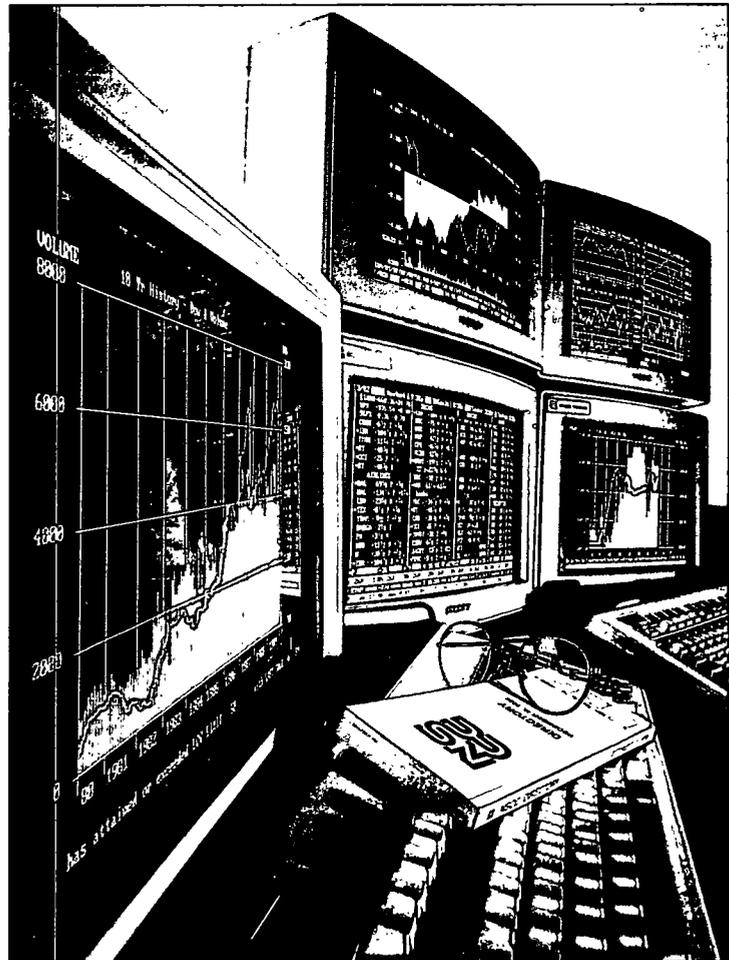




# National Securities Clearing Corporation

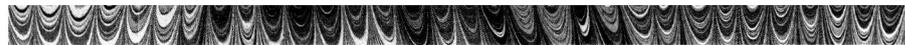
## 1989 Annual Report



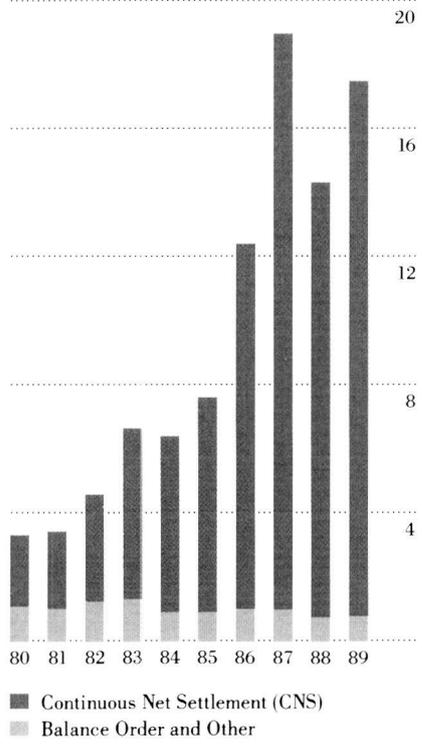
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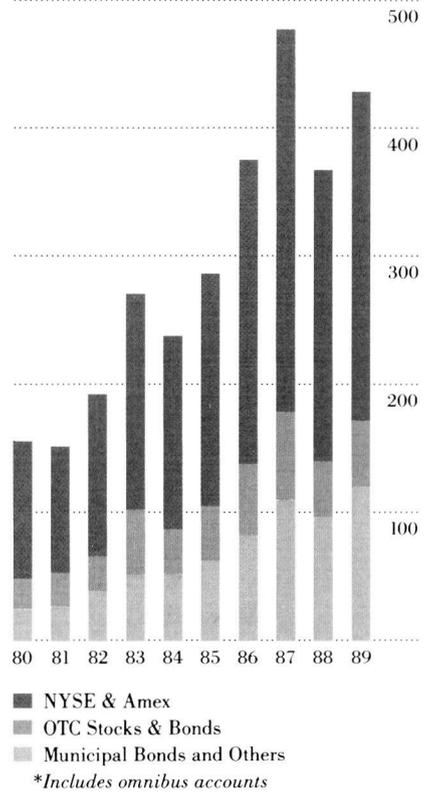
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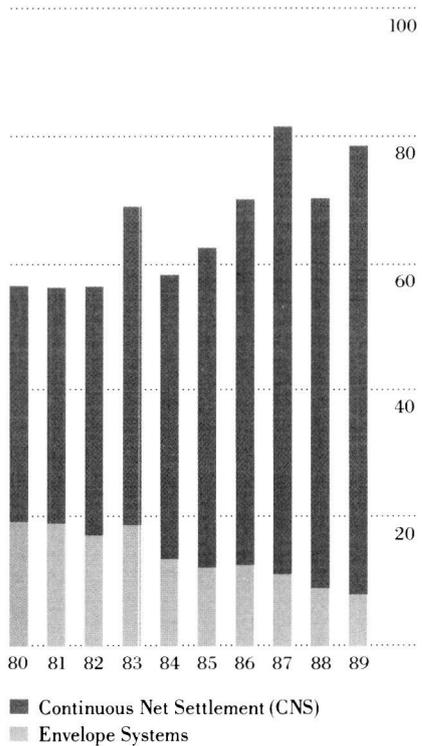
**Average Daily Value of Transactions Settled\***  
(In billions)



**Average Daily Volume of Transactions Processed\***  
(In thousands)



**Average Daily Volume of Deliveries**  
(In thousands)





## To Our Participants

**T**he world witnessed a series of irreversible changes during 1989 ranging from the student uprisings in Tiananmen Square to the toppling of the Berlin wall, to the beginning of the end of communist domination in Hungary, Poland, Czechoslovakia and Bulgaria. While no one can predict the course of world events and their impact on global financial markets, it is apparent that we are facing prospects of even more rapid change both in the political arena and in the financial markets in the 1990s.

The political events in 1989 have changed the course of history just as the market events in October 1987 initiated fundamental changes in the securities industry and financial services business. The unprecedented growth in the securities industry during the 1980s, which grew out of deregulation of the markets and tremendous leaps in technology, has tapered off considerably in an environment that is now characterized by change and competition. The industry has faced challenging times since 1987 when it became apparent that firms could not support the programs and staffing levels that they once did if they were to operate profitably through the period of change. NSCC is well aware that the cost-cutting, downsizing and restructuring programs in the securities industry will continue in the 1990s, and we will work closely with the markets, participants and other clearing and depository organizations to achieve even greater efficiency in trade clearance and settlement services.

In spite of the leaner times facing the industry, NSCC must continue to be visionary and to better understand what these changes mean to your organizations. This dictates that we continue to research and evaluate new products and services and address the fundamental changes that are occurring in the domestic and international financial communities.

On the domestic front, these changes involve moving from the costly, labor-intensive world of physical certificates to a book-entry environment and eliminating operational risks within the systems to make our markets even more efficient and risk adverse. Specifically for NSCC, this means carefully evaluating the Group of Thirty's far-reaching recommendations calling for final settlement on Trade Date Plus Three and same-day funds settlement.

Fundamental changes continue to occur in the international marketplaces as well. As the 12 nations of the European Community continue their efforts to create a barrier-free common market by 1992, it is apparent that new and better mechanisms must be established to settle cross-border trades and facilitate capital flows across markets while the securities remain in the issuer's home country. The next decade will see a major cooperative effort between ISCC and clearing and depository organizations as well as other intermediaries around the world to establish standards, links and communications networks



that will mitigate differences in settlement between the markets and support participants' international business.

NSCC's commitment to its participants and improved technology, which enabled us to support the unprecedented growth in the securities industry in the 1980s, has positioned us well for the challenges of the 1990s. NSCC enters the new decade with a heightened commitment to provide efficient, cost-effective trade processing services. We owe a special debt of gratitude to our staff, our Board members and the industry for their support in these changing times.

Ronald W. Readmond (left)  
*Chairman of the Board*

David M. Kelly (right)  
*President and  
Chief Executive Officer*





## The Year in Review

**T**he market break in October 1987 altered the direction of and hastened the pace of change within the securities industry and financial services business. While 1988 was a year for reviewing the issues and exploring the alternatives, 1989 was a year for implementing new systems and changing existing ones to address those issues.

The timely reconciliation of transactions received considerable attention following the market events in 1987 when paper DKs and QTs flooded the floor. In 1989, NSCC supported the efforts of the NYSE and Amex to reduce risk and move trade reconciliation closer to the point of trade execution through the implementation of on-line correction systems. NSCC modified its Listed and OTC Comparison systems so that participants submit their two-sided equity trade data to NSCC by 2:00 a.m. on Trade Date Plus One (T + 1) thereby bringing the comparison cycle closer to the trading cycle. Supplemental processing occurs on T + 1 rather than on T + 2 which effectively moves the trade resolution process, and NSCC's guarantee of matched trades, up by one day and reduces the exposure on open trades. Compression of the trade resolution process for listed and OTC equities has laid the foundation for effecting similar changes in the corporate and municipal bond comparison systems.

**Redesign of the Listed Comparison System and acceleration of OTC input and output time frames were significant efforts at NSCC in 1989 and an integral part of the industry's efforts to limit exposure on open trades by compressing the trade resolution process.**

NSCC, in addition to supporting the NYSE's and Amex's on-line correction systems, actively supported the NASD's development of an on-line trade comparison system. This system, when implemented in 1990, will provide same-day comparison for all NASDAQ trades and bring the trade matching process closer to the point of execution. Participants' transactions in this system will be transmitted to NSCC as locked-in compared trades.

