

wrds

The Global Standard for Business Research

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

Navigating WRDS: Overview of Financial Data on WRDS CRSP, Compustat, and IBES

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WRDS Librarian Colloquium
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Agenda

- What is WRDS?
- Sources of Financial Data
- Overview of Compustat, CRSP, and IBES Data
- WRDS Tools and Support:
How to Get the Help You Need?
- How Can Researchers Use WRDS More Efficiently?

WRDS Overview

- Single and flexible source to extract data from leading research databases
 - Variety of disciplines: Accounting, Finance, Economics, Banking, Insurance, Marketing, Statistics, +
 - Standardized queries: Every database webpage has the same format: query + variable documentation + list of manuals, overviews, & research applications
 - Ideal for Data linking: e.g. CRSP (stock prices, dividends, splits), Linking CRSP and COMPUSTAT, Matching IBES and CRSP Data, + linking sample programs
- Internet-based platform with multiple access options
 - Web queries: compatible with various browsers and operating systems (nothing to install)
 - Standardized, easy-to-use, point-and-click interface, unlimited downloads (~ 2GB size limit per query)
 - Easy variable and company name searches, and other tools
 - Fast extracts and record retrievals through TerraBytes of data
 - PC SAS CONNECT remote libraries
 - UNIX X-Windows and batch job capabilities
- Full-time research and technical support
 - Online help (variable definitions, data sources, equations, manuals, tutorials, sample programs, FAQs), email support, and 24/7 network monitoring
 - Data Overviews, Research Applications, Knowledge Base and Forums@WRDS
 - We are WRDS users too

WRDS History

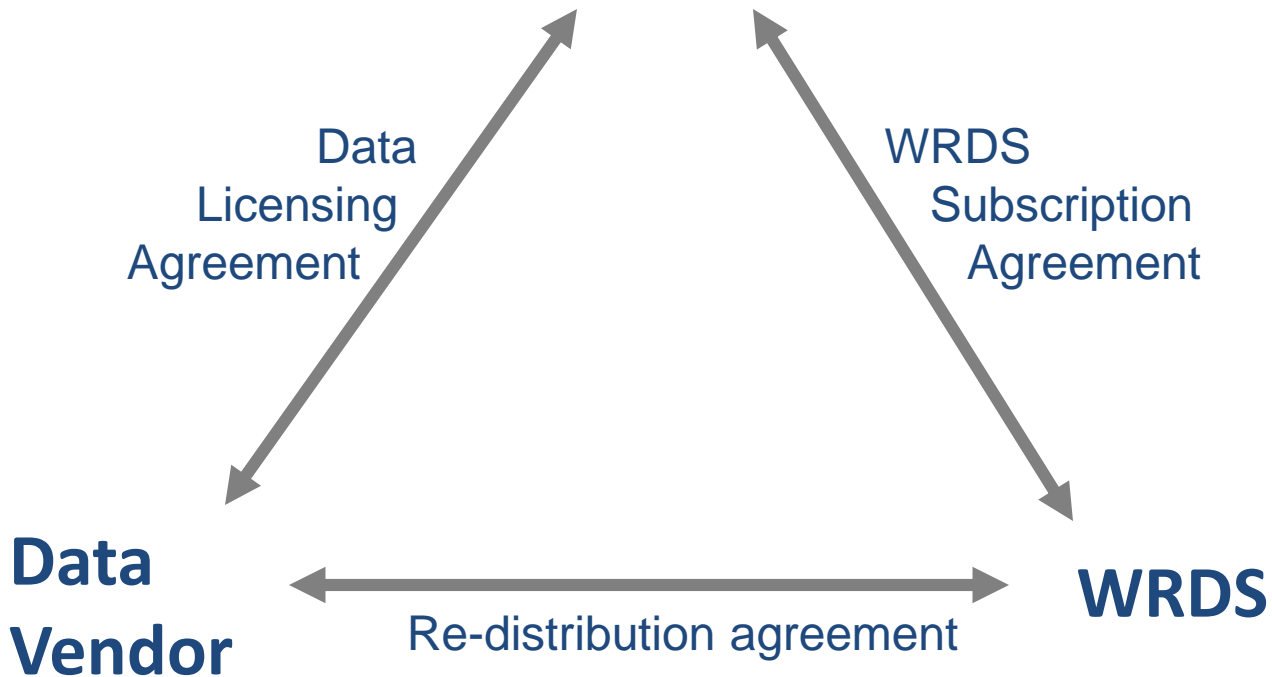
- Originally developed for Wharton needs:
 - Centralize data management and research support
 - Provide faculty and PhD candidates with web-based, and interactive research tools
- Grown from 2 subscribers in 1997 to 250+ subscribers in 2009:
 - All top academic and non-profit research institutions
 - We support over 18,000 faculty and other researchers' accounts
- Data increased from 60 GB to 30+ TB
 - Originally accounting and financial data; now includes economic, banking, insurance and marketing data
 - Several Free Data Sources
- Partnerships with leading data vendors: Grown from 2 to 40+ data providers

