
 Madoff (Bernard L.)
 Marcus & Company
 Marcus Schloss & Co., Inc.
 Marks (Carl) & Co., Inc.
 Mayer & Schweitzer, Inc.
 McCarthy Securities Ltd.*
 McCourtney-Breckenridge & Company*
 McDaniel Lewis & Co.
 McDonald & Company Securities, Inc.
 McKinney (C.L.) & Co., Inc.*
 McLeod Young Weir Incorporated
 McLeod Young Weir Limited*
 McNeil Mantha Inc.*
 Meehan (M.J.) & Company
 Melville (Ronald E.) Inc.*
 Mercator Partners
 Mericka & Co., Inc.*
 Merit Investment Corporation*
 Merrill Lynch Canada Inc.*
 Merrill Lynch, Pierce, Fenner & Smith
 Incorporated
 Merrill Lynch Specialists Inc.*
 Merrimack Valley Investment Inc.*
 Mesirov & Company Incorporated
 Midland Doherty Inc.

Midland Doherty Limited*
 Mitchum, Jones & Templeton, Inc.*
 Montgomery Securities
 Morgan, Keegan & Company, Inc.
 Morgan, Olmstead, Kennedy & Gardner,
 Incorporated
 Morgan Stanley & Co. Incorporated
 Muller & Company, Inc.
 Municorp. of California*
 Murphey Favre, Inc.*
 Murphey, Marseilles, Smith & Nammack
 Murphy & Durieu
 NB Clearing Corporation
 National Financial Services Corporation
 Neuberger & Berman
 New Japan Securities International, Inc.
 Newbridge Securities Inc.
 Newhard, Cook & Co. Incorporated
 Nikko Securities Co. International, Inc. (The)
 Nippon Kangyo Kakumar International Inc.
 Nomura Securities International, Inc.
 Nuveen (John) & Co. Incorporated
 O'Connor & Associates
 O'Connor Securities
 Odlum Brown Limited*
 Offerman & Co., Inc.*
 Olde Discount Corporation
 Oppenheimer & Co., Inc.
 Osler Inc.*
 Outwater & Wells, Inc.*
 Pacific Brokerage Services, Inc.
 Paine Webber Incorporated
 Paine Webber Specialists Inc.*
 Parker (S.C.) & Co., Inc.*
 Payson (H.M.) & Co.*
 Pemberton Houston Willoughby Bell Guoin
 Lock Inc.*
 Pflueger & Baerwald Inc.*
 Pforzheimer (Carl H.) & Co.
 Pictet (Canada) and Company, Limited*
 Piper, Jaffray & Hopwood, Incorporated
 Pittock Financial Corporation*
 Porter, White & Yardley, Inc.
 Preferred Technology, Inc.*
 Prescott, Ball & Turben, Inc.
 Prudential-Bache Securities Inc.
 Purcell, Graham & Co.
 Q&R Clearing Corporation
 Quinn (E.J.) & Co., Inc.*
 Quinn (F.P.) & Co.*
 RFG Company*
 RSF Partners
 Raney (T.J.) & Sons Inc.
 Rauscher Pierce Refsnes, Inc.
 Raymond, James & Associates, Inc.
 Reaves (W.H.) & Co., Inc.
 Refco Securities, Inc.
 Regional Clearing Corp.
 Reich & Co., Inc.
 Richardson Greenshields of Canada, Ltd.*
 Richardson Greenshields Securities, Inc.
 Rimson (M.) & Co., Inc.
 Robb, Peck, McCooey Clearing Corporation
 Robertson, Colman & Stephens
 Rodman & Renshaw, Inc.
 Roney & Co.
 Rose & Company Investment Brokers, Inc.*