Commitment to technology not only allowed NSCC to support the industry's efforts to compress the trade resolution process, but also played an integral part in the development of enhancements to existing systems and services in 1989.

NSCC completed all of the developmental work on a link between Fund/SERV, NSCC's automated order entry, confirmation and settlement system for mutual funds, and the Automated Customer Account Transfer (ACAT) service. When the link becomes operational in 1990, broker/dealers will be able to transfer their customers' mutual fund assets in a controlled environment through ACATs. Networking, which opened the doors for electronic communication between fund groups and broker/dealers for those financial and non financial transactions not supported in Fund/SERV, continued to meet developmental milestones in its first full year of operation as the number of participants and subaccounts supported increased. The electronic lines





**The successful implementation of Fund/SERV led to the development of Networking, a centralized and standardized data communications system, which allows a customer's account to appear identically on the records of the broker/dealer and fund group.**

of communication established in Networking have led to additional applications as well, such as the introduction of a Dividend Cash Settlement feature which enables fund groups and broker/dealers to settle dividend monies within NSCC's settlement system. As a result of the Dividend Cash Settlement feature, cash dividend payments are now made by fund groups in federal funds with broker/dealers receiving credit, including interest earned on the overnight investment of the dividend payment, in next-day funds on Settlement Date.

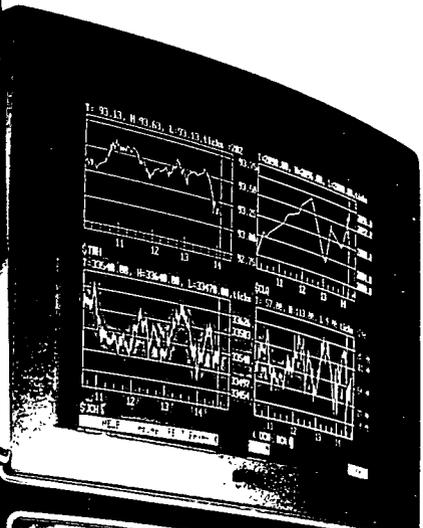
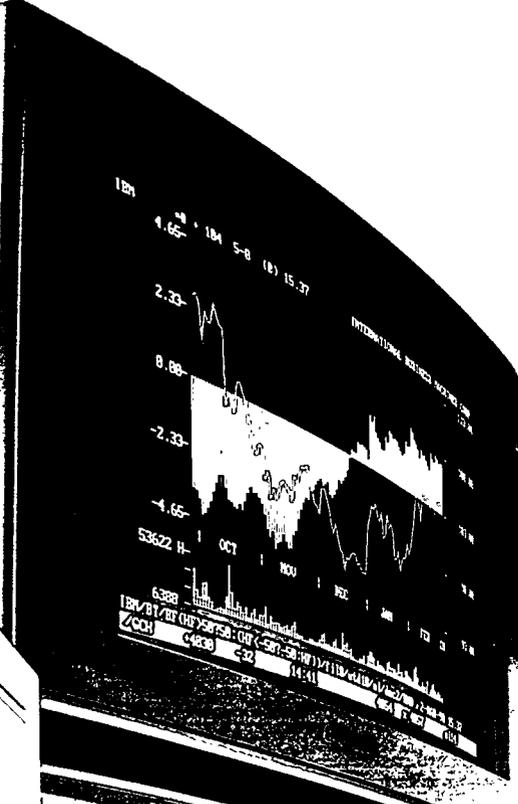
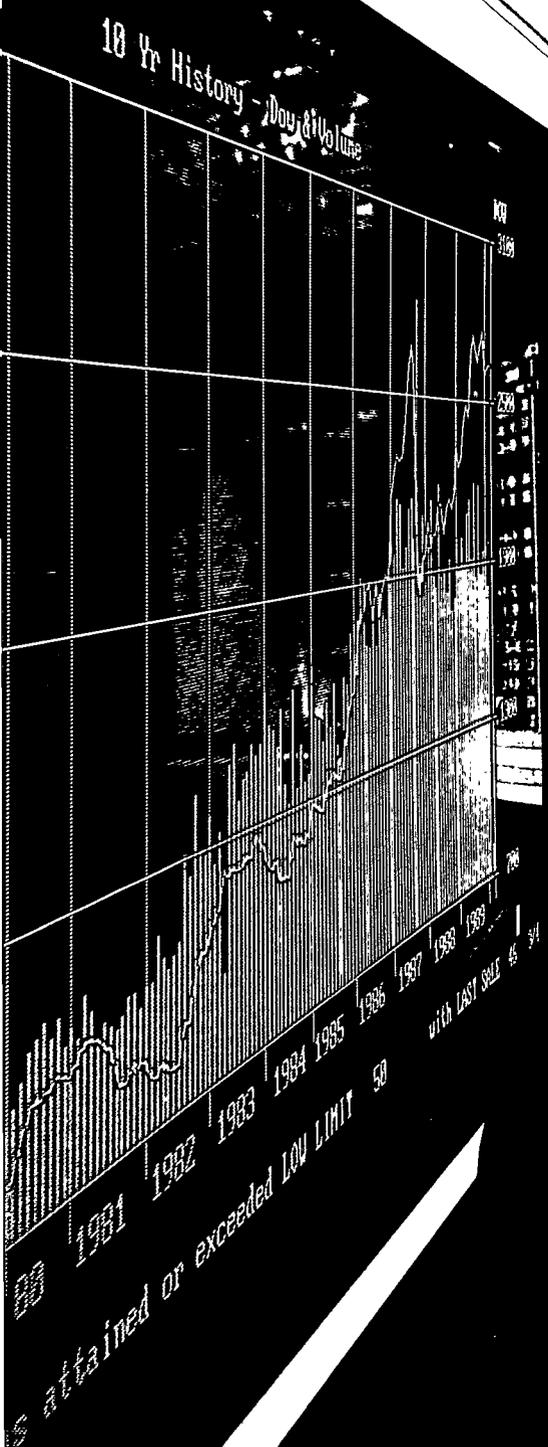
NSCC's when-issued municipal bond netting program, which allows all when-issued trades of DTC-eligible issues to be processed in CNS, expanded dramatically as more participants joined the program. More than 97,500 when-issued sides having a par value of \$34 billion were processed in CNS in 1989. The program's 150 participants account for 70% of the when-issued municipal trades processed by NSCC. NSCC continued to work toward integrating the processing of municipal bonds into the CNS clearance and settlement system in 1989 through the introduction of a netting pilot for regular-way bonds.



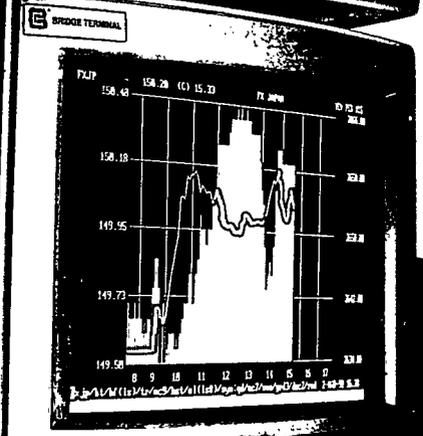
This pilot, which grew out of the successful implementation of the when-issued netting program, followed an extensive study of regular-way trading and is in keeping with the municipal industry's current directive to net all book-entry only municipals in 1990. Of major concern to NSCC and industry organizations in 1989 was the poor T + 1 comparison rate for when-issued transactions. To address this issue, NSCC and the Public Securities Association undertook a study to identify the reasons for the poor comparison rate and to propose recommendations to improve it. Improving comparison will continue to be a major effort in 1990 as the municipal industry evaluates and acts on the recommendations presented in the study.

**I**n addition to system developments and enhancements, a major effort in 1989 was a detailed study of NSCC services to evaluate the current fee schedule. The results of the study indicated that a major fee revision was necessary to enable NSCC to maintain an adequate revenue base to cover production costs and to support NSCC's commitment to meeting the changing needs of the industry through product development and enhancement programs. Several alternatives were evaluated before NSCC arrived at a fee schedule that more equitably distributes the cost of operations to participants based on product usage and encourages participation in new services by amortizing the start-up costs. The revised fee schedule, which represents the first major rate revision in seven years, became effective on January 1, 1990.





Symbol	Price	Change	Volume	High	Low	Open	Close
SINDU	668.136	+24.78					
SPX	335.54	+2.88					
COBK	61.2	+0.78					
IBM	184.2	+0.78					
PMBS	113.4	-1.4					
BT	48.8	+0.8					
CCI	25.1	+1.4					
BT	48.3	+0.8					
AIRLINES							
ML	69.8	+0.8					
UAL	134.4	+0.8					
LUV	23.8	+0.8					
TEX	81.8	+0.8					
TEAM	15.2	-1.2					
ENBGA	23.8	+0.8					
PN	31.8	+0.8					
NDU	111.2	+0.8					
U	38.2	+0.8					
IBM	184.2	+0.78					





Since its formation in 1976, NSCC has supported and participated in industry-sponsored initiatives. In 1989, NSCC was actively involved in efforts by the Group of Thirty and the Fédération Internationale des Bourses de Valeurs (FIBV) to prescribe improvements in custody, clearing and settlement systems through standardization. The recommendations put forth by the Group of Thirty and the FIBV in their groundbreaking reports on domestic and international settlement, respectively, will require an in-depth study in the coming year. NSCC also participated in the Office of Technology Assessment's study on international clearing and settlement and the General Accounting Office's examination of clearance and settlement reform in the stock, options and futures markets. In addition, NSCC's representative chairs the Securities Clearing Group (SCG). The SCG, which grew out of the market break in 1987 and was formalized in 1989, provides a mechanism for sharing information among SEC-registered clearing agencies.

