



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

# WRDS E-Learning Session

## **Tutorial of Financial Datasets on WRDS – I**

### **Major Financial Databases**

**Rabih Moussawi**

November 6, 2009

# Webex Session Guidelines

Welcome to WRDS E-Learning. Please use the following Webex guidelines:

- Ask Questions via the “Chat” Window.
- Audio problems? Disconnect and call in using one of the toll free numbers listed in the reminder email.

# 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 web 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), Matching CRSP and COMPUSTAT, Linking IBES and CRSP Data, + Merging sample programs
- Extensive research and technical support
  - Online help (variable definitions, data sources, equations, manuals, tutorials, sample programs, FAQs), & email support
  - Data Overviews, Research Applications, Knowledge Base, and Forums@WRDS

# 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), Financial Services Data
- 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 (and management guidance (*FirstCall*))
- Revisions and new estimates on daily frequency

**SEC**

*EDGAR, IAPD,...*

## 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...)

# wrds Data on WRDS – Easy and Flexible Extracts



wrds

WHARTON RESEARCH DATA SERVICES  
The Global Standard for Business Research

Welcome, Rabihi! [ [Log Out](#) ]

[HOME](#)

[TOOLS](#)

[SUPPORT](#)

[FORUMS](#)

[NEWS](#)


[ABOUT](#)

[E-LEARNING](#)

 [myWRDS](#)

[Home](#) → [Support](#) → [Introduction To WRDS](#) → Dataset List by Concept

## Select a Data Set:

Select an available dataset 

[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

[Search](#) 

[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

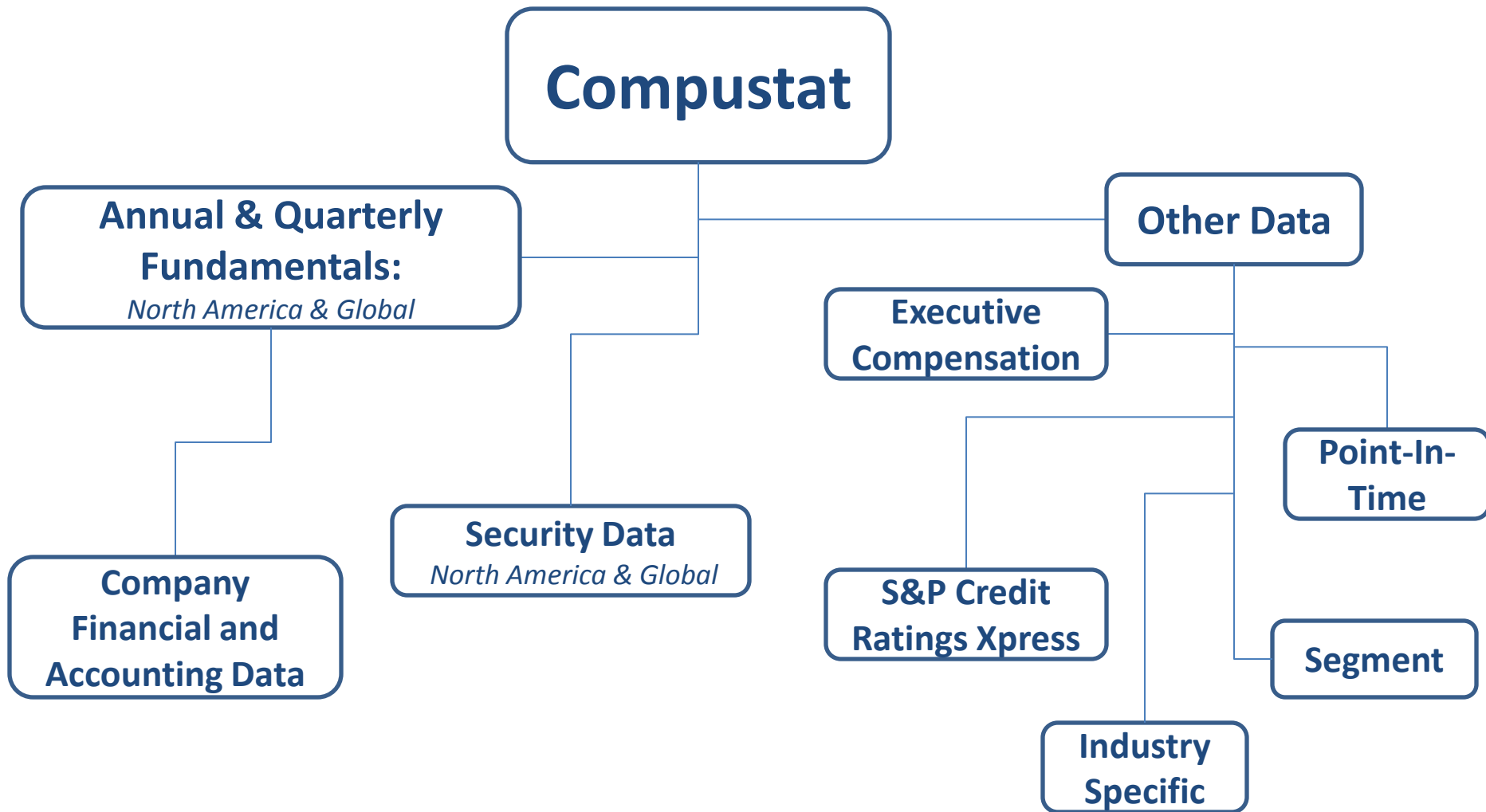
- ☒ ACT -- Current Assets - Total
- ☒ INVT -- Inventories - Total
- ☒ DLTT -- Long-Term Debt - Total