Rothschild (L.F.) & Co. Incorporated
 Roulston Research Corp.
 Rowland (R.) & Co., Incorporated
 Ryan Beck & Co.*
 Sage Clearing Corporation*
 Sage, Ruddy & Co., Inc.
 Salomon Brothers Inc
 Schapiro (M.A.) & Co., Inc.
 Schwab (Charles) & Co., Inc.*
 Scott & Stringfellow, Inc.
 Seasongood & Mayer*
 Seattle-Northwest Securities Corporation
 Securities Settlement Corporation
 Seidel (Morton) & Co. Inc.*
 Seidler Amdec Securities Inc.*
 Seligman Securities, Inc.
 Shatkin Investment Corp.*
 Shatkin-Lee Securities Co.
 Shearson Lehman Brothers Inc.
 Shearson Lehman Special Securities
 Incorporated
 Shelter Rock Securities Corporation*
 Sherwood Securities Corp.
 Simon (I.M.) & Co., Inc.
 Smith Barney, Harris Upham & Co.
 Incorporated
 Smith, Moore & Co.*
 Southwest Securities, Inc.
 Spear, Leeds & Kellogg
 Spear Securities, Inc.*
 Steichen (R.J.) & Company*
 Stephens, Inc.
 Stern & Kennedy
 Sterne, Agee & Leach, Inc.
 Stifel, Nicolaus & Company Incorporated
 StockCross, Inc.*
 Stoeber, Glass & Co., Inc.
 Stokes, Hoyt & Co.
 Stone & Youngberg*
 Streicher (J.) & Co.
 Stuart-James Company Inc.*
 Sunrise Capital Corporation*
 Swift (Henry F.) & Co.*
 Swiss American Securities Inc.
 Swiss Bank Corporation International
 Securities Inc.
 TCW Inc.*
 Thomson Kernaghan & Co., Ltd.*
 Thomson McKinnon Securities Inc.
 Timber Hill Inc.
 Titus & Donnelly Inc.*
 Transaction Services, Inc.*
 Transatlantic Securities Company
 Trusteed Funds, Inc.*
 Tucker, Anthony & Day (R.L.), Inc.
 UBS Securities Inc.
 Underwood Neuhaus & Co., Inc.
 Universal Securities Corporation
 Vail Securities Investment, Inc.
 Van Kampen Merritt Inc.
 Vickers da Costa Securities Inc.
 Viner (Edward A.) & Co., Inc.
 W&D Securities
 Wachtel & Co., Inc.
 Wagner Stott & Co.
 Wagner Stott Clearing Corp.
 Wall Street Clearing Company

**Participants in Same-Day Funds
Settlement System****

Wall Street Equities Incorporated*
Walsh, Greenwood & Co.
Walwyn Stodgell Cochran Murray Limited*
Warburg (S.G.) & Co. Inc.
Weber, Hall, Sale & Associates, Inc.
Wechsler & Krumholz, Inc.
Wedbush Securities, Inc.*
Weedon & Co.*
Weiss, Peck & Greer
Wellington (H.G.) & Co. Inc.
Wheat, First Securities, Inc.
Whitaker (Don C.) Inc.*
White (Thomas F.) & Co., Inc.*
Williams Securities Group, Inc.*
Wilshire Associates*
Wilson (L.W.) & Co., Inc.*
Windsor Associates
Witter (Dean) Reynolds (Canada) Inc.*
Witter (Dean) Reynolds Inc.
Wolfe & Hurst Bond Brokers, Inc.
Wolfe & Hurst Bond Brokers, Inc.*
Wood (Arthur W.) Company*
Wood Gundy Corp.
Wood Gundy Inc.*
Yamaichi International (America), Inc.
Yamaichi International (America), Inc.*
Yorkton Securities Inc.*
Ziegler Thrift Trading, Inc.*

Clearing Agencies

Boston Stock Exchange Clearing Corp.
Midwest Securities Trust Company
National Securities Clearing Corporation
Options Clearing Corporation (The)
Pacific Clearing Corporation
Philadelphia Depository Trust Company