wrds

Data Licensing and Access with WRDS

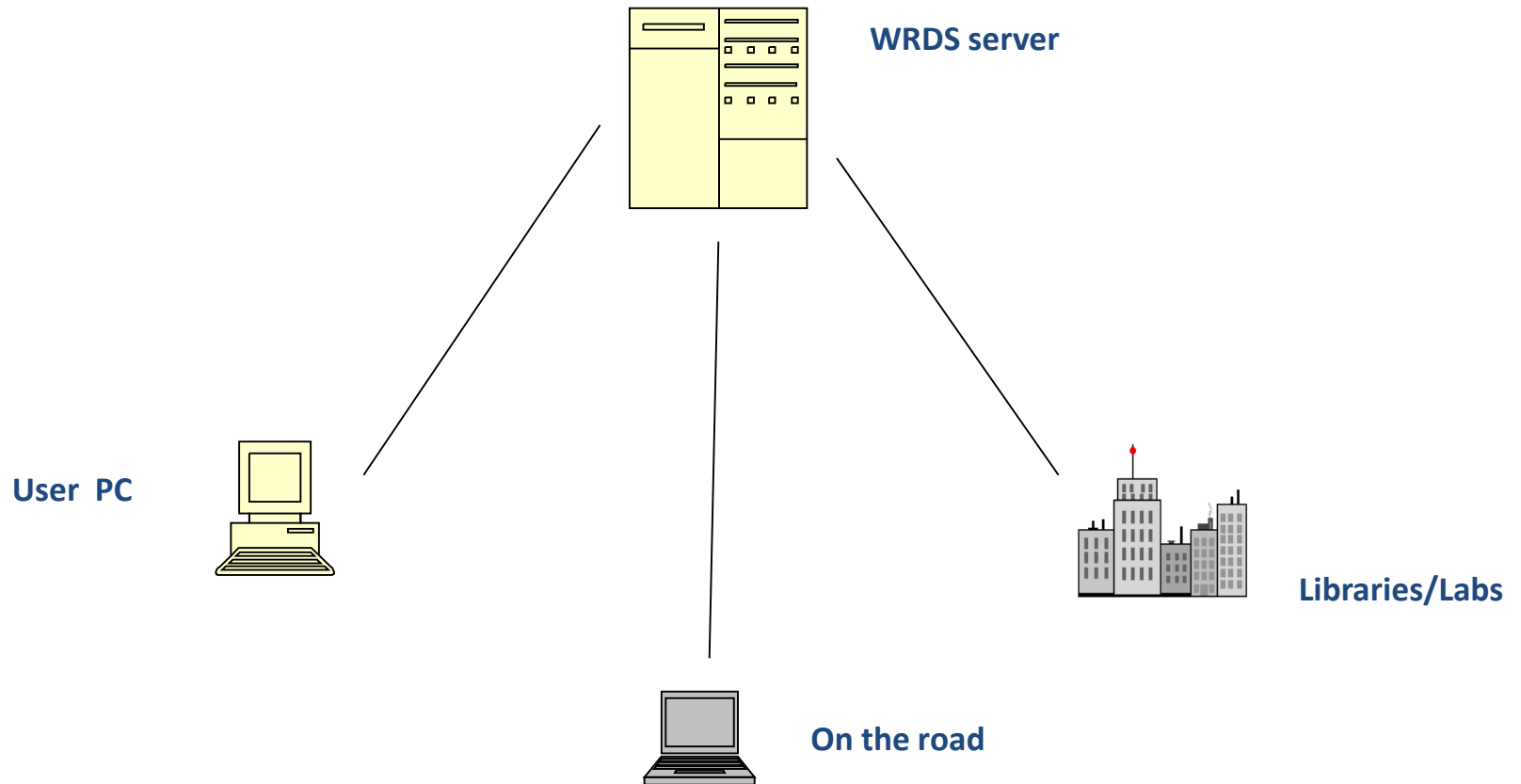
Databases *à la carte*

WRDS Subscriber



WRDS Technology

Flexibility to Connect and Get Data



WRDS Account Types

	<u>Web queries</u>	<u>UNIX login**</u>	<u>Expiration dates</u>
Faculty	X	X	
Full time Staff	X	X	
PhD Candidates	X	X	X
Master Students	X		X
Research Assistants	X	X	X
Visitors*	X	X	X
Shared Class Accounts	X		X
Library & IP-based	X		

* 'Visitors' must have formal, temporary appointment

** Also allows for PC SAS CONNECT sessions

Financial Information by Source

Sell-Side Analysts (brokers)

Accounting Data *Compustat & others*

- BS, IS, and CF numbers from 10-K, 10-Q filings
- Quarterly and Annual Freqs (observed with lags)
- Financial, Accounting, and Industry Specific Data (e.g. SSS, Verified Oil Reserves)
- Executive Compensation Data

(Analyst) Forecasts Data *IBES, FirstCall, & others*

- Analyst expectations about companies future Earnings (future EPS, g(sales), or SSS)
- Valuation assessments: Recommendations, Price Target
- Revisions and new estimates on daily frequency

Market Data

CRSP, OptionMetrics, & others

- Prices and Returns of equities and bonds
- Shares Outstanding, Volume, and Market Capitalization
- Historical Data, no selection or survival biases
- Prices (NAVs) and Returns of REITS and Closed end funds
- Prices, Volumes, and Implied Volatilities of traded Options
- Bond Prices, Returns, and Ratings (S&P Ratings, FISD, Trace)


Exchanges, &...

Ownership Data

Thomson Reuters' Ownership Data

- Ownership by companies' insiders and large blockholders
- Aggregate Ownership by institutions with >\$100million in discretionary assets, at the security level (e.g. hedge funds, mutual funds – Vanguard Group)
- Ownership by mutual fund management companies, at the fund level (e.g. Vanguard S&P500 Index Fund, etc...)

SEC
EDGAR, IAPD,...

Select a Data Set: [Help me find my data](#)**Contact Support**

Need help with a specific issue
and can't find the answer online?

The WRDS support team can help.
Send us your questions by
submitting a [request for help](#).

