Getting Started with
Wharton Research Data Services

http://wrds.wharton.upenn.edu

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WELCOME TO WHARTON RESEARCH DATA SERVICES

WRDS democratizes data access so that all disciplines — Accounting, Banking, Economics, ESG, Finance, Healthcare, Insurance, Marketing, and Statistics — can easily search for concepts across the data repository. Partnering with global vendors, **WRDS** hosts 350+TB of data — the broadest collection of data on the most robust computing infrastructure to give users the power to analyze complex information at speeds of up to 400MB per second.

Our rigorous data review and validation give users the confidence to tailor research and create a wide range of reliable data models. WRDS' unique array of resources and services include access to a suite of ANALYTICS tools developed by our doctoral-level research team, tutorials, research support. Learning Pathways by WRDS — online learning and instructor pathways — provide curated, guided, online resources for Researchers, Instructors, and Information Professionals. Through Data, Analytics, Research and Technology, approach your research using real world examples and advance your analysis to answer the most critical questions with your data.

WRDS is more than just a data platform. Supporting over 75,000 commercial, academic, and government users at 500+ institutions in 35+ countries, WRDS is the global gold standard in data management, innovative tools, analytics, and research services — all backed by the credibility and leadership of the Wharton School.

ACCESS OPTIONS

WRDS provides a common interface to a variety of databases in order to make the process of extracting data more simple for you and help you focus on what's important – your research.

WRDS offers 3 ways of accessing data: **On our website** using form-based queries, through a **UNIX terminal** session, or using PC-SAS **on your desktop computer**. Each method has its own benefits and strengths.

HOW TO ACCESS THE DATA

BROWSER-BASED ACCESS
All you need is a web browser and Internet access to query data from WRDS. No software to install, no specific programming language to learn. After you've decided on which dataset to use, you can used our web-based query form to extract and output data in the format of your choice.

- **Simple, powerful queries** with a few clicks.
- **Export** into the format of your choice.
- **Import** into popular programs with ease.

Each dataset on WRDS includes a description of what's included as well as links to the pages for each query. The web-based version of WRDS is designed to work with any modern browser.

Our web queries have the same general format for all databases in WRDS. In almost all cases, you need to complete four steps:

1. Chose your **date range**
2. Select your **company codes** or **tickers**
3. Select your query **variables**
4. Select your query **output type**

When you submit your query, it runs on our powerful servers and is made available for you to download when it is complete. For additional information on running web queries please click here.

WRDS CLOUD

WRDS also provides a high performance computing cluster we call the WRDS Cloud. This system gives you command-line access to a powerful research computing system that provides direct access to all of our data, and includes support for many powerful research programming languages. Some of the benefits of the WRDS Cloud include:

- **Run your own customized programs** with several data sources at once.
- Use our powerful servers, offering up to **24 cores** and **256GB RAM** each.
- Store up to **10GB of your programs and data** in your own directory.
- Access up to **500GB of temporary disk space** to process programs and store results.
- Direct access to WRDS data over a **high-speed network.**

The WRDS Cloud is accessible via SSH, a way of easily and securely connecting to WRDS. Once connected, you'll be able to access WRDS data directly in your favorite programming languages. Languages supported on the WRDS Cloud:

- **SAS**
- **Python**
- **R**
- **Stata** (requires active Stata license with StataCorp)

Some knowledge of UNIX is helpful when working on the WRDS Cloud, but we've included everything you need to get started in our documentation. For additional information using the WRDS Cloud please click here.

CONNECTING REMOTELY

WRDS data is further accessible remotely from the comfort of your workstation or laptop, through many popular programming applications.

You can connect to WRDS and access WRDS datasets in the following interactive applications:

- **SAS** via *PC-SAS/Connect*
- **Python** via *Jupyter Notebooks* or *Spyder*
- **R** via *RStudio*
- **MATLAB**
- **Stata**

Each of these allows you to program on your local workstation while connecting remotely to WRDS to have access to all WRDS data. Each solution requires a small amount of setup to initially connect, but once connected, accessing WRDS data within your programming environment is as simple as referencing a variable or libname. Besides the SAS connection method, all other methods rely of submitting SQL statements to WRDS and receiving the results directly in your program. For additional information about Programming at WRDS please click here.

