

wrds.



Wharton
UNIVERSITY of PENNSYLVANIA

Getting Started with Wharton Research Data Services

Lehigh University

<http://wrds.wharton.upenn.edu>

wrds-support@wharton.upenn.edu

Table of Contents

| | |
|--|-----------|
| Welcome to Wharton Research Data Services | 3 |
| 1. Getting Started | |
| 1.1 Eligibility for Access | 4 |
| 1.2 Applying for an Account | 4 |
| • Faculty | |
| • Administrative | |
| • PhD | |
| • Research | |
| • Visitor | |
| • Library / Class | |
| 1.3 Types of Accounts | 4 |
| 1.4 WRDS Terms of Use | 5 |
| 1.5 Databases Available | 6 |
| 1.6 Future Resources | 8 |
| 1.7 Accessing the Data | 8 |
| • Web Interface Queries | |
| • SSH | |
| 2. Contact Information | |
| 2.1 Vendor Contacts | 9 |
| 2.2 WRDS Representative | 10 |
| 2.3 WRDS Administration | 11 |
| 3. Additional Help | |
| 3.1 Technical and Research Support | 11 |
| • How to Contact Us | |
| 3.2 Electronic Resources | 11 |
| • WRDS FAQ | |
| • SAS FAQ | |
| • Online Manuals | |
| • Downloads | |
| 3.3 Changing Your Password | 11 |
| 3.4 Lost Password | 12 |
| 3.5 Lost Output | 12 |
| 4. WRDS@Wharton | 12 |

Welcome to **Wharton Research Data Services!**

Wharton Research Data Services, or WRDS, is an Internet-based business data research service from The Wharton School at the University of Pennsylvania. Developed in 1993 to support faculty research at Wharton, the service has since evolved to include over 225 institutions including:

| | |
|----------------------------|--|
| Stanford University | Northwestern University |
| Harvard University | University of Hong Kong |
| London School of Economics | University of Chicago |
| London Business School | Massachusetts Institute of Technology and more |

WRDS provides access to COMPUSTAT, CRSP, IBES/First Call, NYSE-TAQ, Global Insight, OptionMetrics and other important business research databases in a manner that gives universities several key benefits:

Outsourced Data Management. The Wharton Computing staff receives the data directly from providers and posts the data to our system in SAS data sets. The data is warehoused at Wharton and access is provided to subscribers over the Internet. You concentrate on research; we handle all the data management issues.

Access to Multiple Data Sources Simultaneously. WRDS provides a common interface to a variety of databases, simplifying extraction and increasing productivity. You no longer have to spend countless hours programming and decoding tapes or writing Fortran access programs. The information is easily retrievable over the Internet--anytime, anywhere--via point-and-click web query pages, SAS/PC Connect, or a secure shell (SSH) log-in session, whichever method best suits your needs.

Professional Technical and Research Support. Our staff of doctoral-level research specialists is available to you on-line. They can assist you with difficulties pertaining to database access, data queries, and programming in SAS, FORTRAN, or C.

Integrated Tools. WRDS provides sophisticated software tools and sample programs for a wide variety of applications, including security analysis, conducting event studies, and testing asset-pricing models using Fama-French portfolios. In addition, complete financial statements for a single company can be downloaded using a simple web interface.

Classroom Application. Access to historical financial data on WRDS is also available to students using special class accounts that may be requested by any standing faculty of member institutions. One-click, IP-based access in labs and libraries is also offered.

Continual Improvements. We are continuously improving and adding value to WRDS. Our current efforts are concentrated on support for comprehensive international databases, as well as state-of-the-art analytical tools for faculty research and new applications for students and classroom use.

We hope you enjoy your new WRDS accounts. We are confident you will find the ease of access, abundance of data, and system support a significant benefit to your research and teaching endeavors.

Enjoy!
Sincerely,
WRDS Staff

1.1 Eligibility for Access

All current faculty, staff, and students at Lehigh University are eligible for web access to WRDS. Individual (faculty, doctoral, staff, visitor and research assistant) accounts, which allow SSH access, may be provided with access at the discretion of the university's WRDS Representative. Unfortunately, alumni members of the community, research colleagues outside the university, and other persons not actively employed or registered with the university do not qualify.

