# A Short History

of

# The Depository Trust Company

## Securities depositories go way back

We often associate the idea of securities depositories with the last quarter of this century. However, national securities depositories had existed in Europe since before World War II with the earliest—Germany's—operating since Bismarck's time. In the United States, the Federal Reserve began operating a book-entry system for Treasuries in 1968.

Prior to the 1960s, the concept of a depository in the United States was explored only sporadically. In one instance, a New York Stock Exchange representative, sent to Germany to study its system, found himself detained upon the outbreak of World War I. A second attempt in 1937 was more successful. In a report to the Exchange, Haskins & Sells prophetically recommended the development of a trust institution depository interfacing with the NYSE's Stock Clearing Corporation (SCC) to clear and settle trades in New York City. However, with the beginning of the Second World War, the study was set aside for nearly three decades.

# THE 1960s

For the securities industry, the 1960s was a decade that began with great promise but ended in crisis.

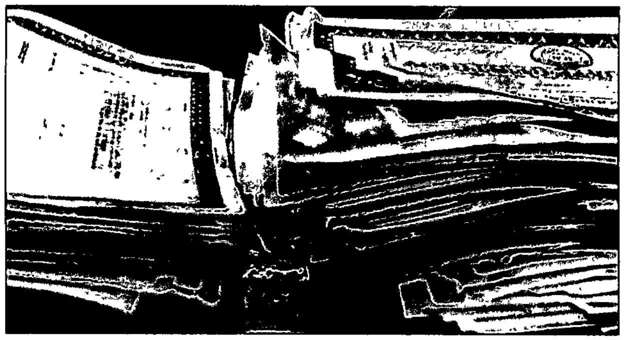
As the decade began, the securities industry was enjoying the prosperity of an economic resurgence. Capital needs of American business were growing, public participation in the market was increasing, and institutional trading was becoming a major force in the stock market. Average daily trade volume on the NYSE reflected this, growing from 3 million shares per day in 1960 to 12 million in 1970.

Concurrent with the growth in trade volume came an increase in the pressure on brokers' back offices. Transaction processing—always labor intensive—became a serious threat to market efficiency as the decade progressed. On April 1, 1968 trading on the NYSE broke the previous record of October 29, 1929—nearly four decades earlier. Before the year ended, the record was broken an additional 24 times and the expression "paperwork crisis" had entered the nation's lexicon.

These record volumes, while dramatic, did not catch the industry wholly unprepared. Brokerage leaders had long recognized the difficulties that increased trading volumes would pose to the Street. Accordingly, while a number of temporary measures were undertaken—closing the market on Wednesdays, shortened trading days, and extending settlement from four to five days—work on more permanent solutions was accelerated.

*"Future historians of the securities industry will doubtless analyze in great detail everything that has taken place in this industry during the past three years. They will be able to step back and view the events of 1968–1970 more or less dispassionately—free from the trauma of personal involvement to which every one of us has been subject during the period of crisis... In a sense, we have come to an end of an era."*

Robert W. Haack,
President, NYSE

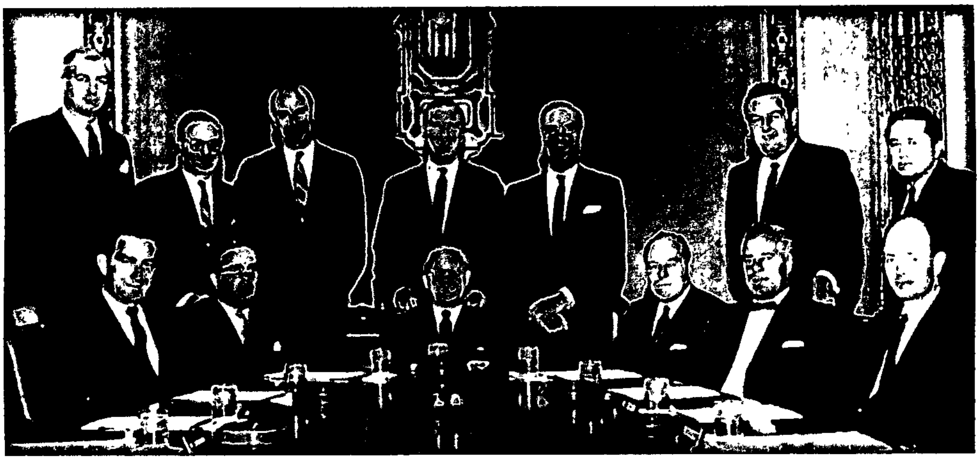


*For each transaction, a stock certificate passed through as many as 100 pairs of hands.*

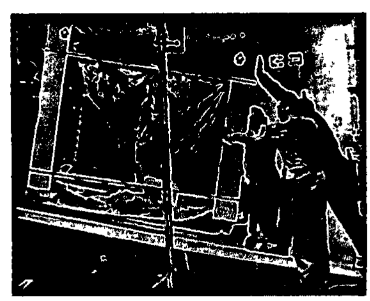
*The paperwork crisis made clear that security transactions could no longer be processed manually.*

In mid-1961 the NYSE, together with Bankers Trust Company, The Chase Manhattan Bank, N.A., and First National City Bank of New York initiated the "Pilot Operation for Central Handling of Securities." Beginning with 15 securities and 31 firms, deliveries were made between members by book-entry and without the physical movement of certificates. Over the course of the pilot, which ended in early 1962, 14 million shares were delivered demonstrating book-entry delivery's practicality.

Before a certificate processing and safekeeping service could be initiated, it was necessary to secure amendments to Article 8 of the Uniform Commercial Code (UCC) that would sanction the transfer of ownership or pledge of securities by depository book-entry in lieu of delivering physical certificates. That effort began in 1962 and the last state's amendment was obtained in 1970. However, by the mid-1960s enough states had passed enabling legislation to encourage the New York Stock Exchange, together with a core of New York Clearing House (NYCH) banks, to proceed to work out the details of the proposed service.