[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](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](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/\\_finststate/indexqtr.cfm](http://wrds-web.wharton.upenn.edu/wrds/aux/_finststate/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](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](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

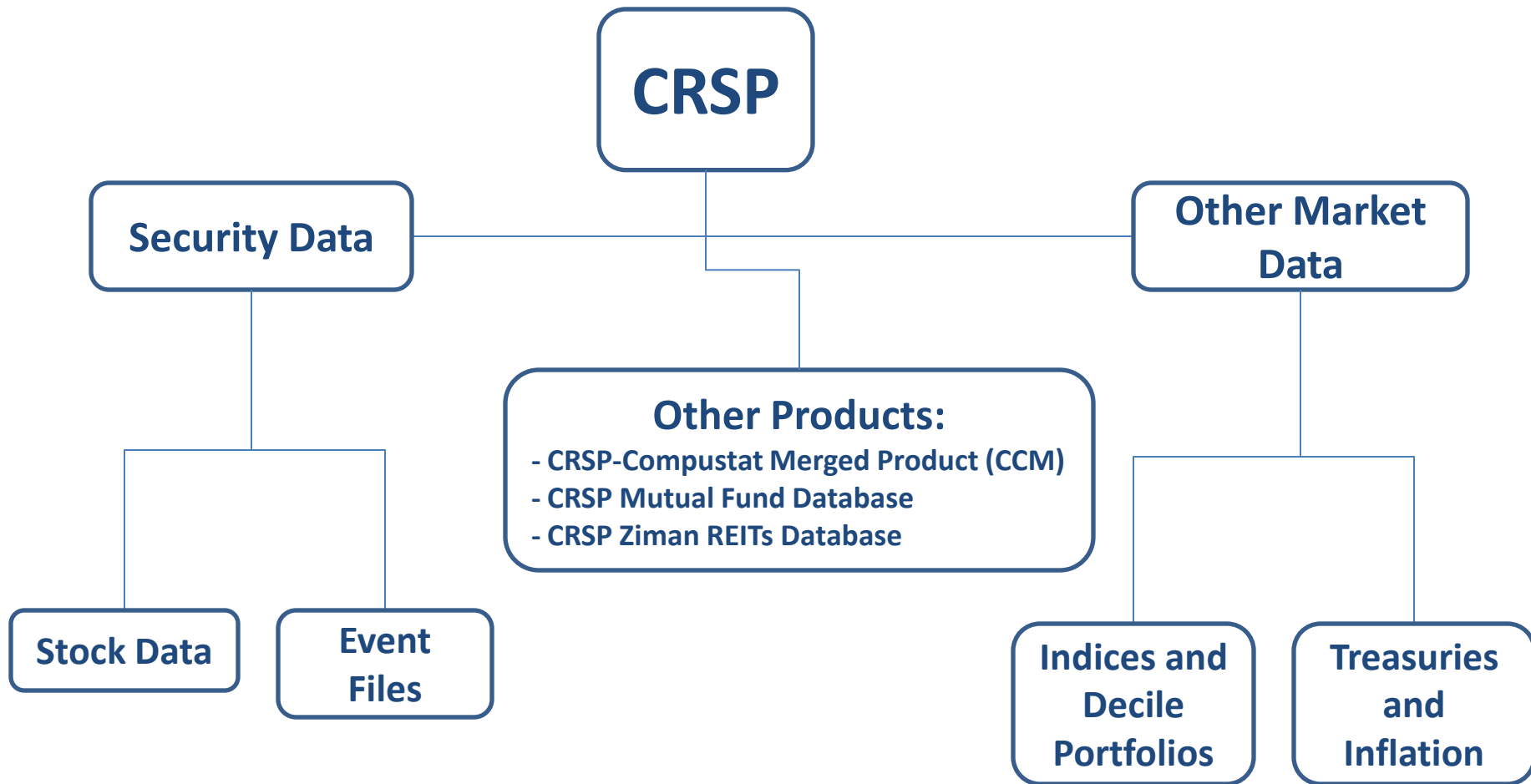