Search WRDS [Advanced Search](#)**FAQs & Feedback**[Frequently Asked Questions](#)[Feedback](#)**Dataset List By Concept**

- Company Financials
 - + Balance Sheets and Income Statements
 - + Company Management and Ownership
 - + Earnings Forecasts
 - + Audit Information
 - + Banks
- Financial Markets and Prices
 - + Stock Prices
 - + Market Indices and Factors
 - + Mutual Funds and 13fs
 - + Bonds
 - + Derivatives/Options
 - + FX Currencies
- Other Data
 - + Economics
 - + Marketing

S&P's Compustat

Accounting and Financial Data

- Compustat North-America: U.S. and Canadian fundamental and market information on around 31,000 active and inactive publicly held companies, from 1950-present
- Compustat Global: fundamental, market, and currency data for more than 30,000 publicly traded companies in global markets (>80 countries), from 1988-present
- Fundamental data available on an annual and quarterly frequencies with thousands of Income Statement, Balance Sheet, Statement of Cash Flows, and supplemental & industry-specific data items
- Market data available on a monthly and daily frequencies with Prices, Dividends, Returns, Trading Volume , Shares Outstanding and Short-Interest Information
- Information on Indices, Segments, Banks, Incentive plans, Pension Data Items, as well as: Executive Compensation and S&P Credit Ratings Xpress
- In the summer of 2007, WRDS adopted the Xpressfeed format of Compustat North America, containing more details on a wider array of companies

Compustat Example – Live Demo

- Get Current Assets, Inventories, and Long-Term Debt for Microsoft, Dell, and IBM between Jan 2000 and April 2009

<http://wrds-web.wharton.upenn.edu/wrds/ds/comp/funda/index.cfm>

[Index Constituents](#)
[Index Fundamentals](#)
[Index Prices](#)
[Industry Specific Annual](#)
[Industry Specific Quarterly](#)
[Pension Annual](#)
[Pension Quarterly](#)
[Ratings](#)
[Security Monthly](#)

[Compustat North America - Updated Annually](#)

[Fundamentals Annual](#)
[Fundamentals Quarterly](#)
[Industry Specific Annual](#)
[Industry Specific Quarterly](#)
[Pension Annual](#)
[Pension Quarterly](#)
[Ratings](#)
[Security Monthly](#)

[Emerging Markets Data Base \(EMDB\)](#)

[Daily Stock File](#)
[Monthly Market](#)
[Monthly Global Indices](#)
[Monthly Investable Indices](#)
[Monthly Stock File](#)
[Daily Index File](#)
[Stock ID File](#)

[Executive Compensation](#)
[Annual Compensation](#)
[Company Financial and Director Compensation for 2005 and prior](#)
[Deferred Compensation](#)
[Director Compensation](#)
[Long Term Incentive Awards - 1992 Format](#)
[Outstanding Equity Awards](#)

Step 1: What date range do you want to use?

Datadate is the reporting date for a record; for annual data it is the last calendar day of the fiscal year. Most companies report annual data on December 31.
 (Admin Edit - FormStep1)

Date Variable: Datadate Fiscal Year

I would like data from Jan 2000 to Apr 2009

Step 2: How would you like to search this dataset?

(Admin Edit - FormStep2)

What format are your company codes?

- TIC
 GVKEY
 CUSIP
 SIC
 NAICS
 CIK

How does this work?

- Manually enter Company code

Company Code [Code Lookup]

MSFT IBM DELL

Please enter Company codes separated by a space.

Example: IBM MSFT DELL

Balance Sheet Items (3 of 386 selected)

Select the items you would like to include in your search. For more information on each code, use the corresponding help link.

- DLTT -- Long-Term Debt - Total
- DM -- Debt Mortgages & Other Secured
- DN -- Debt Notes
- DPACB -- Depreciation (Accumulated) Buildings
- DPACC -- Depreciation (Accumulated) Construction in Progress
- DPACLI -- Depreciation (Accumulated) Land and Improvements
- DPACLS -- Depreciation (Accumulated) Leases
- DPACME -- Depreciation (Accumulated) Machinery and Equipment
- DPACNR -- Depreciation (Accumulated) Natural Resources
- DPACO -- Depreciation (Accumulated) Other
- DPACRE -- Accumulated Depreciation of RE Property

