

TAQ User's Guide
New York Stock Exchange,
Inc.

Version 3.31

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Table of Contents

1. The TAQ Database: An Overview	1
2. Getting Started	3
2.1 Hardware and Software Requirements	3
2.2 Other Operating System Platforms	4
2.3 Installing Access Routines	5
2.4 Using TAQ	7
A. Selection Program (SELECT.EXE)	8
B. CUSIP-to-Ticker Symbol Translation (CUSIP.EXE).....	10
C. Index Reading Program (IDXREAD.EXE).....	11
D. Direct Reading Program (DIRECT.EXE).....	12
E. Master Program	13
F. A Sample Session	14
2.5 Technical Support.....	15
3. File Descriptions	16
3.1 Date File (DATE.DAT).....	16
3.2 CT Binary File (CTyymm.BIN).....	17
3.3 CT Index File (CTyymm.IDX).....	24
3.4 CQ Binary File (CQyymm.BIN).....	25
3.5 CQ Index File (CQyymm.IDX).....	31
3.6 The Master Table (MASTyymm.TAB).....	32
3.7 The Dividend File (DIVyymm.TAB).....	35
Appendix A: Common Queries.....	37
Appendix B: Nasdaq Market Makers.....	38
Appendix C: Stock Suffix Table	41
Appendix D: NYSE Trading Systems	44
Appendix E: NYSE Industry Codes	45

1. The TAQ Database: An Overview

The Trade and Quote (TAQ) database contains intraday transactions data (trades and quotes) for all securities listed on the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX), as well as Nasdaq National Market System (NMS) and SmallCap issues.

TAQ is available for purchase directly from the New York Stock Exchange on CD-ROM only. Individual months are available, as well as annual subscriptions. Each CD-ROM contains data for one month and is distributed approximately four weeks after the last trading day of each month.

These data are available at low-cost, designed for sophisticated users participating in research projects. Because of this pricing scheme, only limited support is available for the product. No warranty is made that the data are free of errors and the user assumes all responsibility for the consequences of any errors.

Programs for retrieving trades and quotes for specific days and ticker symbols are available for DOS, Windows 3.1, and Unix environments. The DOS source code was developed on Microsoft FORTRAN version 5.1. All the retrieval programs are published on each CD, as is the DOS/MS Fortran source code.

Please note that information on the counterparties involved in the trade is NOT included.

2. Getting Started

2.1 Hardware and Software Requirements

CD-ROM Drive

To read the TAQ data, a CD-ROM drive compliant with the ISO-9660 standard, a data format available on all CPU platforms, is necessary.

Note: A CD-ROM drive on an MS-DOS-based machine requires the CD-ROM Extension file¹, MSCDEX.EXE. This file allows the CD-ROM to be recognized as a single logical drive and translates the ISO-9660 file format into DOS's file allocation format. It is recommended that MSCDEX.EXE be included in your AUTOEXEC.BAT so that the CD-ROM is ready to use when the computer is started.

Access Routine Requirements: 386+ PC / MS-DOS / MS-Windows

CPU:	80386 or better
RAM:	512KB
Operating System:	DOS 3.31 or higher
Disk Space:	300 KB (minimum) 2MB recommended
CD-ROM reader:	ISO-9660 compatible
Device Driver:	MSCDEX.EXE

Note: The executable programs make use of a math co-processor chip, which can significantly enhance the performance of TAQ. The executable programs emulate the chip if it is not available.

¹This program should be provided by your CD-ROM drive manufacturer if the drive is connected to a proprietary host adapter. If the drive is connected to a SCSI host adapter or a parallel-to-SCSI interface, this program is available from the vendor of your SCSI host adapter.

2.2 Other Operating System Platforms

To install TAQ on a platform other than MS-DOS, such as Sun SPARC station, IBM RISC/6000, Macintosh, or an IBM-compatible 286 machine, the source programs provided will need to be recompiled with the appropriate FORTRAN compiler². The following table will help when modifying and recompiling the source programs.

IBM SAA FORTRAN Standard

Executable program	Main source program	Procedural Source program	Implementation
CUSIP.EXE	CUSIP.FOR	TAQ.FOR	MS-DOS 3.31 or higher
DIRECT.EXE	DIRECT.FOR	TAQ.FOR	MS-DOS 3.31 or higher
IDXREAD.EXE	IDXREAD.FOR	TAQ.FOR	MS-DOS 3.31 or higher
SELECT.EXE	SELECT.FOR	TAQ.FOR	MS-DOS 3.31 or higher
MAST.EXE	MAST.FOR	TAQ.FOR	MS-DOS 3.31 or higher

²Note that binary integers on DOS-based systems place the low-order byte ahead of high-order byte. The order of these bytes may have to be swapped before the data are used on other systems.

2.3 Installing Access Routines



For the latest information regarding TAQ access routines, see the file **README.TXT** located in the TAQOUT subdirectory on the CD-ROM.

Creating a Directory and Copying Program Files

To ensure the use of the most recent version of the TAQ access routines, the routines should be copied to the hard disk from the most recent TAQ CD-ROM available.

The date file (DATE.DAT) must always be copied from the latest CD-ROM, regardless of whether you update the access routines.

To install the access routines:

1. Insert the TAQ CD-ROM in your CD-ROM drive.
2. Create a directory on the hard disk for the program, input, and output files by typing:

```
mkdir c:\taq or md c:\taq
```

3. Copy the access programs and sample input files to the hard disk by typing:

```
copy d:\taqout\*. * c:\taq (use appropriate drive letter if your CD-ROM drive is other than d:)
```

4. Enter the CD-ROM drive letter, or subdirectory in Unix, in the TAQ configuration file (TAQ.INI). TAQ.INI should consist of one line that points to the location of the TAQ CD-ROM data files:

```
D:\
```

Exception: When using the January 1993 data with access routines from any CD-ROM *prior to* January 1994, TAQ.INI should have one line

```
D:\TAQ9301\
```

Note: The above instructions assume that C:\TAQ is the name of the directory chosen on the hard drive and that the CD-ROM drive is recognized as drive D on your machine. If you are installing the TAQ access programs to a different drive or directory, or the CD-ROM drive is not recognized as drive D, make the appropriate substitutions in the preceding commands.

Working with Microsoft Windows 3.0 or higher

Program information files (PIFs) for each executable program are provided so that the access routines may be run under Microsoft Windows. Each PIF file provides Windows with the information it requires to run each DOS access routine efficiently.

To install SELECT.PIF (CUSIP.PIF, IDXREAD.PIF, or DIRECT.PIF):

1. Start Windows by typing:
`win`
2. Open the group that will contain the access routines
3. From the *File* menu, choose *New*
4. Select the *Program Item* option button, and choose the *OK* button
5. In the *Command Line* box, type:
`c:\taq\select.pif` (or appropriate PIF file name)
6. Choose the *OK* button

Note: The instructions assume that *Program Manager* is the Windows desktop and that C:\TAQ is the name of the directory to which all the program files are copied. If the access routines are installed to a different drive or directory, the PIF files must be modified. Specifically, substitutions must be made in the *Program Filename* box and the *Start-up Directory* box of the PIFs and in step 5 above. For more information about starting Windows and opening groups, refer to the *Microsoft Windows Users Guide*.

To start the access routines within Windows:

1. Open the group that contains the program-item icon for SELECT.PIF (or appropriate PIF file)
2. Choose the icon by double-clicking the icon or using the arrow keys to move the selection cursor to the icon, and then pressing *Enter*.

2.4 Using TAQ

The access routines prompt the user for options during execution. Each program requires an input file and produces one or more result files.