#### Selected Items

- ☒ 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/_002Dataset%20List.cfm?dataVendor=crsp)  
[http://wrds-web.wharton.upenn.edu/wrds/support/Data/\\_001Manuals%20and%20Overviews/\\_002CRSP/index.cfm](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](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](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](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

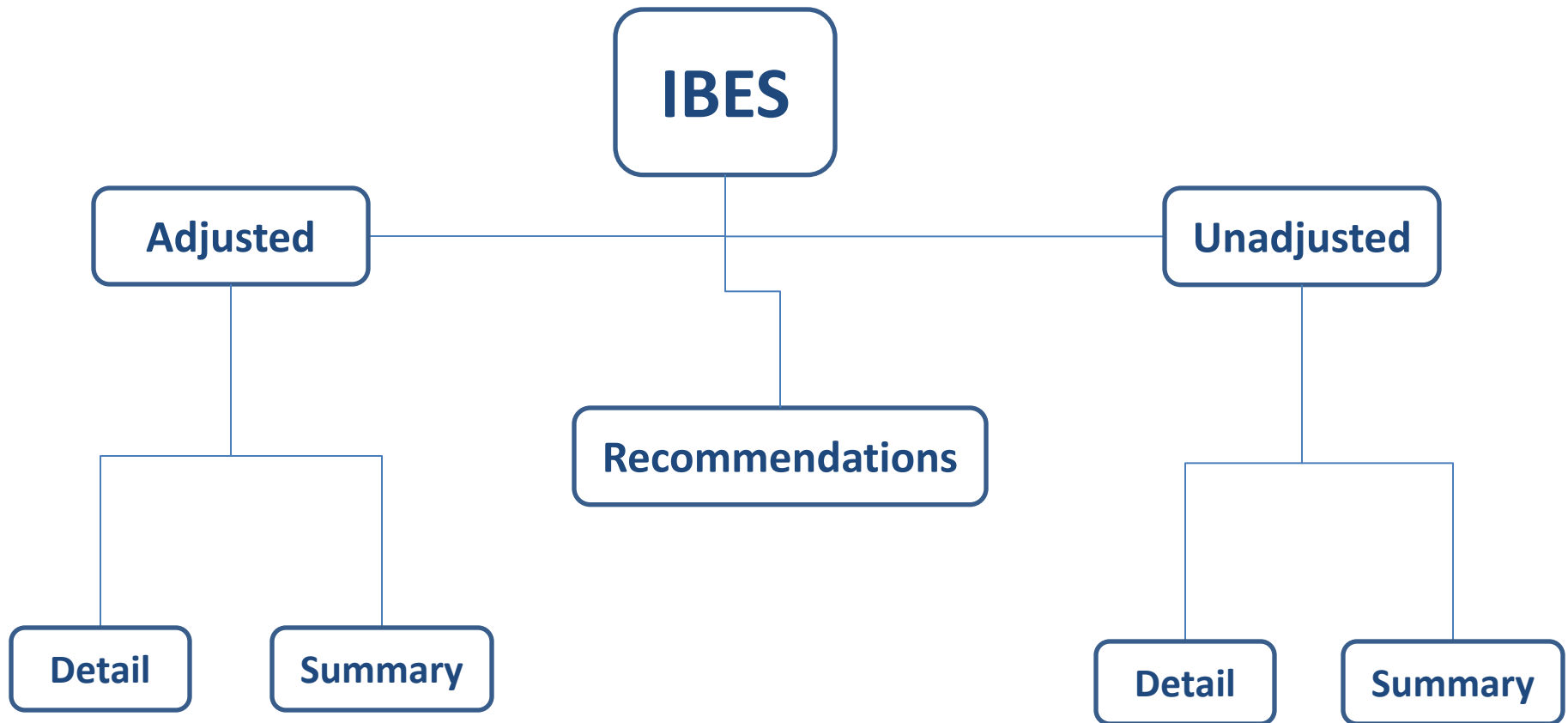
[Check All](#) | [Uncheck All](#)