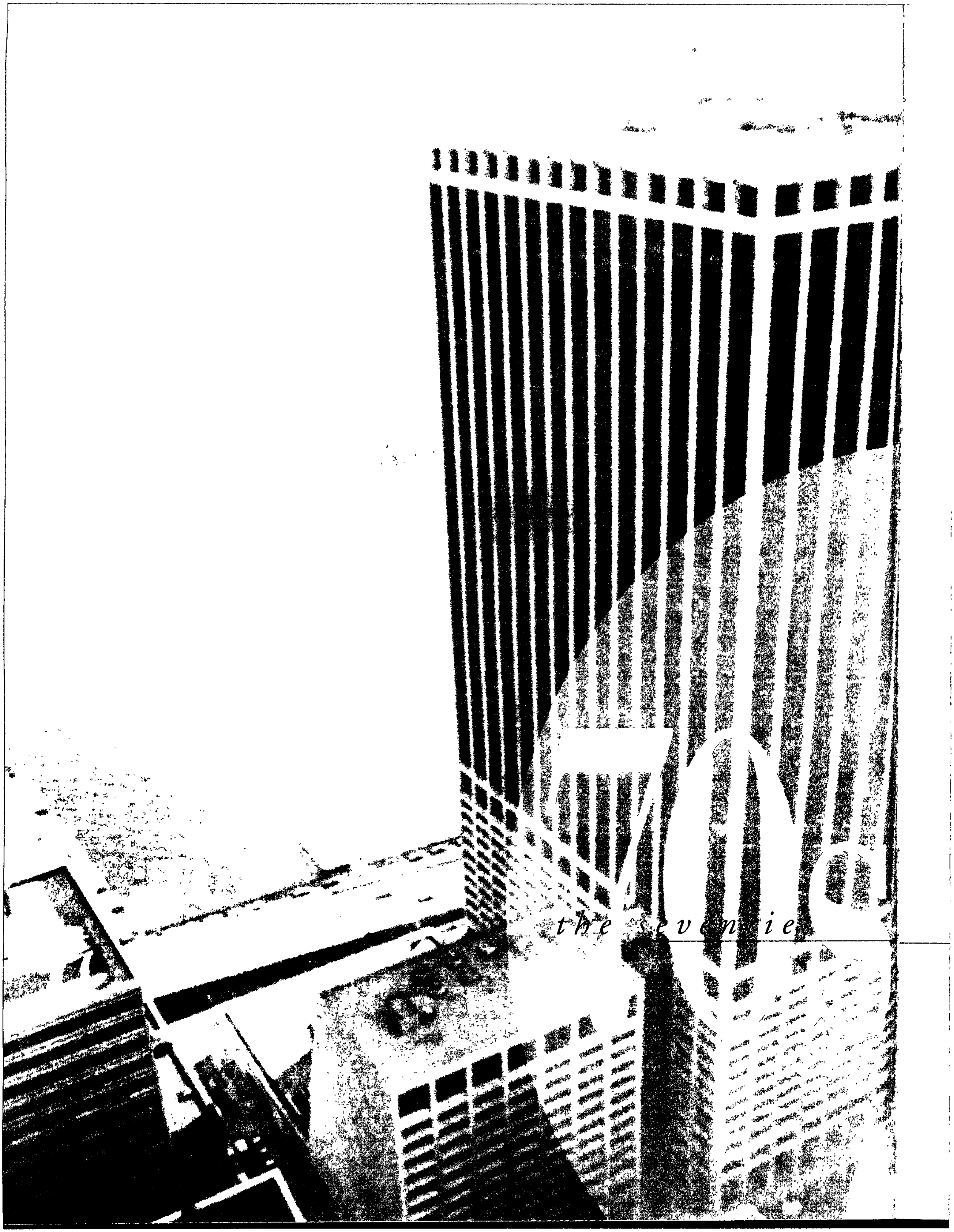
*Frequent meetings of the Ad Hoc Committee on Office Operations with officers of the New York and American Stock Exchanges and the National Association of Securities Dealers were a major factor in determining an industry-wide approach to the paperwork problem.*
*Committee members (seated, left to right) are: James E. Thomson, Merrill Lynch, Pierce, Fenner & Smith, Inc.; Frank C. Graham, Jr., Purcell, Graham & Co.; Committee Chairman Solomon Litt, Asiel & Co.; Harold A. Rousselot, Francis I. duPont & Co.; John H. Schwieger, Paine, Webber, Jackson & Curtis; and Avery Rockefeller, Jr., Dominick & Dominick, Inc. Standing (left to right): Lee D. Arning, VP-Operations, NYSE; Paul Kolton, EVP, ASE; Ralph S. Saul, President, ASE; Robert W. Haack, President, NYSE; Gustave L. Levy, Chairman, NYSE; R. John Cunningham, EVP, NYSE; Lee Monett, Director, Department of Uniform Practices, NASD. (Not present for photo, John J. Flanagan, Josephthal & Co.)*



*By the end of 1960s Wall Street firms were spending an estimated one hundred million dollars per year on automation equipment, considered a massive sum at the time.*

Plans called for immobilizing in a vault the millions of certificates held in "street name" by NYSE member firms. Transfer of ownership among members could then be accomplished with accounting entries—"book-entry"—eliminating physical certificate movement and the mushrooming paperwork needed to transfer them.

Using this approach, the Central Certificate Service (CCS) was activated on a limited basis in June 1968. By late 1969, initial systems and operating problems had been sufficiently resolved to allow expansion, and by yearend broker/dealers had 464 million shares on deposit with CCS. The foundation of a national depository system had begun to take form.



*the seventies*

# THE 1970s

### *BASIC and the evolution of CCS to DTC*

By the beginning of 1970, numerous studies of the problems of the U.S. securities industry were under way. These problems generated a deep concern within Congress and the Securities and Exchange Commission (SEC), suggesting the need for a federal solution. A common conclusion in the private sector was that long-term solutions would require inter-industry efforts, especially with the growing significance of institutional trading. Recognizing this, senior industry executives representing the New York banks and the stock markets met early in 1970 to discuss the creation of an inter-industry organization to provide this direction. From these discussions the Banking and Securities Industry Committee (BASIC) was formed, comprised of the CEOs of those organizations. BASIC, chaired by J.P. Morgan's Chairman and CEO, John M. Meyer, Jr., soon added an Executive Director, the recently retired Price Waterhouse Senior Partner, Herman W. Bevis, and a small task force to investigate specific problem areas and to evaluate the myriad solutions offered.

Throughout 1970 and much of 1971, BASIC acted on 14 projects designed to reduce the costs and improve the process of securities operations. The most significant of these was the establishment of a Comprehensive Securities Depository

*John M. Meyer, Jr. was the Chairman of BASIC at its inception in 1970, when he was Chairman & CEO of J.P. Morgan & Co. After retiring from the bank, he continued as BASIC's Chairman until 1974. He died July 4, 1996, a few days shy of his 90th birthday.*

*Herman W. Bevis, retired Senior Partner of Price Waterhouse & Co., was the Executive Director of BASIC during its existence from 1970 to 1975 and an advisor to the management of DTC throughout its formative years. He died May 5, 1989, at the age of 80.*

System (CSDS) expanding upon the NYSE's Central Certificate Service. In September of 1971, BASIC announced the signing of a Memorandum of Understanding among the New York and American Stock Exchanges, the National Association of Securities Dealers, and the eleven member banks of the New York Clearing House Association, toward this end. Regional markets and banks soon joined in the process and a National Coordinating Group (NCG) was formed. The planning to implement the elements of the Memorandum of Understanding was begun immediately, but in an atmosphere of uncertainty due to events unfolding at the Federal level.

