



The Global Standard for Business Research

# wrds

WHARTON RESEARCH DATA SERVICES

## WRDS使用培训

厦门大学

April 2, 2021 by Erica Zhang

# 主要内容

1. WRDS介绍
2. WRDS平台浏览及已开通数据介绍
3. 数据检索方式及提取示范
4. WRDS科研支持
5. 联系我们

# WRDS是什么?

- ✓ Wharton Research Data Services
- ✓ 宾夕法尼亚大学沃顿商学院
- ✓ 云端数据研究平台
- ✓ 600+数据库及衍生：包括Compustat、CRSP等科研常用数据库
- ✓ 多种访问形式：网页检索、Unix命令行访问、互动应用
- ✓ 增值服务：科研工具、教学工具、以及科研后备支持

# WRDS全球用户



36 国家和地区  
500+ 客户，涵盖高等院校、政府监管机构、  
公司企业和非营利机构  
75,000+ 注册用户

# WRDS中国大陆用户

北京大学	上海交通大学
清华大学	上海高级金融学院
长江商学院	上海财经大学
人民大学	上海对外经贸大学
对外经贸大学	中欧商学院
南开大学	上海立信会计金融学院
哈尔滨工业大学	宁波诺丁汉大学
中山大学	西交利物浦大学
南方科技大学	浙江大学
香港中文大学 (深圳)	南京大学
北大汇丰商学院	西南财经大学
厦门大学	闽江学院新华都商学院
中国科学技术大学	广西大学



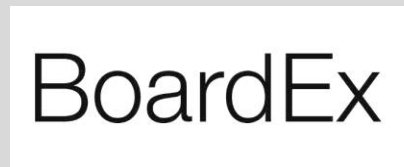
# WRDS的优势

提高研究效率：帮助研究学者缩短数据搜索、分析及论文发表的所需时间

- 一站式数据商场，提供60多个数据供应商超过 250TB 的不同学术领域的的数据，涵盖会计、银行业、经济学、金融、保险、营销和统计学等多个领域，包括标普公司全球财务数据（Compustat）、芝加哥大学价格研究中心（CRSP）、路孚特/汤森路透、TAQ、国泰安等科研常用数据。
- 以互联网为基础，WRDS 提供灵活的数据下载和互动访问模式，包括：网络查询、云服务和客户端服务（PC SAS、Matlab、Stata、R 和Python 等），以实现跨数据库无缝链接和批量处理。
- 博士研究生提供科研后备支持，提供经典论文的复制性研究，及丰富的模板和范例程序套件。

# WRDS数据合作商

以下为WRDS部分合作商



# WRDS金融领域相关常用数据库

## Financial Statements

Bureau van Dijk: Amadeus, Bankscope, ISIS, and OSIRIS  
Capital IQ Compustat Fundamental  
Capital IQ Compustat North America Annual & Quarterly  
Capital IQ Compustat Global Fundamentals  
Capital IQ Compustat Segments  
Capital IQ Compustat Point-in-Time Fundamental  
CRSP CRSP Compustat Merged (CCM)  
Factset

## Stock Market Data

CRSP Stock Monthly & Daily  
Capital IQ Compustat EMDB  
Capital IQ Compustat North American Prices  
Capital IQ Compustat Global Prices  
London Share Price Data (LSPD)  
NYSE Euronext TAQ  
OptionMetrics  
Market Factors & Indices

## Earnings Forecast & Ratings

Thomson Reuters IBES  
S&P Ratings Express  
Zacks

## Fixed Income & Loan Data

CRSP Treasuries  
GOVPX  
Mergent FISD and NAIC  
Thomson Reuters DealScan  
TRACE  
Markit CDS

## Corporate Governance

Capital IQ Compustat Execucomp  
Corporate Library  
RiskMetrics  
KLD

## Ownership Data

CRSP Mutual Funds  
HFR  
Thomson Reuters Insiders  
Thomson Reuters 13F  
Thomson Reuters Mutual Funds  
WRDS MFLINKS

## WRDS SEC Analytics Suite

WRDS SEC Filing  
WRDS CIK Linking Tables  
WRDS Filing Exhibits  
WRDS 8-K Items

## Other Databases

Global Insight Economics  
Global Insight Commodities  
Global Insight Market Indices  
Call Reports  
Bank Holding Company Reports

更多数据请访问 [Browse Data by Concept](#)



WRDS平台浏览  
&  
厦门大学已开通数据介绍

# 注册WRDS

[wrds-www.wharton.upenn.edu](http://wrds-www.wharton.upenn.edu)

The screenshot shows the WRDS website homepage. The browser's address bar is highlighted with a red box and contains the URL `wrds-www.wharton.upenn.edu`. In the top right navigation bar, the `REGISTER` link is highlighted with a red arrow. The main content area features the Wharton logo and the text "wrds WHARTON RESEARCH DATA SERVICES". Below this is a large "wrds" logo and the tagline "The Global Standard for Business Research". A login form with fields for "Username" and "Password" and a "Login" button is visible. On the right, there is a "Research Analytics at WRDS" section with icons for "RESEARCH APPLICATIONS", "CLOUD COMPUTING", "TUTORIALS", and "CLASSROOM BY WRDS". A video player at the bottom right shows a play button and a duration of 02:30.

# 注册WRDS Register for WRDS

提交申请后将由  
WRDS管理员审批  
您的请求，并在审  
批通过后邮件告知。

Username

Please choose a username.

Required. 4 to 15 characters long. Lowercase letters and digits only. Must start with a letter.

Password

Please choose a password.

- Your password must contain at least 12 characters.
- Your password can't be a commonly used password.
- Your password can't be entirely numeric.
- Passwords may contain ASCII letters, numbers, spaces, and punctuation characters: `~!@#\$\$%^&\*()-=\_+[]\|:;'",./<>?

Password confirmation

Please choose a password.

Enter the same password as before, for verification.

First name

Last name

Email address

Please enter your institutional email address.

Subscriber

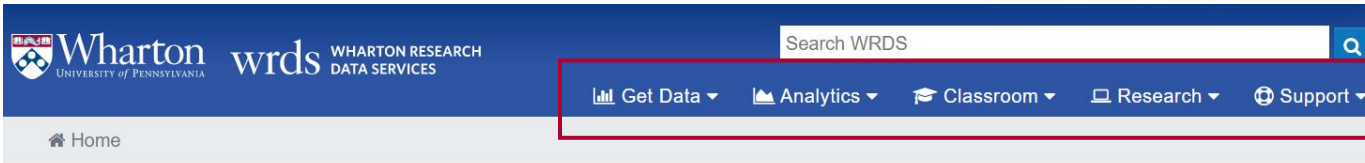
User type

The account type of this user.

Expiration date

Department

# WRDS主页面



主要功能



Researchers



Instructors



Information Professionals



点击Get Data → All Data查看所有数据。下拉至Trial Subscriptions可查看数据商提供的样本数据。

## Subscriptions

Data Dashboard >>

» 2iQ	2	» Healthbase	13	» RavenPack	16
» Free Data	2	» Hedge Fund Researc...	18	» RepRisk	14
» American Hospital As...	9	» IBES	113	» Research Quotient	1
» Audit Analytics	48	» IHS Global Insight	2	» SEC Order Execution	1

## WRDS News

- 29 MAR Wharton Research Data Services adds Refinitiv Datastream and ESG ...  
March 29th, 2021
- 10 MAR Webinar: Essential Regulators' Toolkit: Deep Dive on Data

在“Subscriptions”中查看全部已开通数据

# D.A.R.T Paths在线视频教学

Wharton UNIVERSITY OF PENNSYLVANIA wrds WHARTON RESEARCH DATA SERVICES

Search WRDS

Get Data Analytics Classroom Research Support

Home



Researchers



Instructors



Information Professionals



## Subscriptions

Data Dashboard >>

## WRDS News

- |                           |    |                         |     |                       |    |
|---------------------------|----|-------------------------|-----|-----------------------|----|
| » 2iQ                     | 2  | » Healthbase            | 13  | » RavenPack           | 16 |
| » Free Data               | 2  | » Hedge Fund Researc... | 18  | » RepRisk             | 14 |
| » American Hospital As... | 9  | » IBES                  | 113 | » Research Quotient   | 1  |
| » Audit Analytics         | 48 | » IHS Global Insight    | 2   | » SEC Order Execution | 1  |

- 29 MAR Wharton Research Data Services adds Refinitiv Datastream and ESG ...  
March 29th, 2021
- 10 MAR Webinar: Essential Regulators' Toolkit: Deep Dive on Data

根据不同应用场合、科研需求，用户可随时随地进行自主学习。

# 公开数据库

以下数据库为WRDS免费提供。具体内容请从WRDS主页面Subscriptions中查看。

Bank Regulatory Database	IRI Marketing Factbook
Blockholders	Penn World Tables
CBOE Indexes	Philadelphia Stock Exchange
DMEF	SEC Disclosure of Order Execution
Dow Jones	TRACE
Fama-French Portfolios and Factors	MSRB
FDIC Database Files	OTC Markets
Federal Reserve Bank Reports	Federal Judicial Center

# 厦门大学 – 其他已订阅数据库

## S&P Compustat & Capital IQ (标普全球) :

- **子库: Compustat NA, Global, Bank, Segments**
- 全面的财务数据库, 收录公司的营运及财务状况信息。数据库覆盖130个国家, 超过104,000个上市/退市公司; 超过130,000个证券, 几乎涵盖超过99%的市值。财务数据回溯到1950年。