**I**n 1989, NSCC continued to provide support for International Securities Clearing Corporation and Government Securities Clearing Corporation which were established in 1985 and 1986, respectively, to address the challenges presented by growing markets.

**NSCC's netting program for municipal bonds clearly demonstrates the operational benefits of reduced book-entry movements and is available for all when-issued trades in DTC-eligible issues as well as regular-way trades in selected issues.**

A major focus at ISCC, which was granted temporary registration as a clearing agency by the SEC in 1989, was the development of a clearance and settlement mechanism to accommodate the NASD's Private Offerings, Resale and Trading through Automated Linkages (PORTAL) marketplace. ISCC, because of its existing links to international clearing and depository organizations, is well positioned to support PORTAL which will provide a marketplace for broker/dealers and qualified investors to offer and trade SEC Rule 144A unregistered private placements. Once PORTAL is operational, ISCC will provide a centralized, book-entry clearance and settlement mechanism using Cedel in Luxembourg as the depository interface to permit the orderly and controlled flow of foreign securities into and out of the market.



ISCC's existing clearing and custody links continued to grow in 1989 as did its participant base. The London Link was expanded to allow participation in The International Stock Exchange's Institutional Net Settlement (INS) service which provides a centralized settlement service for institutional investors. The custody services links with Japan Securities Clearing Corporation and the Central Depository (Pte.) Limited in Singapore grew as new issues were made eligible in the custody accounts. Over 21,000 purchases and sales in ordinary shares of foreign issues, valued at





**ISCC's bilateral clearing link with The International Stock Exchange in London extends clearance and settlement services internationally while the custody services links with depository organizations in Japan and Singapore provide more efficient handling of U.S. issues listed overseas or involved in cross-border trading.**

\$144 million, were processed in the Foreign Securities Comparison and Netting Service which is now used by 161 participants.

GSCC achieved a number of significant milestones in 1989 as it enhanced the Comparison System to increase its effectiveness and to complete the foundation for netting. Enhancements to the Comparison System included the establishment of a pend file and a cancellation and replace feature. In addition, participants now have the ability to compare trades on an as-of basis. Participation in the Comparison System increased with 13 participants joining the system in 1989. Comparison percentages remained high with an average monthly comparison rate of 94%.

Implementation of the enhancements to the Comparison System were an important step in bringing netting to the government securities industry. The Netting System, which was designed to minimize the total number of receive and deliver obligations, became operational in July with 20 participants netting a four-year U.S. Treasury Note. In the Netting System, compared trades are netted to a single position in each issue and receive and deliver obligations are created after all net security positions have been calculated. Since its implementation, the Netting System has grown to encompass all Bills, Bonds and Notes currently eligible for the Comparison System. Monthly netting factors remained well within the projected levels with periods of high-volume activity resulting in the highest netting factors.



**T**echnology will continue to play an important role at NSCC and in the securities industry in the coming decade. Just as critical in meeting the challenges that lie ahead is the need to maintain an open dialogue with participants, regulatory agencies and markets, both domestic and international. This combination has worked effectively at NSCC since its formation and has positioned us well for the future.





## NSCC and ISCC Board of Directors

**N**SCC's Board of Directors, whose members represent a broad spectrum of the securities industry, is committed to NSCC's goal of addressing the industry's needs for cost-effective, low-risk trade processing and expanding further its product base. The Board fulfills this commitment by providing policy direction, establishing corporate objectives and goals and monitoring NSCC's progress toward achieving them. Since NSCC's formation, the Board has provided the leadership necessary to address the industry's current needs as well as the vision required to position the company to meet future changes and challenges. In 1989, the Board continued to guide NSCC's efforts to increase and improve participants' processing efficiency through system developments and enhancements.

Domestic and international clearance and settlement continued to become more interrelated in 1989 as the industry focused its attention on establishing clearance and settlement standards within markets and for cross-border transactions. As a result of this trend, the Executive Committee expanded the NSCC Board from 17 to 18 members. John A. Lambiase, Salomon Brothers Inc, was elected to fill the seat. Further, the Executive Committee recommended that the ISCC Board of Directors be restructured. In December, the members of NSCC's Board of Directors were elected to serve concurrent terms as members of the ISCC Board to enable NSCC and ISCC to more effectively address the issues presented by the globalization of markets. In addition, an International Committee was established as a standing committee of the NSCC Board to provide specific international focus within the Board and to support ISCC's mission of providing locally accessible clearance and settlement for U.S. firms dealing in foreign securities and foreign firms dealing in U.S. securities. NSCC's Finance & Audit Committee and Membership Committee were appointed to serve as the ISCC Finance & Audit and Membership Committees, respectively.

Chaired by Ronald W. Readmond, the NSCC Board consists of 14 Directors who are elected from member firms, NSCC's President and CEO, David M. Kelly, and three Shareholder Directors appointed by the New York Stock Exchange, American Stock Exchange and National Association of Securities Dealers: Donald J. Solodar, Jules L. Winters and C. Richard Justice, respectively.

The Nominating Committee began the annual electoral process in late 1989 by inviting participants to propose names of prospective Directors to serve three-year terms to succeed retiring Directors Leonard V. Haynes, Ronald W. Readmond and Wilbert A. Thiel. Nominations include Robert H. Benmosche, PaineWebber Incorporated, Walter F. Siebecker, Smith Barney, Harris Upham & Co. Incorporated, and Raymond E. Wooldridge, Southwest Securities Incor-

porated. Carlos A. Salvatori, Citibank, N.A., who was elected to the Board in October 1989 to complete Ronald D. Upton's term, and John A. Lambiase were nominated to additional three-year terms. Howard A. Shallcross, Merrill Lynch, Pierce, Fenner & Smith Inc., was nominated to serve an additional one-year term. These nominees will become Directors at the Board's Annual Meeting in May 1990.

Ronald W. Readmond <i>Chairman of the Board, NSCC Executive Vice President Charles Schwab &amp; Co., Inc.</i>	Leonard V. Haynes <i>Senior Executive Vice President &amp; Chief Operations Officer Shearson Lehman Hutton Inc.</i>	Howard A. Shallcross <i>Senior Vice President &amp; Director of Operations Merrill Lynch, Pierce, Fenner &amp; Smith Inc.</i>
David M. Kelly <i>Chairman of the Board, ISCC President &amp; CEO National Securities Clearing Corporation</i>	C. Richard Justice <i>Executive Vice President National Association of Securities Dealers, Inc.</i>	Donald J. Solodar <i>Executive Vice President New York Stock Exchange, Inc.</i>
James M. Avena <i>President Cantor Fitzgerald &amp; Co., Inc.</i>	John A. Lambiase <i>Managing Director Salomon Brothers Inc</i>	Fenton R. Talbott <i>Managing Director The First Boston Corporation</i>
William P. Behrens <i>Senior Managing Director Ernst &amp; Company</i>	David W. Niemiec <i>Managing Director Dillon, Read &amp; Co., Inc.</i>	Wilbert A. Thiel <i>Executive Vice President, Treasurer The Chicago Corporation</i>
Bruce E. Geismar <i>Senior Managing Director Bear, Stearns &amp; Co. Inc.</i>	Darryl L. Pope <i>Principal, Operations Edward D. Jones &amp; Co.</i>	Jules L. Winters <i>Executive Vice President Operations American Stock Exchange, Inc.</i>
Gates H. Hawn <i>Chief Operating Officer Pershing Division Donaldson, Lufkin &amp; Jenrette Securities Corporation</i>	David L. Roscoe III <i>Senior Vice President Morgan Guaranty Trust Company of New York</i>	
	Carlos A. Salvatori <i>Vice President Division Executive – Worldwide Securities Services Citibank, N.A.</i>	



## GSCC Board of Directors

**A**s a full-service clearing corporation, GSCC, which was established in 1986 through cooperative efforts by the government securities industry, provides comparison and netting of next-day and forward settling transactions in Treasury Bills, Bonds and Notes. GSCC will continue to increase its participant base and make more securities eligible for netting in 1990.

GSCC's 15-member Board is structured to provide representation to shareholders and is comprised of 12 Participant Shareholder Directors representing six dealers, three brokers and three clearing agent banks, two representatives of NSCC and one officer of GSCC. GSCC began the nominating process in early 1990 to fill one broker and two dealer seats. Joseph A. Malvasio, Cantor, Fitzgerald Securities Corp., who was appointed to the Board in May 1989 to complete the term of Edward J. Geng, was elected at the Annual Shareholders Meeting in April to serve an additional one-year term. James P. Mahoney, Morgan Stanley & Co. Incorporated, and Kenneth J. Halpin, Discount Corporation of New York, were elected as dealer Directors to complete the remaining one-year terms of retiring Directors Alexander Neamtu and Howard A. Shallcross. David M. Kelly, NSCC, and M. Andrew Threadgold, J.P. Morgan Securities Inc., remain as the NSCC-Designated Directors together with Charles A. Moran from GSCC.

The Board of Directors, at the Annual Meeting in April, reinforced its commitment to continuity in GSCC's leadership by reelecting Chairman of the Board Bruce R. Lakefield to a second term.