*Plans for establishing CSDS were outlined to House Subcommittee on Commerce and Finance by Exchange Executive Vice President Richard B. Howland among other panelists taking part in the October 1971 hearings.*

Beginning in 1970, a series of hearings were conducted by U.S. Senate and House of Representatives sub-committees, and the SEC. Until their conclusion almost five years later, with the passage of the Securities Acts Amendments of 1975, there was intense discussion and debate over the vision of a National Securities Market System for the clearance and settlement of securities transactions and their regulation. Accordingly, the industry, led by BASIC, and spurred on by Congress, proceeded with its work to develop the CSDS knowing that its efforts might be preempted by Federal law.

Developing the CSDS involved resolving several key issues. These included a formal determination of the depository's characteristics; creation of an acceptable corporate structure and management; commitments to finance the costs of staff, computer equipment and facilities; and the passage of enabling legislation.

Plans called for a two-stage evolution of the existing CCS into an expanded depository system. In the first stage, CCS was to move from a division of the Stock Clearing Corporation to a trust company chartered under New York State banking law and with Federal Reserve membership. As an interim step, CCS was incorporated as a wholly owned subsidiary of the NYSE, CCS, Inc., with representation of the Amex, NASD and NYCH banks on its board. In the second stage of the expansion, ownership of the depository would be shared by its users—a step which would require enabling state legislation.

*CCS maintained an extensive tape library of Participants' positions and securities inventory.*

Among the issues to be immediately addressed were the applicability of the New York State stock transfer tax to book-entry deliveries; the fiduciary laws of many states limiting the form and means of holding securities in certain capacities; and a revisiting of Article 8 of the UCC which then effectively limited ownership of depositories to securities exchanges and associations. The latter two issues were of particular concern as they would substantially limit the full participation of banks.

Work on these issues was undertaken by BASIC with considerable support from virtually all segments of the securities industry. By mid-1972, discussions with New York State and City tax and finance officials resulted in supportive amendment of the stock transfer tax law. During the same period, a separate effort resulted in the introduction and passage of amendments to the New York State fiduciary law which, in turn became a model for other states. By yearend 1973, an additional 15 states had made necessary amendments to their fiduciary laws. Concurrent progress was made in working with states to pass enabling amendments to Article 8 of the UCC into law. By mid-1972, seven states had adopted necessary amendments, and by yearend 1973, 31 states had acted. Taken in sum, these legislative accomplishments cleared the way for expanding the depository program.

At the same time that the legislative issues were being addressed, a parallel and equally vigorous effort was under way to complete the many organizational, administrative and legal tasks needed to evolve CCS into a trust company.

*William T. Dentzer, Jr. DTC's founding Chairman & Chief Executive Officer, 1972-1994.*

The question of whether or not a securities depository could obtain a trust company charter needed to be determined early in the process. In late 1971, BASIC initiated discussions with officials of the New York State Banking Department on this point. The Department concluded that securities depositories could be granted limited purpose trust company charters and issued an amendment to its Supervisory Policy, CB1, permitting the State Banking Board to accept and consider such applications.

Subsequent to the State's action, informal discussions with officials of the Federal Reserve System, regarding membership of a depository trust company, indicated no significant difficulties.

Having determined that a trust company charter could be obtained, NYSE began the preliminary steps in March 1972, starting a year-long process with the submission of a formal charter application on December 28, 1972.

William T. Dentzer, Jr., who had recently left the post of Superintendent of the New York State Banking Department, was engaged effective June 1, 1972 as Chairman and Chief Executive Officer.

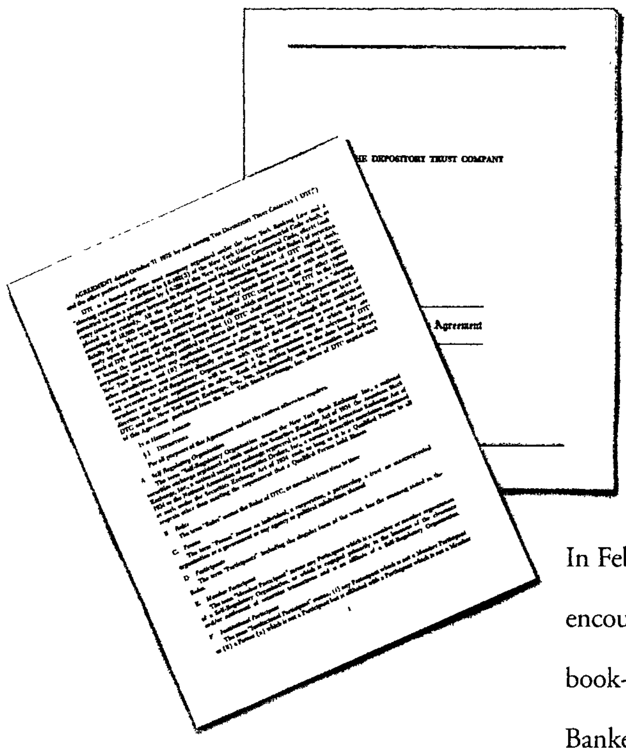
The remaining significant task was that of obtaining the Securities and Exchange

Commission's approval of the depository's articles of incorporation, by-laws and rules. Drafts were completed in mid-1972 and submitted to the SEC on September 15th. Following a period of public comment and numerous discussions with the Commission staff, a final draft was cleared in early May, 1973. The approval was conditional on certain changes, particularly with respect to the qualifications for membership in the new depository. While this portion of the rules would continue under review for months to follow, it was agreed to proceed with the plan.

Having previously received approval of its trust company charter on February 27th and of its application for membership in the Federal Reserve System on April 23rd, the final step was taken. The transfer of operations to The Depository Trust Company was completed on May 11,1973.


*Ownership and Governance*

One of the fundamental principles behind the development of DTC was that it should be owned by its users. Therefore, the New York Stock Exchange which held 100% of its subsidiary's stock began developing a plan to "spin off" a portion of its ownership soon after DTC became operational. Still, until 1975, the extent of bank usage and therefore the



*Original Stockholders Agreement distributed to Participants in 1975.*

field of potential user/owner "Participants" was modest due to continued concern over possible Federal legislation, regulatory interpretation, and a residual number of states without enabling amendments to Article 8 of the Uniform Commercial Code. However, by early 1975, events were beginning to unfold which encouraged the NYSE to submit a plan of sale to the Securities and Exchange Commission.

In February 1975, the U.S. Attorney General issued a news release encouraging all financial institutions to use central depositories and book-entry system to reduce theft and loss; in March, the American Bankers Association strongly endorsed depositories at its annual Trust Operations and Automation Workshop; in May, the SEC released a letter making clear that an investment company's direct or indirect participation in a depository would conform to the Commission's rules; and in June the Securities Acts Amendments of 1975 was signed into law. The legislation's regulatory provisions established the SEC as the primary regulator of securities depositories but provided for shared regulatory authority with the Federal Reserve for Fed members such as DTC. The 1975 legislation combined federal regulation and private sector self-regulation, representing a well-balanced compromise between the public and private sectors which fostered significant growth in the industry for the next 25 years. This was due in large part to the industry's ability to work closely, primarily through BASIC, with Congress and the SEC, commencing in 1970.