Other Agencies

Canadian Depository for
Securities Limited (The)*

Excludes some firms with limited activity

* National Securities Clearing Corporation
Sponsored Account

Amalgamated Bank of New York (The)
Bank of America National Trust
and Savings Association
Bank of New England, N.A.
Bank of New York (The)
Bankers Trust Company
Bear, Stearns & Co. Inc.
Blair (William) & Company
Bradford (J.C.) & Co.
Brown (Alex.) & Sons, Inc.
Chase Manhattan Bank, N.A. (The)
Chemical Bank
Citibank, N.A.
Connecticut Bank and Trust Company (The)
Continental Illinois National Bank and Trust
Company of Chicago
Cowen & Co.
Dain Bosworth Incorporated
Dillon, Read & Co. Inc.
Donaldson, Lufkin & Jenrette
Securities Corporation
Drexel Burnham Lambert Incorporated
Edwards (A.G.) & Sons, Inc.
First Albany Corporation
First Boston Corporation (The)
First Interstate Bank of California
First National Bank of Boston (The)
Goldman, Sachs & Co.
Herzog, Heine, Geduld, Inc.
Hutton (E.F.) & Company Inc.
IDS Bank & Trust
Irving Trust Company
Kemper Clearing Corp.
Kidder, Peabody & Co. Incorporated
Manufacturers Hanover Trust Company
Marine Midland Bank
McDonald & Company Securities, Inc.
Mellon Bank, N.A.
Merrill Lynch, Pierce, Fenner & Smith
Incorporated
Morgan Guaranty Trust Company of New York
Morgan, Keegan & Company, Inc.
Morgan Stanley & Co. Incorporated
NCNB National Bank of North Carolina
Northern Trust Company (The)
Nuveen (John) & Co. Incorporated
Paine Webber Incorporated
Provident National Bank
Prudential-Bache Securities Inc.
Rainier National Bank
Rauscher Pierce Refsnes, Inc.
Rodman & Renshaw, Inc.
Salomon Brothers Inc
Securities Settlement Corporation
Security Pacific National Bank
Shawmut Bank of Boston, N.A.
Shearson Lehman Hutton Inc.
Smith Barney, Harris Upham
& Co. Incorporated
Southwest Securities, Inc.
State Street Bank and Trust Company
Thomson McKinnon Securities Inc.
United States Trust Company of New York
Van Kampen Merritt Inc.
Wachovia Bank & Trust Company, N.A.
Witter (Dean) Reynolds Inc.

**As of March 31, 1988

DTC Stockholders*

Advisory Bank & Trust Company
 American Security Bank, N.A.
 American Stock Exchange Clearing Corporation
 American Stock Exchange, Inc.
 AmeriTrust Company
 AmSouth Bank, N.A.
 Arnhold and S. Bleichroeder, Inc.
 Baer (Julius) Securities Inc.
 Bank of America National Trust
 and Savings Association
 Bank of Boston Connecticut
 Bank of California (The)
 Bank of Montreal, New York Branch
 Bank of New England, N.A.
 Bank of New York (The)
 Bank One Trust Company, N.A.
 Bankers Trust Company
 Barclays Bank PLC
 Barnett Banks Trust Company, N.A.
 Barrett & Company
 Bear, Stearns & Co. Inc.
 Boston Safe Deposit and Trust Company
 Brounoff, Claire, & Co., Inc.
 Brown (Alex.) & Sons, Inc.
 Brown Brothers Harriman & Co.
 Cazenove Incorporated
 Centerre Bank, N.A.
 Central Bank of the South
 Chase Lincoln First Bank, N.A.
 Chase Manhattan Bank, N.A. (The)
 Chemical Bank
 Cincinnati Stock Exchange (The)
 Citibank, N.A.
 Citizens and Southern National Bank (The)
 City National Bank
 Connecticut Bank and Trust Company (The)
 Connecticut National Bank (The)
 County Securities Corporation USA
 Craigie Incorporated
 Denver National Bank
 Dominion Trust Company
 Donaldson, Lufkin & Jenrette
 Securities Corporation
 Eberstadt Fleming, Inc.
 Edwards (A.G.) & Sons, Inc.
 Equitable Bank, National Association
 Execution Services Incorporated
 Fagenson & Co., Inc.
 Fidelity Bank, National Association
 Fiduciary Trust Company of Boston
 First Albany Corporation