Bruce R. Lakefield  
*Chairman of the Board  
Executive Vice President  
Shearson Lehman  
Government  
Securities, Inc.*

Thomas J. Basile  
*Executive Managing  
Director, Administration &  
Operations  
Carroll McEntee &  
McGinley*

Jorge A. Brathwaite  
*Senior Vice President  
The Bank of New York*

Allen B. Clark  
*Vice President  
Manufacturers Hanover  
Trust Company*

Frank D. Cuoco, Jr.  
*Executive Vice President  
Garban Ltd.*

Herbert Friedman  
*Managing Director  
Salomon Brothers Inc*

Kenneth J. Halpin  
*Vice President & Treasurer  
Discount Corporation of  
New York*

David M. Kelly  
*President & CEO  
National Securities  
Clearing Corporation*

James P. Mahoney  
*Principal  
Morgan Stanley & Co.  
Incorporated*

Joseph A. Malvasio  
*Executive Vice President  
Cantor Fitzgerald  
Securities Corp.*

Leonard C. Monteleone  
*Vice President  
RMJ Securities Corp.*

Charles A. Moran  
*President  
Government Securities  
Clearing Corporation*

Sal Ricca  
*Managing Director &  
Chief Operating Officer  
Security Pacific National  
Trust Company*

William D. Riley  
*Managing Director  
The First Boston  
Corporation*

M. Andrew Threadgold  
*Managing Director  
J.P. Morgan Securities Inc.*

# Consolidated Balance Sheet

National Securities Clearing Corporation

<i>(in thousands)</i>	December 31,	
	1989	1988
<b>Assets</b>		
<i>Current assets:</i>		
Cash and cash equivalents	\$ 47,059	\$ 53,539
Temporary investments at cost (approximates market)	88,750	90,402
Accounts receivable, net	5,172	5,558
Settlement accounts receivable	2,174	3,183
Other current assets	452	970
<b>Total current assets</b>	<b>143,607</b>	<b>153,652</b>
Clearing fund	259,322	224,207
Fixed assets, less accumulated depreciation of \$2,349 and \$1,964 at December 31, 1989 and 1988, respectively	928	1,125
Deposits and other noncurrent assets	8,116	7,275
<b>Total assets</b>	<b>\$411,973</b>	<b>\$386,259</b>
<b>Liabilities and Shareholders' Equity</b>		
<i>Current liabilities:</i>		
Accounts payable	\$ 6,053	\$ 7,247
Settlement accounts payable	50,756	68,206
Other	5,543	5,787
<b>Total current liabilities</b>	<b>62,352</b>	<b>81,240</b>
<i>Clearing fund:</i>		
Participants' cash deposits	74,049	65,908
Other participant deposits	259,322	224,207
	333,371	290,115
Notes payable	3,250	3,250
Commitments and contingent liabilities (Note 5)		
<i>Shareholders' equity:</i>		
Common stock authorized, issued and outstanding; 30,000 shares of \$.50 par value	15	15
Capital in excess of par	885	885
Retained earnings	12,100	10,754
	13,000	11,654
<b>Total liabilities and shareholders' equity</b>	<b>\$411,973</b>	<b>\$386,259</b>

The accompanying notes are an integral part of this statement.

# Consolidated Statement of Income and Retained Earnings

National Securities Clearing Corporation

<i>(in thousands)</i>	For the year ended December 31,	
	1989	1988
Revenues:		
Revenue from clearing services	\$74,735	\$70,852
Interest income	4,977	3,868
Total revenues	79,712	74,720
Expenses:		
Securities Industry Automation Corporation processing expenses	42,762	40,004
The Depository Trust Company fees	16,268	15,370
General and administrative	18,439	17,773
Total expenses	77,469	73,147
Income before income taxes	2,243	1,573
Provision for income taxes	897	607
Net income	1,346	966
Retained earnings, beginning of year	10,754	9,788
Retained earnings, end of year	\$12,100	\$10,754

*The accompanying notes are an integral part of this statement.*

# Consolidated Statement of Cash Flows

National Securities Clearing Corporation

<i>(in thousands)</i>	For the year ended December 31,	
	1989	1988
<b>Cash flows from operating activities:</b>		
Net income	\$ 1,346	\$ 966
Adjustments to reconcile net income to net cash (used) provided by operating activities:		
Depreciation and amortization	385	412
<b>Changes in operating assets and liabilities:</b>		
Decrease in accounts receivable	386	209
Decrease in settlement accounts receivable	1,009	1,563
Decrease in other current assets	518	390
(Increase) decrease in deposits and other noncurrent assets	(841)	173
(Decrease) in accounts payable	(1,194)	(193)
(Decrease) increase in settlement accounts payable	(17,450)	23,632
(Decrease) in other current liabilities	(244)	(1,180)
Increase (decrease) in clearing fund participants' cash deposits	8,141	(19,404)
<b>Net cash (used) provided by operating activities</b>	<b>(7,944)</b>	<b>6,568</b>
<b>Cash flows from investing activities:</b>		
Decrease in temporary investments	1,652	18,594
Purchases of software and fixed assets	(188)	(251)
<b>Net cash provided by investing activities</b>	<b>1,464</b>	<b>18,343</b>
Net (decrease) increase in cash and cash equivalents	(6,480)	24,911
Cash and cash equivalents, beginning of year	53,539	28,628
<b>Cash and cash equivalents, end of year</b>	<b>\$ 47,059</b>	<b>\$ 53,539</b>
<b>Supplementary disclosures:</b>		
Income taxes paid	\$ 1,052	\$ 269
Interest paid	\$ 293	\$ 293

*The accompanying notes are an integral part of this statement.*

**Note 1 Organization and Operations:**

National Securities Clearing Corporation (NSCC – the Company), a clearing agency registered with the Securities and Exchange Commission (SEC), provides various services to the financial community, consisting principally of securities trade comparison, clearance and settlement. The Company's common stock is owned equally by the New York Stock Exchange, Inc. (NYSE), American Stock Exchange, Inc. (Amex) and the National Association of Securities Dealers, Inc. (NASD). The Company is controlled by an independent user Board of Directors which is responsible for its policies, operations and financing.

The Company is the sole shareholder of International Securities Clearing Corporation (ISCC) which supports U.S. brokers, dealers and banks through bilateral linkages with central clearing and depository organizations in other countries.

The Board of Directors of the Company determines any additions to retained earnings it wishes to establish in a given year, having due regard to current and anticipated needs. The Company has not historically declared dividends to shareholders, but has provided discounts on its billings to participants of \$6,058,000 and \$2,416,000 in 1989 and 1988, respectively. Revenue from clearing services is shown net of such discounts.

**Note 2 Summary of Significant Accounting Policies:**

*Principles of Consolidation:* The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary, ISCC. All significant intercompany accounts and transactions are eliminated in consolidation. For the period January 1, 1988 to May 20, 1988, the Company's consolidated financial statements also included the accounts of Government Securities Clearing Corporation (GSCC), an entity formed to provide automated comparison and netting services to brokers, dealers and banks trading in U.S. Government securities. On May 20, 1988 and sub-

sequent thereto, GSCC issued common stock to certain participants, which reduced NSCC's ownership interest to approximately 19%. The Company is accounting for its investment in GSCC subsequent to May 20, 1988 using the equity method of accounting.

*Cash and cash equivalents:* The Company's investment policy allows for the investment of funds in overnight reverse repurchase agreements. Such agreements provide for the Company's delivery of cash in exchange for securities having a market value of at least 102% of the amount of the agreement. An independent custodian designated by the Company receives the cash and takes possession of the securities. Investments under reverse repurchase agreements amounted to \$37,000,000 and \$40,000,000 at December 31, 1989 and 1988, respectively.

*Temporary investments:* Temporary investments consist of U.S. Treasury securities maturing primarily in less than one year, and are carried at cost adjusted for amortization of premiums and accretion of discounts. Investments of \$41,540,000 and \$44,400,000 at December 31, 1989 and 1988, respectively, were held in an account for the exclusive benefit of participants to facilitate participants' compliance with customer segregation rules of the SEC.

*Settlement accounts:* Settlement accounts receivable and payable arise from one-day time lags in the cash settlement process between the Company and participants and other registered clearing agencies. The nature of the Company's business involves significant money transfers on a daily basis, certain of which are executed via Federal Funds and given effect in the financial statements on the basis of one-day earlier Clearing House Funds.

*Notes payable:* Notes payable consist of \$3,250,000 of ten-year notes issued by ISCC due June 15, 1996. The notes bear interest at a rate of 9% per annum, and interest payments are made annually on June 15.

*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.

In December 1987, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards (SFAS) No. 96, *Accounting for Income Taxes*. SFAS 96 mandates the liability method for computing deferred income taxes. The Company intends to adopt SFAS 96 when adoption becomes mandatory. Adoption of the new Statement is not expected to have a significant effect on the Company's financial position or results of operations.

The Company and ISCC file consolidated Federal and combined New York State and City income tax returns. The difference between the 40.0% effective tax rate for the year ended December 31, 1989 (38.6% for the year ended December 31, 1988) and the 34% federal statutory tax rate, is primarily attributable to state and local taxes.

*Reclassifications:* Certain reclassifications of 1988 amounts have been made in the accompanying financial statements to conform to the 1989 presentation.

*Statement of Cash Flows:* In 1989 the Company adopted the indirect method of presentation of a statement of cash flows as permitted by SFAS No. 95, *Statement of Cash Flows*, and has restated its 1988 statement of cash flows accordingly.

### **Note 3 Participant Deposits:**

The rules of the Company require certain participants to maintain minimum clearing fund deposits based on calculated requirements. The consolidated clearing fund balance includes the NSCC and ISCC clearing funds, which are available to secure respective participant obligations and certain liabilities of NSCC and ISCC, should they occur. Clearing fund requirements and cash in excess of calculated requirements amounted to \$333,371,000 and \$290,115,000 at December 31, 1989 and 1988, respectively. Total clearing fund deposits held at December 31, 1989 consisted of \$74,049,000 in cash, \$65,848,000 in market value of securities issued or guaranteed by the U.S. Government, its states and their political subdivisions, and \$361,222,000 in letters of credit issued by authorized banks; comparative amounts as of December 31, 1988 were \$65,908,000, \$44,702,000 and \$264,122,000, respectively.

### **Note 4 Transactions with Related Parties:**

*GSCC:* Effective May 20, 1988, the Company entered into an agreement with GSCC to provide various support services and office facilities. Charges under this agreement are based on the Company's cost of providing these services. The agreement formally expires in 1993; however, it will continue in effect unless notice of cancellation is given by either party. Costs under this agreement amounted to \$4,557,000 and \$2,700,000 in 1989 and 1988, respectively. At December 31, 1989 and 1988, receivable from (payable to) GSCC amounted to \$264,000 and (\$3,733,000), respectively.