1.2 Applying for An Account

Step 1:

- Point your web browser to <http://wrds.wharton.upenn.edu>

Step 2:

- In the center of the login screen, you will see a link entitled "account request."
- Click on that link. Then click on the link entitled "new account."

Step 3:

- Fill out the account request form.

Step 4:

- Click the box entitled "submit request."

1.3 Types of Accounts

Faculty: Faculty accounts are available to all standing faculty of member institutions. Standard accounts allow unlimited access via web, SSH, and/or FTP, and include 750 MB of home/projects storage. Faculty will have their own password access; this password is to remain confidential and is not to be shared with any other individual.

Staff: Staff accounts can only be requested by support personnel such as librarians, IT support staff or other staff of member institutions. (Please note that this type of account does not automatically carry WRDS Rep privileges, though many WRDS reps have this kind of account. WRDS Rep administrative capabilities are assigned separately from the account designation.) Staff accounts allow unlimited access via web, SSH, and/or FTP, and include 750 MB of home/projects storage. Staff will have their own password access; this password is to remain confidential and is not to be shared with any other individual.

PhD student: PhD accounts are available to all current Ph.D. candidates of member institutions. (PhD candidates who accept a faculty appointment at another institution may continue to use their WRDS account until they defend their dissertation. After the defense, then the WRDS Rep will disable the account.) Standard accounts allow unlimited access via web, SSH, and/or FTP, and include 750 MB of home/projects storage. Doctoral students will have their own password access; this password is to remain confidential and is not to be shared with any other individual.

Visitor: Visitor accounts are available to visiting faculty (non-permanent or part time position). These accounts are subject to additional review and may not be used after the visiting appointment ends. The WRDS Rep will choose to approve this person as a visitor. The guidelines for "visitors" require a formal relationship between the institution and the individual -- the individual is being paid to be at your institution or has a formal letter of appointment (from a Dean) to an unpaid position. This generally precludes co-authors and PhD candidates as well as unpaid research associates. The User will have to accept additional Terms of Use prior to access. Standard accounts allow unlimited access via web, SSH, and/or FTP, and include 750 MB of home/projects storage. This password is to remain confidential and is not to be shared with any other individual

Research Assistant: Research accounts are available to graduate and undergraduate students performing research for a faculty member. Research Accounts allow access via web, SSH, and/or FTP, and include 750 MB of home/projects storage. Research assistants will have their own password access; this password is to remain confidential and is not to be shared with any other individual.

Class: Class accounts may be requested by standing faculty of member institutions and are used to access the WRDS web interface. These accounts are primarily for student usage that is associated with a specific class and all students in the class share the same password. Up to 15 simultaneous users will share the same account and password. These accounts provide access only and do NOT include disk storage. They expire at the end of the term. This password is not to be shared with any other individual.

Library/Lab: Library/Lab accounts are used to access WRDS using IP authentication; thereby, bypassing the need to remember or keep secure a shared password. We simply need to know the IP addresses and corresponding hostnames. Expiration dates are not set for these accounts.

1.4 WRDS Terms of Use

All users must agree to the following:

