

Introduction to NSYE TAQ (WRDS)

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1. Contents of the database

The information in the database consists of trades and quotes data from actual trading days. NYSE TAQ covers data of listed companies from New York Stock Exchange (NYSE), American Exchange (AMEX) and National Association of Securities Dealers Automated Quotation System (NASDAQ). The information can be used to analyze market microstructure effects, such as liquidity for securities. The database contains available information from January 1993 to December 2007. ASB has subscription from January 2003 to December 2007.

1.1 Consolidated Trades

This section contains information on the intraday trading volume for NYSE, AMEX and NASDAQ.

1.2 Consolidated Quotes

This section contains information on the intraday quoted prices for NYSE, AMEX and NASDAQ. The most important data items are TIME, Bid price¹, Offer price² and Bid/Offer size in round lots³.

1.3 NBBO

This section contains information on the Best intraday quoted prices for NYSE, AMEX and NASDAQ. The most important data items are NBB quoted Time, NBB price (BID), NBO price (OFFER) and NBB/NBO size (in round lots).

1.4 NBBO+TRADES

This section contains information on the Best intraday trading volume for NYSE, AMEX and NASDAQ.

1.5 REG SHO

This section contains information on shorted quoted prices for NYSE, AMEX and NASDAQ. Short selling is referred to, when an investor borrows a security and sells it immediately. At a later time the investor hopes to buy back the security at a lower price in order to profit from the short selling.

2. How to get access?

Access to NYSE TAQ (Trades and Quotes) is part of the *Wharton Research Databases Services* (WRDS) and is available through the computers in H212 (building 2627). Further instruction about accessing NYSE TAQ can be read at <http://libsearch.asb.dk/functionality/alphabetbrowse.aspx?letter=N>.

¹ Bid is the price, which a market maker is willing to buy a security

² Offer price is also known as Ask price. It is the price at which a market maker is willing to sell the security. The difference between the Bid and Offer price is called the Bid-Offer spread.

³ Round lots are an agreement of the units required for the quoted prices e.g. 100 stocks for a specific price.

3. How does it work?

The following example will illustrate a search on Intraday data for Novo Nordisk, which is listed on New York Stock Exchange, and thereby available in the database. The primary searching is quite alike in WRDS in general, and the search will thereby act as an example for further searches.

3.1 Overview of company codes and tickers

Searching in WRDS is available based on different ticker symbols and codes. The following sections will outline the difference and advantages of the different codes and tickers.

3.1.1 SYMBOL

SYMBOL can usually, but not always, be identified with the ticker symbol of the company's publicly traded common stock. However, the same ticker can be assigned to different companies on different exchanges and company tickers can change over time. For example, the ticker "C" has been used by both Chrysler and Citigroup. Consequently, the ticker symbol is often an unreliable way to identify companies over time and in different databases.

3.2 Example of searching in NYSE TAQ

The startup in WRDS gives you the following options

By clicking on NYSE TAQ the following screen appears, where the data options are located in the left-hand side. Pointing the mouse over the listed databases will provide a brief description of the contents of the databases.

3.3 Quick-Search: Quotes

In our search we want data information on the quoted intraday prices for Novo Nordisk. By clicking on consolidated quotes in the left-hand side the following menu appears. The first step includes a specification of the data range i.e. we must specify how many days to include. The second step involves a specification of the intraday hour to hour range. Default is set to include the whole trading day range i.e. from opening to ending hours of the trading. The third step includes a specification of the company search. In this example we operate with Novo Nordisk, which is the search term to be included. In the search we have found a CUSIP and a Symbol code, and we can see that data is available from January

1993 to august 2006 for the security. Symbol is Mnemonic code only available within the WRDS databases. CUSIP is a universal code that enables a tracking of the security in other financial databases e.g. Orbis or Amadeus.

TAQ - Consolidated Quotes

The latest NYSE TAQ manual (version 1.0.9, 10/30/2006) indicates some modifications on the exchange [Code](#)

Data Query | [Documentation](#) | [Data Manuals](#) | [Retrieve from myWRDS Queries](#)

Step One: Date Range

Beginning Jan 06 2007
 Ending Aug 10 2007
 * Data is available from January 1993 through August 2007.

Specify the time period for the data range.

Step Two: Time Range

Filter observations by timestamp
 Beginning 09 : 30 : 00
 Ending 16 : 00 : 00
 * Default to observations within normal trading hours

Default intra-day timerange is set to be within the trading day

Step Three: Search

Search By: SYMBOL
 Choose 1 Of 3 Methods
 1. Company Codes
 NVO Code Lookup
 2. File Containing Company Codes
 3. Entire Database

Search for Novo Nordisk by clicking on code lookup

Find... Close

Matches found: 1

CUSIP	SYMBOL	NAME	DATE RANGE
670100205000	NVO	NOVO NORDISK ADS 1 ORD SH	JAN1993-AUG2006

The first part of our search specification is now completed. In the next step we need to specify, which parts of the intraday data we want to extract. In this example we want the bid price, offer price, bid size in number of round lots, quote condition and exchange on which the quote occurred.