The data on the CD-ROM are in paired component files: two for quotes and two for trades. The first component, the date and symbol binary index file, is used to indicate the beginning and end of trade/quote blocks in the binary data file. The second component, the binary data file, is composed of trade/quote blocks for each symbol for each day. Each binary data file is sorted by date, and alphabetically by symbol within each date. The access routines retrieve information from these two files to produce printable result files.

The following table shows the input/output files associated with each access routine.

Program	User input file	System input files	Output files
SELECT.EXE	SELECT.IN	DATE.DAT CQyymm.BIN CTyymm.BIN CQ.yymm.IDX CTyymm.IDX MASTyymm.TAB DIVyymm.TAB TAQ.INI	SELECT.Q SELECT.T SELECT.LOG SELECT.S
CUSIP.EXE	CUSIP.IN	DATE.DAT MASTyymm.TAB TAQ.INI	CUSIP.OUT
IDXREAD.EXE	SELECT.IN	DATE.DAT CQyymm.IDX CTyymm.IDX TAQ.INI	IDXREAD.Q IDXREAD.T IDXREAD.LOG
DIRECT.EXE	N/A	CQyymm.BIN CTyymm.BIN TAQ.INI	DIRECT.Q DIRECT.T
MAST.EXE	N/A	MASTyymm.TAB TAQ.INI	MASTyymm.IN MASTyymm.INF

Note: The system input file, DATE.DAT, is used by the access routines to validate trading dates.

A. Selection Program (SELECT.EXE)

This access routine retrieves quotes and/or trades (with correction) for the ticker symbols and dates specified by the user. The symbols may be fed to the program in two ways:

1. Listed in the SELECT.IN file. Any text editor may be used to create or modify the SELECT.IN file, which must contain one or more symbols, each listed on a separate line. A sample SELECT.IN file is supplied for testing the selection program when the installation is complete. For a description of the sample files, please refer to **A Sample Session**, Section 2.4.F.
2. Typed as command-line arguments. When using this option, the symbols must be typed in **capital letters**. For example, entering

```
SELECT IBM T XON
```

will retrieve data for the symbols IBM, T, and XON.

Retrieved quotes (trades) are written to SELECT.Q (SELECT.T) with optional reference information. Daily statistics are written to SELECT.S. If there are no data for a selected symbol or date, the unmatched symbol/date pairs will be noted in SELECT.LOG.

The program prompts the user for:

1. Inclusive date ranges;
2. Quotes, trades, or both;
3. The addition of column headers, which identify each column in the SELECT.Q and SELECT.T files;
4. The addition of symbol detail, which lists ticker symbol, company name, shares outstanding, etc.;
5. The addition of dividend and/or split/adjustment information;
6. Calculation of daily statistics, which include the opening and closing prices from the primary market, the high and low from the consolidated market, share volume from the primary market, and consolidated share volume.

To run the SELECT program, type the following command at the DOS prompt:

```
select
```

Or, while in Windows, double-click the icon associated with SELECT.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

Note 1: The selection program writes quote/trade time in *hhmmss* form. An alternative form - cumulative number of seconds since midnight - is provided in the source program. Please refer to the source program's comment statements for easy-to-follow instructions.

Note 2: The data have **not** been filtered. For example, trades that were improperly reported to the tape are included. The **CT File Description**, Section 3.2, shows the criteria needed to eliminate bad records.

B. CUSIP-to-Ticker Symbol Translation (CUSIP.EXE)

This translation program reads a list of CUSIPs stored in CUSIP.IN and writes the output to CUSIP.OUT. Unmatched CUSIPs appear as blank entries.

The program prompts the user for the number of characters (up to 12) to be used in matching the symbols. The first six characters of CUSIP uniquely identify a company, with the next three identifying the issue. The last three are used by the National Securities Clearing Corporation (NSCC) to identify the exchange. (See CUSIP field description in **The Master Table**, Section 3.6.)

Any text editor may be used to create or modify the CUSIP.IN file. This file must contain one or more CUSIPs, each listed on a separate line. A sample CUSIP.IN file is supplied for testing the translation program when the installation is complete. For a description of the sample files, please refer to **A Sample Session**, Section 2.4.F.

To run the CUSIP program, type the following command at the DOS prompt:

```
cusip
```

Or, while in Windows, double-click the icon associated with CUSIP.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

CUSIP.OUT can be used as input to the selection program if blank lines for unmatched CUSIPs are removed and it is renamed or copied to SELECT.IN.

C. Index Reading Program (IDXREAD.EXE)

This program determines the beginning and ending locations in CT/CQyymm.BIN for the ticker symbols listed in SELECT.IN for the range of dates specified by the user. It is useful when debugging your own selection programs, or for ensuring that the CD-ROM drive is retrieving data properly. The retrieved locations are written with optional reference information to IDXREAD.Q and/or IDXREAD.T. Each matched symbol/date pair will be noted in IDXREAD.LOG.

The program prompts the user for:

1. Inclusive date ranges;
2. Quotes, trades, or both;
3. The addition of column headers, which identify each column in the IDXREAD.Q and IDXREAD.T files;

To run the IDXREAD program, type the following command at the DOS prompt:

```
idxread
```

Or, while in Windows, double-click the icon associated with IDXREAD.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

IDXREAD.Q (IDXREAD.T) can be used as input to the direct reading program (DIRECT.EXE) if it is renamed or copied to SELECT.IN.

For more information on the input file SELECT.IN, please refer to **Selection Program (SELECT.EXE)** and **A Sample Session**, Sections 2.4.A and 2.4.F, respectively.

D. Direct Reading Program (DIRECT.EXE)

This program retrieves quotes and/or trades directly from the binary file(s). The user specifies the starting and ending locations of the symbol(s) to be retrieved. The collected quotes (trades) are written to DIRECT.Q (DIRECT.T) with optional reference information.

When combined with IDXREAD.EXE, this program is useful when debugging your own selection programs or for ensuring that the CD-ROM drive is retrieving data properly.

The program prompts the user for:

1. Year and month of the CD-ROM being used;
2. Beginning and ending record numbers;
3. Quotes, trades, or both;
4. The addition of column headers, which identify each column in the DIRECT.Q and DIRECT.T files;

To run the DIRECT program, type the following command at the DOS prompt:

```
direct
```

Or, while in Windows, double-click the icon associated with DIRECT.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

E. Master Program

This program retrieves user-selected symbols by security type and/or exchange. The user needs to type 2 words next to MAST where the first is the exchange(s) and the second is the issue type(s). The options must be entered as command-line arguments. For example, entering

```
MAST NT CPW
```

will retrieve all commons (C), preferreds (P), and warrants (W) on the NYSE (N) and NASD (T).

The program prompts the user for the year and month of the CD-ROM being used. The data for the retrieved symbols are written to two output files: MASTyymm.in and MASTyymm.inf, where yymm is the month responded to in the prompt. MASTyymm.IN contains a list of the symbols that meet the selection criteria and can be used as input to the select program by renaming it to SELECT.IN. MASTyymm.inf lists each symbol, CUSIP number, company name, the valid exchanges, and type of issue. For more information regarding these fields, please refer to **The Master Table (MASTyymm.TAB)**, Section 3.6.

Valid Exchanges:

N	NYSE
A	AMEX
B	Boston
P	Pacific
T	NASD
X	Philadelphia
W	CBOE

Valid Security Types:

C	Common
P	Preferred
W	Warrants
R	Rights
O	Other

F. A Sample Session

Having copied all the required executable programs as well as their sample input files, you are now ready to use TAQ. If in DOS, you must first make C:\TAQ (or whatever name you chose during installation) the current drive and directory by typing the following commands:

```
c:  
cd \taq
```

Modify the configuration file TAQ.INI to enable the access routines to locate the binary data files on the CD-ROM (e.g., insert the line `D:\` into the file; CD-ROM drive is also commonly H:).