- **WRDS services are for academic and non-commercial research purposes only.** Data hosted on WRDS is for academic purposes only and its use is restricted under license terms set by each vendor. Do not use data downloaded from WRDS for any non-academic or commercial endeavor.
- **Access to WRDS is linked to your university or institution.** Individual accounts may only be used by standing faculty, full-time research staff, and currently-enrolled PhD students. Access and individual accounts for research assistants, visiting scholars and other nonpermanent faculty is offered at WRDS's discretion. Access by other types of students is limited to class accounts, in-library use accounts, and special IP authenticated services.
- **Protect your WRDS username and password.** Do not share your username and password (not even with a co-author).
- **Immediately notify WRDS of any changes in your institutional affiliation.** If you leave your current university or change your affiliation in any manner, you will have one month to notify WRDS about the change. If your new university or institution is a WRDS client, we will quickly transfer your account and files.
- **Your institution may have additional restrictions.** You are obligated to learn about and honor restrictions your institution may place on users of WRDS and any licensed data that is accessed through WRDS.
- **Any evidence of the misuse of your WRDS account or the data hosted at WRDS is subject to immediate suspension of your account.**
- **WRDS and its third party data providers do not make any representations or guarantees about the accuracy or timeliness of the content.** Due to the number of sources from which WRDS contents are obtained, and the inherent hazards of electronic distribution, there may be delays, omissions, or inaccuracies in the contents. Although the contents have been obtained from sources believed to be reliable, they are provided to you on an "as is" basis without warranties of any kind. With respect to this service and the contents, and to the fullest extent permitted by applicable law, WRDS and its third party data providers hereby disclaim all express, implied and statutory warranties of any kind to the user or any third party, including, but not limited to, representations and warranties regarding accuracy, timeliness, completeness, correctness, currentness, noninfringement, merchantability, or fitness for any particular purpose, or any representations or warranties arising from usage or custom or trade or by operation of law. WRDS, and its third party data providers, assume no responsibility for the consequences of any errors or omissions. In no event shall WRDS or any third party data provider or any of their licensors be liable to the user or to anyone else for any loss or injury caused in whole or in part by contingencies beyond their control or negligence in procuring, compiling, interpreting, editing, writing, reporting or delivering any content. In no event shall WRDS or any third party data provider or any of their licensors be liable to the user or anyone else for any claim arising out of or relating to WRDS-provided content, including, but not limited to, any decision made or action taken by you in reliance upon such content or for any types of damages (such as, but not limited to, direct, consequential, pecial, incidental, punitive or indirect damages), even if advised of the possibility of such damages.

1.5 Databases Available

Although WRDS provides access to a wide variety of databases, users are only given authorization to those to which their university subscribes. If you attempt to access a database to which your university does not subscribe, you will receive the following error message:

“User does not have appropriate authorization level for file.”

Below is a list of the databases available for WRDS. Your access will depend on your school’s licenses. For more information on data access and permissions, see the "My Datasets" link in the MY.WRDS section of our web site and peruse the "Data Lists" for the various subdivisions of data products and subscription levels.

Board Analyst

- Governance, compensation, performance practices

Bureau Van Dijk ©:

- Amadeus
- Bankscope
- Isis
- Osiris

Center for Research in Security Prices© (CRSP):

- NYSE/AMEX/NASDAQ Stocks
- Government Bonds
- Indices/Portfolio Assignments
- CRSP/Compustat Merged Database

Standard and Poor’s Compustat©:

- Industrial, Full Coverage and Research
- Canadian Industrial
- Business Industry Segments
- Business Geographic Segments
- Price, Dividends, and Earnings
- Bank
- Executive Compensation
- Unrestated Historical data
- Audit Fee

Standard and Poor’s Global©:

- Industrial/Commercial
- Financial Services
- Issues
- Currency

comScore:

- Marketing

Eventus:

- Event Study Software

First Call Historical Database

- Analyst Estimates

FISD

- Fixed Income Securities Database
- Fixed Income Securities Database with NAIC data

Global Insight :

- DRI Basic Economics
- DRI International

GovPX, Inc.©:

- Treasury Bonds, Tick-by-Tick

GSI Online:

- Mergers and Acquisitions (M&A) Database
- Registrations and Prospectus Database

GTA-CSMAR:

- Accounting, Finance, Economic data for China

Institutional Brokers Estimate System© (I/B/E/S):

- Detail and Summary History
- Summary History

IRI:

- Point of Sale

IRRC:

- Takeover Defenses
- Directors Data

ISSM:

- Price and Volume data

IVES' AuditAnalytics:

- Audit Fee

KLD

- Globally social investment research

NYSE Trade and Quote© (TAQ):

- Consolidated Trades and Quotes

OptionMetrics:

- Ivy DB

The NASDAQ Stock Market, Inc.©:

- NASTRAQ

Sandra Ann Morsilli Pacific-Basin Capital Markets Research Center:

- PACAP Databases

Thomson Financial Services, Inc.©:

- Mutual Fund Holdings
- Institutional (13f) Holdings
- Insider

Access to the following databases is *free* for all subscribers:

- Bank Regulatory Database
- Blockholders
- CBOE Indexes
- CISDM –Hedge Funds, active CTAs, CPOs
- DMEF - Direct Marketing Educational Foundation
- Dow Jones
- Fama-French ("Research") Portfolios and Factors
- Federal Deposit Insurance Corporation (FDIC)
- Federal Reserve Bank reports
- Penn World Tables
- Philadelphia Stock Exchange Options
- SEC Disclosure of Order Execution

1.6 Future Resources

To provide clients with an ever-expanding resource, we are continually negotiating with new vendors about adding a variety of datasets to WRDS. Please visit our electronic newsletter, wrds.News, for further information at wrds.wharton.upenn.edu/news/index.shtml.