*The Senate Subcommittee on Securities gets a full-scale briefing from officials of the Exchange, Depository Trust Company, and Securities Industry Automation Corporation.*

The NYSE's plan was approved on October 9th and the sale of approximately 39% of DTC capital stock took place on October 31st. For the initial distribution, each Participant that was not a member of the NYSE, Amex or NASD was offered a portion of DTC stock based proportionately on its DTC use during the last quarter of 1974. Stock representing the use by broker/dealers was offered to their respective organizations. Thus, Amex and NASD were each offered 8% while the NYSE held approximately 61% including depository stock not bought by eligible purchasers.

In October 1976, the NYSE further broadened the stockholder base by giving broker/dealers the right, at their own election, to own DTC capital stock directly. By the end of the decade, the number of organizations purchasing their share entitlement rose from 24 to 55, comprising 28 broker/dealers, 22 banks and five self regulatory organizations and clearing agencies.

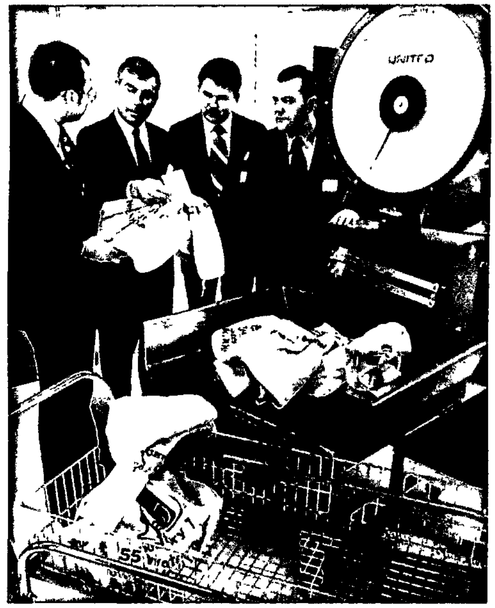

*In March 1973, the depository moved to new, specially designed quarters in lower Manhattan, concurrent with a conversion to new computer equipment.*

*Service and growth in the '70s*

Throughout the period of transition from CCS to DTC, and for the remainder of the 1970s, the depository embarked on a program to attract increased membership and participation. Setting the pattern for the future, it immediately set out to expand issue eligibility, establish mutually beneficial interfaces with other depositories and clearing agencies, develop cost effective services for the growing number of users, and apply technology solutions to the industry's operations problems.

Eligibility over the decade increased from approximately 1,200 issues to more than 13,000. From an initial base of NYSE-listed equity issues, the depository first extended eligibility to Amex-listed and NASD over-the-counter issues, in response to Participants' wishes. By the close of 1979, the list of eligible issues included most publicly traded domestic common and preferred stock, corporate bonds, American Depositary Receipts, U.S. Treasury notes and bonds, and some interchangeable municipal bonds.

To extend its Participants' ability to effectively use other industry utilities, DTC collaborated with the regional exchanges and their clearing corporations and depositories to build the necessary interfaces. At the end of the decade, these interfaces included: the Midwest Securities Trust Company in Chicago, the New England Securities Depository Trust Company in Boston, the Pacific Securities Depository Trust Company in San Francisco, and The Philadelphia Depository Trust Company. Since its inception, DTC had been closely linked to the clearing corporations of the NYSE, Amex and NASD and had collaborated in the implementation of the Continuous Net Settlement System (CNS) developed for their members. The three clearing corporations combined in 1977 to form the National Securities Clearing Corporation (NSCC), with which DTC continues to work in close partnership.




Using an average of 64 certificates per pound, Operations managers could quickly estimate the days' work. This scale was still in use in 1998.

In response to the proliferation of failed trades in the institutional market, DTC's staff worked with the NYCH Securities Committee, chaired by William Powers of Chase Manhattan, to develop an automated process to connect the three principal parties to such trades—broker/dealers, investment managers, and custodian banks. The result was the Institutional Delivery (ID) system introduced in 1973.

As harbingers of more futuristic technologies to follow, the depository piloted the Participant Terminal System (PTS) in 1974 and the Computer-to-Computer Facility (CCF) in 1979, eliminating an average of more than 90,000 paper transactions per day by 1980.

80s
the eighties
WEST SHORE RAILROAD COMPANY
will pay to bearer TWENTY DOLLARS
at the office of the New York Central and Hudson River Railroad Company in the City of New York, being six months' interest then due on its First Mortgage Bond No. 3185
ON THE FIRST DAY OF JULY 1983
JANY 1983
JULY 1982
JANY 1982
JULY 1981
JANY 1981
JULY 1980
JANY 1980
JULY 1979
JANY 1979
JULY 1978
JULY 1977
JANY 1977
JANY 1976
JULY 1974
JANY 1973
JANY 1971
$20
American Bank Note Co. New York

# THE 1980s

While the previous decade had been one of establishing the depository concept, the 1980s brought the system to maturity.

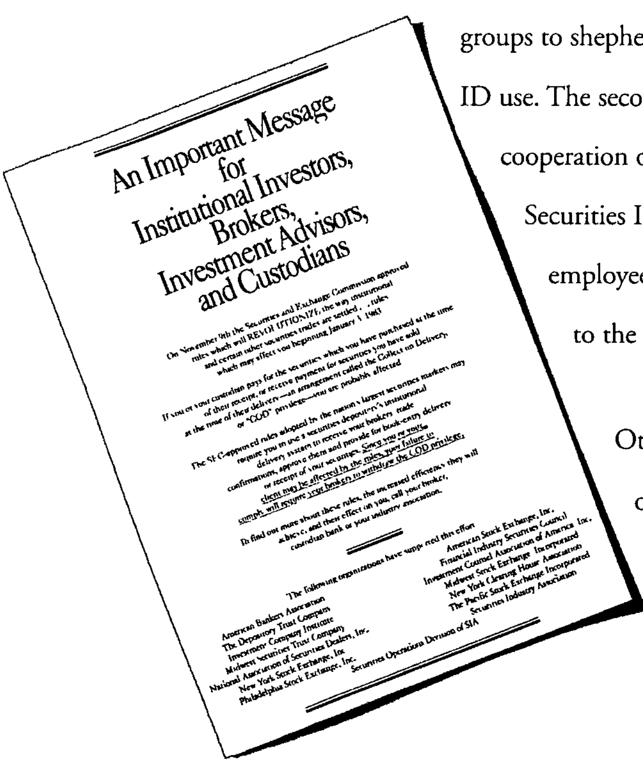
*The growth of institutional use*

During the 1980s, securities on deposit grew from $305 billion to $4 trillion, due mainly to DTC becoming conventional wisdom for bank Participants and their institutional customers. The last regulatory barriers to institutional use were removed and the use of the Institutional Delivery system became mandatory.