To run the CUSIP-to-ticker symbol translator, type the following command at the DOS prompt:

```
cusip
```

Or, while in Windows, double-click the icon associated with CUSIP.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

The input file, CUSIP.IN, contains some sample CUSIP numbers. This program will produce a result file called CUSIP.OUT that contains five valid symbols and one invalid symbol, which appears as a blank line. The blank line represents the unmatched CUSIP, 123456789012, in the sample input file.

To run the selection-by-symbol program, type the following command at the DOS prompt:

```
select
```

Or, while in Windows, double-click the icon associated with SELECT.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

The sample input file, SELECT.IN, contains six symbols. This program will produce two to four result files based on the options selected during execution. The file names are SELECT.T, SELECT.Q, SELECT.S, and SELECT.LOG. The size and content of these files will vary based on the dates and additional options selected. The first column in each row is used to identify the information contained in each row.

If first column contains:	This row shows ...
%	Company reference information
\$	Dividend information
@	Header information
Blank	Trade or quote

To run the index reading program, type the following command at the DOS prompt:

```
idxread
```

Or, while in Windows, double-click the icon associated with IDXREAD.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

The sample input file, SELECT.IN, contains six symbols. This program will produce two to three result files based on the options chosen during execution. The output file names are IDXREAD.Q, IDXREAD.T, and IDXREAD.LOG.

To run the direct reading program, type the following command at the DOS prompt:

```
direct
```

Or, while in Windows, double-click the icon associated with DIRECT.PIF or use the arrow keys to move the selection cursor to the icon, and press *Enter*.

This program will produce two result files, DIRECT.Q and DIRECT.T, based on the options chosen during execution.

2.5 Technical Support

Limited support for the TAQ database is available via Internet by sending e-mail to **TAQSUPPORT@NYSE.COM**.

3. File Descriptions

3.1 Date File (DATE.DAT)

The date file, DATE.DAT, is written in character format with a fixed record length of 40 bytes (42 bytes including carriage return and line feed). It contains trading dates beginning with January 1993 and four fields that indicate the start/end position in each of the binary index files for each trading date. Also, a field indicating which CD-ROM since there are more than one per month (four currently).

The format of this file was changed in April 1994. While older versions of the access routines will perform without any modification, it is recommended that the latest version of the access routines be used to take advantage of the reduced access time.

Field Name	Layout	Description
TDATE	Character 6 bytes	Transaction date. Format: yymmdd
CQIDXB	Character 8 bytes	Start position in CQyymm.IDX.
CQIDXE	Character 8 bytes	End position in CQyymm.IDX.
CTIDXB	Character 8 bytes	Start position in CTyymm.IDX.
CTIDXE	Character 8 bytes	End position in CTyymm.IDX.

3.2 CT Binary File (CTyymm.BIN)

The Consolidated Trade binary file, CTyymm.BIN, is written in binary integer format with a fixed record length of 22 bytes (without ending carriage return or line feed). This file contains one record for each trade reported.

Note 1: Beginning in June 1995, the trade time for NYSE and AMEX issues is the Consolidated Trade System (CTS) time stamp. Beginning in March 1997, the trade time for Nasdaq issues is the NTDS time stamp. Previously, the time shown for all trades was the time the message was received by IGS, which is approximately 3 seconds later than the CTS time stamp.

Note 2: Market-On-Close (MOC) Prints³. When there is an imbalance in MOC orders, the imbalance is executed at the close of trading against the bid or offer on the NYSE, as appropriate, thereby setting the closing price. (An imbalance of buy orders would be executed against the offer. An imbalance of sell orders would be executed against the bid.) The remaining buy and sell MOC orders are then paired off at the closing price set by the imbalance trade. The "pair-off" trade should be reported as "stopped stock". (See the G127 field.)

Note 3: Prior to August 1993, conditions of A and D were assigned the values of acquisition and distribution, respectively. These actions were governed by NYSE Rule 392, which was rescinded in August 1993. An "Exchange Distribution" or "Exchange Acquisition" occurred when a member or member firm, acting as either agent or principal, asked another member or member firm to buy or sell a block of a security. This action required Exchange approval and was done only when the regular market could not absorb the supply.

Field Name	Layout	Description
TTIM	Binary 4 bytes	Trade time. This number reflects the time at which the trade entered CTS. Format: cumulative number of seconds since midnight.

³ For more information, see Hasbrouck, Sofianos, and Sosebee (1993), "New York Stock Exchange Systems and Trading Procedures," Working Paper #93-01, New York Stock Exchange, p.46-47.

Field Name	Layout	Description
PRICE	Binary 4 bytes	Actual trade price per share. Truncated to five implied decimal places. Note: The first two digits in the price field for Berkshire Hathaway (BRK) have been omitted.
SIZ	Binary 4 bytes	Number of shares traded.
TSEQ	Binary 4 bytes	Market Data Systems (MDS) sequence number. This field applies only to NYSE trades. It will contain a zero if the trade is not an NYSE trade or if the sequence number is indeterminate.
G127	Binary 2 bytes	<p>Combined "G", Rule 127, and stopped stock trade indicator. This field applies only to NYSE trades.</p> <p>For example, a trade that is Display Book-reported (40) and complies with Rule 127 (100) would appear as 140 in the file.</p> <ul style="list-style-type: none"> 0 = Does not qualify as "G", Rule 127, or stopped stock trade 2 = "G" trade buyer and seller 3 = "G" trade buyer 4 = "G" trade seller 10 = Elect box stroked 20 = Percent box stroked 40 = A Display Book-reported trade. 100 = Rule 127 trade 200 = Stopped stock trade <p style="text-align: right;">(Cont'd on next page)</p>

Field Name	Layout	Description
G127 (cont'd)		<p>"G" trade - A member firm trading for its own account must publicly identify that the order is principal. (See NYSE Constitution and Rules, ¶2090, Rule 90.)</p> <p>Rule 127 - An NYSE trade reported as having been executed as a block position. (See NYSE Constitution, ¶2127, Rule 127.)</p> <p>Stopped stock - A guarantee by the specialist that an order will be executed at a specific price. (See NYSE Constitution, ¶2116, Rule 116.)</p>
CORR	Binary 2 bytes	<p>Correction Indicator. Beginning in June 1995, corrections to corrections are permissible. TAQ shows only the original trade and final correction. No interim corrections are shown.</p> <p><u>Good trades:</u></p> <ul style="list-style-type: none"> 0 Regular trade that was not corrected, changed, or signified as cancel or error. 1 Original trade which was later corrected. This record contains the original time and the corrected data for the trade. 2 Symbol correction (out of time sequence). <p><u>Original trade records:</u></p> <ul style="list-style-type: none"> 7 Trade cancelled due to error. 8 Trade cancelled. 9 Trade cancelled due to symbol correction. <p><u>Correction instructions:</u></p> <ul style="list-style-type: none"> 10 Cancel record (associated with 8). 11 Error record (associated with 7). 12 Correction record (associated with 1; contains corrected time and original data).