## CRSP (美国芝加哥大学证券价格研究中心) :

- **子库: CCM, Stock, Treasury**
- 最全面的汇聚了纽约证券交易所、美国证券交易所及纳斯达克股市证券价格、回报和成交量系列数据。最早可回溯到1926年。

## Option Metrics (期权研究通用数据集) :

- 包含1996年以来所有美国交易所上市和纳斯达克股票和市场指数以及所有在美国上市的指数和股票期权的数据; 以及涵盖了来自EU国家自2002年1月以来超过900种有价期权证券。

# 数据检索方式及提取示范

1. 网页检索
2. 云服务
3. 客户端互动应用



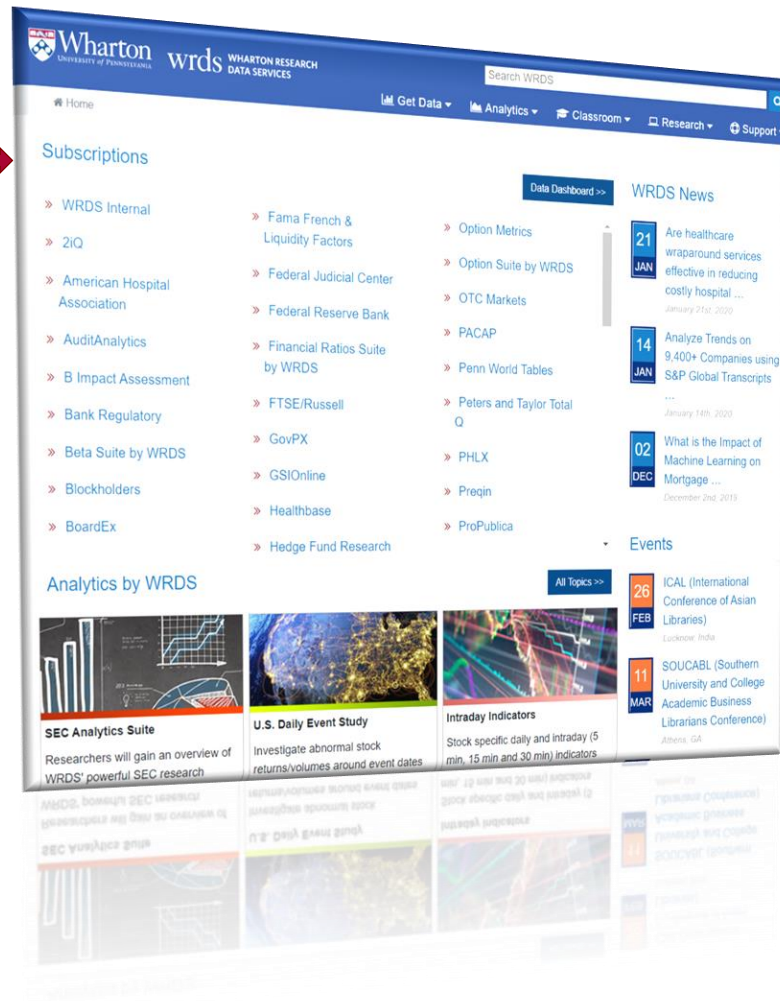
# 网页检索：最简便的检索方式



WRDS



网络



The screenshot displays the Wharton WRDS website interface. The header includes the Wharton University of Pennsylvania logo, the WRDS logo, and a search bar. Navigation links for Home, Get Data, Analytics, Classroom, Research, and Support are visible. The main content area is divided into several sections:

- Subscriptions:** A list of various data services including WRDS Internal, 2iQ, American Hospital Association, AuditAnalytics, B Impact Assessment, Bank Regulatory, Beta Suite by WRDS, Blockholders, BoardEx, Fama French & Liquidity Factors, Federal Judicial Center, Federal Reserve Bank, Financial Ratios Suite by WRDS, FTSE/Russell, GovPX, GSIOnline, Healthbase, Hedge Fund Research, Option Metrics, Option Suite by WRDS, OTC Markets, PACAP, Penn World Tables, Peters and Taylor Total Q, PHLX, Preqin, and ProPublica.
- Data Dashboard:** A section with a right-pointing arrow.
- WRDS News:** A section featuring three news items with dates and titles, such as "Are healthcare wraparound services effective in reducing costly hospital ...", "Analyze Trends on 9,400+ Companies using S&P Global Transcripts", and "What is the Impact of Machine Learning on Mortgage ...".
- Events:** A section listing upcoming events like "ICAL (International Conference of Asian Libraries)" and "SOU CABL (Southern University and College Academic Business Librarians Conference)".
- Analytics by WRDS:** A section with three featured analytics tools: "SEC Analytics Suite" (Investigate abnormal stock returns/volumes around event dates), "U.S. Daily Event Study" (Investigate abnormal stock returns/volumes around event dates), and "Intraday Indicators" (Stock specific daily and intraday (5 min, 15 min and 30 min) indicators).

# 网页检索 – Compustat示例

通过网页检索从Compustat数据库中提取IBM和Amazon公司近10年季度报表中的以下科目：Total Assets、Total Liabilities、Total Equity、Net Income

登陆WRDS Homepage → Compustat – Capital IQ → Compustat/ North America – Daily → Fundamentals Quarterly

第一步: 设置时间范围为2010年1月至2020年12月。

第二步: 找到IBM和Amazon公司的识别码。

第三步: 选中变量Total Assets, Total Liabilities, Total Equity和Net Income。

第四步: 选择结果呈现形式。

# 网页检索 – Compustat示例

[Home](#) / [Get Data](#) / [Compustat - Capital IQ](#)

## Compustat - Capital IQ

S&P Global Market Intelligence Data Through Wharton Research Data Services

### Compustat

Compustat

» North America - Daily

18

» Bank - Daily

2

» Snapshot

7

» Global - Daily

5

» Historical Segments - Daily

2

» Execucomp

9

### Capital IQ

Capital IQ

» Transactions

12

» Capital Structure

3

» Key Developments

1

» S&P Credit Ratings

4

» Transcripts

2

» Identifiers

1

» People Intelligence

3

**S&P Global**

Market Intelligence

[More About This Vendor >>](#)

#### Knowledge Base

» Compustat Index Constituents Removed

» North America

» Global

#### Manuals and Overviews

» Compustat Online Manual

» WRDS Overview of Compustat North America - Global - Bank

» Execucomp

#### Additional Tools

# 网页检索 – Compustat示例

## North America - Daily

### North America - Daily

**Compustat North America** is a database of U.S. and Canadian fundamental and market information on active and inactive publicly held companies. It provides more than 300 annual and 100 quarterly Income Statement, Balance Sheet, Statement of Cash Flows, and supplemental data items. For most companies, annual history is available back to 1950 and quarterly history back to 1962 with monthly market history back to 1962.

Compustat North America files also contain information on aggregates, industry segments, banks, market prices, dividends, and earnings.

» Fundamentals Annual

» Fundamentals Quarterly

» Index Constituents

» Index Fundamentals

» Index Prices

» Industry Specific Annual

» Industry Specific Quarterly

» Pension Annual

» Pension Quarterly

» Ratings

» Security Daily

» Security Monthly

**S&P Global**

Market Intelligence

[More About This Vendor >>](#)

### Knowledge Base

» [Compustat Index Constituents Removed](#)

» [North America](#)

» [Global](#)

### Manuals and Overviews

» [Compustat Online Manual](#)

» [WRDS Overview of Compustat North America - Global - Bank](#)

» [Execucomp](#)

### Additional Tools



# 网页检索 – Compustat示例

Compustat - Capital IQ

North America - Daily

Fundamentals Annual

Fundamentals Quarterly

Index Constituents

Index Fundamentals

Index Prices

Industry Specific Annual

Industry Specific Quarterly

Pension Annual

Pension Quarterly

Ratings

Security Daily

Security Monthly

Query Form

Variable Descriptions

Manuals and Overviews

FAQs

Dataset List

Compustat | 指标/标量 | 用户手册/指南 | 常见问题 | 数据列表

[alert](#)

[documentation](#)

**Step 1:** Choose your date range.

[FormStep1](#)

Date Variable:

Data Date

Date range

2010-01

to

2021-03

**Step 2:** Apply your company codes.

[FormStep2](#)

TIC  GVKEY  CUSIP  SIC  NAICS  CIK  GIC Sub-Industry

Select an option for entering company codes

Company Codes

Code List Name

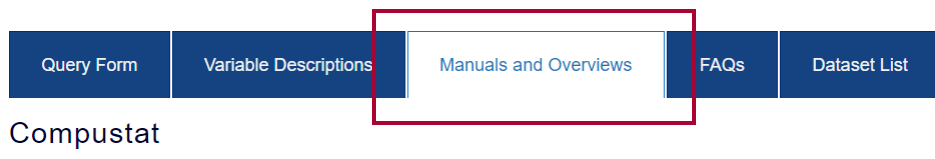
Please enter Company codes separated by a space.