First Boston Corporation (The)
 First City National Bank of Houston
 First Fidelity Bank, National Association,
 New Jersey
 First Interstate Bank of California
 First Interstate Bank of Denver, N.A.
 First Interstate Bank of Oregon, N.A.
 First Jersey National Bank (The)
 First National Bank and Trust Company
 of Tulsa (The)
 First National Bank of Boston (The)
 First National Bank of Chicago (The)
 First National Bank of Cincinnati
 First National Bank of Colorado Springs (The)
 First National Bank of Maryland (The)
 First National Bank of Minneapolis
 First Republic Bank Dallas, N.A.
 First Tennessee Bank N.A. Memphis
 First Trust Company, Inc.
 Fleet National Bank
 Fort Wayne National Bank
 Frost National Bank
 Goldman, Sachs & Co.
 Gradison & Company Incorporated
 Gruss (Oscar) & Son Incorporated
 Hough (William R.) & Co.
 Huntington National Bank (The)
 Imperial Trust Company
 Investors Bank and Trust Company
 Irving Trust Company
 Jesup & Lamont Clearing Corp. Inc.
 Johnson, Lane, Space, Smith & Co., Inc.
 Josephthal & Co. Incorporated
 Key Trust Company
 LaBranche & Co.
 Lafer Amster & Co.
 Lewco Securities Corp.
 MacAllaster Pitfield Mackay, Inc.
 Manufacturers and Traders Trust Company
 Manufacturers Hanover Trust Company
 Marcus Schloss & Co., Inc.
 Marine Midland Bank
 Marks (Carl) & Co., Inc.
 Maryland National Bank
 Mayer & Schweitzer, Inc.
 Mellon Bank, N.A.
 Merchants National Bank & Trust Company
 of Indianapolis
 Merrill Lynch & Co., Inc.
 Michigan National Bank—Grand Rapids
 Midlantic National Bank

Morgan Guaranty Trust Company of New York
 Morgan Stanley & Co. Incorporated
 NCNB National Bank of North Carolina
 National Association of Securities Dealers, Inc.
 National Bank of Washington (The)
 National City Bank
 National Westminster Bank PLC
 National Westminster Bank USA
 New Jersey National Bank
 New York Stock Exchange, Inc.
 Northern Trust Company (The)
 Norwest Bank Minneapolis, N.A.
 Oppenheimer & Co., Inc.
 Pforzheimer (Carl H.) & Co.
 Philadelphia National Bank (The)
 Prescott, Ball & Turben, Inc.
 Reaves (W.H.) & Co., Inc.
 Rhode Island Hospital Trust National Bank
 Salomon Brothers inc
 Santa Barbara Bank & Trust
 Sanwa Bank California
 Scott & Stringfellow, Inc.
 Seattle-Northwest Securities Corporation
 Securities Settlement Corporation
 Security Pacific National Bank
 Shawmut Bank of Boston, N.A.
 Shearson Lehman Special Securities
 Incorporated
 Sovran Bank, N.A.
 State Street Bank and Trust Company
 Stock Clearing Corporation
 Stock Yards Bank and Trust Company
 Swiss American Securities Inc.
 Swiss Bank Corporation—New York Branch
 Texas American Bank/Fort Worth
 National Association
 Texas Commerce Bank National Association
 Thomson McKinnon Securities Inc.
 Trust Company Bank
 United States Trust Company of New York
 Valley National Bank of Arizona
 Van Kampen Merritt Inc.
 Viner (Edward A.) & Co., Inc.
 Wachovia Bank & Trust Company, N.A.
 Wechsler & Krumholz, Inc.
 Wells Fargo Bank, National Association
 Wilmington Trust Company
 Wood Gundy Corp.
 Zions First National Bank