Field Name	Layout	Description
COND	Character 1 byte	<p>Sale Condition. These conditions apply to trades on all exchanges except as indicated.</p> <p>Regular Way (blank or *) - A trade made without any stated conditions.</p> <p>Note: Effective June 7, 1995, the standard settlement cycle was changed from five business days to three business days.</p> <p>Cash-Only Basis (A) - All trading in that issue for that day is on a 'cash only' basis. Every trade for that day will have a condition of A. (See Note 3 at the beginning of this section.)</p> <p>Bunched (B) - A trade representing an aggregate of two or more regular trades (other than the opening or reopening trade) that were executed within the same 60 second period at the same price.</p> <p>Cash Sale (C) - A transaction which calls for the delivery and payment of securities on the same day the trade took place.</p> <p>Next-day Settlement Only (D) - All trading in that issue for that day is for 'next day settlement' only. Every trade for that day will have a condition of D. (See Note 3 at the beginning of this section.)</p> <p>Bunched sold (G) - A bunched trade not reported within 90 seconds of execution.</p> <p style="text-align: right;">(Cont'd on next page)</p>

Field Name	Layout	Description
<p>COND (cont'd)</p>		<p>Rule 127 trade (J) - (NYSE only) An NYSE trade reported as having been executed as a block position.</p> <p>(See NYSE Constitution and Rules, ¶2127, Rule 127.)</p> <p>Rule 155 trade (K) - (AMEX only) A specialist must give precedence to agency orders in any stock before executing a purchase or sale for the same stock in which he/she has an interest. (See Amex Constitution and Rules, ¶9295, Rule 155.)</p> <p>Sold last (L) - A transaction that occurs in sequence but is reported to the tape at a later time; there are no intervening trades between the time the transaction occurs and when it is reported.</p> <p>Next day (N) - Calls for delivery of securities on the first business day following the day of the contract.</p> <p>Opened Last (O) - An opening trade that occurs in sequence but is reported to the tape at a later time.</p> <p style="text-align: right;">(Cont'd on next page)</p>

Field Name	Layout	Description
<p>COND (cont'd)</p>		<p><i>Seller (R)</i> - "Seller's Option". Delivery date is specified by the seller and must be between two and sixty calendar days following the day of the contract (but not on the third business day after the trade date, which is considered <i>regular way</i>).</p> <p>(See NYSE Constitution and Rules, ¶2064, Rule 64.)</p> <p>Note: Beginning in June 1995, values over 60 are permissible. Any value over 99 has been changed to 99.</p> <p><i>Split Trade (S)</i> - (NASD only) An execution that takes place in two markets. The market-maker in the first market agrees to execute a portion of an order at a price realized in another market, to which the balance of the order is forwarded for execution.</p> <p><i>Pre- and Post-Market Close Trades (T)</i> - (NASD only) A trade that occurred within the current trading day, but is executed outside of the current market hours and within the market reporting hours. These trades include:</p> <ul style="list-style-type: none"> • European market between 9:06 and 9:13 EST; • U.S. market between 8:00 and 9:30 EST; • U.S. market between 16:00 and 17:16 EST. <p><i>Average Price Trades (W)</i> - A trade where the price reported is an average of the prices for transactions during all or any portion of the trading day. Applies to Nasdaq NMS and SmallCap issues and to listed (CTS) issues only during European Market session.</p> <p style="text-align: right;">(Cont'd on next page)</p>

Field Name	Layout	Description																				
COND (cont'd)		<p><i>Opened after trading halt if reporter checked the open box (X)</i> – Information unavailable at this time.</p> <p><i>Sold Sale (Z)</i> - A transaction that is reported to the tape at a time later than it occurred and when other trades occurred between the time of the transaction its report time.</p> <p><i>Crossing Session (8, 9)</i> - one record per symbol for executed volume entered as one-sided orders (9) and one record per symbol for executed volume entered as two-sided orders (i.e., matched) at the closing price (8). There are no individual records for executed one-sided or two-sided orders.</p> <p>(For details on Crossing Session, see NYSE Market Surveillance Information Memo 91-19, June 5, 1991.)</p>																				
EX	Character 1 byte	Exchange on which the trade occurred. <table data-bbox="763 1165 1274 1354" style="margin-left: 40px;"> <tr> <td>A</td> <td>AMEX</td> <td>P</td> <td>Pacific</td> </tr> <tr> <td>B</td> <td>Boston</td> <td>T</td> <td>NASD</td> </tr> <tr> <td>C</td> <td>Cincinnati</td> <td>X</td> <td>Philadelphia</td> </tr> <tr> <td>M</td> <td>Midwest</td> <td>W</td> <td>CBOE</td> </tr> <tr> <td>N</td> <td>NYSE</td> <td></td> <td></td> </tr> </table>	A	AMEX	P	Pacific	B	Boston	T	NASD	C	Cincinnati	X	Philadelphia	M	Midwest	W	CBOE	N	NYSE		
A	AMEX	P	Pacific																			
B	Boston	T	NASD																			
C	Cincinnati	X	Philadelphia																			
M	Midwest	W	CBOE																			
N	NYSE																					

3.3 CT Index File (CTyymm.IDX)

The Consolidated Trade index file, CTyymm.IDX is written in binary integer format with a fixed record length of 22 bytes (without ending carriage return or line feed). The index file associates each symbol/date pair with a beginning and ending location in the corresponding binary file.

Field Name	Layout	Description
SYMBOL	Character 10 bytes	Stock symbol. (See Appendix C.)
TDATE	Binary 4 bytes	Transaction date. Format: yymmdd
BEGREC	Binary 4 bytes	Start position.
ENDREC	Binary 4 bytes	End position.

3.4 CQ Binary File (CQyymm.BIN)

The Consolidated Quote binary file, CQyymm.BIN, is written in binary integer format with a fixed record length of 27 bytes (without ending carriage return or line feed). It contains one record for each quote reported, which remains in effect until it is changed.

The Nasdaq quotes (in Nasdaq NMS issues) contain only the Best Bid and Offer (BBO) for Nasdaq NMS issues. For issues with more than one market maker, only the size of the first market maker to quote at that price is shown. For this reason, the size field for Nasdaq quotes is not representative of the market size.

Note 1: For January 4, 1993 through April 6, 1993, the bid and offer sizes for Nasdaq NMS issues are invalid. They have been zero-filled.

Note 2: Nasdaq NMS quotes after 4:00 p.m. may contain zero bid or offer sizes. These are valid end-of-day quotes. NASD quotes with mode 12 and zeroes in the BIDSIZ, OFRSIZ, BID, and OFR fields represent quotes withdrawn by the market maker (MMID) submitting the zero quotes.

Note 3: Beginning in August 1993, the data files include a market maker identification field with every NASD quote in exchange-listed issues. The addition of this field makes it possible to accurately calculate the BBO among Nasdaq market makers and all market centers.

Note 4: Beginning in March 1996, the quote time for NYSE and AMEX issues is the Consolidated Quote System (CQS) time stamp. Beginning in November 1996, the quote time for Nasdaq issues is the NQDS time stamp. Previously, the time shown for all quotes was the time the message was received by IGS, which is approximately a 3 seconds later than the CQS time stamp.

Field Name	Layout	Description
QTIM	Binary 4 bytes	Quote time. This number reflects the time at which the quote entered CQS. Format: cumulative number of seconds since midnight.
BID	Binary 4 bytes	Bid price. Truncated to five implied decimal places.