Example: IBM MSFT DELL [ [Code Lookup](#) ]

[company\\_codes](#)

Save code list to Saved Codes

# 网页检索 – Compustat示例



## Compustat Manuals and Overviews

### North America - Global - Bank

📄 [Compustat Online Manual](#)

» [WRDS Overview of Compustat North America - Global - Bank](#)

📄 [Balancing Model - Compustat Bank](#)

📄 [Understanding the Data](#)

[More North America - Global - Bank resources](#) ↕

### Execucomp

📄 [ExecuComp Company Names](#)

» [Input for BlackScholes Calculations](#)

» [Modified Black-Scholes Option Valuation Methodology](#)

» [ExecuComp Table Descriptions](#)

[More Execucomp resources](#) ↕

### Capital IQ

📄 [Capital IQ Professional Data](#)

» [Financials](#)

📄 [Understanding the Data - Capital Structure](#)

📄 [Capital IQ on WRDS FAQ](#)

[More Capital IQ resources](#) ↕

### Segments

» [WRDS Overview of Compustat Segments Data](#)

📄 [Segment Info](#)

📄 [Compustat Segments Knowledgebase Articles](#)

### SNL

» [FIG](#)

» [Bank Regulatory](#)

### Backtest

» [WRDS Overview of Preliminary, Unrestated, and Point-in-Time Datasets](#)

“Manuals and Overviews” 中提供了关于Compustat数据库的详细介绍

# 网页检索 – Compustat示例 Step1

Query Form	Variable Descriptions	Manuals and Overviews	FAQs	Dataset List
------------	-----------------------	-----------------------	------	--------------

## Compustat Daily Updates - Fundamentals Quarterly

 alert

 documentation

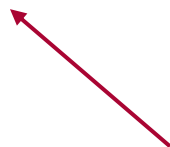
**Step 1:** Choose your date range.

 FormStep1

Date Variable:

Date range

2010-01	to	2021-03
---------	----	---------



选择时间范围

# 网页检索 – Compustat示例 Step2

选择TIC作为识别码

Step 2: Apply your company codes.

[FormStep2](#)

- TIC  GVKEY  CUSIP  SIC  NAICS  CIK  GIC Sub-Industry

Select an option for entering company codes

- IBM AMZN

Please enter Company codes separated by a space.

Example: IBM MSFT DELL [ [Code Lookup](#) ]

[company\\_codes](#)

- No file selected

Upload a plain text file (.txt), having one code per line.

- Select Saved Codelists-----

Choose from your saved codelists.

- Search the entire database

This method allows you to search the entire database of records. Please be aware that this method can take a very long time to run because it is dependent upon the size of the database.

填写IBM和Amazon公司的TIC代码

可以使用“Code Lookup”功能查找公司代码

### Compustat Daily Updates - Fundamentals Quarterly Code Lookup

Amazon

The Company Code Lookup Tool is designed to find all identifiers associated with a specific company. This tool can retrieve identifiers for multiple companies, then add the codes directly to your query. You can also use this tool to save and download codes for future queries. Downloaded codes are saved in the text (.txt) file format.

1. Start by entering a company name (or part of the name) into the search box above.
2. After the results are displayed, make your selections and chose an identifier.
3. Next, refine your list of codes or add more.
4. Last, choose whether to insert your selections into your web query or to download them as a text file for later use.

**Need more help?**

Take a moment to [read the full step-by-step instructions](#) to using this tool, including a [complete list of identifiers](#) available.

**1 results found that start with "Amazon"**

<input type="checkbox"/>	ENTITY_NAME	TICKER	CUSIP_FULL	CIK	SIC	GVKEY	FIRST_DATE	LAST_DATE
<input checked="" type="checkbox"/>	AMAZON.COM INC.	AMZN	023135106	0001018724	5961	064768	1995	2018

[Export all results as a spreadsheet](#)

#### Select Your Identifier

TICKER  CUSIP\_FULL  CIK  SIC  GVKEY



# 网页检索 – Compustat示例 Step3

Step 3: Choose variable types.

FormStep3

**Select Variable Types**

Select the items you would like to include in your search.

Select  All (2) Selected  Clear All (1)

- Footnotes
- Data Codes
- Data Items

选中需要查看的变量

How does this work?

Search All 6/674
Identifying Information 27
Identifying Information, cont. 0/34
Company Desc >>

Select  All Selected  Clear All (6)

Search All

- CUSIP
- CIK Number
- Stock Exchange Code
- Fiscal Year-End
- Foreign Incorporation Code
- ADD1 -- Address Line 1
- ADD2 -- Address Line 2
- ADD3 -- Address Line 3
- ADD4 -- Address Line 4
- ADDZIP -- Postal Code
- BUSDESC -- S&P Business Description

- Ticker Symbol
- Company Name
- ATQ -- Assets - Total
- LTQ -- Liabilities - Total
- TEQQ -- Stockholders Equity - Total
- NIQ -- Net Income (Loss)

https://wrds-web.wharton.upenn.edu/wrds/query\_forms/variable\_documentatio...

点击问号可查看变量具体含义和信息

The green tab is what the user sees.

File Library **Vendor**

The variable documentation shown is globally set for all variables named: exchg, within the vendor: COMP.  
[Edit Vendor's Variable Doc \[COMP>exchg\]](#) [Delete Vendor's Variable Doc \[COMP>exchg\]](#)

Only what is below this line is visible to the user:

**Stock Exchange Code**  
**Variable Name = EXCHG**

This item identifies the major exchange on which the company's Common/Ordinary Stock (Capital) is traded. Below are some of the common exchange codes. A complete list is available in the Compustat manual.

Code	Description	Exchange Country
0	Subsidiary/Private	Canada
0	Subsidiary/Private	United States
1	Non-traded Company or Security	Canada
1	Non-traded Company or Security	Germany
1	Non-traded Company or Security	Switzerland
1	Non-traded Company or Security	Taiwan
1	Non-traded Company or Security	United States
2	Consolidated Parent or Tracking Stock Company	United States

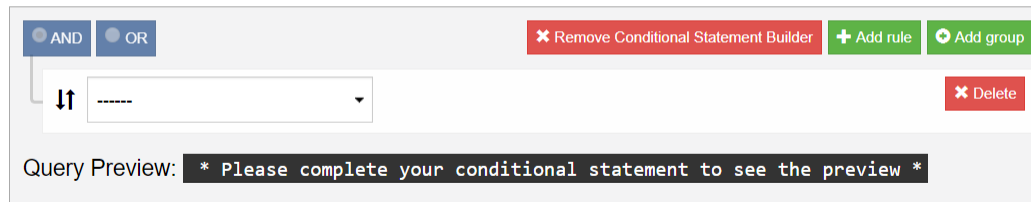
# 网页检索 – Compustat示例 Step3

## Step3中可做筛选条件

如有需要，可设置筛选条件

Conditional Statements (Optional)

*How does this work?*



The screenshot shows a web interface for building conditional statements. At the top, there are two radio buttons for 'AND' and 'OR'. To the right are three buttons: 'Remove Conditional Statement Builder' (red), '+ Add rule' (green), and '+ Add group' (green). Below this is a single rule entry consisting of a dropdown menu with a double-headed arrow icon on the left and a 'Delete' button (red) on the right. At the bottom, a 'Query Preview' section displays the text: '\* Please complete your conditional statement to see the preview \*'.

# 网页检索 – Compustat示例 Step4

**Step 4:** Select query output.

[FormStep4](#)

Select the desired [format](#) of the output file. For large data requests, select a compression type to expedite downloads. If you enter your email address, you will receive an email that contains a URL to the output file when the data request is finished processing.

Output Format	Compression Type	Date Format
<input type="radio"/> fixed-width text (*.txt)	<input checked="" type="radio"/> None	<input checked="" type="radio"/> YYMMDDn8. (e.g. 19840725)
<input type="radio"/> comma-delimited text (*.csv)	<input type="radio"/> zip (*.zip)	<input type="radio"/> DATE9. (e.g. 25JUL1984)
<input checked="" type="radio"/> Excel spreadsheet (*.xlsx)	<input type="radio"/> gzip (*.gz)	<input type="radio"/> DDDMMYY6. (e.g. 250784)
<input type="radio"/> tab-delimited text (*.txt)		<input type="radio"/> MMDDYY10. (e.g. 07/25/1984)
<input type="radio"/> HTML table (*.htm)		<input type="radio"/> DDDMMYY10. (e.g. 25/07/1984)
<input type="radio"/>		<input type="radio"/> YYMMDDs10. (e.g. 1984/07/25)
<input type="radio"/> SAS Windows_32 dataset (*.sas7bdat)		
<input type="radio"/>		
<input type="radio"/> SAS Windows_64 dataset (*.sas7bdat)		
<input type="radio"/> SAS Solaris_64 dataset (*.sas7bdat)		
<input type="radio"/> dBase file (*.dbf)		
<input type="radio"/> STATA v14+ file (*.dta)		
<input type="radio"/> SPSS file (*.sav)		

选择结果呈现形式

E-Mail Address <i>(Optional)</i>	Custom Field <i>(Optional)</i>
<input type="text" value="E-mail"/> <input type="button" value="Edit Preferences"/>	<input type="text"/> <input style="float: right;" type="button" value="?"/>

Save this query to myWRDS

Please note: if you select wrds-sol1-dev as the Processing Server, you may only choose wrds-sas1-dev-h, wrds-data, or wrds-lore as the SAS Server. To pick as production SAS node, you must pick a production process server (sol1 or sol2).