At the start of the decade, state and municipal retirement system assets and insurance company assets were still subject to restrictive statutes and regulations in various states. Typically, such assets were required to be physically domiciled within the state or to be kept certificated wherever domiciled. In 1980, 23 states had such restrictions. With the support of the SEC, the National Association of Insurance Commissioners, and others, DTC worked with public officials to lift the restrictions. By 1989, 49 states and the District of Columbia had taken amendatory action with respect to insurance company assets, and all 50 states and the District of Columbia had lifted the barriers with respect to pension fund and investment company assets.

In early 1980, industry forecasters were predicting the arrival of 100 million share days and were becoming concerned with the rising number of COD-DK (Don't Know) rejected deliveries. Recognizing the relief that DTC's ID system could bring to this problem, the industry and DTC accelerated ID participation. Strong backing

*The growth of institutional use and municipal bond eligibility spurred high deposit activity which increased the value of securities on deposit from $305 billion to $4 trillion.*




came from leading firms and industry groups. Most notable was the Securities Industry Association's Operations Committee which, through a subcommittee chaired by Morgan Stanley's Gerard P. Lynch, proposed an amendment to NYSE Rule 387 that would essentially require the settlement of most institutional trades through ID. The NYSE adopted the change in late 1981 and, following a period of public comment, the SEC approved it in November 1982 to become effective January 1, 1983. Similar rules in other markets, such as amendments to Section 64 of the NASD's Uniform Practice Code, and the Municipal Securities Rulemaking Board's (MSRB) Rule G-15, followed.

DTC responded by forming two special groups. The first was a Rule 387 Implementation Committee of executives from the SIA, American Bankers Association, Investment Company Institute, Investment Counsel Association of America, and other industry groups to shepherd the process of the conversion to mandatory ID use. The second group was a special task force, formed with the cooperation of the Securities Operations Division of the Securities Industry Association, comprised of some 30 DTC employees and broker-loaned personnel assigned for a year to the project, to assist new ID users.

Other incentives to ID use included the development of the Standard Letter of Agreement, which was designed by the Ad Hoc Committee of Custodian Bankers in 1983 and which eliminated the need for Investment Managers to send instructions to their custodians, and the Broker Mailed Confirmation Elimination Agreement, introduced in 1989.

ID's rapidly growing appeal increased the number of ID users from 667 in 1980 to nearly 7,400 in 1989, and the number of transactions processed (confirmations, affirmations and deliveries) from 3.5 million to 39 million.

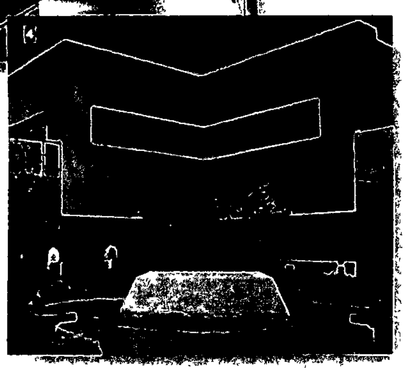
*In 1986, DTC cut and presented some 35 million municipal bond coupons to obtain interest due to Participants.*

*The municipal bond program*

A small number of interchangeable (bearer to registered) issues had been made eligible in the 1970s. By 1980, Participants urged the depository to broaden its program to include the estimated 1.5 million CUSIP, multi-hundred billion dollar market—the great bulk of which was in bearer form. In August 1981, DTC inaugurated a program to make most municipal bonds eligible and to distribute as many new issues as possible by DTC book-entry.

The program called for adding 1,000 issues per month during 1982 and to reach a minimum of 100,000 eligible issues by 1985, under plans which anticipated the use of regional bank custodians as the project expanded. However, unanticipated Federal legislation altered the direction of the program.

The U.S. Congress legislated, effective July 1, 1983, a requirement that municipal bonds with maturities of more than one year be in registered rather than bearer form to retain their tax-exempt status. This action, part of the Tax Equity and Fiscal Responsibility Act (TEFRA), came at a fortuitous stage in the municipal bond program. Now there would be a transition period for the municipal bond industry in which book-entry processing and certificate transfer procedures would increasingly replace certificates in bearer form.



*1 Framing the Garden City facility.*

*2. Pouring 9,000 tons of concrete.*

*3. The result inside.*

*4. The result outside*

New plans were laid in which DTC would act as its own custodian and a decision was made to build a dedicated processing facility to meet the expected rush of activity. The facility, located in Garden City, Long Island, was occupied in mid-1984; it included a huge top-of-the-line 40,000 square foot vault with 14 foot ceilings, and was designed to custody 40 million certificates. By the end of the decade, 20.6 million bearer and 6.9 million registered municipal certificates valued at $750 billion were on deposit there.

As much as TEFRA, the sharp drop in bond interest rates in the latter half of the decade, hastened refinancing and the resulting transition of the municipal bond market from bearer to registered, fueling dramatic increases in redemption activity and in underwritings. Between 1983 and 1989, full and partial calls, redemptions and maturities increased from fewer than 1,500 to nearly 67,000 annually. Municipal bond underwritings for the same period rose from fewer than 500 (about 6,500 CUSIPS) to nearly 6,500 (80,000 CUSIPS).

*Book-Entry-Only*

While various automated systems were being designed or enhanced to deal with the high municipal bond transaction volumes, a more fundamental change was occurring. In 1982, the Book-Entry-Only (BEO) program, in which there are no certificates for investors, was introduced.

BEO was strongly endorsed by the Securities and Exchange Commission. In 1985, in letters to state governments and a number of securities industry executives, SEC Chairman John S.R. Shad sought support for the national effort to accelerate the immobilization of securities certificates and increase the use of cost-saving, book-entry procedures.

Under the leadership of Delaware State Treasurer Janet Rzewnicki, and others, the program gained broad acceptance and by the end of the decade 25% (47% as measured by principal amount) of all new, long-term, municipal debt in the U.S. was being issued in this form.