Field Name	Layout	Description
OFR	Binary 4 bytes	Offer price. Truncated to five implied decimal places.
QSEQ	Binary 4 bytes	Market Data Systems (MDS) sequence number. This field applies only to NYSE quotes. It contains a zero if the quote is not an NYSE quote or if the sequence number was indeterminate.
BIDSIZ	Binary 2 bytes	Bid size in number of round lots (100 share units). Note: The publishable limit for the quote system is 999. This value may appear in the BIDSIZ field when there is more size, but <i>without</i> a mode of 2.
OFRSIZ	Binary 2 bytes	Offer size in number of round lots (100 share units). Note: The publishable limit for the quote system is 999. This value may appear in the OFRSIZ field when there is more size, but <i>without</i> a mode of 1.
MODE	Binary 2 bytes	Quote condition. These conditions apply to quotes on all exchanges except as indicated. Zero (0) - invalid field for that issue (e.g., Nasdaq NMS issue). Depth on offer side (1) - Indicated more size behind the quote being disseminated for the offer. This depth may be at the ask price of the quote or at a price immediately outside the disseminated ask quote. Depth on bid side (2) - Similar to Mode 1 in indicating depth, but only for bid quotation. (Cont'd on next page)

Field Name	Layout	Description
MODE (cont'd)		<p><i>Closing quote (3)</i> – Indicates the last quote from a participant for that security during the trading day. There may be two closing quotes per symbol at the same price for market-on-close (MOC) transactions.⁴</p> <p><i>News dissemination (4)</i> - A regulatory halt used when relevant news influencing the stock is disseminated. Trading is suspended until the resultant impact has been assessed.</p> <p><i>Fast trading (5)</i> - Used during extremely active periods of short duration. While in this mode, quotes are entered on a "best efforts" basis.</p> <p><i>Depth on bid and offer (6)</i> - Indicated more size behind the reported quote for both bid and offer. The depth may be either at or immediately outside the quote.</p> <p><i>Order imbalance (7)</i> – A non-regulatory halt used when there is a severe buy or sell order imbalance. To prevent a disorderly market, trading is temporarily suspended.</p> <p><i>Closed market maker (NASD) (8)</i> - This condition is disseminated by each market maker to signify either the last quote of the day or the premature close of a market maker for the day. In the latter case, the market maker can re-open by transmitting a quote accompanied by Mode 12.</p>

⁴For more information, see Hasbrouck, Sofianos, and Sosebee (1993), "New York Stock Exchange Systems and Trading Procedures," Working Paper #93-01, New York Stock Exchange, p.46-47.

Field Name	Layout	Description
MODE (cont'd)		<p><i>Non-firm quote (9)</i> - A regulatory halt used when the level of trading activity in a security is such that the Exchange cannot collect, process, and disseminate quotes that accurately reflect market conditions. The specialist, with Floor Official approval, may switch to "non-firm mode" for 30 minutes.⁵</p> <p>(See NYSE Constitution and Rules, ¶2060, Rule 60.)</p> <p><i>Opening quote (10)</i> – The first quote disseminated from a given market center for each security.</p> <p><i>News pending (11)</i> – Indicates a regulatory trading halt or delayed opening due to an expected news announcement which may influence trading in the stock. A trading halt or opening delay may be reversed once the news has been disseminated.</p> <p><i>Regular (NASD open) (12)</i> - Indicates normal trading environment. May be used by NASD market makers in place of Mode 10 to indicate the first quote of the day or if a market maker re-opens a security during the day (see Mode 8).</p> <p><i>Trading halt due to related security (13)</i> - A non-regulatory halt used when events relating to one security will affect the price and performance of another security (e.g., a tender offer).</p> <p style="text-align: right;">(Cont'd on next page)</p>

⁵For more information, see Hasbrouck, Sofianos, and Sosebee (1993), "New York Stock Exchange Systems and Trading Procedures," Working Paper #93-01, New York Stock Exchange.

Field Name	Layout	Description
MODE (cont'd)		<p><i>Trading halt in view of common (14)</i> - A non-regulatory trading halt used when matters that affect the common stock of a company may affect the performance of other classes of securities for the same company.</p> <p><i>Order influx (15)</i> - A non-regulatory halt used when there is a severe influx of buy and sell orders. To prevent a disorderly market, trading is temporarily suspended.</p> <p><i>No open/no resume (16)</i> - Indicates a trading halt or an opening delay is to be in effect for the rest of the trading day. Generally, a trading halt condition indicating the reason for the halt or delay is indicated prior to the input of Mode 16.</p> <p><i>Opening (Re-opening) Price (17, 18)</i> - Indicates the probable trading range (bid and offer sizes, no prices) of a security that is not opening delayed or halted. This quote condition can be used prior to (17) or after (18) the opening of a security.</p> <p><i>Related Security News dissemination (19)</i> - A regulatory halt used when news relating to one security will affect trading in an associated security. For example, news pertaining to the common issues of a company may affect the preferred issues.</p> <p><i>Related Security News pending (20)</i> - Same as above but refers to an expected news.</p> <p>(Cont'd on next page)</p>

Field Name	Layout	Description																				
MODE (cont'd)		<p><i>Additional Information (27)</i> - A regulatory halt or delayed opening used if more disclosure of information for the security is requested by the exchange. If inadequate information is disclosed during a trading halt or delayed opening due to news dissemination (mode 4) or news pending (mode 11), the reason could subsequently be reported as mode 27.</p> <p><i>Additional Information due to related security (28)</i> - A regulatory halt or delayed opening used if more disclosure of information for the security is requested for a related security.</p> <p><i>Resume (29)</i> - Used with zero-filled bid and offer sized to indicate that quoting is no longer suspended for a security that was halted or delayed.</p> <p><i>Related Security News pending (20)</i> - Same as above but refers to an expected news announcement.</p>																				
EX	Character 1 byte	<p>Exchange on which the quote occurred.</p> <table data-bbox="747 1218 1347 1417"> <tr> <td>A</td> <td>AMEX</td> <td>P</td> <td>Pacific</td> </tr> <tr> <td>B</td> <td>Boston</td> <td>T</td> <td>NASD</td> </tr> <tr> <td>C</td> <td>Cincinnati</td> <td>X</td> <td>Philadelphia</td> </tr> <tr> <td>M</td> <td>Midwest</td> <td>W</td> <td>CBOE</td> </tr> <tr> <td>N</td> <td>NYSE</td> <td></td> <td></td> </tr> </table>	A	AMEX	P	Pacific	B	Boston	T	NASD	C	Cincinnati	X	Philadelphia	M	Midwest	W	CBOE	N	NYSE		
A	AMEX	P	Pacific																			
B	Boston	T	NASD																			
C	Cincinnati	X	Philadelphia																			
M	Midwest	W	CBOE																			
N	NYSE																					
MMID	Character 4 bytes	<p>Identifies the NASDAQ market maker for each NASD quote. See Appendix B for a list of valid market makers.</p> <p>Note: This field was added in August 1993. Beginning in March 1997, the values AA, AI, IA, and II were replaced with blanks. Previously, these values identified aggregate CAES and non-CAES quotes.</p>																				

3.5 CQ Index File (CQyymm.IDX)

The Consolidated Quote index file, CQyymm.IDX, is written in binary integer format with a fixed record length of 22 bytes (without ending carriage return or line feed). The index file associates each symbol/trading date pair with its beginning and ending location in the corresponding binary file.

Field Name	Layout	Description
SYMBOL	Character 10 bytes	Stock symbol. (See Appendix C.)
QDATE	Binary 4 bytes	Quote date. Format: yymmdd
BEGREC	Binary 4 bytes	Start position.
ENDREC	Binary 4 bytes	End position.

3.6 The Master Table (MASTyymm.TAB)

The master table contains reference information about the stocks in the trade and quote files. Some fields apply only to NYSE and/or AMEX issues, and are blank or zero-filled when not applicable to the issue.

For those issues that clear through the National Securities Clearing Corp. (NSCC), there is at least one record. If an issue does not clear through the NSCC, a record will not appear in the master file.

Any time a change occurs in any field pertaining to an issue, there is a new record with a new effective date. Historical records are not carried forward. There is one exception to this rule: if a company changes its name or symbol while retaining its CUSIP, the file will contain two separate unrelated records with the same CUSIP number.

The master file, MASTyymm.TAB, is written in character format with a fixed record length of 89 bytes (91 bytes including carriage return and line feed).

Note 1: For January 1993 data, there are five symbols that traded but do not appear in the master file: ARN (American Re Corp), BTZWI (Berlitz Int Inc), SPY (Spider Tr Unit), TIDED (Tide West Oil Co), and VEIX (VAALCO Energy Inc). Master information pertaining to these symbols is available via the NYSE Internet account, and was included with the February 1993 master file.