Debugging Options	Processing Server	SAS Server
<input type="text" value="Do Not Use Debug Mode"/>	<input type="text" value="Query Manager"/>	<input type="text" value="Use Default"/>

Submit Query

点击“Submit Query”

# 网页检索 – Compustat示例 结果

Home / Your Account / Queries / Query 3849949, for comp\_na\_daily\_all

Open In: [Django Admin](#) | [API](#)

## Query 3849949, for comp\_na\_daily\_all

Submitter:	xiazhan (Erica Zhang, xiazhan@wharton.upenn.edu) (wrds)	
Status:	Success	
Product:	comp_na_daily_all	
Results:	Result Size: 13 KiB	
	Result Count: 88 Rows	
	Output Files: <ul style="list-style-type: none"><li>/output/wrds/xiazhan/pes7m5zycrceuryi.xlsx</li></ul>	
	Service Files [admin only]: <ul style="list-style-type: none"><li>/var/query-manager/tmp/wrds/xiazhan/xiazhan_pes7m5zycrceuryi_sas.log</li><li>/var/query-manager/tmp/wrds/xiazhan/xiazhan_pes7m5zycrceuryi_grid.log</li></ul>	
Timing:	Elapsed Time:	
	Submitted: 2021-03-10 00:53	
	Work Begun: 2021-03-10 00:53	
	Work Finished: 2021-03-10 00:53	
Input Parameters:	<a href="#">Toggle Input Parameters</a>	

### Data Retention

Results data will be accessible for 2 days, until 2021-03-12, 00:53

### Notice

Your use of WRDS and this data extract must comply with the [WRDS Terms of Use](#).

There may be additional usage restrictions that are governed by your institution's licensing of specific databases. If you have any questions about data licensing and appropriate usage, please contact WRDS using the [Support form](#).

### Citation instructions

To cite this data use the following format:

Wharton Research Data Services. "WRDS" wrds.wharton.upenn.edu, accessed 2021-03-10.

# 网页检索 - Compustat示例

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
	Global Company Key	Data Date	Fiscal Year	Fiscal Quarter	Industry Format	Level of Consolidation - Company Interim Descriptor	Population Source	Data Format	Ticker Symbol	Company Name	ISO Currency Code	Calendar Data Year and Quarter	Fiscal Data Year and Quarter	Assets - Total	Liabilities - Total	Net Income (Loss)	Stockholders Equity - Total	Active/Inactive Status Marker
2	006066	3/31/2010	2010	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2010Q1	2010Q1	105208	83059	2601	22149	A	
3	006066	6/30/2010	2010	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2010Q2	2010Q2	103420	82244	3386	21176	A	
4	006066	9/30/2010	2010	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2010Q3	2010Q3	107174	84815	3589	22359	A	
5	006066	12/31/2010	2010	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2010Q4	2010Q4	113452	90280	5257	23172	A	
6	006066	3/31/2011	2011	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2011Q1	2011Q1	112960	90184	2863	22776	A	
7	006066	6/30/2011	2011	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2011Q2	2011Q2	113474	90264	3663	23210	A	
8	006066	9/30/2011	2011	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2011Q3	2011Q3	110158	87780	3839	22378	A	
9	006066	12/31/2011	2011	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2011Q4	2011Q4	116433	96197	5490	20236	A	
10	006066	3/31/2012	2012	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2012Q1	2012Q1	115346	94563	3066	20783	A	
11	006066	6/30/2012	2012	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2012Q2	2012Q2	113832	93269	3882	20563	A	
12	006066	9/30/2012	2012	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2012Q3	2012Q3	115778	94112	3823	21666	A	
13	006066	12/31/2012	2012	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2012Q4	2012Q4	119213	100229	5833	18984	A	
14	006066	3/31/2013	2013	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2013Q1	2013Q1	117258	98044	3032	19214	A	
15	006066	6/30/2013	2013	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2013Q2	2013Q2	115153	97270	3226	17883	A	
16	006066	9/30/2013	2013	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2013Q3	2013Q3	117845	97837	4041	20008	A	
17	006066	12/31/2013	2013	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2013Q4	2013Q4	126223	103294	6184	22929	A	
18	006066	3/31/2014	2014	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2014Q1	2014Q1	122646	105906	2384	16740	A	
19	006066	6/30/2014	2014	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2014Q2	2014Q2	124314	106801	4137	17513	A	
20	006066	9/30/2014	2014	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2014Q3	2014Q3	118911	104516	18	14395	A	
21	006066	12/31/2014	2014	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2014Q4	2014Q4	117532	105518	5483	12014	A	
22	006066	3/31/2015	2015	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2015Q1	2015Q1	112037	99748	2328	12289	A	
23	006066	6/30/2015	2015	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2015Q2	2015Q2	112729	98892	3449	13837	A	
24	006066	9/30/2015	2015	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2015Q3	2015Q3	108648	95198	2950	13450	A	
25	006066	12/31/2015	2015	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2015Q4	2015Q4	110495	96071	4463	14424	A	
26	006066	3/31/2016	2016	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2016Q1	2016Q1	118856	103784	2014	15072	A	
27	006066	6/30/2016	2016	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2016Q2	2016Q2	118056	102167	2504	15889	A	
28	006066	9/30/2016	2016	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2016Q3	2016Q3	115606	98447	2853	17159	A	
29	006066	12/31/2016	2016	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2016Q4	2016Q4	117470	99078	4501	18392	A	
30	006066	3/31/2017	2017	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2017Q1	2017Q1	117495	99047	1750	18448	A	
31	006066	6/30/2017	2017	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2017Q2	2017Q2	120495	101951	2332	18544	A	
32	006066	9/30/2017	2017	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2017Q3	2017Q3	121636	101879	2725	19757	A	
33	006066	12/31/2017	2017	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2017Q4	2017Q4	125356	107631	-1054	17725	A	
34	006066	3/31/2018	2018	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2018Q1	2018Q1	125285	106995	1679	18290	A	
35	006066	6/30/2018	2018	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2018Q2	2018Q2	121622	102974	2404	18648	A	
36	006066	9/30/2018	2018	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2018Q3	2018Q3	121990	102072	2694	19918	A	
37	006066	12/31/2018	2018	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2018Q4	2018Q4	123382	106453	1951	16929	A	
38	006066	3/31/2019	2019	1	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2019Q1	2019Q1	130926	114320	1591	16606	A	
39	006066	6/30/2019	2019	2	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2019Q2	2019Q2	154652	136876	2498	17776	A	
40	006066	9/30/2019	2019	3	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2019Q3	2019Q3	149620	131524	1672	18096	A	
41	006066	12/31/2019	2019	4	INDL C	D	STD	IBM	INTL BUSINESS MACHINES CORP	USD	2019Q4	2019Q4	153426	134324	2672	20205	A	

Compustat数据格式

# 云存储：大型数据操控



WRDS



网络



```

ruidai — ssh — 84x31
Last login: Sat Nov 19 12:55:02 on ttys000
van163:~ ruidai$ ssh -Y rdai@wrds.wharton.upenn.edu
Password:
Password:
Last login: Sat Nov 19 22:59:18 2011 from sentinel.wharto

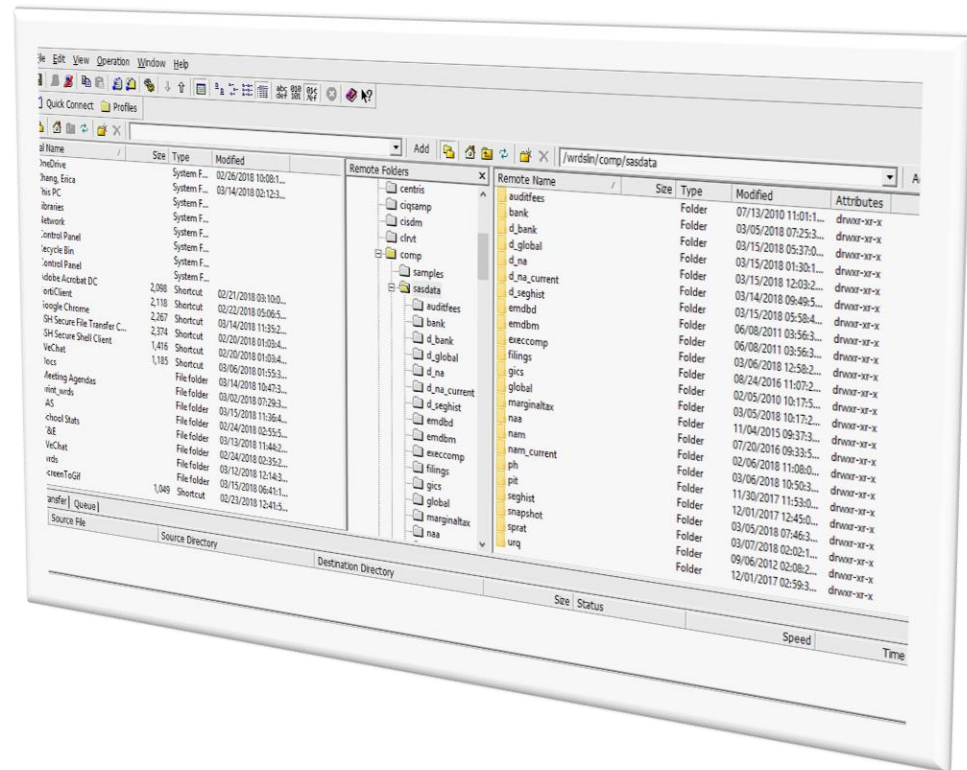
*****
* The WRDS Unix server will be undergoing maintenance from *
* 7:00am - 10:00am EST on Tuesday, November 22. We will be *
* patching the system to provide the most up-to-date computing *
* environment for your research programming needs. The WRDS *
* website will not be affected by the maintenance. *
* *
* Users will not be able to access WRDS through UNIX or PC SAS *
* Connect while the maintenance is in progress. Jobs and user *
* sessions that are active when it begins will be interrupted *
* and they will have to be restarted and run again when the *
* system is back online. *
* *
* We understand how important access to data through the WRDS *
* system is to your research and we appreciate your patience *
* during this time. If you have any questions or concerns, *
* please contact the WRDS support team at *
* wrds-support@wharton.upenn.edu. *
* *
*****

tcsh: using dumb terminal settings.
wrds(~)%