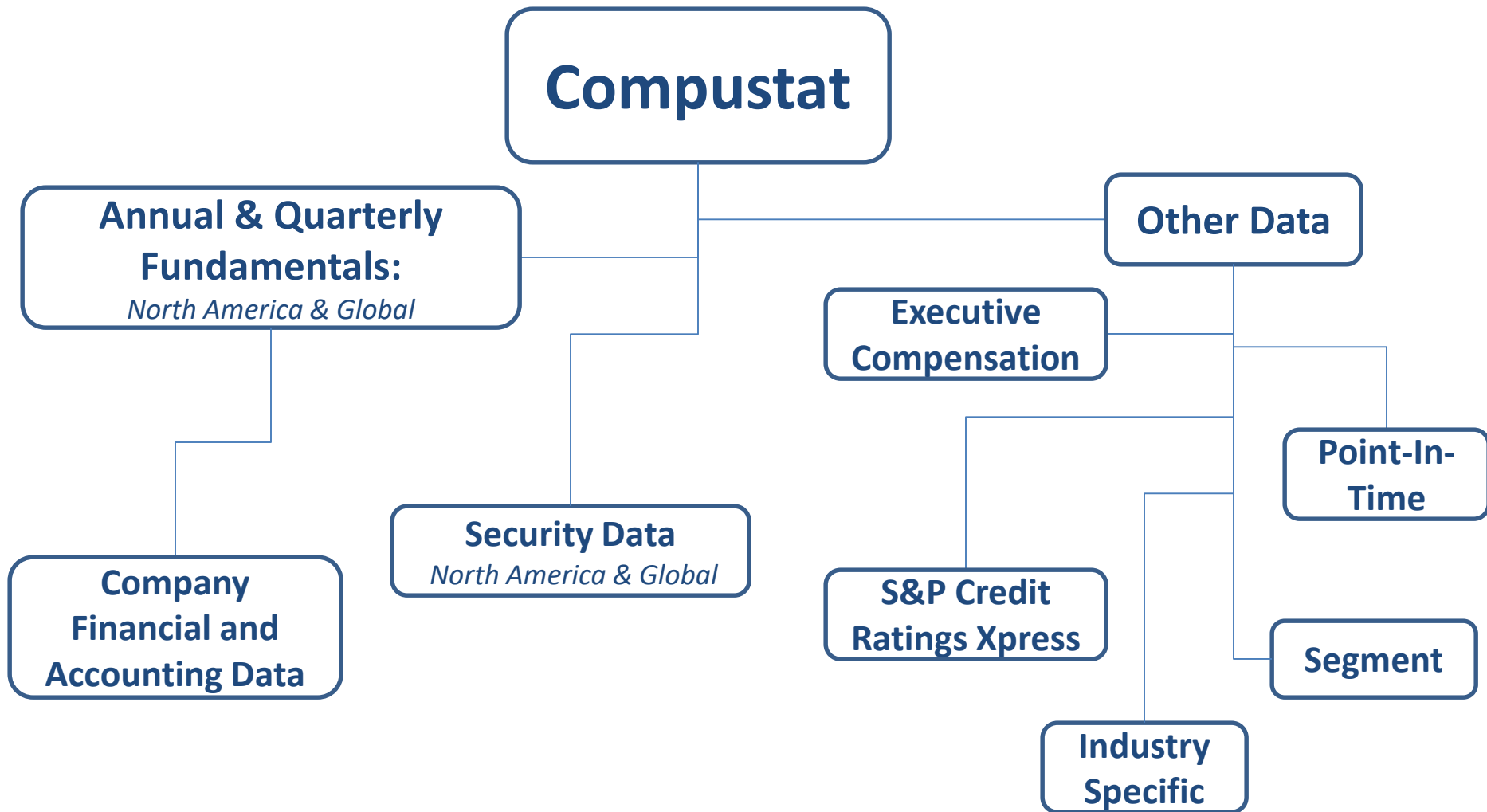
Selected Items

- ACT -- Current Assets - Total
- INVT -- Inventories - Total
- DLTT -- Long-Term Debt - Total

Check All | Uncheck All

Basic Compustat Structure

Fundamental Data



WRDS Support: Compustat

- Overview to Compustat XPressfeed Database, FAQs, and WRDS Reference Materials

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_001Compustat/index.cfm

For more about this dataset, see the [Variable Descriptions](#), [Dataset List](#), [Manuals and Overviews](#) or [FAQs](#).

- Comprehensive Dataset and Variable List

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_002Dataset%20List.cfm?dataVendor=comp

- Financial Statements, S&P 500 Index Constituents, and other Tools:

http://wrds-web.wharton.upenn.edu/wrds/aux_/finstate/indexqtr.cfm

<http://wrds-web.wharton.upenn.edu/wrds/ds/comp/spindex/index.cfm>

- Sample Programs: extracts, filing dates, portfolios, earnings surprises, # of segments, etc.

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_003Sample%20Programs/Compustat/index.cfm

- Research Applications: book-to-market, linking, etc.

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_004Research%20Applications/index.cfm

CRSP

Stock Market Data

- Center for Research in Security Prices (CRSP) is a research center at the Booth School of Business of the University of Chicago
- Comprehensive collection of daily and monthly security price, return, and volume data for the NYSE, AMEX and NASDAQ stock markets
- Daily and Monthly data for roughly 28,000 securities of Domestic companies and ADRs traded on major exchanges (no OTC), from 1925–present
- Complete historical information (bias-free):
 - Accurate accounting of special distributions and stock splits in return calculation
 - Keep delisting companies (pre-M&A or bankruptcies), and delisting returns
- Additionally provide stock indices, beta- and cap-based portfolios, treasury bond and risk-free rates, CRSP/Compustat Merged Database, REITs, and mutual fund databases

CRSP Example – Live Demo

1. Get monthly prices, return and volume information for Microsoft and Ford from 1925 to 2008
2. Find all stocks that were trading in NYSE at the end of November 1929, and get their month-end prices, return and volume information

<http://wrds-web.wharton.upenn.edu/wrds/ds/crsp/mstk/index.cfm?navGroup=AnnualUpdateMonthlyStocks>

CRSP

Annual Update

- Monthly Stocks
- Monthly Stock File
- Monthly Market Indices
- ☑ Daily Stocks
- ☑ CRSP/COMPUSTAT Merged
- ☑ Fama TBILL Structures
- ☑ Indices/Deciles: Annual
- ☑ Indices/Deciles: Daily
- ☑ Indices/Deciles: Monthly
- ☑ Indices/Deciles: Portfolio Assignments
- ☑ Indices/Deciles: Quarterly
- ☑ Indices/Deciles: Treasury and Inflation
- ☑ Monthly Treasuries
- ☑ Daily Treasury
- ☑ Tools

Mutual Funds

- ☑ Mutual Funds

Ziman REIT

- ☑ Ziman REIT

Quarterly Update

- ☑ Monthly Stocks
- ☑ Daily Stocks
- ☑ CRSP/COMPUSTAT Merged
- ☑ Fama TBILL Structures
- ☑ Indices/Deciles: Annual
- ☑ Indices/Deciles: Daily
- ☑ Indices/Deciles: Monthly
- ☑ Indices/Deciles: Portfolio

For more about this dataset, see the [Variable Descriptions](#), [Dataset List](#), [Manuals and Overviews](#) or [FAQs](#).