Step Four: Variables

Select All Clear
 Bid Price Offer Price Bid Size in Number of Round Lots
 Offer Size in Number of Round Lots Quote Condition
 Exchange on which the Quote Occurred Nasdaq market marker for each NASD Quote

Select variables to be included in the output. You can select multiple data items by holding the control key while clicking.
 Make sure to select at least one variable of monthly frequency.
 See [documentation](#) for a description of each data item.

Next we need to specify the export process.

Step Five: Output

Output Format

- tab-delimited text (*.txt) ▼
- fixed-width text (*.txt)
- comma-delimited text (*.csv)
- tab-delimited text (*.txt)
- dBase file (*.dbf)
- SAS Windows_32 dataset (*.sas7bdat)
- SAS Solaris_64 dataset (*.sas7bdat)
- SAS transport file (*.trp) (PROC CPORT)
- SAS transport file (*.xpt) (PROC COPY)
- HTML table (*.htm)
- STATA file (*.dta)
- SPSS file (*.sav)

[How 'Save Query' works -- Using myWRDS Queries](#)

Under output format it is possible to specify, which data format to export to. In our example we will export to a tab-delimited text file. WRDS offers numerous output formats into the most popular statistical packages and text files.

By clicking submit request the following window appears.

Data Request Summary	
Data Request ID	201221037
Libraries/Data Sets	taq/cq /
Frequency/Date Range	intraday / 06Jan2007 - 10Aug2007
Search Variable	SYMBOL
Input Codes 1 item(s)	NVO
Conditional Statements	n/a
Output format/Compression	tab /
Variables Selected	BID OFR BIDSIZ OFRSIZ MODE EX
Extra Variables and Parameters Selected	

Your output is complete. Click on the link below to open the output file.

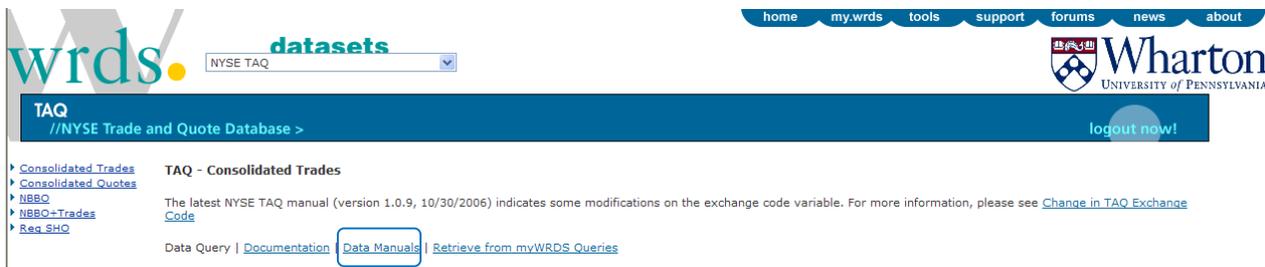
[201221037.txt](#) (105.0 MB, 2497523 observations 9 variables)

Download instructions
 Netscape users... Shift-click
 Internet Explorer users... Right-click and select "Save Target As..."

Right-click on the link, and choose save as. The text-file can now be imported into a statistical program.

4. Further resources

WRDS offers various manuals online that readily explains the different data types and how to export the data. Usually the manuals are available at the top of each category.



The screenshot shows the WRDS website interface. At the top, there is a navigation bar with links for 'home', 'my.wrds', 'tools', 'support', 'forums', 'news', and 'about'. The 'Wharton UNIVERSITY of PENNSYLVANIA' logo is visible on the right. The main content area is titled 'TAQ //NYSE Trade and Quote Database >' and includes a 'logout now!' link. Below this, there is a section for 'TAQ - Consolidated Trades' with a sub-menu on the left containing links for 'Consolidated Trades', 'Consolidated Quotes', 'NBBO', 'NBBO+Trades', and 'Req SHQ'. The main text states: 'The latest NYSE TAQ manual (version 1.0.9, 10/30/2006) indicates some modifications on the exchange code variable. For more information, please see [Change in TAQ Exchange Code](#)'. At the bottom of this section, there are links for 'Data Query', 'Documentation', 'Data Manuals', and 'Retrieve from myWRDS Queries'. The 'Data Manuals' link is highlighted with a red box.

The following manuals are available online for NYSE TAQ



This screenshot shows the same WRDS website interface as the previous one, but with the 'Data Manuals' link highlighted. The main content area is titled 'TAQ //NYSE Trade and Quote Database >' and includes a 'logout now!' link. Below this, there is a section for 'TAQ Data Manuals' with a sub-menu on the left containing links for 'Consolidated Trades', 'Consolidated Quotes', 'NBBO', 'NBBO+Trades', and 'Req SHQ'. The main text lists five manuals:

- [TAQ User's guide for data ranging from Jan 1993 to Nov 1999](#)
- [TAQ User's guide for data ranging from Dec 1999 to Dec 2004](#)
- [TAQ User's guide for data ranging from Jan 2005 to Sep 2005](#)
- [TAQ User's guide for data ranging from Oct 2005 to Mar 2007](#)
- [TAQ User's guide for data ranging from Apr 2007 to current](#)

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