```

# SSH/SFTP

- 任意的SSH/SFTP的用户端
  - Server: wrds-cloud.Wharton.upenn.edu
  - Username: 网页登陆用户名
  - Password: 网页登陆密码
- 用途
  - 上传和下载任何格式的文档
  - 删除和建立文件和目录
- 详细操作步骤请点击[此处](#)



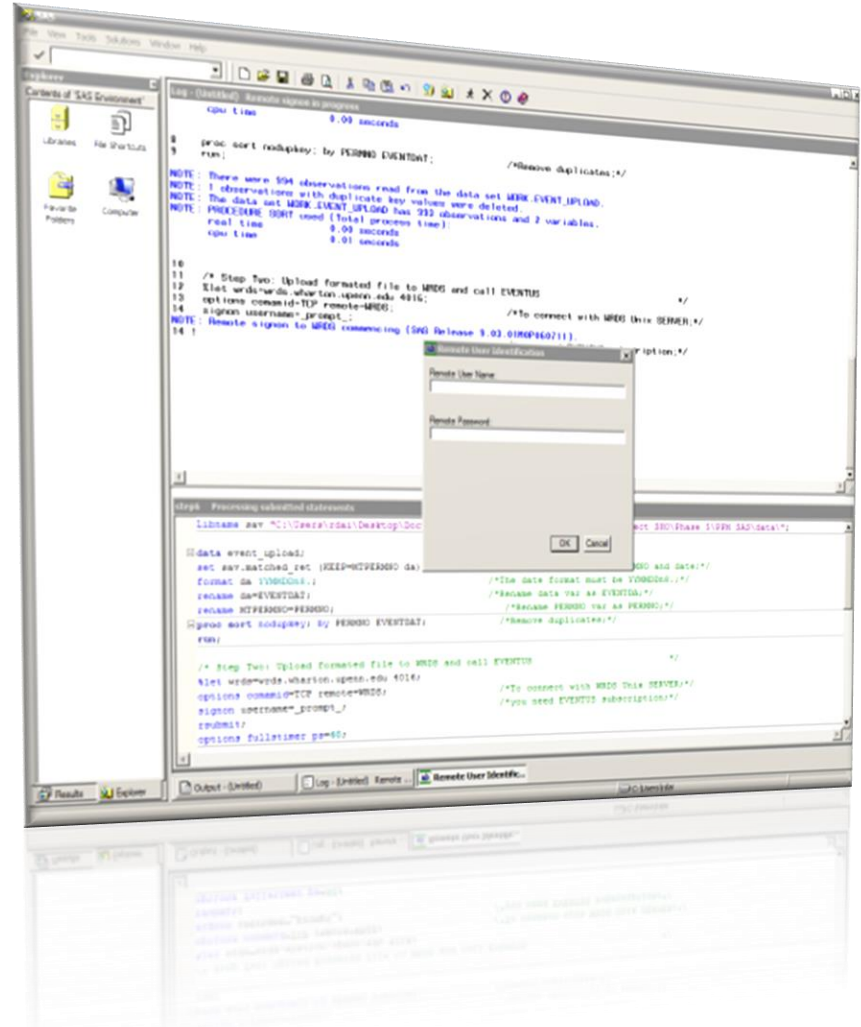
# 客户端互动应用



WRDS



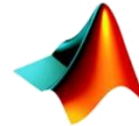
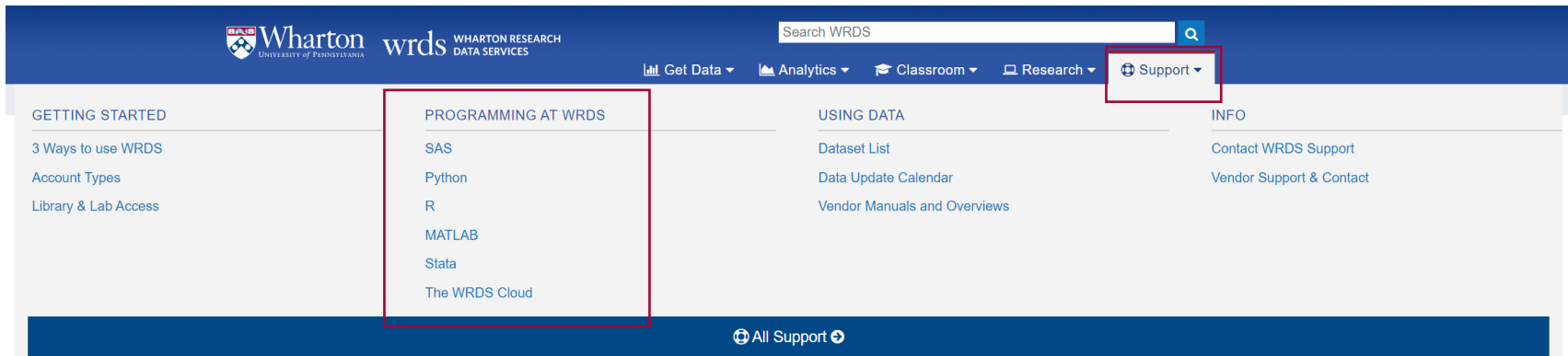
网络





# 使用客户端连接

详细操作步骤请访问Support → [Programming at WRDS](#)



MATLAB



# PC SAS

- 通过在本地安装的SAS程序实现与WRDS的互动式程序设计和检索。实现远端主机处理、集合、保存资料

- 操作步骤:

1. 链接:

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

2. 运行:

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

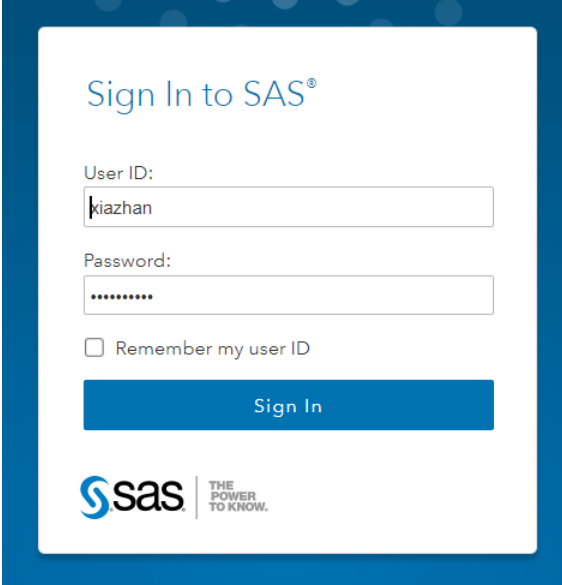
3. 退出:

```
signoff;
```

# SAS Studio

- 无需购买安装PC-SAS也可以实现WRDS的互动式程序设计和检索
- 硬件需求：任何配备全面功能浏览器的设备（PC、MAC、Ipad）

点击[此处](#)打开SAS Studio  
输入WRDS用户名和密码



Sign In to SAS®

User ID:  
kiazhan

Password:  
.....

Remember my user ID

Sign In

sas | THE POWER TO KNOW.

# SAS Studio – Compustat示例

使用WRDS账号登陆SAS Studio后呈现以下界面，左侧工具栏中点击Libraries查看所有已开通数据。



The screenshot shows the SAS Studio interface. The top navigation bar includes 'SAS® Studio', 'SAS Programmer', and 'Sign Out'. The left-hand pane is titled 'Libraries' and contains a list of folders: BVDSAMP, CALCBNCH, CALCSAMP, CBOE, CENTRIS, CIQ, CIQSAMP, CISDM, CISDMSMP, CLRVT, CLRVTSMF, and COMP. The COMP folder is expanded, showing sub-folders: ACO\_AMDA, ACO\_IMDA, ACO\_INDENTA, ACO\_INDENTO, ACO\_INDENTYTD, ACO\_INDSTA, and ACO\_INDSTQ. A red arrow points from the 'Libraries' header to the text '查找顺序: Libraries → Folder → Tables → Variables'. Another red arrow points from the 'Libraries' header to the 'COMP' folder. In the center workspace, there is a prompt 'Drag an item here to open' with icons for a bar chart, a pie chart, a table, and a summation symbol.