SERVICES

WRDS provides a common interface to a variety for databases, simplifying extraction and increasing productivity with:

- **WRDS Support** Support from a team of Ph.D., data, and technical specialists is available to your researchers.
- **DART Videos** Self paced remote access to our library of data, analytics, research and technology training resources. The library contains a range of resources curated to researchers, information professionals and instructors.
- **Classroom Tools** Instructors can use Classroom Tools by WRDS as a core component of their curriculum, as stand-alone lessons, or as assignments. This is also a helpful place to our Introduction to WRDS guides which can be a helpful resource as you familiarize yourself with WRDS.
- **Analytic Tools** Analytics tools are designed to improve efficiency, enabling researchers to tap into different data sources and research areas without having to create sophisticated programs. Results are presented graphically and include the underlying data for further analysis and exploration.
- **Knowledgebase** Knowledgebase articles offer dynamic articles regarding WRDS and our data.
- **Data Validation, Integrity and Consistency.** Working with multiple vendors, we provide the broadest collection of data and most robust computing infrastructure to give users the power to analyze complex information at speeds of up to 400MB per second. We provide a reliable infrastructure with professionals managing the process of uploading and updating the data on state-of-the art systems.

ACCOUNTS

All full-time faculty, staff, and students at a subscribing institution are eligible for web access to WRDS. Individual (faculty, doctoral, staff, visitor and research assistant) may be provided with access at the discretion of your local WRDS Representative. Alumni members, research colleagues, and other persons not actively employed or registered with your organization do not qualify for an account.

Our WRDS policy prohibits Undergraduate/Masters students from accessing WRDS during the extended break between semesters. Once the new semester begins, these students will again be able to access their WRDS accounts. Please contact WRDS Support with any questions.

APPLYING FOR AN ACCOUNT

Step 1: Point your web browser to https://wrds-www.wharton.upenn.edu/register/

Step 2: Complete the registration form, review the Terms of Use and submit.

Step 3: Check your email for a link to verify and complete your registration.

Step 4: Once your verification is complete, your local WRDS representatives will review your account request and you will receive a system generated email to notify you when your request has been processed.

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 10 GB of permanent disk storage. Faculty will have their own password access; this password is to remain confidential and is *not to be shared with any other individual*.

Please note: Lecturers are not eligible for faculty accounts but may apply for a visitor account.

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 10 GB of permanent disk storage. Staff will have their own password access; this password is to remain confidential and is *not to be shared with any other individual*.

Ph.D. student: Ph.D. accounts are available to all current Ph.D. candidates of member institutions. Ph.D. 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 10 GB of permanent disk 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*.

Masters / Undergrad student: Masters accounts are available to full-time masters students of member institutions. These accounts allow access via web, and SAS. Masters students will have their own password access. This password is to remain confidential and is *not to be shared with any other individual*. These accounts do NOT include disk storage. *Please note:* Our WRDS policy prohibits undergraduate/Masters students from accessing WRDS during the extended break between semesters. Once the new semester begins, students will again be able to access their WRDS accounts. Please contact WRDS support should you have any questions regarding this access.

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 Ph.D. 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 10 GB of permanent disk storage. Visitor accounts will have their own password access, 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 10 GB of permanent disk storage. A standing faculty member may have one Research Assistant account. 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. *This password is not to be shared with any other individual outside of the class.* **These accounts provide access only and do NOT include disk storage, access to WRDS Cloud or the ability to access WRDS data interactively through SAS, Python,**

R, MATLAB, Stata, etc. These accounts expire at the end of the term or semester. Class accounts need to be set up by the Professor, approved by the WRDS Represenative, and should not be carried over for the next semester's class.

WRDS TERMS OF USE

All users must agree to the WRDS Terms of Use which are available on our website under the Getting Started section of the WRDS website.