Step 1: What date range do you want to use?

[\(Admin Edit - FormStep1\)](#)

I would like data from Jan 1925 to Dec 2008

Step 2: How would you like to search this dataset?

[\(Admin Edit - FormStep2\)](#)

What format are your company codes?

- TICKER
- PERMNO
- PERMCO
- CUSIP
- NCUSIP
- HSICCD
- SICCD

[How does this work?](#)

- Manually enter Company code

Company Code [[Code Lookup](#)]

msft f

Time Series Information (3 of 11 selected)

Select the items you would like to include in your search. For more information on each code, use the corresponding help link.

- Price
- Price Alternate
- Price Alternate Date
- Ask or High
- Bid or Low
- Closing Bid
- Closing Ask
- Share Volume
- Holding Period Return
- Spread Between Bid and Ask
- Holding Period Return without Dividends

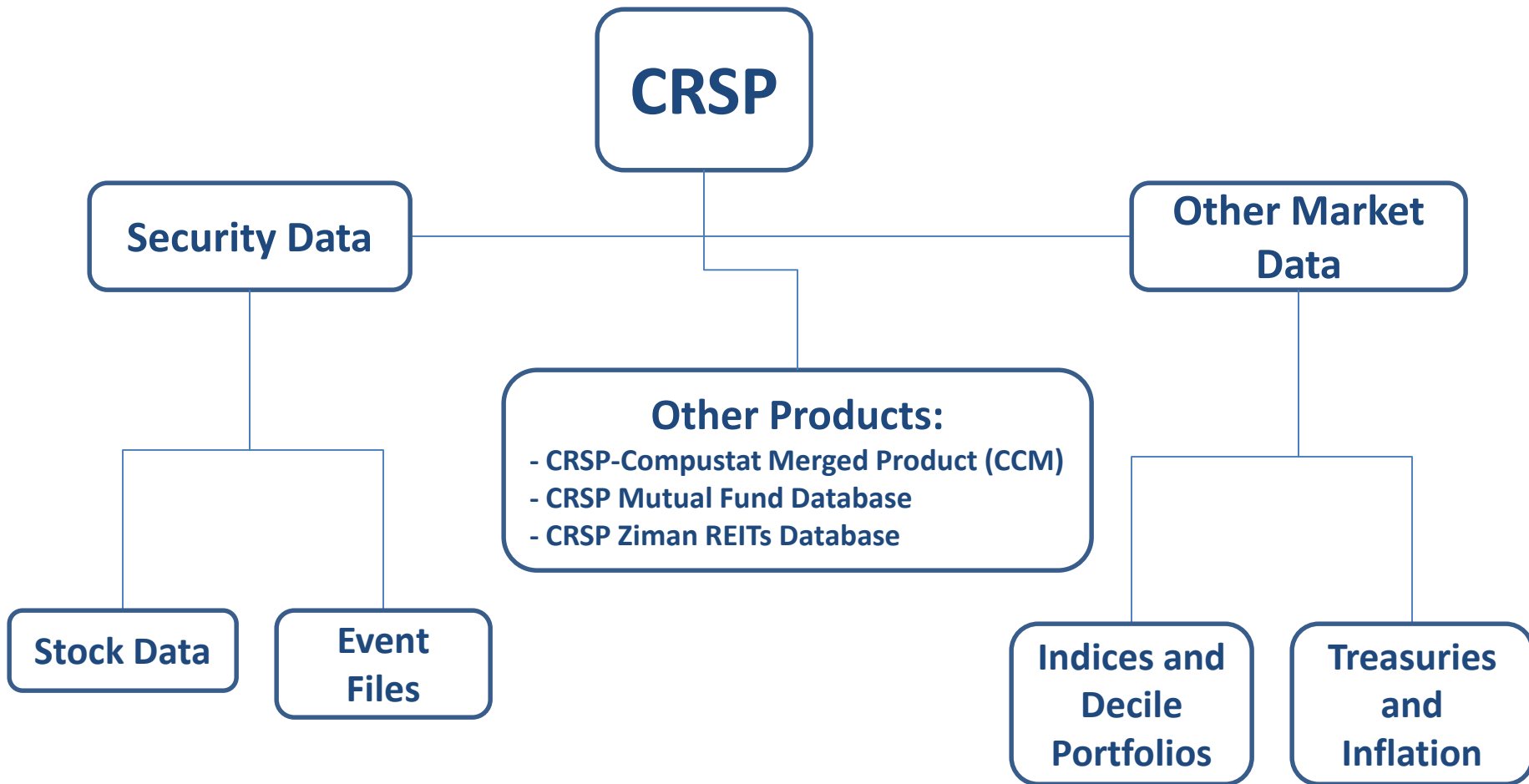
Selected Items

- Price
- Share Volume
- Holding Period Return

[Check All](#) | [Uncheck All](#)