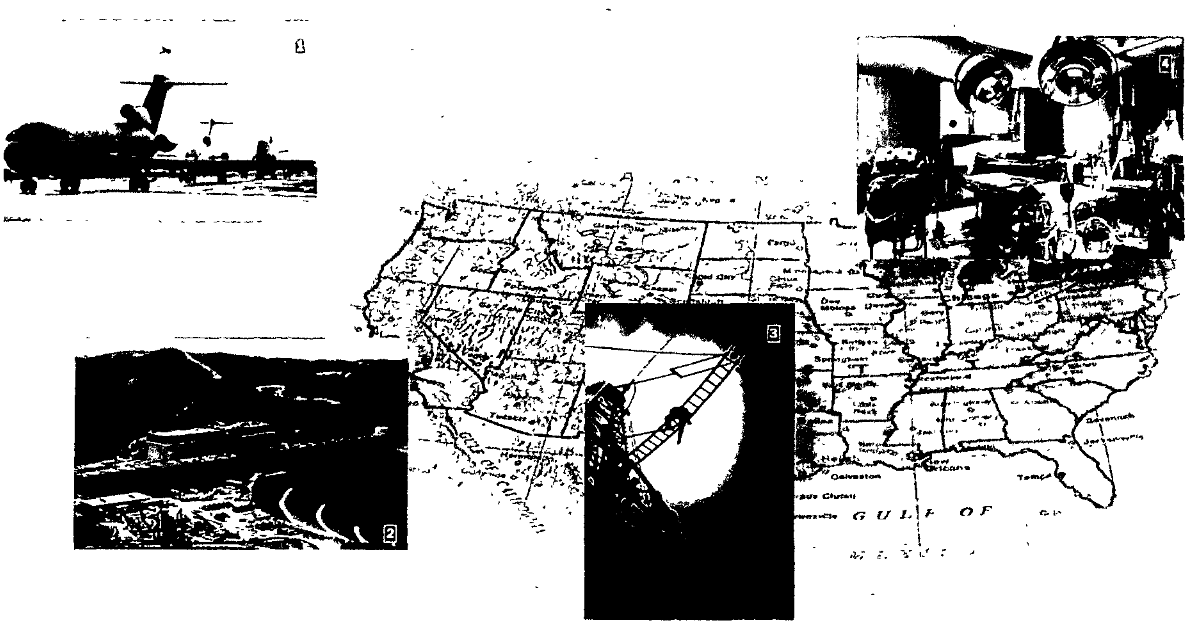
*BEO issuances helped fund each of these four diverse projects:*

*1. Anchorage International Airport, Alaska ($38 million),*

*2. Modesto Irrigation Project, California ($161 million),*

*3. Salt River Project, Arizona ($100 million),*

*4. Bernstein Pavilion, Beth Israel Medical Center, New York ($28 million).*




The New York Times
STOCKS PLUNGE 508 POINTS, A DROP OF 22.6%;
604 MILLION VOLUME NEARLY DOUBLES RECORD
U.S. Ships Shell Iran Installation In Gulf Reprisal
Does 1987 Equal 1929?
Who Gets Hurt?

*Other developments of the '80s*

Technology development played a key role in DTC's expansion throughout the 1980s.

Telecommunication vehicles, such as the 1970's Computer-to-Computer Facility (CCF) and the Participant Terminal System (PTS) expanded, while new real-time communication links and PTS Jr, a personal computer-based dial-up, low volume version of PTS, were implemented.

DTC's systems capacity was put to the test in the market break of October 1987. New York Stock Exchange daily trading volume twice exceeded 600 million shares and book-entry deliveries for trade settlement reached a single day high of $92 billion and, for the first time, DTC's systems processed over one million Participant updates in a single day. During the hectic week of October 19th, a daily average of 1.7 billion shares were delivered through DTC to settle trades made in various markets.

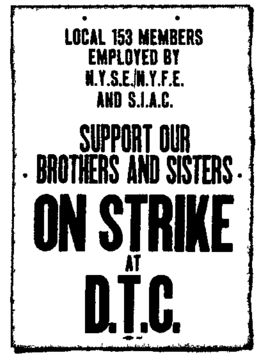
Several classes of securities were made DTC eligible, including Units, Warrants, Unit Investment Trusts, Collateralized Mortgage Obligations, and Certificates of Deposit, among others.

With the review of its regulators, especially Gerald Corrigan and Ernest Patrikis of the Federal Reserve Bank of New York (FRBNY), DTC inaugurated a Same-Day Funds Settlement (SDFS) system in mid-1987 to process issues that settle in such funds, beginning with municipal notes and zero coupon bonds backed by U.S. Government securities. DTC installed a computer connection with the Federal Reserve System —Fedwire Link—enabling automatic crediting of SDFS Participant accounts for payments received over Fedwire into DTC's account at the FRBNY.

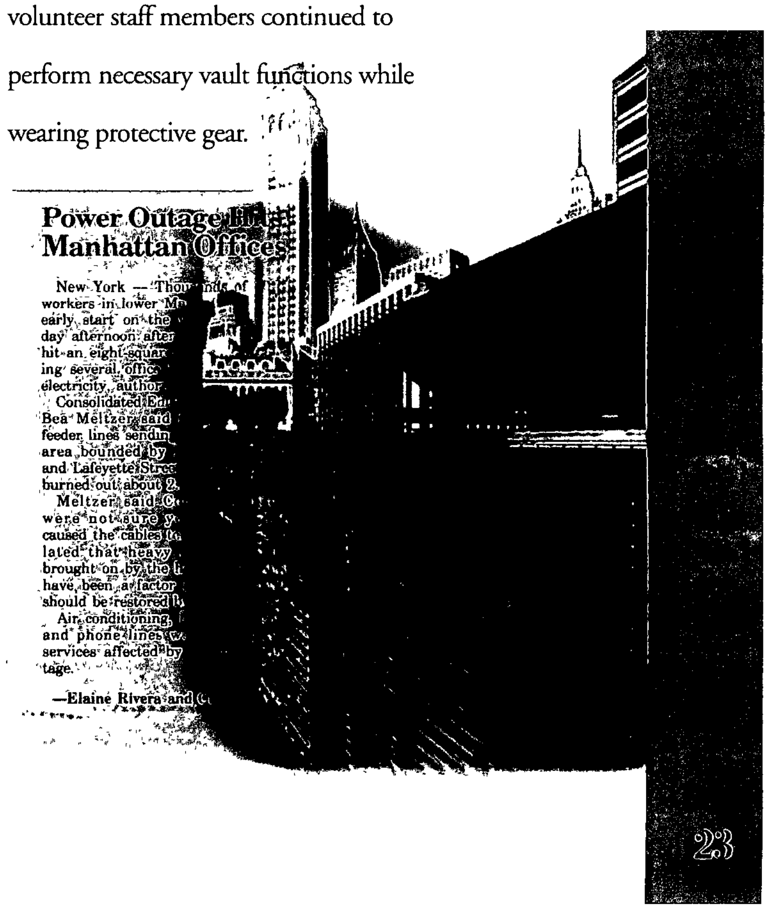
DTC broadened its link with NSCC to include bearer municipal issues and to support clearance and settlement of international trades through NSCC's International Securities Clearing Corporation subsidiary.

The interface with the Options Clearing Corporation was enhanced and a link with the Federal Reserve Bank of New York was established to assist Participants wishing to make book-entry pledges to the Fed for their Treasury, Tax and Loan accounts. A link was also established with the Canadian Depository for Securities Limited (CDS). DTC's interfaces with the New England Securities Depository Trust Company and the Pacific Securities Depository Trust Company ended in 1981 and 1987, respectively, when their exchanges elected to discontinue their depository functions and DTC absorbed their businesses.

In mid-1985, the depository experienced a 14-day strike and work stoppage by some of its bargaining unit employees. DTC had prepared for such a contingency and, with extra effort from management and other non-striking personnel and with support from Participants, superior service was maintained. Subsequent additional automation of work processes and other evolutionary changes sharply reduced any remaining risk in this area.