DATABASE SUBSCRIPTIONS

Although WRDS provides access to a wide variety of databases, users are only given authorization to those resources that their institution subscribes. To view the data your institution has provided navigate to Get Data. The products and vendors your institution are not subscribed to will appear in grey. For more information on data access and permissions, see the "Products" link in the top menu bar under "Your Account".

WRDS ACCESS PASS

IP Authenticated workstation/s can be made available within your institution's library or computer labs. These may only be accessed by valid Users (not the general public) at your institution.

When logging into WRDS, Users will be asked to enter an email account with your institution's domain. WRDS will then send an email message to that email account to verify that the account is valid. This email will contain an "Access Pass" link which the User can click on to get direct access into WRDS.

This is an ideal way for undergraduate students (who may not have access to WRDS via a class account and who do not qualify for an individual account) to use the system. Accessing the WRDS platform through this method does not provide disk storage or access to the WRDS computing cloud.

WRDS website URL for IP access is: http://wrds-web.wharton.upenn.edu/wrds/connect

END USER EXPERIENCE

The Librarians for each institution will consult with WRDS and receive a link for the range of IP-Authenticated computers. The user will open a web browser session and follow the initial steps to obtain an Access Pass. The WRDS server will verify that the email domain is valid for the institution. Once validated, the user will receive an email with the Access Pass link.

DURATION OF ACCESS PASS

The access pass can be set to last from 1 to 3 days per user, the default is one day. Please contact your WRDS Representatives with any questions.

What will WRDS do with this contact information?

WRDS will store the contact information with a record of each data query made during that session, just as it does for all WRDS Users with their own accounts. It will not be treated differently or protected in any way that is less secure than regular WRDS Users. Our privacy policy ensures that WRDS does not share personally identifiable information with any other entities. However, information maintained by WRDS may be disclosed in connection with any judicial proceeding.

VENDOR CONTACT INFORMATION

For data vendor technical support, please contact the data vendors that offer each set. You will find contacts and email addresses for all of our vendors on our website under the Support tab link for Data Vendors.

For inquiries regarding subscriptions to the databases, please contact your WRDS Representatives. Their contact information is available at the menu bar at the top of the WRDS website under "Your Account".

WRDS REPRESENTATIVE

WRDS representatives at your institution are responsible for the following:

1. Serve as a liaison between the WRDS students, faculty, and staff at the university. This may include communicating notices regarding system upgrades, the addition of new vendors, scheduled maintenance, etc.

2. Monitor account requests by verifying that a requestor is standing faculty, a Ph.D. or Masters student, an authorized researcher, or an administrator at the university.

3. Account maintenance which may include disabling accounts as needed for users who are no longer affiliated with the institution, processing expiration dates extensions, etc.

4. Notify department heads/chairs regarding WRDS administrative changes (i.e.: modification of WRDS fee structure, procedures, etc.).

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-support@wharton.upenn.edu.

WRDS SUPPORT & ELECTRONIC RESOURCES

TECHNICAL AND RESEARCH SUPPORT

Our staff of technical and research specialists may be reached be reached via WRDS Support. Our support professionals are available to assist you with difficulties pertaining to database access, data queries, and programming. 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.

ELECTRONIC RESOURCES

DART Videos Self paced remote access to our library of data, analytics, research and technology training resources. The library contains a range of resources curated to researchers, information professionals and instructors.

Classroom Tools Teaching and learning toolkit specifically designed for Faculty who are introducing finance and business concepts in the classroom.

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 Knowledgebase This resource contains detailed articles pertaining to the data available on WRDS.

SAS FAQ: Compiled by one of our technical specialists, this is an excellent resource for users just getting started with SAS.

Manuals and Overviews: All electronic manuals published by our vendor providers 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.

CHANGE PASSWORD

Go to our Password Reset page and follow the instructions.

WRDS SUPPORT

Our staff of technical and research specialists may be reached via WRDS Support.

They are available to assist you with difficulties pertaining to database access, data queries, and programming.

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