Note 2: Only listed companies that have been quoted or traded appear in the Master Table.

Field Name	Layout	Description
SYMBOL	Character 10 bytes	Stock symbol. (See Appendix C.)
NAME	Character 30 bytes	Company name.

Field Name	Layout	Description																
CUSIP	Character 12 bytes	<p>CUSIP number, which uniquely identifies a security. The first nine digits/characters are assigned by the Committee on Uniform Security Identification Procedure (CUSIP).</p> <p>Digits/characters 1-6 identify the issuer Digits/characters 7-9 identify the issue</p> <p>The last three digits are applied by the NSCC to distinguish between NYSE, AMEX, and NASD issues.</p> <table data-bbox="812 735 1347 1008"> <thead> <tr> <th><u>Issue Type</u></th> <th><u>Extension</u></th> </tr> </thead> <tbody> <tr> <td>NYSE</td> <td>000</td> </tr> <tr> <td>NYSE when issued</td> <td>100</td> </tr> <tr> <td>AMEX</td> <td>001</td> </tr> <tr> <td>AMEX when issued</td> <td>101</td> </tr> <tr> <td>NASD</td> <td>002</td> </tr> <tr> <td>NASD when issued</td> <td>102</td> </tr> </tbody> </table>	<u>Issue Type</u>	<u>Extension</u>	NYSE	000	NYSE when issued	100	AMEX	001	AMEX when issued	101	NASD	002	NASD when issued	102		
<u>Issue Type</u>	<u>Extension</u>																	
NYSE	000																	
NYSE when issued	100																	
AMEX	001																	
AMEX when issued	101																	
NASD	002																	
NASD when issued	102																	
Etx	Character 10 bytes	<p>There is one column for each exchange indicating whether it trades equities in this symbol. Each column contains either a 1 (trades equities) or 0 (no equities). The <i>x</i> suffix refers to the following exchange codes:</p> <table data-bbox="876 1260 1250 1575"> <tbody> <tr> <td>N</td> <td>NYSE</td> </tr> <tr> <td>A</td> <td>Amex</td> </tr> <tr> <td>B</td> <td>Boston</td> </tr> <tr> <td colspan="2">2 blank columns</td> </tr> <tr> <td>P</td> <td>Pacific</td> </tr> <tr> <td>X</td> <td>Philadelphia</td> </tr> <tr> <td>T</td> <td>NASD</td> </tr> <tr> <td>W</td> <td>CBOE</td> </tr> </tbody> </table> <p>Note: T indicates that the NASD trades the stock as a non-primary market; O indicates that the NASD trades the stock as a primary market. Therefore, when ETO=1, NASD is the primary market center even though ETT=0.</p>	N	NYSE	A	Amex	B	Boston	2 blank columns		P	Pacific	X	Philadelphia	T	NASD	W	CBOE
N	NYSE																	
A	Amex																	
B	Boston																	
2 blank columns																		
P	Pacific																	
X	Philadelphia																	
T	NASD																	
W	CBOE																	

Field Name	Layout	Description
ITS	Character 1 byte	Intermarket Trading System (ITS) eligibility indicator. 1 = ITS-eligible stock. 0 = Not an ITS-eligible stock.
ICODE	Character 4 byte	NYSE industry code. (See Appendix E.)
SHARESOUT	Character 10 bytes	Issued and outstanding shares in thousands. This number includes treasury shares.
UOT	Character 4 bytes	Number of shares in a round lot.
DENOM	Character 1 byte	Trading denomination (i.e., tick size) of the stock. 3 = 1/8 4 = 1/16 5 = 1/32 6 = 1/64 7 = 1/128 8 = 1/256
TYPE	Character 1 byte	Common stock indicator. 0 = common 1 = preferred 2 = warrant 3 = right 4 = other 5 = derivative
DATEF	Character 6 bytes	Effective date for that record.

3.7 The Dividend File (DIVyymm.TAB)

The dividend file, DIVyymm.TAB, contains one record for each symbol that either paid a dividend or redistributed stock during the month. In rare cases, a symbol may have two records for one month. The file is written in character format with a fixed record length of 51 bytes (53 including carriage return and line feed).

Warning: At this point in time, dividend and stock split data included in TAQ are known to be inaccurate for some securities. We are attempting to correct this problem and will keep all users informed of any changes in the reliability of these data. Currently, we recommend using other data sources to verify the data included in TAQ.

Note 1: For December 13, 1993 through April 4, 1994, all data in the SPLIT/ADJ field are invalid.

Field Name	Layout	Description														
SYMBOL	Character 10 bytes	Stock symbol. (See Appendix C.)														
CUSIP	Character 12 bytes	<p>CUSIP number, which uniquely identifies a security. The first nine digits are assigned by the Committee on Uniform Security Identification Procedure (CUSIP).</p> <p>Digits/characters 1-6 identify the issuer Digits/characters 7-9 identify the issue.</p> <p>The last three digits are applied by the NSCC to distinguish between NYSE, AMEX, and NASD issues.</p> <table> <thead> <tr> <th><u>Issue Type</u></th> <th><u>Extension</u></th> </tr> </thead> <tbody> <tr> <td>NYSE</td> <td>000</td> </tr> <tr> <td>NYSE when issued</td> <td>100</td> </tr> <tr> <td>AMEX</td> <td>001</td> </tr> <tr> <td>AMEX when issued</td> <td>101</td> </tr> <tr> <td>NASD</td> <td>002</td> </tr> <tr> <td>NASD when issued</td> <td>102</td> </tr> </tbody> </table>	<u>Issue Type</u>	<u>Extension</u>	NYSE	000	NYSE when issued	100	AMEX	001	AMEX when issued	101	NASD	002	NASD when issued	102
<u>Issue Type</u>	<u>Extension</u>															
NYSE	000															
NYSE when issued	100															
AMEX	001															
AMEX when issued	101															
NASD	002															
NASD when issued	102															
Blank	1 byte															

Field Name	Layout	Description
DIV	Character 10 bytes	Amount of cash dividend if stock is ex-dividend on this date. Five implied decimal places.
Blank	1 byte	
SPLIT/ADJ	Character 10 bytes	Amount of the adjustment made to the price of the symbol due to a stock split, stock distribution, or stock dividend. Rounded up to nearest eighth. Five implied decimal places.
Blank	1 byte	
DATEF	Character 6 bytes	Date of stock split or dividend.

Appendix A: Common Queries

Opening trades Select $CORR \leq 1$, $EX = N$, and $TTIM > 9:30:00$

Based on this selection, choose the first regular way trade or first trade with condition of O (whichever comes first).

Closing trades

The following sale conditions are used as criteria when determining the closing price on a consolidated basis and for an individual market center. The last trade of each day with any of the following conditions is eligible in the calculations.

<u>Condition</u>	<u>Indicator (COND field)</u>
Regular Way	blank or *
Cash-only basis*	A
Next-day settlement only*	D
Bunched	B
Rule 127 (NYSE only)	J
Rule 155 (AMEX only)	K
Sold Last**	L
Sold Sale***	Z

* Prior to August 1993, conditions of A and D were assigned the values of acquisition and distribution, respectively. These actions were governed by NYSE Rule 392, which was rescinded in August 1993. (See the COND field in the CT file.)

** Included only when:

1. It is the only trade of the day; or
2. It is the last trade and from the same participant as the prior trade; or
3. It is from the PRIMARY MARKET for that security.