查找顺序: Libraries → Folder → Tables → Variables

从Compustat数据库中提取IBM和Amazon公司近10年以来报表中的以下科目: Total Assets、Total Liabilities、Total Equity、Net Income。

# SAS Studio – Compustat示例

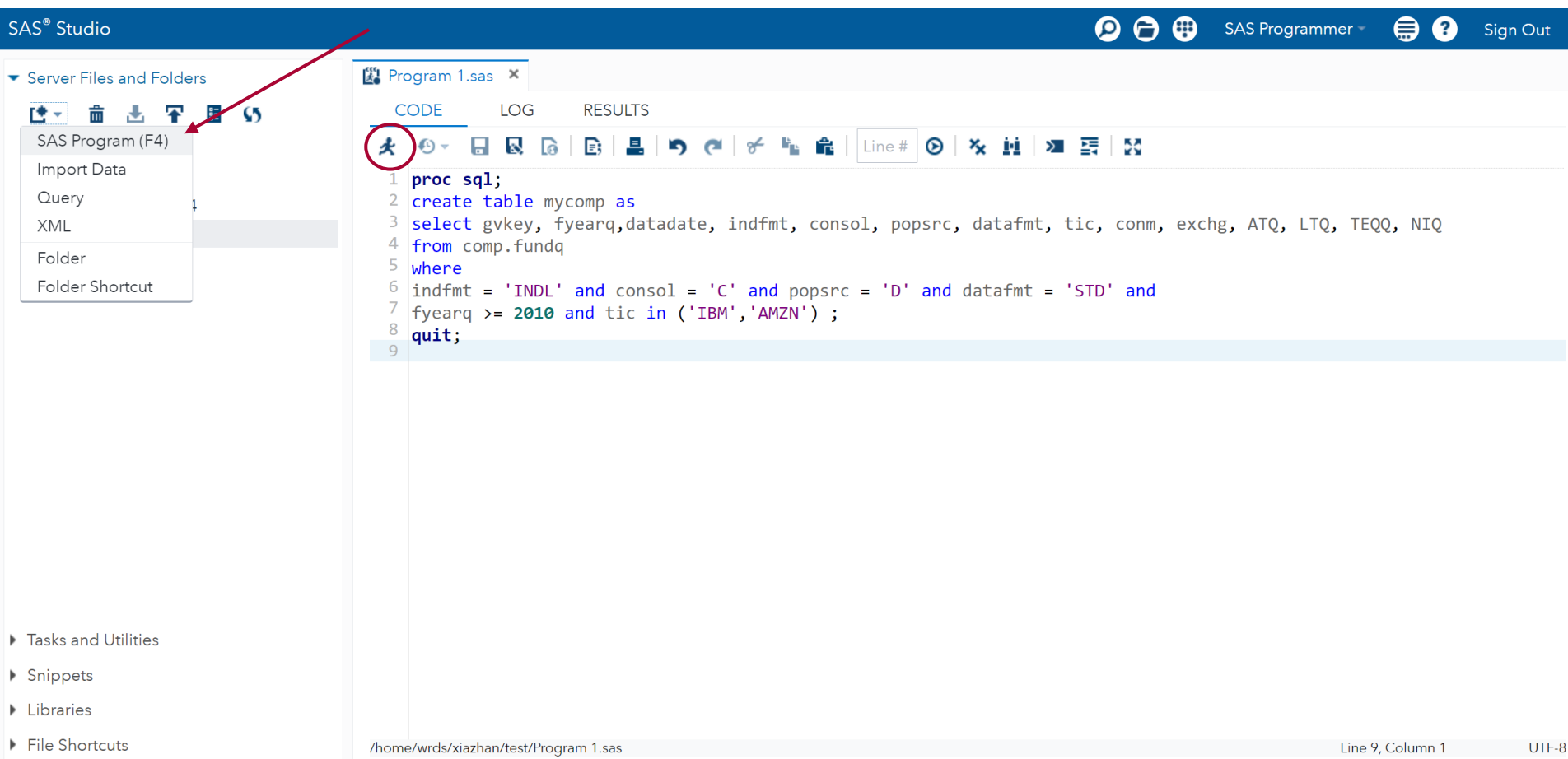
在COMP中找到FUNDQ（即Compustat季度基本面信息），双击FUNDQ，呈现前100行数据。可通过选择变量Column names和设置Filter直接筛选数据。

The screenshot shows the SAS Studio interface. The top bar includes the SAS logo, a home icon, a grid icon, the user name 'SAS Programmer', a help icon, and a 'Sign Out' button. The left sidebar contains a tree view with 'Server Files and Folders', 'Tasks and Utilities', 'Snippets', and 'Libraries'. Under 'Libraries', the 'FUNDQ' dataset is selected. The main workspace shows the 'COMP.FUNDQ' dataset with a 'View: Column names' dropdown and a 'Filter: (none)' field. Below this, a list of columns is shown with checkboxes, and a 'Property Value' table is visible. The main data grid displays the first 18 rows of the dataset.

	gvkey	datadate	fyearq	fqtr	fyr	indfmt	consol	popsrc	datafmt	tic	cusl
1	001000	19660331	1966	1	12	INDL	C	D	STD	AE.2	0000
2	001000	19660630	1966	2	12	INDL	C	D	STD	AE.2	0000
3	001000	19660930	1966	3	12	INDL	C	D	STD	AE.2	0000
4	001000	19661231	1966	4	12	INDL	C	D	STD	AE.2	0000
5	001000	19670331	1967	1	12	INDL	C	D	STD	AE.2	0000
6	001000	19670630	1967	2	12	INDL	C	D	STD	AE.2	0000
7	001000	19670930	1967	3	12	INDL	C	D	STD	AE.2	0000
8	001000	19671231	1967	4	12	INDL	C	D	STD	AE.2	0000
9	001000	19680331	1968	1	12	INDL	C	D	STD	AE.2	0000
10	001000	19680630	1968	2	12	INDL	C	D	STD	AE.2	0000
11	001000	19680930	1968	3	12	INDL	C	D	STD	AE.2	0000
12	001000	19681231	1968	4	12	INDL	C	D	STD	AE.2	0000
13	001000	19690331	1969	1	12	INDL	C	D	STD	AE.2	0000
14	001000	19690630	1969	2	12	INDL	C	D	STD	AE.2	0000
15	001000	19690930	1969	3	12	INDL	C	D	STD	AE.2	0000
16	001000	19691231	1969	4	12	INDL	C	D	STD	AE.2	0000
17	001000	19700331	1970	1	12	INDL	C	D	STD	AE.2	0000
18	001000	19700630	1970	2	12	INDL	C	D	STD	AE.2	0000

# SAS Studio – Compustat示例

通过运行程序获取数据。打开一个新的Program，敲入代码运行。  
命名一个新的table “mycomp”。



The screenshot displays the SAS Studio interface. On the left, the 'Server Files and Folders' pane is open, showing a context menu with options like 'SAS Program (F4)', 'Import Data', 'Query', 'XML', 'Folder', and 'Folder Shortcut'. A red arrow points from the 'SAS Program (F4)' option to the 'Run' button in the code editor's toolbar. The code editor shows a SAS program named 'Program 1.sas' with the following code:

```
1 proc sql;  
2 create table mycomp as  
3 select gvkey, fyearq, datadate, indfmt, consol, popsrc, datafmt, tic, conm, exchg, ATQ, LTQ, TEQQ, NIQ  
4 from comp.fundq  
5 where  
6 indfmt = 'INDL' and consol = 'C' and popsrc = 'D' and datafmt = 'STD' and  
7 fyearq >= 2010 and tic in ('IBM', 'AMZN');  
8 quit;  
9
```

The status bar at the bottom indicates the file path is '/home/wrds/xiazhan/test/Program 1.sas', the current position is 'Line 9, Column 1', and the encoding is 'UTF-8'. The user is identified as 'Erica Zhang'.

# SAS Studio – Compustat示例

运行完成后，结果显示在OUTPUT DATA中。下一步如何下载数据到本地？

结果保存于Libraries中的WORK临时文件夹中，右击选择Export。

The screenshot displays the SAS Studio interface. The top navigation bar includes 'SAS® Studio', 'SAS Programmer', and 'Sign Out'. The left sidebar shows the 'Libraries' pane with 'WORK' selected. The main workspace shows the 'OUTPUT DATA' tab for 'Program 1.sas'. The table 'WORK.MYCOMP' is displayed with 88 rows and 14 columns. The columns are: gvkey, fy..., datadate, indfmt, consol, popsrc, datafmt, tic, and conm. The table contains data for various companies, including Amazon and IBM. A context menu is open over the 'WORK' library, with 'Export' highlighted. A red arrow points from the 'Export' option in the context menu to the 'OUTPUT DATA' tab. Another red arrow points from the 'OUTPUT DATA' tab to the 'Export' option in the context menu.

	gvkey	fy...	datadate	indfmt	consol	popsrc	datafmt	tic	conm
1	064768	2010	20100630	INDL	C	D	STD	AMZN	AMAZON.COM INC
2	064768	2010	20100930	INDL	C	D	STD	AMZN	AMAZON.COM INC
3	064768	2010	20101231	INDL	C	D	STD	AMZN	AMAZON.COM INC
4	006066	2010	20101231	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
5	006066	2010	20100331	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
6	006066	2010	20100630	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
7	064768	2010	20100331	INDL	C	D	STD	AMZN	AMAZON.COM INC
8	006066	2010	20100930	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
9	006066	2011	20111231	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
10	006066	2011	20110331	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
11	064768	2011	20110331	INDL	C	D	STD	AMZN	AMAZON.COM INC
12	064768	2011	20111231	INDL	C	D	STD	AMZN	AMAZON.COM INC
13	064768	2011	20110930	INDL	C	D	STD	AMZN	AMAZON.COM INC
14	006066	2011	20110930	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
15	006066	2011	20110630	INDL	C	D	STD	IBM	INTL BUSINESS MACHII

# SAS Studio – Compustat示例

选择需要储存结果的Folder，并选择Output形式。

The screenshot shows the SAS Studio interface with the 'Export Table' dialog box open. The dialog is titled 'Export Table' and has a close button (X) in the top right corner. It contains the following elements:

- Folders:** A tree view showing the file system structure. Under 'Folder Shortcuts', 'Home' is expanded, showing sub-folders 'sasuser.v94' and 'test'. 'Files (/)' is also visible.
- File name:** A text input field containing 'MYCOMP'.
- File format:** A dropdown menu set to 'CSV (Comma delimited file)(\*csv)'.
- Buttons:** 'Export' and 'Cancel' buttons at the bottom right. A red arrow points to the 'Export' button.