Basic CRSP Structure

Monthly Security Data



WRDS Support: CRSP

- Comprehensive Dataset and Variable Lists, FAQs, Manuals & Data Guides
http://wrds-web.wharton.upenn.edu/wrds/support/Data/_002Dataset%20List.cfm?dataVendor=crsp
http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_002CRSP/index.cfm
- Linking CRSP-Compustat Data (with and without CCM Product)
http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_002CRSP/index.cfm
- Tools: Returns + Decile Assignments , Translate to PERMNO/PERMCO , Mutual Fund Returns & Fama-French , Market Indices , Events and Names
<http://wrds.wharton.upenn.edu/home/tools.shtml>
- Sample Programs: Data Extracts, CCM and merging by CUSIP, Calculate CAPM beta, Excess returns, Portfolio formations, plots, Event studies, Mutual fund data
http://wrds-web.wharton.upenn.edu/wrds/support/Data/_003Sample%20Programs/CRSP/index.cfm
- Research Applications: Compounded returns, Momentum and Governance Portfolios, Rolling Regressions, Beta Estimation, Event Studies etc.
http://wrds-web.wharton.upenn.edu/wrds/support/Data/_004Research%20Applications/index.cfm

Thomson Reuters' IBES

Analyst Forecast Data

- Analysts earnings and sales forecasts (+), consensus estimates, and Buy/Hold/Sell Recommendations
- Comprehensive Global Coverage: Domestic and International public companies from 1980–present
- Features up to 26 forecast measures including GAAP and pro-forma EPS, revenue/sales, net income, ROA, ROE, pre-tax profit and operating profit, EBIDTA, etc.
- Company indentifying information and exchange rates
- **NEW** data on price targets, company level footnotes and restated actuals (all in detailed and summary formats)

IBES Example – Live Demo

- Get price target data for Lehman Brothers between July -Sep 2008 (e.g., value, horizon, announcement date, analyst name)

<http://wrds-web.wharton.upenn.edu/wrds/ds/ibes/ptgdet/index.cfm>

IBES

Detail History

[Detail](#)
[Actuals](#)
[Restated Actuals](#)
[Adjustments](#)
[Identifier](#)
[Excluded Estimates](#)
[Stopped Estimate](#)
[Company Level Footnote](#)
[Price Target](#)
[Stop Price Target](#)

Summary History

[Summary Statistics](#)
[Actuals, Pricing and Ancillary](#)
[Restated Actuals](#)
[Adjustment Factors](#)
[Company Identification](#)
[Company Level Footnote](#)
[Secondary Revision Momentum](#)
[Summary Statistics \(2nd Mean\)](#)
[Price Target](#)

Unadjusted Detail

[History](#)
[Actuals](#)
[Restated Actuals](#)
[Excluded Estimates](#)
[Price Target](#)

Unadjusted Summary

[Summary Statistics](#)
[Actuals, Pricing and Ancillary](#)
[Restated Actuals](#)
[Summary Statistics \(2nd Mean\)](#)

Recommendations

[Detail](#)
[Detail Identification](#)
[Summary Statistics \(Consensus Recommendations\)](#)
[Summary Identification](#)

For more about this dataset, see the [Variable Descriptions](#), [Dataset List](#), [Manuals and Overviews](#) or [FAQs](#).

Step 1: What date range do you want to use?

[\(Admin Edit - FormStep1\)](#)

Date Variable

Announce Date

I would like data from Jul 2008 to Sep 2008

Step 2: How would you like to search this dataset?

[Using Ticker Symbols and Cusips](#)

You can further refine the search by selecting values for the IBES Universe (U.S. and/or International files).

[\(Admin Edit - FormStep2\)](#)

What variable would you like to search by?

- Official Ticker
 I/B/E/S Ticker
 CUSIP (8-digit)

[How does this work?](#)

- Manually enter Company code

Company Code [[Code Lookup](#)]

LEHM

Please enter company codes separated by a space.

Example: IBM MSFT DELL

Other Variables (6 of 12 selected)

Select the items you would like to include in your search. For more information on each code, use the corresponding help link.

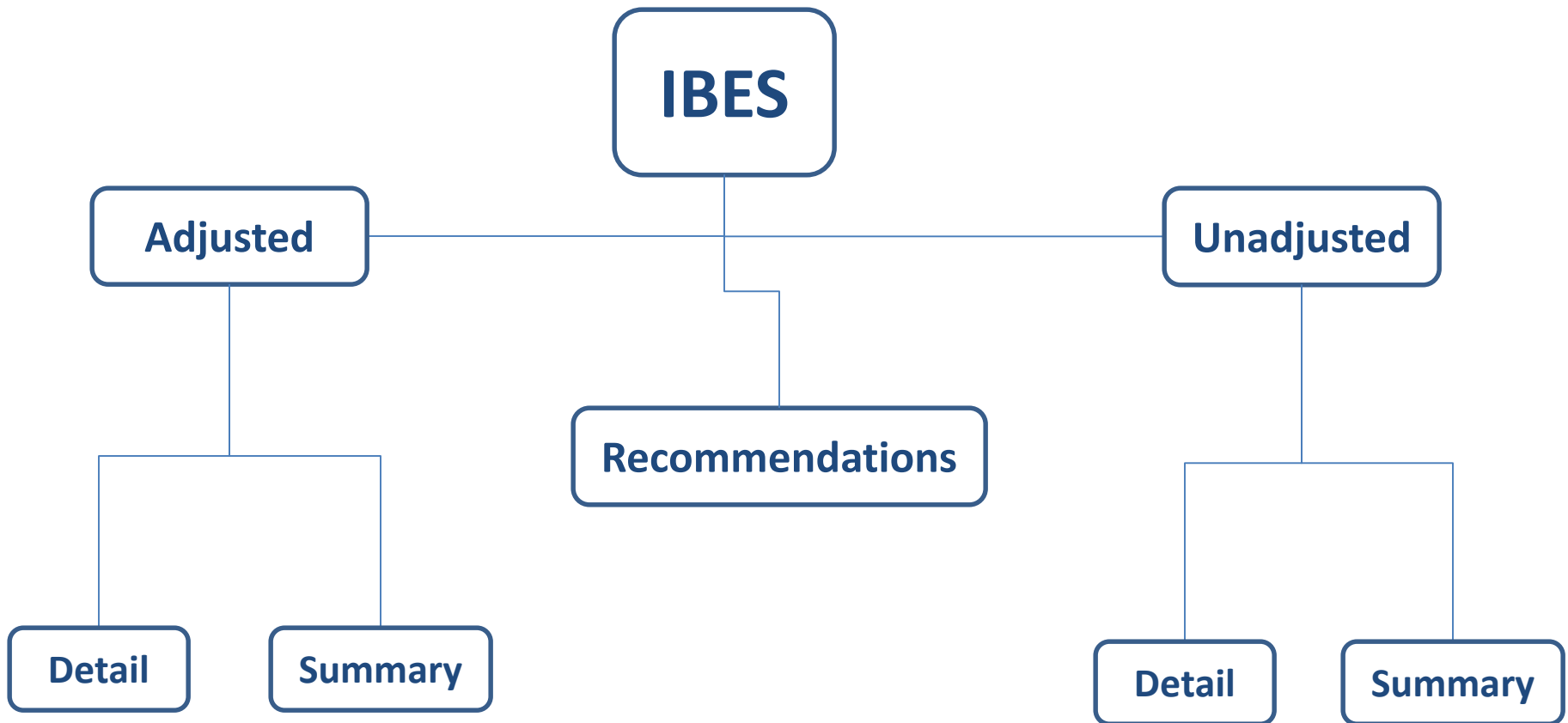
- Estimator ID
 Activation Date, SAS Format
 Activation Time, SAS Format
 Analyst Name
 Analyst Mask Code
 Announce Date, SAS Format
 Announce Time, SAS Format
 Currency at Company Level
 Estimate Currency
 Horizon
 USFIRM=0 if from .INT file, USFIRM=0 if from .CAN file and USFIRM=1 if from .US file
 Value