*As of December 31, 1987



The Depository Trust Company
 7 Hanover Square, New York, NY 10004
 (212) 709-1000

George Washington U. S. Grant James Monroe

Andrew Johnson John Tyler Franklin Pierce

Presidents of the United States

- George Washington
- John Adams
- Thomas Jefferson
- James Madison
- James Monroe
- John Quincy Adams
- Andrew Jackson
- Martin Van Buren
- William Henry Harrison
- John Tyler
- James K. Polk
- Zachary Taylor
- Millard Fillmore
- Franklin Pierce
- James Buchanan
- Abraham Lincoln
- Andrew Johnson
- Ulysses S. Grant
- Rutherford B. Hayes
- James A. Garfield
- Chester A. Arthur
- Grover Cleveland
- Benjamin Harrison
- Grover Cleveland
- William McKinley
- Theodore Roosevelt
- William Howard Taft
- Woodrow Wilson
- Warren G. Harding
- Calvin Coolidge
- Herbert C. Hoover
- Franklin D. Roosevelt
- Harry S. Truman
- Dwight D. Eisenhower
- John F. Kennedy
- Lyndon B. Johnson
- Richard M. Nixon
- Gerald R. Ford
- Jimmy Carter
- Ronald W. Reagan

Julius Field Chester A. Arthur

Philip Van Benjamin Harrison

John Tyler

James K. Polk James A. Garfield James Carter

Ulysses S. Grant Andrew Johnson R. B. Hayes

William McKinley Theodore Roosevelt Woodrow Wilson

James Madison Franklin Pierce John Adams

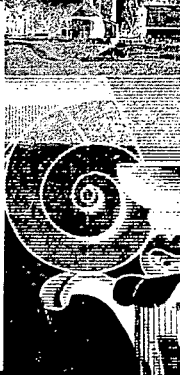