Other challenges in the decade included a series of Wall Street area power outages during which DTC relied on standby generators—in one instance for three days, and the outbreak of a mysterious flu-like illness, called Pontiac Fever, that affected a number of vault employees working in a temporary facility. While DTC worked with environmental agencies to determine and correct the cause, volunteer staff members continued to perform necessary vault functions while wearing protective gear.




90s

# THE 1990s

The 1990s, still a "work in progress" as DTC completes its silver anniversary, has been a decade of re-engineering for both the depository and the securities industry.

Since the market break of October 1987, the industry had been under pressure to improve clearance and settlement, especially increasing safety through better risk management. This led to a March 1989 Group of Thirty (G-30) study that made nine recommendations, including a reduction in the settlement cycle from five to three business days (T+3) and the adoption of same-day funds settlement (SDFS) for all securities. The recommendations received further support from the Securities and Exchange Commission following the May 1992 release of its report on clearance and settlement reform by a task force chaired by John W. Bachmann, of Edward D. Jones & Co.

Thus encouraged, the industry, through the efforts of many groups, most notably the U.S. G-30 Working Committee, co-chaired by Marshall N. Carter of State Street Bank and Alex. Brown's Ronald W. Readmond, worked on these recommendations leading to their eventual adoption in the 1990s.

*From T+5 to T+3*

By the beginning of the 1990s, DTC was in the process of redesigning the ID system, originally conceived as an end-of-day batch system, to an interactive "near real-time" system. Under mandate from the SEC and its Chairman Arthur Levitt, Jr., to move to T+3 settlement in June 1995, DTC, in 1994, unveiled interactive ID replacing both the "old" ID and International ID systems with one that would meet the needs of global trading. By yearend, the new system was processing an average of 157,000 transactions a day for Participants and foreign users.

*Handheld scanners transmitting, by radio frequency, large quantities of data, enabled operations staff to efficiently process nearly 4.4 million deposits—almost 11 million certificates—in 1996.*

Toward the end of 1994, DTC again assembled a task force of 11 middle management employees borrowed for up to one year from Participant banks and brokers, at DTC's expense. Their assignment was to help orient 10,000 ID users across the nation to take full advantage of interactive ID in time for the June arrival of T+3 settlement. The conversion, which took place over a three day period of heavier-than-normal settlement volume (nearly 3 billion shares), occurred smoothly.

*Moving to same-day funds*

At the time that the G-30 and SEC reports were being circulated, DTC was several years into an optional same-day funds system for money market instruments and was, with the NSCC, developing a model for same-day funds payment for all securities. With broad industry input, including input from staff of the FRBNY, the model was iteratively presented by DTC and NSCC from 1992 to 1994 with ever-improving risk management controls, inter-depository and clearing corporation interfaces, and system recovery approaches.

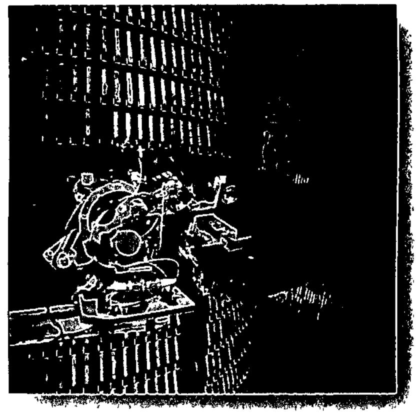
A key concern was the need to receive timely, accurate principal and interest payments in automated form from issuers and their agents. To address this issue, a U.S. G-30 subcommittee, chaired by Jeremiah F. O'Leary of Chemical Bank, was commissioned to develop a set of recommended payment practices. The practices, ultimately endorsed by the SEC and industry groups, marked an important step in SDFS implementation.

A year prior to SDFS, DTC and NSCC embarked on a massive nationwide education and training campaign and held "town hall" meetings for issuers and their agents to ensure a smooth February 1996 conversion. The SDFS conversion, like T+3's the prior year, was seamless.

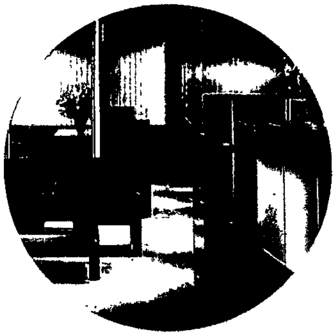
*International Developments*

Early in 1990, DTC began studying its future role in international settlement as cross-border trading surged. Accordingly, the depository began exploratory discussions with foreign national depositories and others, in major markets, to evaluate alternative approaches to settlement.

In 1993, Deutscher Kassenverein (DKV)—the German depository—became DTC's first international Participant. A DTC office opened



*Robotic arms housed in tape silos aid their human counterparts in providing massive data storage—over 15 terabytes, or 15 trillion characters.*



*DTC's London office, opened in 1995 and transferred to IDC in 1996, became a focal point of information exchange on Participants' European operations and needs.*

*IDC's presence at the 1997 S.W.I.F.T. International Banking Operations Seminar (Sibos) in Sydney, Australia promoted interest in its white paper on straight-through processing.*

in London in 1995 to provide better DTC service to Participants' European operations and to gain information on their needs, and in 1997, the Brussels-based Society for Worldwide Interbank Financial Telecommunication (S.W.I.F.T.) approved DTC as an electronic trade confirmation (ETC) provider, expanding the reach of the ID system's 10,000 users to S.W.I.F.T.'s 6,000 members in 151 countries.

In 1994, after more than five years of effort by securities and banking lawyers, industry organizations and regulators, a major revision of Article 8 of the UCC was developed and referred to the states for enactment. The revision would enable DTC to extend depository service to more foreign securities, as well as, other financial instruments such as bankers' acceptances. It would also permit the depository to use foreign custodians. By the end of 1997, 44 states, including New York, had enacted the revision.

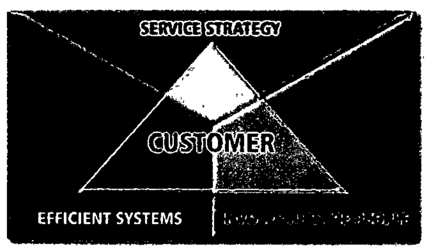
Recognizing the need to provide a single American focus for international clearance and settlement, DTC and NSCC formed in 1996, the International Depository & Clearing LLC (IDC), a jointly owned subsidiary to concentrate on cross-border settlement issues from a research, marketing and development standpoint. In 1997, IDC had begun promoting international industry discussion through its white paper on straight-through processing (STP) which provides for seamless automated processing from trade execution to settlement completion.

Twice during the decade, DTC provided a venue for multi-national gatherings of Central Securities Depositories and other members of the securities community. In 1993, DTC hosted the Second Conference of Central Securities Depositories (CSDs), attended by representatives

of national organizations from 30 countries and two international CSDs, Cedel and Euroclear. In 1997, DTC organized, and jointly sponsored with NSCC and IDC, the first U.S. Depository Clearance and Settlement Conference. The two week conference drew 39 staff members from 19 CSDs in 17 countries (photo above).