[Check All](#) | [Uncheck All](#)

Selected Items

- Estimator ID
 Activation Date, SAS Format
 Value
 Analyst Name
 Announce Date, SAS Format
 Horizon

Basic IBES Structure



WRDS Support: IBES

- Detailed overview of IBES and empirical issues

http://wrds-web.wharton.upenn.edu/wrds/support/Additional%20Support/WRDS%20Presentations/_000user2007/analyst_data.pdf

- Linking IBES and CRSP

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_005Linking%20Databases/_000Linking%20IBES%20and%20CRSP%20Data.cfm

- Important updates on data quality and changes to IBES vintages

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_003I-B-E-S/index.cfm

- Sample programs and Research Applications: Calculate earnings surprises, work with unadjusted data, link recommendations and estimates, and many more

http://wrds-web.wharton.upenn.edu/wrds/support/Data/_003Sample%20Programs/I-B-E-S/index.cfm

Other Popular Databases on WRDS

- NYSE's Trades And Quotes (TAQ) Database:
 - High-frequency data
 - Intraday trades and quotes for all securities on Major US Exchanges
- Thomson Reuters Ownership Databases: 13F, Mutual Funds, Insiders
- RiskMetrics' Governance, and KLD Social Rating datasets:
 - Governance Provisions: Dual Class, Poison Pills, and other antitakeover provision dummies
 - Board of Directors: list of board members, with additional information (ownership, bio,...)
 - Shareholder Proposals and voting records: NEW Datasets on types of proposals by shareholders and votes garnered during annual meetings
 - KLD Social and Environmental Records: criteria to measure corporate social responsibility, such as environment, employee relations, human rights, governance, community issues ...
- S&P Credit Ratings Xpress, TRACE and FISD Bond Data
- Free Datasets (CBOE Indexes, DJ Averages, Fama-French, Liquidity factors)

WRDS Tools: Company & Variable Search

Company and Identification Search For North America

This search tool produces tables of company names and associated ID keys from Thomson and OSIRIS databases that primarily cover U.S. and other North America.

Select Dataset:

- COMPUSTAT North America
- CRSP Stocks
- IBES Analysts Forecasts and Estimates
- TAQ Trades and Quotes
- GSIOnline Mergers and Acquisitions
- IRRRC Takeover Defenses and Directors
- Thomson Institutional Holdings Insiders
- OSIRIS US Company Financials

Search By:

Enter company name:

Variable and Description Search

Library:

Search Fields: Both Variable Name Description/Label

Enter variable name, word, or phrase:

Matches found for pension

Use the query list link in the Web Queries column to find web query pages that use the corresponding Dataset in the table row.

bvd

LIBRARY	DATASET	VARIABLE	DESCRIPTION	WEB QUERIES
bvd	OSIRIS_QVA	DATA21095	Pension Fund Provisions	query list
bvd	OS_FIN_IND	DATA21095	Pension Fund Provisions	query list

comp

LIBRARY	DATASET	VARIABLE	DESCRIPTION
comp	ACO_PNFNDA	paddml	Pension - Additional Minimum I
comp	ACO_PNFNDA	paddml_dc	Pension - Additional Minimum I
comp	ACO_PNFNDA	pbaco	Pension - Accumulated Benefit
comp	ACO_PNFNDA	pbaco_dc	Pension - Accumulated Benefit
comp	ACO_PNFNDA	pbacomn	Pension - Accumulated Other C
comp	ACO_PNFNDA	pbacomn_dc	Pension - Accumulated Other C
comp	ACO_PNFNDA	pbacu	Pension - Accumulated Benefit