*** Included when it is the only eligible trade of the day.

Appendix B: Nasdaq Market Makers

This table lists the *common* Nasdaq market makers. This file will be available on the TAQ CD-ROM some time in the future. For updates to this list, contact the NSCC at (212) 412-8662. The updates are available over the phone or you may sign up for a free subscription to the NSCC Directory, which is published monthly.

<u>MMID</u>	<u>Company Name</u>
(blank)	Aggregate quote, valid only for Nasdaq issues.
AA	Bid and offer are CAES aggregates*
AI	Bid is CAES aggregate; offer is non-CAES or exchange aggregate*
ALEX	Alexander (J.) Securities, Inc.
ALFR	Alfred Securities Inc.
AUFH	Aufhauser (K.) & Co., Inc.
BACH	Barron Chase Securities, Inc.
BARC	Barclay Investments, Inc.
BRAS	Baraban Securities
BRUS	Brous (H.D.) & Co., Inc.
CAES	NASD Market Services, Inc.
CARR	Carr Securities Corp.
CASS	Cohig & Associates Inc.
CCCC	Comprehensive Capital Corp.
CHAD	Chatfield, Dean & Co./Hanifen
CMBL	Campbell (D.A.) Company, Inc.
CWCI	Colin Winthrop & Co., Inc.
DAIN	Dain Bosworth Incorporated
DBLL	Blair (D.H.) & Co., Inc.
DEAN	Dean Witter Reynolds Inc.
DONC	Donald & Co. Securities, Inc.
EMAN	Emanuel & Company
FAHN	Fahnestock & Co., Inc.
FWAK	Forbes, Walsh, Kelly & Co., Inc.
GLBE	World Securities Corp.
GREN	Green (Thomas)/San Diego Securities Inc.
GRST	Garden State Securities Inc.
HIBB	Hibbard Brown & Co., Inc.
HRZG	Herzog, Heine, Geduld, Inc.
IA	Bid is non-CAES or exchange aggregate; offer is CAES aggregate*
II	Bid and offer are non-CAES or exchange aggregates*
KEMP	Kemper Securities Group, Inc.

* This value only valid prior to March 1997.

<u>MMID</u>	<u>Company Name</u>
LEHM	Lehman Bros.
LLCO	Lieberbaum (Lew) & Co., Inc.
MADF	Madoff (Bernard L.)
MHMY	Meyerson (M.H.) & Co., Inc.
MIGS	Monitor Investment Group
MSCA	Marcus Schloss
NATL	National Securities Corp.
NASD	End of day quote for that issue
NTBC	Neidiger, Tucker, Bruner, Inc.
OCAA	O'Conner & Associates
OLDE	Olde Discount Corporation
PAUL	Paulson Investment Company
PGON	Paragon Capital Corp.
RAFC	RAF Financial Corporation
RAGN	Ragen Mackenzie Inc.
RCRS	Roosevelt & Cross, Incorporated
RHCO	Robinson Humphrey
RPBL	Republic Securities, Inc.
RPSC	Rauscher Pierce Refsnes, Inc.
RSEC	Rothchild, Leiberman Ltd.
SCOT	Scott & Stringfellow Investment Corporation
SHAW	Shaw (D.E.) Securities
SHWD	Sherwood Securities Corp.
SPIN	Spencer Edwards, Inc.
SSEC	Schneider Securities, Inc.
THRD	Third Market Corporation (The)
TRIM	Trimark Securities, Inc.
TRON	Tamaron Investments
TRWN	Winston (T.R.) McKinney & Company
TSCO	Troster Singer Stevens Rothchild Corp.
UNEQ	United Equities Company
USCC	U.S. Securities Clearing Corp.
VENT	Venture Trading Inc.
WBMK	McKee (W.B.) Securities, Inc.
WDCO	Wilson-Davis & Co., Inc.
WIEN	Wien Securities Corp.

Appendix C: Stock Suffix Table

NYSE and AMEX Issues

All securities on the NYSE and AMEX are identified by a three character symbol. The following table lists the valid four- to seven-character suffix identifiers.

<u>Description</u>	<u>Suffix Symbol</u>
Class A	A
Class A Called	ACL
Class A Convertible	ACV
Class A When Issued	AWI
Class B	B
Class B Called	BCL
Class B Convertible	BCV
Class B When Issued	BWI
Called	CL
Certificate	CT
Convertible	CV
Convertible Called	CVCL
Ex-Dividend	XD
Ex-Rights	XRT
Without Warrants	XW
Part Called	PTCL
Preferred	PR
Preferred A through Preferred Z	PRA through PRZ
Preferred Called	PRCL
Preferred When Issued	PRWI
Rock Island Certificate UP	CTUP
Rights	RT
Rights When Issued	PRWI
Special	SP
Stamped	SD
Warrants	WS
Warrants Class A	WSA
Warrants Class B	WSB
Warrants When Issued	WSWI
With Warrants	WW
When Distributed	WD
When Issued	WI

Nasdaq Issues

All securities on Nasdaq are identified by either a four- or five-character identifier. The following table lists the valid fifth-character suffix identifiers.

Description	Suffix
Class A	A
Class B	B
Issuer qualifications exception - the issuer has been granted a continuance in NASDAQ under an exception to the qualification standards for a limited period.	C
New	D
Delinquent in filings - The Association has determined that the issuer is delinquent in its required filings with the SEC.	E
Foreign	F
First convertible bond	G
Second convertible bond, same company	H
Third convertible bond, same company	I
Voting	J
Nonvoting	K
Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units	L
Fourth preferred, same company	M
Third preferred, same company	N
Second preferred, same company	O
First preferred, same company	P
Bankruptcy - The issuer is involved in bankruptcy proceedings.	Q
Rights	R
Shares of beneficial interest	S
With warrants or with rights	T
Units	U
When-issued and when-distributed	V
Warrants	W
ADR (American Depositary Receipt)	Y
Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units	Z

Suffix Definitions

Called - an issue being redeemed by its issuing corporation under definite conditions before maturity.

Certificate - refers to a negotiable certificate representing deposit of stock with a pending change in its condition.

Convertible - a preferred share which its owner may convert into common stock or another security, usually in the same company, in accordance with the terms of issue.

Preferred - class of stock with priority over common stock in regard to earnings and/or liquidations.

Rights - represent the privilege to subscribe (in proportion to the number of shares owned) to new or additional securities, usually at or below the current market price. Rights ordinarily have market values of their own and are actively traded. In most cases they must be exercised within a relatively short period of time.

Stamped - indicates rights and privileges different from securities of the same issue, class, or series not stamped.

Warrant - indicates a certificate giving its holder the right to purchase securities at a stipulated price, either within a specified time limit or perpetually.