*Other developments of the '90s*

In 1993, DTC embarked on a large, formal, multifaceted Continuous Improvement Program (CIP) to direct the company toward a more customer-focused approach to doing business. A cross-departmental steering committee directed projects to improve service quality and efficiency. These programs have resulted in multi-million dollar savings and highly satisfactory Participant responses.

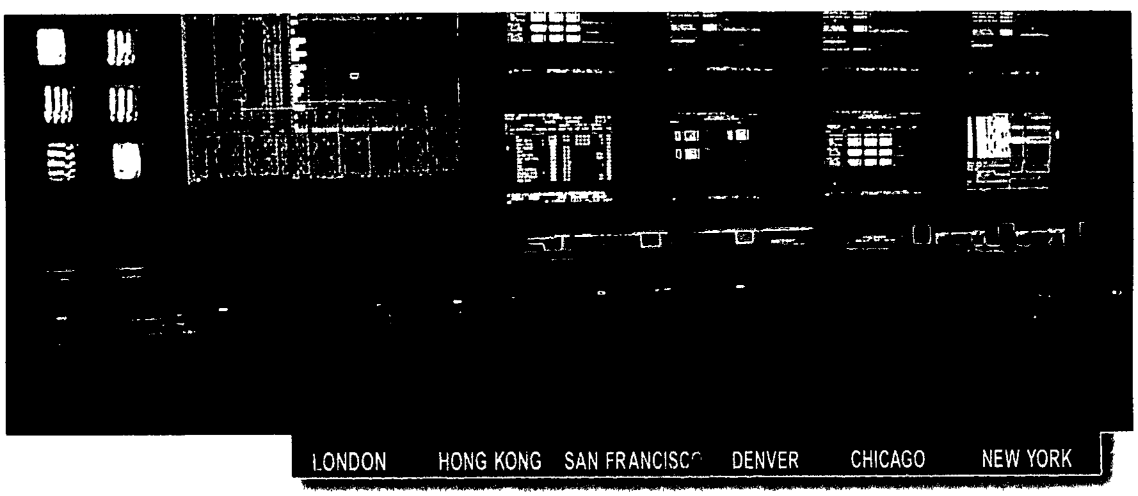



*The CIP "Service Triangle"*

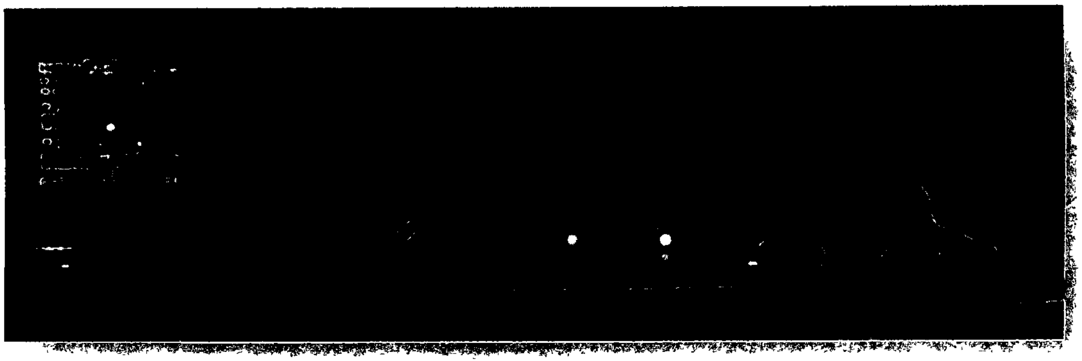
Advisory boards comprised of product experts in the securities industry were formed in 1996 to guide DTC's enhancement of important business lines including; Operations, Corporate Actions, Settlement, Dividends and Institutional Delivery, all under the direction of a 12-executive Operations Advisory Committee.

Issue eligibility increased over the decade by more than 600,000 issues to 1.4 million. In 1993, DTC formed eligibility task forces of employees and Participants to bring into the depository securities without CUSIP numbers, fractional shares, dollar-and-cent-denominated securities, Small Business Administration issues, State of Israel bonds, restricted securities, and other types requiring exception processing in an effort to extend depository service to as many issues as possible. Additional growth resulted from increased eligibility of various types of money market instruments.

Technology developments paralleled depository growth during the 1990s. "Hardcopy" output was increasingly replaced by PTS and CCF facility files while bar-code use and imaging reduced or eliminated many labor intensive functions. DTC allowed Participants to connect a broader variety of devices to PTS including Participants' own local area networks (LANs). Programs began to bring forward more browser-like navigation, graphical user interfaces, and other user-oriented technology.




*The System Command Center displays the status of DTC's communications and processing systems to ensure they're operating at peak efficiency. Simultaneously, the staff keeps track of sophisticated recovery systems that, in the event the primary data center fails, can help recover all DTC systems within one hour.*



System security and the ability to rapidly recover from any potential disaster became increasingly more important with the implementation of SDFS. In 1992, DTC established a state-of-the-art backup facility mirroring its main site computer and communications capabilities; this permitted recovery within three hours in the event that the primary site became inoperable. By second quarter 1998, DTC moved to a new business recovery facility located outside of Manhattan which, in addition to providing 1-hour computer and communications backup, accommodated a staff of more than 800, ready to provide critical operations support.

*The people in the Customer Support Center use state-of-the-art systems and software to track and respond to inquiries. Calls often exceed 800 a day, reflecting the huge volumes processed through the over 17,200 online devices connected to DTC's systems.*

DTC expanded work with other depositories and clearing agencies during the 1990s. Also, DTC developed a program to enable Participants and non-Participants to pledge securities to Federal Reserve banks for certain purposes. In 1994, DTC and the Participants Trust Company (PTC) completed an agreement under which DTC's vault and physical securities-processing capabilities would be used to process and safekeep PTC's inventory of Government National Mortgage Association (Ginnie Mae) securities, and in early 1998 plans were being completed for DTC to absorb PTC. In 1996, DTC and NSCC agreed to coordinate in handling physical securities transactions. The arrangement permitted Participants using DTC's custody services to access NSCC's

New York Window, through systems and communications interfaces developed by DTC, to arrange for any physical deliveries needed to complete settlement. In mid-1998 DTC accepted responsibility for operating the Window function from NSCC.

DTC's interfaces with the Midwest Depository Trust Company and The Philadelphia Depository Trust Company ended in 1995 and 1997, respectively, when their exchanges elected to discontinue their depository functions and DTC absorbed their businesses.

## A FINAL NOTE . . .

This digest of DTC's history illustrates the pioneering and often tortuous path that its development necessarily followed. All concerned, Participants, employees, regulators and others contributing to its success wished it could have been accomplished faster, notwithstanding the circumstances over which they had little control.

Yet, as the '90s were drawing to a close, they could look back on the progress of the last quarter century taking considerable pride in the depository they created with its world-wide reputation for integrity, competence and objectivity in meeting the expectations of the American capital markets.