*NYSE, Amex, and NASD:* NSCC collects regulatory fees on behalf of NYSE, Amex and NASD. At December 31, 1989, no regulatory fees were due NYSE, Amex or NASD. At December 31, 1988, amounts due to NYSE were \$1,664,000 and amounts due to NASD were \$138,000.

*SIAC and DTC:* Under the terms of an agreement, the Securities Industry Automation Corporation (SIAC), an entity

owned by NYSE and Amex, provides facilities, personnel and services in support of the Company's operations. SIAC charges NSCC for these services based on its direct, computer and overhead costs arising from providing such services. The agreement has no expiration date and continues in effect unless satisfactory written notice of cancellation is given by either party.

The Company sublets a portion of its space to SIAC. Rental payments received from SIAC amounted to \$1,605,000 in 1989 and \$1,547,000 in 1988.

NYSE, Amex and NASD own minority interests in The Depository Trust Company (DTC), whose facilities are used by the Company. DTC fees included \$12,072,000 and \$12,070,000, net of rebates, in 1989 and 1988, respectively, relating to charges for NSCC participants which the Company sponsors at DTC. NSCC passes through these charges directly to the sponsored participants. In addition, the Company rents certain office space from DTC. Rental payments amounted to \$795,000 in both 1989 and 1988.

Amounts payable at December 31, 1989 to SIAC and DTC were \$3,856,000 and \$686,000, respectively (\$4,332,000 and \$351,000, respectively, at December 31, 1988). Amounts receivable from SIAC at December 31, 1988 amounted to \$577,000.

### **Note 5 Commitments and Contingent Liabilities:**

The Continuous Net Settlement (CNS) system interposes the Company between participants in securities clearance and settlement. The failure of participants to deliver securities to the Company, and the corresponding failure of the Company to redeliver the securities, results in open positions. Open positions are marked-to-market daily. Such marks are debited or credited to the involved participants through the settlement process. At the close of business on December 31, 1989, open positions due the Company approximated \$580,322,000 (\$568,046,000 at December 31, 1988), and open positions due by the Company to participants approximated \$378,058,000 (\$406,066,000 at December 31, 1988) for unsettled positions and \$202,264,000 (\$161,980,000 at December 31, 1988) for securities borrowed through the Company's Stock Borrow Program.

In connection with an agreement ISCC has with The International Stock Exchange (ISE) in London, ISCC and NSCC have guaranteed the settlement obligations of ISCC's

# Notes to Consolidated Financial Statements

National Securities Clearing Corporation

(continued)

members at ISE. ISCC's members collateralize such obligations by depositing clearing fund amounts with ISCC as required pursuant to the ISCC Member's Agreement. Throughout 1989, ISCC had an unused 1,000,000 pound sterling line of credit with a major London bank.

Under the terms of the agreement with SIAC noted above, the Company is contingently liable in the event of cancellation for computer equipment leases in the amount of \$9,906,000 at December 31, 1989. In accordance with the agreement between NSCC and GSCC (see Note 4), \$2,064,000 of these contingent liabilities are passed through to GSCC.

Additionally, in connection with SIAC's establishment of a dual processing site, the Company has entered into an agreement indemnifying NYSE, the guarantor, for NSCC's proportionate share of proposed long-term lease obligations. The Company's contingent liability under this agreement is approximately \$2,000,000 per annum through 1998.

At December 31, 1989, future minimum annual rental payments under all noncancellable operating leases are as follows:

1990	\$ 3,541,000
1991	2,984,000
1992	2,828,000
1993	3,002,000
1994	3,222,000
1995 and thereafter	8,404,000
<b>Total minimum annual rental payments</b>	<b>\$23,981,000</b>

Total sublease rentals of \$2,031,000 are to be received over the two-year period 1990 through 1991 under noncancellable subleases at December 31, 1989. Rental expense amounted to \$1,804,000 and \$1,973,000, which is net of rental reimbursements of \$1,605,000 and \$1,547,000 in 1989 and 1988, respectively.

## Note 6 Pension Plan:

The Company has a trustee noncontributory defined benefit pension plan covering substantially all employees. Benefits under this plan are generally based on employees' years of service and compensation during the years immediately preceding retirement. The Company's funding policy is to make contributions under the plan that meet or exceed the minimum funding standards under the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986, as amended.

The Company also has a noncontributory supplemental executive retirement plan which provides for certain benefits to identified executives of the Company upon retirement which are in addition to benefits provided by the defined benefit pension plan. Aggregate pension cost for 1989 for both plans is summarized as follows:

Service cost	\$ 508,607
Interest cost	267,692
Actual return on plan assets	(580,789)
Net amortization and deferral	417,533
<b>Total pension cost</b>	<b>\$ 613,043</b>

Aggregate pension cost for the year ended December 31, 1988 amounted to \$479,008. The funded status of the plans at December 31, 1989 is as follows:

Actuarial present value of benefit obligations:	
Vested benefit obligations	\$(1,506,747)
Nonvested benefit obligations	(322,088)
Accumulated benefit obligations	(1,828,835)
Effect of salary projections	(2,301,319)
Projected benefit obligations	(4,130,154)
Fair value of plan assets	3,017,342
Plan assets less than projected benefit obligations	(1,112,812)
Unrecognized net gain	(165,816)
Unrecognized prior service cost	(191,164)
Unrecognized transitional liability	449,417
<b>Accrued pension cost</b>	<b>\$(1,020,375)</b>

The expected rate of return on plan assets was 8% in 1989. The discount rate and rate of increase in future compensation levels used in determining the actuarial present value of accumulated benefit obligations were 8.5% and 8%, respectively, in 1989.

# Report of Independent Accountants

**Price Waterhouse** 

To the Board of Directors and Shareholders of  
National Securities Clearing Corporation

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income and retained earnings and of cash flows present fairly, in all material respects, the financial position of National Securities Clearing Corporation and its subsidiary at December 31, 1989 and 1988, and the results of their operations and their cash flows for the years then ended in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

*Price Waterhouse*

February 20, 1990

## Branch Offices

### **National Securities Clearing Corporation**

Corporate Office  
55 Water Street  
New York, NY 10041  
(212) 510-0400

Boston  
One Boston Place  
Boston, Massachusetts  
02108

Chicago  
135 South LaSalle Street  
Chicago, Illinois  
60603

Dallas  
Plaza of the Americas  
TCB Tower  
Dallas, Texas  
75201

Denver  
Dominion Plaza  
600 17th Street  
Denver, Colorado  
80202

Detroit  
3153 Penobscot Building  
Detroit, Michigan  
48226

Jersey City  
10 Exchange Place  
Jersey City, New Jersey  
07302

Los Angeles  
727 West 7th Street  
Los Angeles, California  
90017

Minneapolis  
IDS Center  
80 South 8th Street  
Minneapolis, Minnesota  
55402

St. Louis  
One Mercantile Tower  
St. Louis, Missouri  
63101

San Francisco  
250 Montgomery Street  
San Francisco, California  
94104

Seattle  
770 Century Square  
Seattle, Washington  
98101

Toronto  
Two First Canadian Place  
Toronto, Ontario, Canada  
M5X 1A9

### **International Securities Clearing Corporation**

Corporate Office  
55 Water Street  
New York, New York  
10041  
(212) 510-0400

### **Government Securities Clearing Corporation**

Corporate Office  
55 Water Street  
New York, New York  
10041  
(212) 510-0400

# Participating Organizations

(as of December 31, 1989)