In the background, the SAS Studio interface is visible. The top bar shows 'SAS® Studio' and 'SAS Programmer'. The left sidebar shows 'Server Files and Folders', 'Tasks and Utilities', 'Snippets', and 'Libraries'. The main area shows a table with columns 'popsrc', 'datafmt', 'tic', and 'conn'. The table contains 15 rows of data. The status bar at the bottom shows '15 006066 2011 20110630 INDL C'.



# SAS Studio – Compustat示例

MYCOMP.csv已储存于Home中，右击选择Download File，下载到本地。

The screenshot displays the SAS Studio interface. On the left, the 'Server Files and Folders' pane shows a tree view with 'Home' containing 'sasuser.v94' and 'test', and 'test' containing 'MYCOMP.csv'. A context menu is open over 'MYCOMP.csv', listing options such as 'Open', 'New', 'View File as Text', 'Background Submit', 'Import Data', 'Add to My Tasks', 'Add to My Snippets', 'Create', 'Rename', 'Delete', 'Move To', 'Copy To', 'Upload Files...', 'Download File', and 'Properties'. A red arrow points to the 'Download File' option.

The main workspace shows the 'OUTPUT DATA' tab for 'Table: WORK.MYCOMP'. The table has 88 rows and 14 columns. The columns are: gvkey, fy..., datadate, indfmt, consol, popsrc, datafmt, tic, and conm. The data is displayed in a grid format.

	gvkey	fy...	datadate	indfmt	consol	popsrc	datafmt	tic	conm
1	064768	2010	20100630	INDL	C	D	STD	AMZN	AMAZON.COM INC
2	064768	2010	20100930	INDL	C	D	STD	AMZN	AMAZON.COM INC
3	064768	2010	20101231	INDL	C	D	STD	AMZN	AMAZON.COM INC
4	006066	2010	20101231	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
5	006066	2010	20100331	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
6	006066	2010	20100630	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
7	064768	2010	20100331	INDL	C	D	STD	AMZN	AMAZON.COM INC
8	006066	2010	20100930	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
9	006066	2011	20111231	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
10	006066	2011	20110331	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
11	064768	2011	20110331	INDL	C	D	STD	AMZN	AMAZON.COM INC
12	064768	2011	20111231	INDL	C	D	STD	AMZN	AMAZON.COM INC
13	064768	2011	20110930	INDL	C	D	STD	AMZN	AMAZON.COM INC
14	006066	2011	20110930	INDL	C	D	STD	IBM	INTL BUSINESS MACHII
15	006066	2011	20110630	INDL	C	D	STD	IBM	INTL BUSINESS MACHII

# WRDS科研支持

1. WRDS Analytics
2. WRDS Classroom
3. WRDS Research

# WRDS科研工具 ( [WRDS Analytics](#) )

Wharton wrds WHARTON RESEARCH DATA SERVICES

Search WRDS

Get Data Analytics Classroom Research Support

## ANALYTICS by wrds

WRDS has developed a variety of powerful analytics tools to support you in your research. Get more out of your data with less effort.

FEATURED TOOLS:

- Bag of Words
- Factors by WRDS

Grid View List View

All Topics Efficient Frontier Event Study Financial Ratios Other Research Tools Programming Tools SEC

### U.S. Daily Event Study

Investigate abnormal stock returns/volumes around event dates by uploading your own "events" file, or analyzing reaction to firm-specific events from Capital IQ's Key Development database.

- Instant visualization of the effect of events on U.S. equities
- Output includes statistics, plots

More »

### SEC Filings Search

Use this powerful research platform to search the contents of the most commonly used SEC filings—over 3.4 million reports—filed by more than 94 thousand companies.

- Easy-to-use web queries
- Daily updates
- Links to original HTML and text filings

More »

### Intraday Indicators

Stock specific daily and intraday (5 min, 15 min and 30 min) indicators created from the TAQ intraday dataset.

- Stock specific daily and intraday (5 min, 15 min and 30 min) indicators.
- Requires subscription to TAQ dataset.

More »

### Financial Ratios: Firm Level

With the Financial Ratios: Firm Level tool you can access over 70 pre-calculated financial ratios for all U.S. companies across eight different categories.

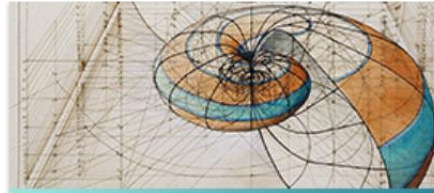
- Calculates ratios most commonly used in accounting and finance research
- Monthly time series of financial ratios per company

More »

- Event Studies
- Intra-day Indicators
- Financial Ratios
- Bond Returns
- Beta Suite
- SEC Filings
- Linking Suite
- And etc...

# WRDS科研工具示例1： Financial Ratios

- 超过70个提前预算的财务比率
  - 盈利能力
  - 偿债能力
  - 营运能力
  - 估值分析
- 公司层面 & 行业层面比率
- 数据来源：  
Compustat/CRSP/IBES
- 大量使用于公司金融和资本定价实证研究



## Financial Ratios: Firm Level

With the Financial Ratios: Firm Level tool you can access over 70 pre-calculated financial ratios for all U.S. companies across eight different categories.

- Calculates ratios most commonly used in accounting and finance research
- Monthly time series of financial ratios per company

[More →](#)



## Financial Ratios: Industry Level

This tool enables you to access over 70 pre-calculated financial ratios at industry or sector-level aggregation.

- Choose between universe of CRSP Common Stock or S&P 500 Index Constituents
- Use GICS Sectors or Fama-French Industries Classification

[More →](#)

# WRDS科研工具示例1： Financial Ratios SAS Codes

## Financial Ratios SAS Program

```
1 /* ***** */
2 /* ***** WRDS RESEARCH APPLICATIONS ***** */
3 /* ***** */
4 /* Summary : The three-step macro code calculates financial ratios at both firm-
5 /* level and industry-level. Macro "FinRatio" calculates financial ratio
6 /* at firm-level, macro "FinRatio_Firm" outputs the ratios, and macro
7 /* "FinRatio_Ind" aggregates financial ratios at user-selected industry
8 /* level.
9 /*
10 /* Date : Feb 2016
11 /* Author : Denys Glushkov, WRDS
12 /* Input :
13 /* Universal Inputs
14 /* - UNI_BEGDT : Begin Date of the Sample (e.g. 01JAN1990)
15 /* - UNI_ENDDT : End Date of the Sample (e.g. 31DEC2015)
16 /* - UNI_SP500 : Sample Selection S&P500 if=1, CRSP Common Stock if=0
17 /* Macro FinRatio Input
18 /* - RATIOS_OUT : Output Data
19 /* Macro FinRatio_Firm Input
20 /* - FIRMRATIOS : Output Data at Firm-Level
21 /* Macro FinRatio_Ind Input
22 /* - INDCODE : GICS=GICS 10 Sectors, FF=Fama French Industries
23 /* - NIND : Num of Industries (FF only) - 10, 12, 17, 30, 48, 49
24 /* - AVR : Choice of Averaging - Median or Mean
25 /* - INDRATIOS : Output Data at Industry-Level
26 /*
27 /*
28 /* To run the program, a user should have access to CRSP daily and monthly stock,
29 /* Compustat Annual and Quarterly sets, IBES and CRSP/Compustat Merged database
30 /* ***** */
31
32 /* Set Universal Input Variables */
33 %let uni_begdt = 01JAN2000;
34 %let uni_enddt = 31DEC2015;
35 %let uni_sp500 = 1;
36
37
38 %MACRO FINRATIO (begdate=, enddate=, sp500=, ratios_out=);
39
40 /*Impose filter to obtain unique gvkey-datadate records*/
41 %let compcond=indfmt='INDL' and datafmt='STD' and popsrc='D' and consol='C';
42 %if &sp500=1 %then %let sp500_where=and sp500=1; %else %let sp500_where=and 1;
43
44 /*List of Ratios to be calculated*/
45 %let vars=
46 pe_op_basic pe_op_dil pe_exi pe_inc ps pcf evm bm capei dpr npm opmbd opmad gpm ptpm cfm roa roe
47 equity_invcap debt_invcap totdebt_invcap int_debt int_totdebt cash_lt invt_act rect_act debt_at
48 profit_lct debt_ebitda ocf_lct lt_ppent dltt_be debt_assets debt_capital de_ratio intcov cash_r
```