#### 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](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](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](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](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 1993-2009
  - Intraday trades and quotes for all securities on US Exchanges
  - How to work with TAQ: [WRDS TAQ Research Applications](#)
- Thomson Reuters Ownership Databases: 13F, Mutual Funds, Insiders
  - Institutional Ownership
  - Research Notes: Computing Institutional Ownership Ratios and Concentration.
- RiskMetrics' Governance, and KLD Social Rating datasets:
  - Governance Provisions: Dual Class, Poison Pills, and other antitakeover provisions
  - Board of Directors information
  - Shareholder Proposals and voting records
  - KLD Social and Environmental Records
- 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
- ☒ GSIOOnline Mergers and Acquisitions
- ☒ IRRRC Takeover Defenses and Directors
- ☒ Thomson ☒ Institutional Holdings ☐ Insiders
- ☒ OSIRIS US Company Financials

Search By:

Enter company

CUSIP number  
Ticker Symbol  
Company name

name:

Find...

## Variable and Description Search

Library: ALL  
Audit Analytics  
Bank Regulatory  
Blockholders

Search Fields: ☒ Both ☐ Variable Name ☐ Description/Label

Enter variable name, word, or phrase: pension

Find...

## Matches found for pension

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

### bvd

LIBRARY	DATASET	VARIABLE	DESCRIPTION	WEB QUERIES
bvd	OSIRIS_QVA	DATA21095	Pension Fund Provisions	<a href="#">query list</a>
bvd	OS_FIN_IND	DATA21095	Pension Fund Provisions	<a href="#">query list</a>

### comp

LIBRARY	DATASET	VARIABLE	DESCRIPTION
comp	ACO_PNFNDA	paddml	Pension - Additional Minimum L
comp	ACO_PNFNDA	paddml_dc	Pension - Additional Minimum L
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](mailto: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

wrds

wrds

The Global Standard for Business Research

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

# Thank You

Thank you for attending this WRDS E-Learning session. Please look for an email from us with a link to the course materials used in this session.

If you have any questions about the material covered in this session, please email [wrds-support@wharton.upenn.edu](mailto:wrds-support@wharton.upenn.edu)

To join us in future WRDS E-Learning courses, please visit the E-Learning section of the WRDS website.