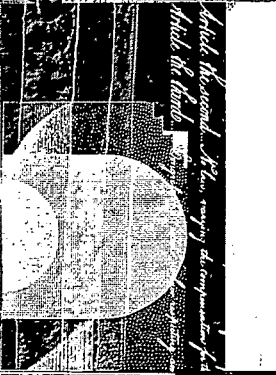
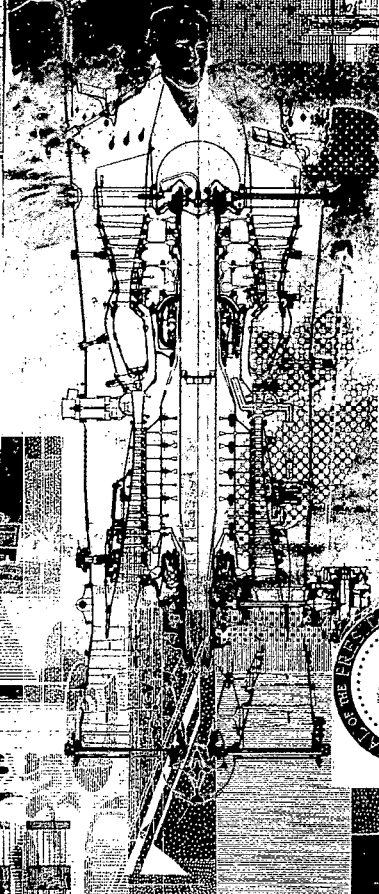
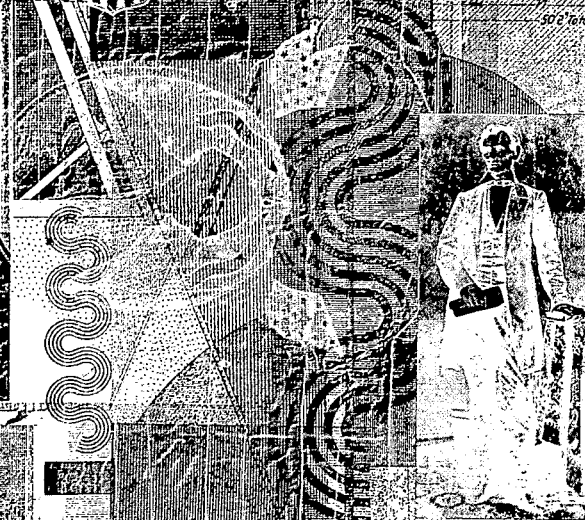
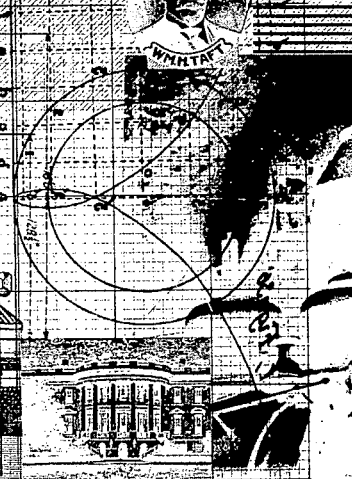
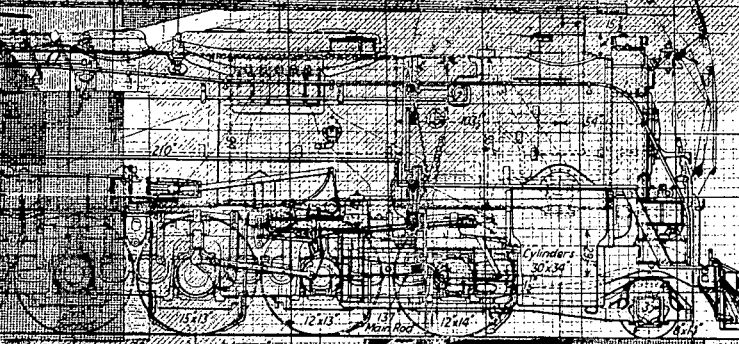
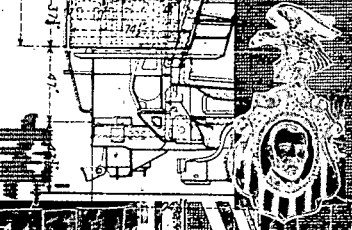
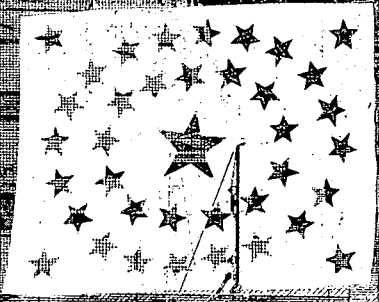
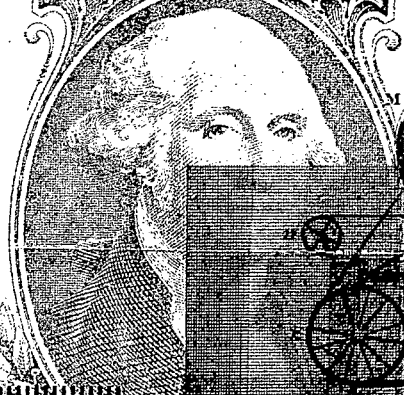
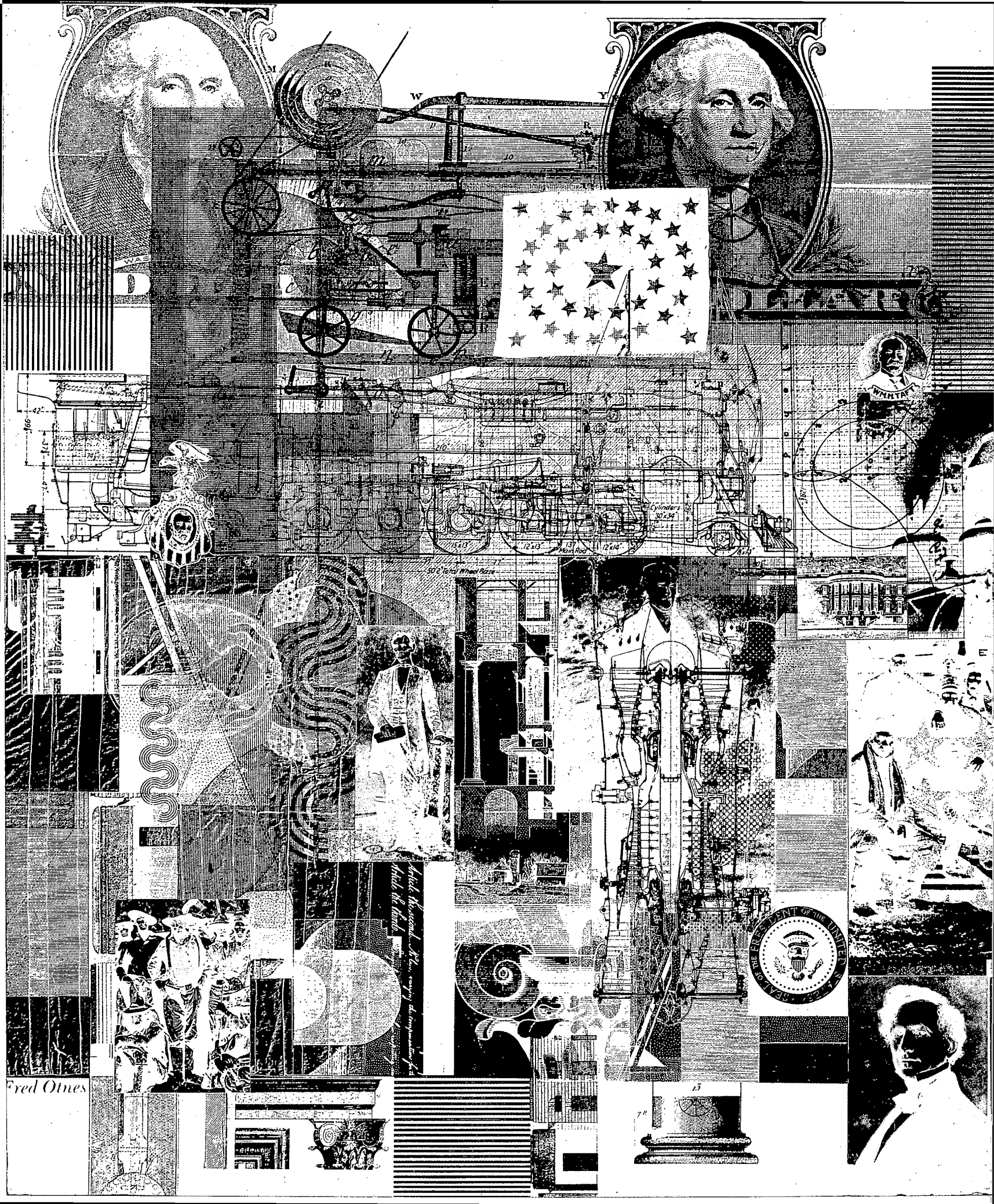
Thomas Jefferson Martin Van Buren

Ronald Reagan Millard Fillmore Gerald R. Ford

Zachary Taylor John Quincy Adams John Adams

Andrew Jackson James Buchanan

James K. Polk Dwight D. Eisenhower



Fred Ottes

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