ABD Securities Corporation  
Adams, Harkness & Hill, Inc.  
Adler, Coleman & Co., Inc.  
Advantage Capital Corporation  
Advest, Inc.  
J. Alexander Securities, Inc.  
Fred Alger & Company Incorporated  
Allen & Company Incorporated  
Allen Securities Corp.  
Alpine Associates  
Amalgamated Bank of New York  
American Brokerage Services Inc./  
ODC  
American Securities Corporation  
American Stock Exchange Clearing  
Corporation  
Amster & Co.  
Arnhold and S. Bleichroeder, Inc.  
Asiel & Co.  
BHF Securities Corporation  
BT Brokerage Corporation  
Julius Baer Securities Inc.  
Baird, Patrick & Co., Inc.  
Robert W. Baird & Co., Incorporated  
Bank of Montreal, New York Branch  
The Bank of New York  
The Bank of New York – Brokers  
Clearance  
Bankers Trust Broker Clearing Unit  
Bankers Trust – Clearance  
Bankers Trust Company  
Bankers Trust/Investment Services  
Barclays Bank International Limited  
George K. Baum & Co.  
Bear, Stearns & Co., Inc.  
Bear, Stearns Specialist  
Bear, Stearns Specialists – NYSE  
Beckman & Co., Inc.  
Benton & Company  
Sanford C. Bernstein & Co., Inc.  
Bidwell & Company  
Blackmore & Co., Inc.  
Charles M. Blair & Co., Inc.  
William Blair & Company  
Blinder, Robinson & Co., Inc.  
Bocklett & Co.  
Boston Stock Exchange Clearing Corp.  
Bodell Overcash Anderson & Co.,  
Inc.  
Buell Securities Corp.  
Cantella & Co. (Retail)  
Datek Securities Corp.  
Diamant Investment Corp.  
F. W. Doyle & Co.  
Gage-Wiley & Co., Inc.  
Gowell Securities Corporation  
(Retail)  
Hibbard Brown & Co., Inc.  
Instant Funds Incorporated  
Investors Discount Corporation  
Kimball & Cross  
Merrimack Valley Investment Inc.  
H. M. Payson & Co.  
Shelter Rock Securities Corp.  
Winslow Investment Company  
Arthur W. Wood Company  
Boston Stock Exchange Specialist  
Account  
ABD Securities Corporation  
BHF Securities Corporation  
Cantella & Co.  
The Chicago Corporation  
Dean Witter Reynolds Inc.  
Dietrich & Company  
Ganoudis Securities, Inc.  
Garden State Securities, Inc.  
Gowell Securities Corp.  
Hawthorne Securities Corp.  
Jefferies & Co., Inc.  
King, Keller & Co.  
Meadowbrook Securities, Inc.  
Merrill Lynch Specialists, Inc.  
National Financial Services Corp.  
Ocean Hill Equities, Inc.  
PaineWebber Specialists, Inc.  
Pershing Division of Donaldson,  
Lufkin & Jenrette Securities  
Corporation  
Prescott, Ball & Turbin, Inc.  
J. C. Bradford & Co.  
Branch, Cabell & Co.  
Broadcort Capital Corporation  
Brounoff, Claire & Co., Inc.  
Alex. Brown & Sons Incorporated  
Brown Brothers Harriman & Co.  
Brown & Company Securities  
Corporation  
Brown, Lisle/Cummings, Inc.  
P. R. Burke & Co., Inc.  
Burns Fry Hoare Govette Inc.  
Burns, Pauli & Co., Inc.  
D. A. Campbell Company, Inc.  
Campbell, Waterman, Inc.  
Canadian Depository for Securites  
Limited  
Andras Research Capital Inc.  
Brault, Guy, O'Brien, Inc.  
Brawly Cathers Limited  
Alfred Bunting & Company Ltd.  
Burns Fry Limited  
Canarim Investment Corporation  
Ltd.  
Capital Group Securities Limited  
Connor, Clark & Company Ltd.  
Darier Canada Inc.  
Deacon Morgan McEwen Easson  
Limited  
Dean Witter Reynolds (Canada) Inc.  
Deragon Langlois Ltd.  
Disnat Investment Inc.  
First Boston Canada Limited  
First Canada Securities Corporation  
First Marathon Securities Limited  
Geoffrion, Leclerc Inc.  
Gordon Capital Corporation  
Greenline Investor Services Inc.  
Guardian Trust Company  
Lafferty, Harwood & Partners Ltd.  
Levesque, Beaubien Inc.  
Loewen, Ondaatje, McCutcheon &  
Co., Ltd.  
MacDougall, MacDougall &  
MacTier Ltd.  
McCarthy Securities Limited  
McNeil, Mantha, Inc.  
Merit Investment Corporation  
Midland Doherty Limited  
Nesbitt Thomson Deacon Inc.  
Odlum Brown Limited  
Pictet (Canada) and Company,  
Limited  
Prudential Bache Securities  
Canada Ltd.  
RBC Dominion Securities Inc.  
Richardson Greenshields of  
Canada Limited  
ScotiaMcLeod Inc.  
Thomson Kernaghan & Co. Ltd.  
Trust La Laurentienne du Canada  
Walwyn Stodgell Cochran Murray  
Limited  
Wood Gundy Inc.  
Yorkton Securities Inc.  
Canadian Imperial Bank of  
Commerce  
Cantor Fitzgerald & Co., Inc.  
Cantor Fitzgerald Corporate Brokers,  
Inc.  
S. B. Cantor & Co., Inc.  
Capital Shares, Inc.  
Carr Securities Corp.  
Carroll McEntee McGinley  
Securities, Inc.  
Cenpac Securities Corporation  
Challenge Securities, Inc.  
J. W. Charles Securities, Inc.  
Chase Dealer & Investment  
The Chase Manhattan Bank, N.A.  
Chase/Syndicate  
Chemical Bank  
Chemical Bank/CSI  
The Chicago Corporation  
S. W. Childs Management Corp.  
The Cincinnati Stock Exchange  
Citibank Dealer – Municipal  
Operations  
Citibank, N.A.  
Citibank – Private Banking Division  
Citizens and Southern Securities  
Corporation  
Coast Options Inc.  
Commerzbank Capital Markets  
Corporation  
Common Bank Office Inc.  
The Connecticut Bank and Trust, N.A.  
Coughlin & Co., Inc.  
County NatWest Securities  
Corporation USA  
Cowen & Co.  
Craig-Hallum, Inc.  
Craigie Incorporated  
Cresvale International, Inc.  
Crowell, Weedon & Co.  
Custodial Trust Company  
Dain Bosworth Incorporated  
Daiwa Securities America Inc.  
Daugherty, Cole Inc.  
Davenport & Co. of Virginia, Inc.  
D. A. Davidson & Co. Inc.  
Shelby Cullom Davis & Company  
Dean Witter Reynolds Inc.  
Deltec Securities Corporation  
Deutsche Bank Capital Corporation  
Dillon, Read & Co. Inc.  
Doft & Co., Inc.  
Dominick & Dominick, Incorporated  
Drexel Burnham Lambert  
Incorporated  
Easton & Co.  
A. G. Edwards & Sons, Inc.  
Einhorn & Co.  
Eppler, Guerin & Turner, Inc.  
Equity Securities Trading Co., Inc.  
Ernst & Company  
Ernst Loan Services  
Exchange Services, Inc.  
Execution Services Incorporated  
Fagenson & Company, Inc.  
Fagenson & Company, Inc. – Retail  
Fahnestock & Co., Inc.  
Fechter, Detwiler & Co., Inc.  
Fernandez, Bartsch & Mirra  
Financial Clearing & Services  
Corporation  
Financial Network Investment  
Corporation  
First Alabama Investments, Inc.  
First Albany Corporation  
The First Boston Corporation  
First Manhattan Co.  
First of Michigan Corporation  
First Options of Chicago, Inc.  
First Southwest Company  
First Wachovia Brokerage Service  
Corporation  
Fossett Corporation  
Walter N. Frank & Co.  
Wm. V. Frankel & Co., Inc.  
Freeman Securities Company, Inc.  
Freeman Welwood & Co., Inc.  
French American Banking Corp.  
Albert Fried & Company  
Fundamental Corporate Bond  
Brokers, Inc.  
J. W. Gant & Associates, Inc.  
Geldermann Securities, Inc.  
Geldermann Securities, Inc. (Retail)  
Gintelco, Inc.  
Glickenhau & Co.  
Goldman, Sachs & Co.  
Gordon & Co.  
Gradison & Company Incorporated  
Oscar Gruss & Son Incorporated