Thomson Financial Services, Inc.©:

- Block Ownership

1.7 Accessing the Data

WRDS may be accessed either through a web interface or a UNIX login session. After January 28, 2003, users may no longer connect to WRDS using the telnet protocol. A Secure Shell ("SSH") program should be used instead. An account with username and password authorization is required to access WRDS using either method.

Web Interface:

To access WRDS via the Web, begin by pointing your browser <http://wrds.wharton.upenn.edu>. The WRDS web site serves our users in three ways. First, it offers the documentation and description of databases available. Each database is accompanied by a general description, various components of the database, descriptions of variables, and documentation. Second, users may access the database using the query forms. Users can search and download information using these pages by entering their own search criteria. Finally, users can submit an account request, a restore request, or technical questions with this access method.

SSH:

You may also make an SSH connection to wrds.wharton.upenn.edu with a WRDS-issued username and password. Once logged in, you will begin at your home directory.

The directory structure for the data is as follows:

- /wrds/crsp/
- /wrds/compustat/
- /wrds/fdic/ etc.

Each database directory contains subdirectories for the data files and sample programs.

- /wrds/crsp/sasdata
- /wrds/crsp/samples

Each database directory contains subdirectories. We have several documents that provide step-by-step instructions on how to SSH to WRDS and how to retrieve data with FORTRAN and SAS programs (see Section 3.2). They are in MS Word format and can be easily accessed.

Vendor Technical Support Information

2.1 Vendor Technical Contact Information

For data vendor technical support, please contact the data vendors that offer each set. Below are contacts and email addresses.

For subscriptions to the databases listed below, please contact your WRDS Representative.

| Vendor | Support Phone Number | E-mail |
|-------------------------------|----------------------------------|--|
| Board Analyst | 207-874-1468 x 116 | bgrzymski@thecorporatelibrary.com |
| Bureau van Dijk | (212) 797-3557 (212) 797-3550 | Mitchell.Gouss@bvdep.com Ragini.Shah@bvdep.com |
| Compustat | (800) 525-8640 x4458 | clientsupport@standardandpoors.com |
| comScore | (312) 775-6521 | jmccabe@comscore.com |
| CRSP | (773) 834-1025 | subscriptions@crsp.chicagogsb.edu |
| Eventus | | arnie@eventstudy.com |
| First Call | (800) 347-7822 | Bobby.hart@thomson.com |
| FISD | 704 559-6943 212-413-7708 | karen.peterson@mergent.com – technical questions donald.hogan@mergent.com – subscriptions |
| Global.Insight (Includes DRI) | (781) 301-9084 | sarika.pundit@globalinsight.com |

| | | |
|---|------------------------|---|
| GovPX | | sales@govpx.com |
| GSI Online | (800) 783-0312 | info@gsonline.com |
| GTA-CSMAR data | 86-755-83948067 | gtagao@gtadata.com |
| I/B/E/S | (800) 347-7822 | Bobby.hart@thomson.com |
| IRI | | wrds-support@wharton.upenn.edu |
| IRRC | (847) 501-3410 ext. 14 | Edmund.Banfield@issproxy.com Mark.tulay@issproxy.com |
| ISSM | (860) 242-2099 | rawood@pobox.com |
| IVES' AuditAnalytics | (508) 476-7007 x 28 | thardy@ivesinc.com |
| KLD | (617) 426-5270 x 205 | jcarberry@kld.com |
| FISD/NAIC | | Sam.ellner@mergent.com |
| NASTRAQ | (800) 243-4284 | |
| OptionMetrics | (212) 918-1861 | dhait@optionmetrics.com |
| PACAP | (401) 874-5105 | pacapd@etal.uri.edu |
| TAQ | | taqorders@nyse.com |
| Thomson..Financial 13f, MF, CDA Spectrum | (888) 989-8373 | Bobby.hart@thomson.com |