Company search tool

<http://wrds.wharton.upenn.edu/cgi-bin/tools/lookupcomp.cgi>

Allows users to search for a company by CUSIP, Ticker or company name across a host of different databases on WRDS (CRSP, Compustat, Thomson, TAQ, Insiders, etc)

Variable search tool

<http://wrds.wharton.upenn.edu/cgi-bin/tools/lookupvar.cgi>

Allows users to search for a given variable within either variable name or label or both across a wide range of various databases on WRDS (CRSP, Compustat, IBES, TAQ, Global Insight, etc)

How to Get Support

Research and Technical Support

- Online Help (24/7)
 - Database Manuals plus additional support documentation
 - Data Overviews: <http://wrds.wharton.upenn.edu/support/dataoverview.shtml>
e.g. *OptionMetrics Overview*
 - Research Applications: <http://wrds.wharton.upenn.edu/support/researchapp.shtml>
e.g. *Portfolio Construction, Event Studies*
 - Sample Programs: <http://wrds.wharton.upenn.edu/support/dslist/dsl.shtml>
e.g. *Merging CRSP and Compustat*
 - Variable Search: <http://wrds.wharton.upenn.edu/cgi-bin/tools/lookupvar.cgi>
e.g. *Compensation*
 - Company Search: <http://wrds.wharton.upenn.edu/cgi-bin/tools/lookupcomp.cgi>
e.g. *Microsoft*
- WRDS Knowledge Base: FAQ archive of answers to common user questions
<http://wrds.wharton.upenn.edu/cgi-bin/mywrds/knowledgebase.cgi>
e.g. *How to find IPO data*
- FORUMS@WRDS: Interactive users' questions and suggestions
<http://forum.wharton.upenn.edu/forums/>
e.g. *Fama and MacBeth Regressions*
- Email support at wrds-support@wharton.upenn.edu (Monday-Friday, 9a-5p EST)
Researchers and Technical Experts ready to assist with:
 - Data extraction, merging, and management.
 - Programming and technical problems
 - Other research concerns

Advanced WRDS Features

Access Data Remotely on WRDS Server

- What if a web query does not do all that you need it to do?
Example: Find all companies in 1997 with sales greater than 1 billion, total assets greater than 5 billions, and with more than 30 years of publicly reported financial statements.

	<u>Advantages</u>	<u>Disadvantages</u>
<i>Unix</i>	Simple set up.	Line-based editing. Only batch runs.
<i>PC-SAS/Connect</i>	Interactive runs.	Limited UNIX commands.

- Each method can perform a basic data extract, combining different variables from various datasets, and serve as the first step in a full-fledged statistical program. There is no need to download and import data into a separate system or even a second program to complete the analysis.
- SAS Connect makes use of both SAS menus and windows (program/log/output) for batch-style sessions with extras. Can alternate between server and PC processing.

PC-SAS / Connect – Concept

- SAS Windows software installed on your desktop
 - Standalone: your dataset in your PC
 - Remote access WRDS data by connecting to “wrds.wharton.upenn.edu” data server
 - Use WRDS powerful Unix server processing resources
 - Access Unix permanent (750MB) & temp (4.5TB) disk spaces

- Steps:

1. Connect to WRDS server

```
%let wrds = wrds.wharton.upenn.edu 4016;  
options comamid = TCP remote = WRDS;  
signon username = _prompt_;
```

2. Remote Submit

```
rsubmit;  
    {Program}  
endrsubmit;
```

PC-SAS / Connect – Example

Find all companies in Compustat in 1997, with sales greater than 1 billion, total assets greater than 5 billions, and more than 30 years of publicly reported financial statements as of fiscal year 1997

Compustat Variables: <http://wrds.wharton.upenn.edu/ds/compq/funda/doc.shtml>

PC-SAS Solution:

```
%let wrds = wrds.wharton.upenn.edu 4016;
options comamid=TCP remote=WRDS;
signon username=_prompt_;

libname home remote "~" server=wrds;

rsubmit;
libname home "~";

proc sql;
create table home.demo (where=(fyear=1997 and sale>=1000 and at>=5000 and firm_age>=30))
as select fyear, conm, tic, gvkey, sale, at, (fyear - min(fyear)) as Firm_Age
from comp.funda where not missing(at) and
    consol="C" and indfmt="INDL" and datafmt="STD" and popsrc="D"
group by gvkey;
quit;

endrsubmit;
```

PC-SAS / Connect – WRDS Support

Support

SAS Programming

[Getting Started With SAS](#)

[Recommended Texts on SAS](#)

[SAS FAQs](#)

[SAS Viewer \(Downloads\)](#)

[SAS v9 Online Documentation](#)

[The SAS Institute](#)

Accessing and Manipulating the Data - Unix Access

Unix Access

[Introduction to the WRDS Unix System](#)

[PC Logins using Client-Server Software](#)

[Remote Access to WRDS using SSH](#)

[Remote Connections to the WRDS Unix System](#)

[SCP \(Secure Copy\)](#)

[UNIX Quick Reference Sheet](#)

[Unix Disk Space](#)

[Unix and Remote Server Terminology](#)

PC SAS Connect

[Special Issues with PC SAS CONNECT](#)

[Unix and PC SAS Connect](#)

[Using PC SAS CONNECT -- Secure Port Configuration](#)

Support

Data

[Manuals and Overviews](#)

[Dataset List](#)

[Sample Programs](#)

[Research Applications](#)

[Linking Databases](#)

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The Global Standard for Business Research
<http://wrds.wharton.upenn.edu>

We are happy to assist you with all your inquiries.
For questions, please to contact us at: wrds-support@wharton.upenn.edu