Hamilton Investments, Inc.  
 John Hancock Clearing Corporation  
 Hanifen, Imhoff Inc.  
 J. F. Hartfield & Co., Inc.  
 The Heitner Corporation  
 Henderson Brothers, Inc.  
 Herzog, Heine, Geduld, Inc.  
 Hill, Thompson, Magid & Co., Inc.  
 J. J. B. Hilliard, W. L. Lyons Inc.  
 William R. Hough & Co.  
 Howard, Weil, Labouisse, Friedrichs  
 Incorporated  
 Wayne Hummer & Co.  
 Huntleigh Securities Corporation  
 IBJ Schroder Bank & Trust Co.  
 INC Trading Corporation  
 ISFA Corporation/Invest  
 Icahn & Co., Inc.  
 Ingalls & Snyder  
 Interstate/Johnson Lane Corporation  
 InvestNet Corporation  
 Irving Trust Company  
 Irving Trust/Investment/Dealer  
 JJC Specialist Corp.  
 JMS Execution Services  
 Benjamin Jacobson & Sons  
 Janney Montgomery Scott Inc.  
 Jefferies & Co., Inc.  
 Jesup & Lamont, Incorporated  
 Johnston, Lemon & Co. Incorporated  
 Edward D. Jones & Co.  
 S. A. Judah & Co., Inc.  
 K K & Company  
 Kalb, Voorhis & Co.  
 Kaufmann, Alsberg & Co., Inc.  
 H. Kawano & Co., Inc.  
 Kellner, DiLeo & Co.  
 Kellogg Equities Execution  
 Kemper Clearing Corp.  
 J. J. Kenny Drake, Inc.  
 Kidder, Peabody & Co. Incorporated  
 C. L. King & Associates, Inc.  
 Koonce Securities Inc.  
 Henry Krieger/DBI L.P.  
 LIT America, Inc.  
 LIT America, Inc./DOT  
 LIT America, Inc./DOT 2  
 LIT America, Inc. Securities  
 Lending  
 LaBranche & Co.  
 Emmett A. Larkin Co., Inc.  
 Lashco, Inc.  
 Lasker, Stone & Stern  
 C. J. Lawrence, Morgan Grenfell, Inc.  
 Lawrence, O'Donnell, Marcus & Co.  
 Lazard Freres & Co.  
 Lewco Securities Corp.  
 Liberty Street Trust Company  
 Lomas Securities USA, Inc.  
 MKI Securities Corp.  
 MN Services  
 MS Securities Services Inc.  
 Mabon, Nugent & Co.  
 MacAllaster Pitfield Mackay Inc.  
 Bernard L. Madoff  
 Manufacturers and Traders Trust  
 Company  
 Manufacturers Correspondent  
 Clearing Services  
 Manufacturers Hanover Securities  
 Corporation  
 Manufacturers Hanover Trust  
 Company  
 Manufacturers Hanover Trust  
 Company – Municipal Dealer  
 Operations  
 Marcus Schloss & Co., Inc.  
 Marine Midland Bank – New York  
 Marketing One Securities, Inc.  
 Mayer & Schweitzer, Inc.  
 McCourtney-Breckenridge &  
 Company  
 McDaniel Lewis & Co.  
 McDonald & Company Securities, Inc.  
 M. J. Meehan & Co.  
 Mellon Securities Trust Co.  
 Mercator Partners  
 Mericka & Co., Inc.  
 Merrill Lynch, Pierce, Fenner &  
 Smith Inc.  
 Merrill Lynch, Pierce, Fenner &  
 Smith Inc. – Securities Lending  
 Mesirow Capital, Inc.  
 Midland Doherty Inc.  
 Midwest Clearing Corporation  
 Bartlett & Co.  
 Equitable Securities Corporation  
 Howe, Barnes & Johnson, Inc.  
 Kessler Asher Clearing Inc.  
 Mesirow Capital, Inc.  
 The Ohio Company  
 Montgomery Securities  
 Morgan Guaranty Trust Company of  
 New York  
 J. P. Morgan Securities Inc.  
 J. P. Morgan Securities Inc. – Fixed  
 Income Division  
 Morgan, Keegan & Company, Inc.  
 Morgan, Olmstead, Kennedy &  
 Gardner Incorporated  
 Morgan Stanley & Co. Incorporated  
 Murphey Favre, Inc.  
 Murphey, Marseilles, Smith &  
 Nammack, Inc.  
 Murphy & Durieu  
 NB Clearing Corporation  
 NFSCO – Stock Loan  
 National Financial Services  
 Corporation  
 National Westminster Bank N.J.  
 National Westminster Bank USA  
 Neuberger & Berman  
 New Japan Securities International,  
 Inc.  
 New Windsor Associates, L.P.  
 W. H. Newbold's Son & Co./Hopper  
 Soliday & Co., Inc.  
 Newbridge Securities Inc.  
 Newhard, Cook & Co. Incorporated  
 The Nikko Securities Co.  
 International, Inc.  
 Nippon Kangyo Kakumaru  
 International, Inc.  
 Nomura Securities International, Inc.  
 The Northern Trust Company – Trust  
 Income Collections  
 John Nuveen & Co. Incorporated  
 O'Connor & Associates  
 O'Connor Securities  
 Offerman & Co., Inc.  
 Olde Discount Corporation  
 Oppenheimer & Co., Inc.  
 Pacific Brokerage Services, Inc.  
 Pacific Stock Exchange Specialist  
 Account  
 ABD Securities Corporation  
 AGF Securities Inc.  
 Adams-Fastnow Company, Inc.  
 Bateman Eichler, Hill Richards  
 Incorporated  
 The Chicago Corporation  
 Crowell, Weedon & Co.  
 D. A. Davidson & Co., Inc.  
 Dean Witter Reynolds Inc.  
 Donaldson, Lufkin & Jenrette  
 Securities Corp.  
 Garat & Co.  
 Goldberg Securities, Inc.  
 Haynes, Lawson & Co.  
 Shiels Hoelscher & Co.  
 Hopkins, Harbach & Co.  
 Jefferies & Company, Inc.  
 K. J. Keeley & Co. Inc.  
 Ronald E. Melville, Inc.  
 Merrill Lynch Specialists Inc.  
 Mitchum Jones & Templeton Inc.  
 LAQ-PSE LA SCOREX  
 PQ-PSE SF SCOREX  
 PaineWebber Specialists Inc.  
 Post 63 Partners  
 Post 96 Partners  
 Seidler Amdec Securities Inc.  
 Shearson Lehman Bros. Inc.  
 Sutro Specialists, Inc.  
 TCW Inc.  
 Wedbush Securities, Inc.  
 Weeden & Co.  
 Don C. Whitaker Inc.  
 L. W. Wilson & Co., Inc.  
 Yamaichi International (America),  
 Inc.  
 PaineWebber Incorporated  
 PaineWebber Specialists,  
 Incorporated – deCordova  
 Division  
 S. C. Parker & Co., Inc.  
 Pershing Division of Donaldson,  
 Lufkin & Jenrette Securities  
 Corporation  
 Pflueger & Baerwald Inc.  
 Carl H. Pforzheimer & Co.  
 Piper, Jaffray & Hopwood  
 Incorporated  
 Porter, White & Yardley, Inc.  
 Preferred Technology, Inc.  
 Prudential-Bache Securities Inc.  
 Purcell, Graham & Co.  
 E. J. Quinn & Co., Inc.  
 F. P. Quinn & Co.  
 RAF Financial Corporation  
 RBC Dominion Securities Corporation  
 R.F.G. Co.  
 R. J. Stock Lending  
 RSF Partners  
 Ragen, MacKenzie Incorporated  
 Rauscher Pierce Refsnes, Inc.  
 Raymond, James & Associates, Inc.  
 W. H. Reaves & Co., Inc.  
 Refco Securities, Inc.  
 Refco Securities, Inc./Stock Loan  
 Regional Clearing Corp.  
 Richardson Greenshields Securities  
 Inc.  
 M. Rimson & Co., Inc.  
 Robb, Peck, McCooney Clearing  
 Corporation  
 Robertson, Stephens & Company  
 Rodman & Renshaw, Inc.  
 Roney & Co.  
 Roosevelt & Cross, Incorporated  
 Roulston Research Corp.  
 Ryan, Beck & Co.  
 SBCI Swiss Bank Corporation  
 Investment banking Inc.  
 SLS Clearance  
 SLS Securities Limited Partnership  
 Sage Clearing Corporation  
 Sage, Ruddy & Co., Inc.  
 Salomon Brothers Inc  
 Santa Barbara Bank & Trust  
 M. A. Schapiro & Co., Inc.  
 Charles Schwab & Co., Inc.  
 ScotiaMcLeod (USA) Inc.  
 Scott & Stringfellow Investment  
 Corporation  
 Seasingood & Mayer  
 Securities Settlement Corporation  
 Security Pacific Loan Group  
 Security Pacific National Trust  
 Company  
 Morton Seidel & Co., Inc.  
 Seligman Securities, Inc.  
 Shearson Lehman Hutton Inc.  
 Smith Barney, Harris Upham & Co.  
 Incorporated  
 Smith, Moore & Co.  
 Smith New Court, Carl Marks Inc.  
 Southwest Securities Incorporated  
 Spear, Leeds & Kellogg  
 Spear Securities, Inc.  
 State Street Bank and Trust  
 Company, N.A.  
 R. J. Steichen & Co.

# Participating Organizations

(as of December 31, 1989)

- Stern & Kennedy  
M. L. Stern & Co., Inc.  
Sterne, Agee & Leach, Inc.  
Stifel, Nicolaus & Company  
Incorporated  
Stock Clearing Corporation of  
Philadelphia  
BHC Securities, Inc.  
Susquehanna Investment Group  
StockCross, Inc.  
Stokes, Hoyt & Co.  
Stone & Youngberg  
J. Streicher & Co.  
The Stuart-James Company, Inc.  
Sutro & Co. Incorporated  
Henry F. Swift & Co.  
Swiss American Securities, Inc.  
Thomson McKinnon Securities Inc.  
Timber Hill, Inc.  
The Toronto-Dominion Bank  
Transatlantic Securities Company  
Tucker Anthony Incorporated  
UBS Securities Inc.  
U.S. Clearing Corporation  
Unified Management Corporation  
United Missouri Bank of Kansas City,  
N.A.  
United States Trust Company of  
New York  
Universal Securities Corporation  
Vail Securities Investment, Inc.  
Van Kampen Merritt Inc.  
W & D Securities, Inc.  
WSI Stock Loan  
Wachtel & Co., Inc.  
Wagner, Stott & Co.  
Wagner Stott Clearing Corp.  
Wagner Stott Clearing Corp./Cohen  
Feit & Co.  
Wall Street Clearing Company  
Wall Street Equities, Inc.  
S. G. Warburg & Co., Inc.  
Waterhouse Securities Inc.  
Weber, Hall, Sale & Associates, Inc.  
Wechsler & Krumholz, Inc.  
Wedbush Morgan Securities, Inc.  
Weiss, Peck & Greer  
H. G. Wellington & Co., Inc.  
Wells Fargo Bank, N.A.  
Wells Fargo Investment Advisors  
Wheat, First Securities, Inc.  
Thomas F. White & Co., Inc.  
Williams Securities Group, Inc.  
Wilshire Associates Incorporated  
T. R. Winston McKinney & Company  
Wolfe & Hurst Bond Brokers, Inc.  
Wood Gundy Corp.  
Yamaichi International (America), Inc.  
B. C. Zeigler & Company  
Ziegler Thrift Trading, Inc.
- For Municipal Comparison Only**  
Acker, Wolman Securities Corp.  
Adams, McEntee & Company  
Allied Bank of Texas  
American National Bank – St. Paul  
American National Bank & Trust  
Company of Chicago  
American Security Bank, N.A.  
(Washington, D.C.)  
AmSouth Bank, N.A.  
BT Securities Corporation  
BancTexas Dallas N.A.  
Bank IV Wichita, N.A.  
Bank of America, BISD Dealer –  
Portfolio  
Bank of Boston Connecticut  
Bank of California  
Bank of Hawaii  
Bank of Oklahoma, N.A.  
Bank One, Indianapolis, N.A.  
Bank One, Milwaukee, NA  
Bank South, N.A. (Atlanta)  
Bankers Trust Company  
Cantor Fitzgerald & Co., Inc. –  
Retail Dealer  
Citizens First National Bank of  
New Jersey  
Citizens Trust Company  
Crestar Bank  
First Commercial Bank of  
Little Rock  
First Florida Bank, N.A.  
First Interstate Bank of Nevada,  
N.A.  
First Wisconsin National Bank of  
Milwaukee  
Grigsby, Bradford & Co., Inc.  
The Leedy Corporation  
Midlantic National Bank  
E. A. Moos & Co. Incorporated  
National City Bank, Cleveland  
Pacifcorp Capital Securities, Inc.  
D. A. Pincus & Co., Inc.  
R. Seelaus & Co., Inc.  
Southeastern Municipal Bonds, Inc.  
Sterling, Grace Municipal  
Securities Corporation  
Strahsmeier Securities Co.  
The Summit Trust Company  
Tollner & Bean, Inc.  
Wheeler Municipals Corp.  
Barnett Bank of Jacksonville, N.A.  
Barr Brothers & Co., Inc.  
BayBank Boston, N.A.  
Boatmen's National Bank of St. Louis –  
Dealer Account  
Branch Banking & Trust Co.  
Broadway Financial Investment &  
Services Corp.  
Clayton Brown & Associates, Inc.  
K. R. Butler, Inc.  
C & S National Bank/Dealer  
Cain Brothers, Shattuck & Company  
Cal State Securities Corp.
- Cantor Fitzgerald Municipal  
Brokers, Inc.  
Cape Cod Bank & Trust Co.  
Capital Markets Corporation  
Carolan & Co., Inc.  
Carty & Company, Inc.  
Central Bank of the South  
The Central Trust Co. N.A.  
Cincinnati  
Chapdelaine & Co.  
Chase Lincoln First Bank, N.A.  
Chemical Bank – Municipal Dealer  
Citicorp Securities Markets, Inc.  
City National Bank, Beverly Hills,  
California  
Colorado National Bank of Denver  
Comerica Bank – Detroit  
Commerce Bank of Kansas City, N.A.  
Commerce Bank of St. Louis, N.A.  
Commercial National Bank of Peoria  
Connecticut National Bank –  
Investment Dealer  
Connors & Company  
R. W. Corby & Company, Inc.  
Country Club Bank, Kansas City  
Crews & Associates, Inc.  
Denver National Bank – Investment  
Dept.  
Deposit Guaranty National Bank,  
Jackson, MS  
The Depository Trust Company  
First National Bank of Louisville  
Manufacturers National Bank of  
Detroit – Municipal Bond Dept.  
Star Bank, N.A.  
Wachovia Bank & Trust Company,  
N.A.  
Ladd Dinkins & Company  
Discount Corporation of New York  
Municipals  
Doley Securities Inc.  
Dominion Bank, N.A. (Roanoke, VA)  
Douglas & Co. Municipals, Inc.  
Duke McElroy & Company, Inc.  
Egan, Marrin & Rubano, Inc.  
Ehrlich-Bober & Co., Inc.  
Equibank, N.A.  
Essex Company  
W. N. Estes & Company, Inc.  
European American Bank  
The Exchange National Bank of  
Chicago  
Fidelity Bank, N.A.  
The Fifth Third Bank  
First American Bank of Georgia, N.A.  
First American National Bank –  
Nashville  
First Bank (N.A.) Milwaukee
- First Charlotte Corporation  
First Chicago Capital Markets, Inc.  
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First City, Texas – Houston, N.A.  
First Commercial Bank  
First Fidelity Bank, N.A. New  
Jersey/Municipal Dealer  
First Institutional Services Corp.  
First Interregional Equity Corp.  
First Interstate Bank of Arizona, N.A.  
First Interstate Bank of California –  
Dealer Bond Department  
First Interstate Bank of Denver, N.A.  
First Interstate Bank of Oklahoma  
City – Investment Division  
First Interstate Bank of Oregon, N.A.  
First Interstate Bank of Washington –  
Bank Investment Department  
First Missouri Bank & Trust  
Company  
The First National Bank of Boston –  
Dealer  
First National Bank of Chicago  
First National Bank of Commerce  
(New Orleans)  
First National Bank of Maryland  
First National Bank of Minneapolis –  
Bond Dealer  
First National Bank of Springfield  
The First National Bank & Trust Co.  
of Tulsa – Investment Division  
First of America Bank – Detroit, N.A.  
First Security Bank of Utah, N.A.  
First Southern Securities, Inc.  
First Tennessee Bank, N.A.  
First Union National Bank of North  
Carolina  
Florida National Bank (Jacksonville)  
Fox Reusch & Co., Inc.  
The Frazer Lanier Company  
Frost National Bank – Bond Dept.  
GIMB  
Halpert and Company, Inc.  
J. B. Hanauer & Co.  
Harper, McLean & Company  
Hattier, Sanford & Reynoir  
The Huntington National Bank  
Hutchinson, Shockey, Erley & Co.  
Indiana National Bank  
Irving Trust Company  
Citibank (Arizona)  
The First National Bank in  
Albuquerque  
The Provident Bank  
Johnston, Brown, Burnett & Knight,  
Inc.  
Lex Jolley & Co., Inc.  
Joe Jolly & Co., Inc.  
Kirchner, Moore & Company  
W. L. Knox & Company  
LaSalle National Bank/Dealer  
Operations