2.2 WRDS Representative

David H. Myers
Professor of Practice
610-758-4533
dhm2@lehigh.edu

These are the responsibilities of your WRDS Representative:

- 1) Serve as a liaison between the WRDS staff and the users at the university. Any notices regarding system upgrades, the addition of new vendors, scheduled maintenance, etc. will be sent to the representative and he or she will simply forward this information to the users.
- 2) Monitor account requests by verifying that a requestor is indeed standing faculty, a Ph.D. student, or an authorized researcher/ administrator at the university. Whenever a user from your institution submits an account request, we will send you an email notification. Simply go to the URL indicated in the message and follow the instructions to

approve the request. After we receive your approval, we will create the account and send the user an e-mail message with a special URL and instructions for setting the account password and logging into WRDS.

3) Disable accounts after users leave your institution. Extend expiration dates on Ph.D., RA and Visitor accounts when necessary.

2.3 WRDS Administration

For information concerning your subscription, details on upgrading your package, or the status on negotiations with future data providers, please send an e-mail to: wrds@wharton.upenn.edu or contact us at 215-898-9065.

Additional Help

3.1 Technical and Research Support

Our staff of technical and research specialists may be reached at wrds-support@wharton.upenn.edu. They are available to assist you with difficulties pertaining to database access, data queries, and programming in SAS or C. If you request support related to a particular program which you are unable to execute successfully, **please copy the program into the body of your e-mail message for a quicker response.** This is helpful for detecting any errors in your program.

3.2 Electronic Resources

Additional resources are available from any WRDS web page by clicking on the “support” tab located at the top of your screen. You will find several listings:

- **WRDS FAQ** (Frequently Asked Questions): This resource contains the most detailed information on using our service including a system overview, data content and access, and extensive help on using SAS and FORTRAN programs to extract data.
- **SAS FAQ:** Compiled by one of our technical specialists, this is an excellent resource for users just getting started with SAS.
- **Online Manuals:** All electronic manuals published by our vendor providers (i.e. CRSP) are available under this link. If you do not see a particular manual you are interested in, please contact the vendor directly (see Vendor Contact information, Section 2.1) for a copy.
- **Downloads:** TCP script for connecting to WRDS via SAS/CONNECT.
- **Restore Request:** Electronic form to be submitted in the event output is lost (see Section 3.4)

3.3 Changing Your Password

You may change your WRDS password by SSH or web access.

By SSH:

Step 1:

- SSH to wrds.wharton.upenn.edu

- At the system prompt, enter the following: **passwd**

Step 2:

- You will be prompted for your old password. Type in your current password and then press the Enter key.

Step 3:

- You will be asked for the new password. Type in a new password. Your password should be at least 6 characters long. On Unix systems passwords are case sensitive: lower-case and uppercase letters are different. To avoid problems, it's a good idea to use only lower-case letters and numbers. The password does not appear on the screen when you type it.

Step 4:

- To ensure you typed your new password correctly, you are asked to enter it again. Type in your new password again. If you typed the same password both times, the system returns to the system prompt. From now on, use this password to log on to this system. If you make a mistake typing your password, you'll receive an error message, and the system will not change your password. If this happens, repeat Steps 2 through 4.

By WEB:

Go to <https://wrds.wharton.upenn.edu/changepassword/index.shtml> and follow the instructions.

3.4 Lost Password

Go to <http://wrds.wharton.upenn.edu/lostpassword/index.shtml> and follow the instructions.

If you have any further questions, please send e-mail to **wrds-support@wharton.upenn.edu**.

3.5 Lost Output

In this event, please submit a **Restore Request**, available under the Support tab. Please allow one business day for processing.

4. WRDS@WHARTON

Our staff of technical and research specialists may be reached at:

wrds-support@wharton.upenn.edu

They are available to assist you with difficulties pertaining to database access, data queries, and programming in SAS, FORTRAN, or C. If you request support related to a particular program, which you are unable to execute successfully, please copy the program into the body of your e-mail for a quicker response. This is helpful for detecting any errors in your program.

We hope you enjoy your new WRDS accounts. We are confident that you will find the ease of access, abundance of data, and unique system features such as downloading your information to an MS Excel spreadsheet, Advanced Query capabilities, and e-mail notification feature a significant benefit to your research and teaching endeavors.