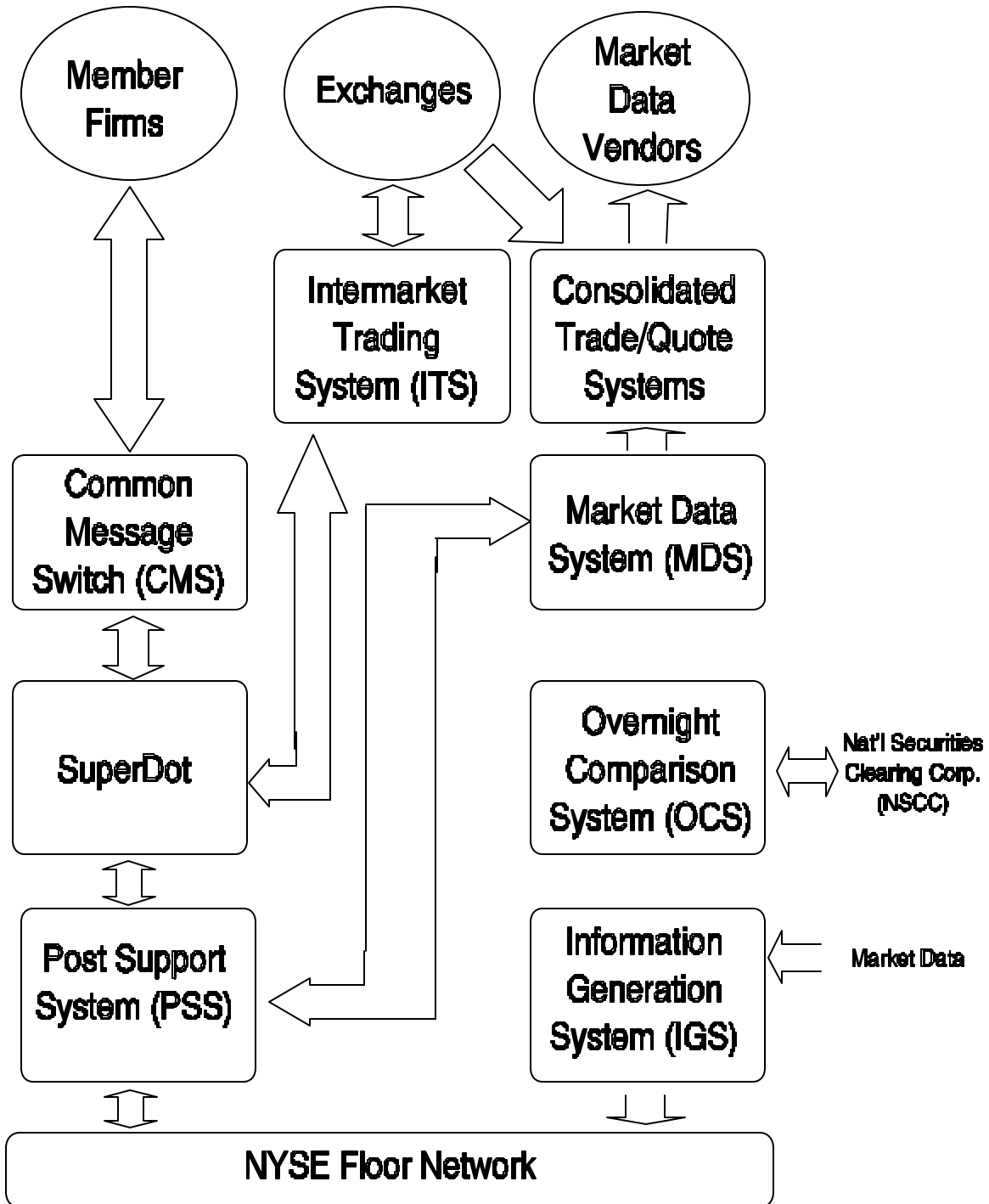
When Distributed - signifies a short form of “when, as, and if distributed” (see When Issued).

When Issued - means a short form of “when, as, and if issued”; indicates a transaction in a security authorized for issuance, but not yet issued. All “when issued” transactions are on an “if” basis, to be settled if and when the actual security is issued.

With Warrants - a security with a warrant attached that entitles the holder to purchase another security at stipulated price(s), either within a specified time or in perpetuity. Warrants may be immediately detachable from their underlying securities or detachable after specified periods.

Without Warrants - a security from which the warrant(s) has been removed.

Appendix D: NYSE Trading Systems



Source: NYSE Equity Systems & Business Development

Appendix E: NYSE Industry Codes

<u>INDUSTRY GROUP</u>	<u>CODE</u>
INDUSTRIALS	100
Aerospace	102
Aircraft	102A
Parts and Equipment	102B
Business Supplies and Services	104
Machines and Equipment (Ecxl. Computers)	104A
Supplies	104B
Services	104C
Chemicals	106
Diversified Chemicals	106A
Specialized	106B
Computers, Data Processing	108
Computer Systems	108A
Data Processing, Software	108B
Peripheral Devices and Supplies	108C
Construction	110
Residential	110A
Industrial	110B
Cement	110C
Lumber, Wood	110D
Other Building Materials and Products	110E
Electrical Equipment	112
Electronics	114
Semi Conductors and Other Components	114A
Telecommunications Equipment	114B
Test, Control Instruments and Systems	114C
Other Systems and Equipment	114D

<u>INDUSTRY GROUP</u>	<u>CODE</u>
Environmental Control	116
Foods, Beverages	118
Beverages	118A
Branded Food Products	118B
Processing and Production	118C
Wholesalers	118D
Health and Beauty Products	120
Personal Health Products	120A
Toiletries, Cosmetics, Perfumes	120B
Health Care Services	122
Equipment and Supplies	122A
Health Care Facilities	122B
Household Goods	124
Appliances	124A
Furnishings and Fixtures	124B
Housekeeping Products	124C
Houswares	124D
Industrial Machinery and Equipment	126
Heavy Machinery	126A
Machine Tools	126B
Measuring and Control Devices	126C
Transmissions and Engines	126D
Other Industrial Equipment	126E
Lodging, Restaurants	128
Hotels, Motels	128A
Restaurants	128B
Mining, Refining, Fabricating	130
Aluminum	130A
Coal	130B
Gold, Silver	130C
Steel, Iron	130D
Other Non-Ferrous Metals	130E

<u>INDUSTRY GROUP</u>	<u>CODE</u>
Motor Vehicles	132
Auto and Truck	132A
Parts and Equipment	132B
Oil and Gas	134
Crude Production	134A
Contract Drilling, Exploration	134B
Integrated Domestic Refiners	134C
Integrated International Refiners	134D
Non-Integrated Refiners	134E
Services and Equipment	134F
Packaging	136
Glass	136A
Metal	136B
Paper	136C
Other	136D
Paper Production	138
Pharmaceuticals	140
Publishing	142
Newspaper Chains	142A
Magazines	142B
Books	142C
Recreation Services and Products	144
Broadcasting	144A
Gaming Operations and Services	144B
Leisure Time Products	144C
Motion Pictures, Entertainment Services	144D
Outdoor Recreational Vehicles and Equipment	144E

<u>INDUSTRY GROUP</u>	<u>CODE</u>
Retail Trade	146
Department Store Chains	146A
Discount Variety Chains	146B
Drug Store Chains	146C
Supermarkets, Food Stores	146D
Hardware, Furniture Stores	146E
Specialty Apparel Shops	146F
Other Retail Operations	146G
Textiles, Apparel	148
Textile and Mill Products	148A
Clothing Companies	148B
Shoes	148C
Tires, Rubber	150
Tobacco	152
Wholesalers, Distributors	154
Consumer Products (Non-Food)	154A
Industrial Products	154B
Multi-Industry	170
Other	180
Manufacturing	180A
Services	180B
TRANSPORTATION	200
Air	202
Passenger Airlines	202A
Freight Airlines	220B
Rail	204
Trucking	206
Other Transportation Services	208

<u>INDUSTRY GROUP</u>	<u>CODE</u>
UTILITIES	300
Electric Services	302
Gas Services	304
Distribution and Integrated Natural Gas Cos	304A
Natural Gas Transmission Companies	304B
Other Gas Services	304C
Telecommunications	306
Water Supply Companies	308
Multi-Service Companies	310
FINANCE, REAL ESTATE	400
Banks	402
Multinational	402A
Regional	402B
Savings and Loan Associations	402C
Brokerage Services	404
Closed-End Investment Companies	406
Bond Funds	406A
Stock Funds	406B
Speciality Funds	406C
Finance Companies	408
Insurance	410
Brokers, Agents	410A
Carriers	410B
Trusts	412
Real Estate Investment Trusts (REITS)	412A
Oil Royalty Trust	412B
Other Trusts	412C

INDUSTRY GROUP

CODE

Real Estate

414

Diversified Financial Services

416