David Lerner Associates, Inc.  
 Liberty National Bank and Trust  
 Company (Louisville, KY)  
 Liberty National Bank & Trust  
 Company Investment Dept.  
 (Oklahoma City, OK)  
 M&I Marshall & Ilsley Bank  
 Manufacturers and Traders Trust Co.  
 Muni Trading & Safekeeping  
 Manufacturers Hanover Trust  
 Company  
 Alamo National Bank  
 The Arizona Bank  
 Banco Popular de Puerto Rico  
 BancOhio National Bank  
 Bank of Virginia  
 Bankers Trust of South Carolina  
 Boatmen's National Bank of  
 St. Louis  
 Central Fidelity Bank  
 Central Fidelity Bank –  
 Investments  
 Central Fidelity Bank  
 (Lynchburg, VA)  
 Corpus Christi National Bank  
 The First National Bank of  
 Shreveport  
 First National Bank of South  
 Carolina  
 Hibernia National Bank in New  
 Orleans  
 Imperial Bank (Los Angeles)  
 Landmark First National Bank  
 Old Stone Corporation  
 South Carolina National Bank  
 Southtrust Bank of Alabama, N.A.  
 Sovran Bank, N.A.  
 Sovran Bank, N.A. – Trading  
 Account  
 UnibancTrust  
 United Bank and Trust Company  
 Marine Midland Bank – New York  
 First National Bank of  
 Toms River, NJ  
 Second National Bank of Saginaw  
 United Jersey Bank  
 Mark Twain National Bank (St.  
 Louis, MO)  
 Hugo Marx & Co., Inc.  
 Masterson & Company  
 McLiney and Company  
 Mellon Bank (East), N.A.  
 Mellon Bank, N.A.  
 Mercantile Bank, N.A.  
 Merchants National Bank & Trust  
 Company of Indianapolis  
 Meuse, Rinker, Chapman, Endres &  
 Brooks  
 N. D. Meyer & Co., Inc.  
 Michigan National Bank of Detroit  
 Municipal Investors Service, Inc.

NCNB National Bank of Florida  
 NCNB National Bank of North  
 Carolina  
 NCNB National Bank of South  
 Carolina  
 NCNB Texas National Bank, Dallas  
 National Bank of Commerce Trust &  
 Savings Association – Dealer  
 National Bank of Detroit  
 Newman and Associates, Inc.  
 Norstar Bank, N.A./Buffalo  
 Norstar Bank of Upstate New York  
 (Albany)  
 Norwest Investment Services  
 O'Brien & Shepard, Inc.  
 J. A. Overton & Co.  
 PNC Securities Corp.  
 Park Investment Corporation  
 Philadelphia National Bank –  
 Corestates Capital Markets  
 Group  
 Pittsburgh National Bank  
 Rainier National Bank  
 Rhode Island Hospital Trust  
 National Bank  
 Rickel & Associates  
 SSB – Bank Portfolio  
 Scheetz, Smith & Company, Inc.  
 Schmidt Securities, Inc.  
 Seattle First National Bank  
 Seattle Northwest Securities  
 Corporation  
 SecuriCorp, Inc.  
 Security Bank of Kansas City  
 Security Pacific Clearing & Services  
 Corp.  
 Adams, Block & Coe Securities  
 Allison, Rosenblum & Hannahs,  
 Inc.  
 Asch-Dwyer Municipal Securities  
 L.P.  
 James Baker & Company  
 Berghoff, Marsh & Company  
 A. F. Best Securities, Inc.  
 Capitol Municipal Securities, Inc.  
 Chilton & O'Connor, Inc.  
 CommunityBanc Brokerage  
 Corporation  
 Langdon P. Cook & Co.  
 Incorporated  
 Dayton, Kahn, Heppe, Hancock  
 & Co.  
 Dolphin & Bradbury Incorporated  
 A. Webster Dougherty & Co.  
 Incorporated  
 Drizos Investments, Inc.  
 Duncan-Williams, Inc.  
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 Emmet & Co., Inc.  
 First Eastern Bank, N.A.  
 First Miami Securities  
 Gibraltar Securities Co.  
 Greenwich Partners, Inc.  
 Griffin, Kubik, Stephens &  
 Thompson, Inc.

Hammon & Botzum, Incorporated  
 Henry/Kearns Municipals, Inc.  
 Maryland National Bank  
 McGowan, O'Meara & Company,  
 Inc.  
 Mid-State Securities Corp.  
 National Bank of Commerce  
 (Birmingham, AL)  
 National Bank of Commerce  
 (Memphis, TN)  
 One National Bank – Investments  
 Leo Oppenheim & Co., Inc.  
 Pacific Securities Inc.  
 R H Investment Corporation  
 Arch W. Roberts & Co.  
 Russell, Rea & Zappala, Inc.  
 Scharff & Jones, Inc.  
 Smith Peters & Stark  
 Townes & Co., Inc.  
 Vining-Sparks Securities, Inc.  
 Westcap Securities, Inc.  
 A. H. Williams & Co., Inc.  
 Security Pacific National Bank  
 Shawmut Bank – Investment Division  
 Signet Bank/Virginia  
 Simmons First National Bank of Pine  
 Bluff  
 Herbert J. Sims & Co., Inc.  
 Sisung Securities, Inc.  
 R. W. Smith & Associates, Inc.  
 Society National Bank  
 Southeast Bank, N.A.  
 Sovran Bank/Central South  
 Sovran Investment Corp.  
 J. W. Sparks Municipals, Inc.  
 Stoeber, Glass & Co. Inc.  
 Texas American Bank, N.A./  
 Fort Worth  
 Texas Commerce Bank, N.A.  
 Texas Independent Bank  
 Third National Bank in Nashville  
 Thornton, Farish & Gauntt  
 Titus & Donnelly Inc.  
 Trust Company Bank – Investment  
 Banking Division  
 Trustmark National Bank  
 U.S. Bank of Washington National  
 Association  
 Unibanc Trading  
 Union Bank – Treasury Department  
 Union Planters Investment Bankers  
 Group  
 United Bank of Denver, N.A.  
 United States Bank of Oregon/Dealer  
 Valley National Bank of Arizona  
 St. Denis J. Villere & Co.  
 R. D. White & Co., Inc.  
 Whitney National Bank of New  
 Orleans  
 Wolfe & Hurst Bond Brokers, Inc. –  
 Muni Division  
 Worthen Bank & Trust Co., N.A.,  
 (Little Rock, AR)

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