在“Manuals and Overviews”中提供

# WRDS科研工具示例2: Linking Suite

- Bond CRSP Link
- CRSP Compustat Link by CUSIP
- IBES CRSP Link
- Option Metrics CRSP Link
- TAQ CRSP Link
- TR Insiders – Boardex Link
- Compustat Customer Segment Company Names – GVKEY Link
- BoardEx CRSP Compustat Link
- Factset CRSP Link

# WRDS教学工具 (WRDS Classroom)

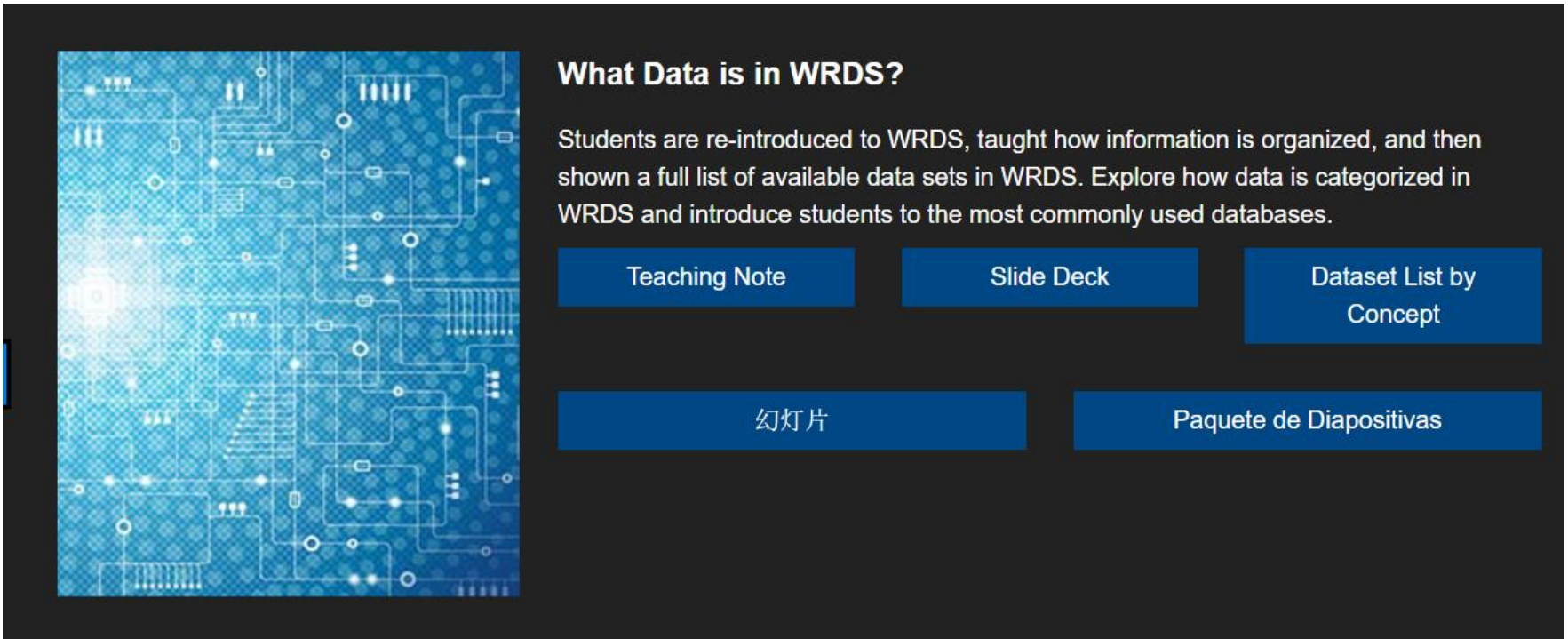
The screenshot shows the WRDS Classroom website. At the top, there is a navigation bar with the Wharton University of Pennsylvania logo, the text 'wrds WHARTON RESEARCH DATA SERVICES', a search bar labeled 'Search WRDS', and menu items for 'Get Data', 'Analytics', 'Classroom', 'Research', and 'Support'. The 'Classroom' menu item is highlighted with a red box and a red arrow pointing to it. Below the navigation bar, the main content area features a large banner for 'Classroom Tools by wrds' with a description: 'Classroom Tools by WRDS is a teaching and learning toolkit designed specifically for faculty who are introducing finance and business concepts in the classroom.' To the right of the banner, there are two 'FEATURED TOOLS' cards: 'Introduction to Topic Modeling' and 'Using the CRSP/Compustat Merged (CCM) Database'. Below the banner, there are two view options: 'Grid View' and 'List View'. A horizontal navigation bar below the view options lists various topics: 'All Topics', 'Accounting', 'Fixed Income', 'Introduction to WRDS', 'Investments', 'Macroeconomics', 'SEC', and 'Text Analytics'. The main content area is divided into four columns, each representing a topic card. Each card has a header image, a title, a brief description, a list of bullet points, and a 'More >>' link at the bottom. The cards are: 1. 'Getting Started' with a pencil image, describing a teaching tool for students. 2. 'What Data is in WRDS?' with a data visualization image, listing data sets like Financial, Economic, Marketing, and Public. 3. 'Finding the Data You Want' with a person on a boat image, listing techniques for locating data. 4. 'Understanding Identifiers' with a lightbulb image, describing major descriptors for companies and securities.

- Introduction to WRDS
- Introduction to Financial Statements
- Time Value of Money
- Using the CRSP/Compustat Merged (CCM)
- SAS Studio
- And etc...

# WRDS教学工具示例1：What Data is in WRDS?

教学工具通常包含“Teaching Note”、“Slide Deck”、“Link to Platform”。部分教学工具提供中文版PPT。

通过“What Data is in WRDS?”教学工具自学WRDS中有什么数据。



**What Data is in WRDS?**

Students are re-introduced to WRDS, taught how information is organized, and then shown a full list of available data sets in WRDS. Explore how data is categorized in WRDS and introduce students to the most commonly used databases.

Teaching Note

Slide Deck

Dataset List by Concept

幻灯片

Paquete de Diapositivas



# WRDS教学工具示例2: Introduction to Financial Statements

## Simplified Financial Statements

Ticker

(Limit of One Ticker per Query)

Begin Year

End Year

Section

- Balance Sheet
- Income Statement
- Statement of Cash Flows
- Complete Financial Statements

Financial Statement for: BAIDU INC

Fiscal Years: 2014 to 2015

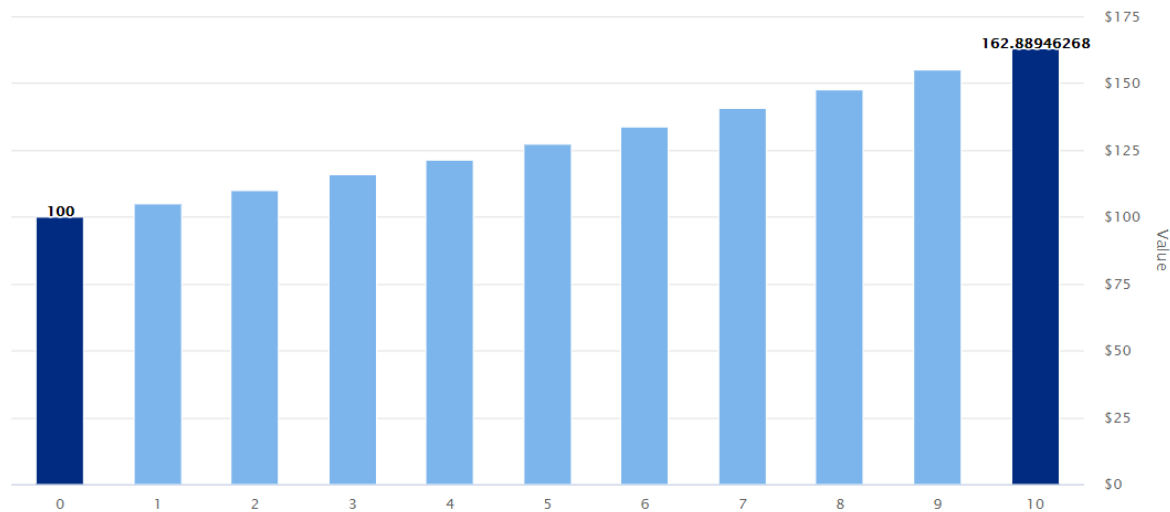
Numbers in millions USD

## BALANCE SHEET

	2014	2015
<b>ASSETS</b>		
Cash and Short-Term Investments	9,361.405	10,501.277
Cash	2,232.654	1,537.549
Short-Term Investments	7,128.751	8,963.728
Receivables	701.661	990.025
Receivables - Trade	590.602	606.264
Income Tax Refund	0.000	0.000
Current Receivables - Other	111.059	383.761
Inventories - Total	0.000	0.000
Inventories - Raw Materials	0.000	0.000
Inventories - Work in Process	0.000	0.000
Inventories - Finished Goods	0.000	0.000
Inventories - Other	0.000	0.000
Current Assets - Other	548.520	585.894
Prepaid Expense	317.477	354.450
Other Curr.Asst, Excl.Ppd.Exp.	231.043	231.444

# WRDS教学工具示例3: Time Value of Money

Present/Future Value



$$100 \cdot (1 + 0.05)^{10} = 162.8895$$

Parameters

Solve For:

- Future Value
- Present Value
- Rate
- Years

Compounded Annually

---

Present Value:

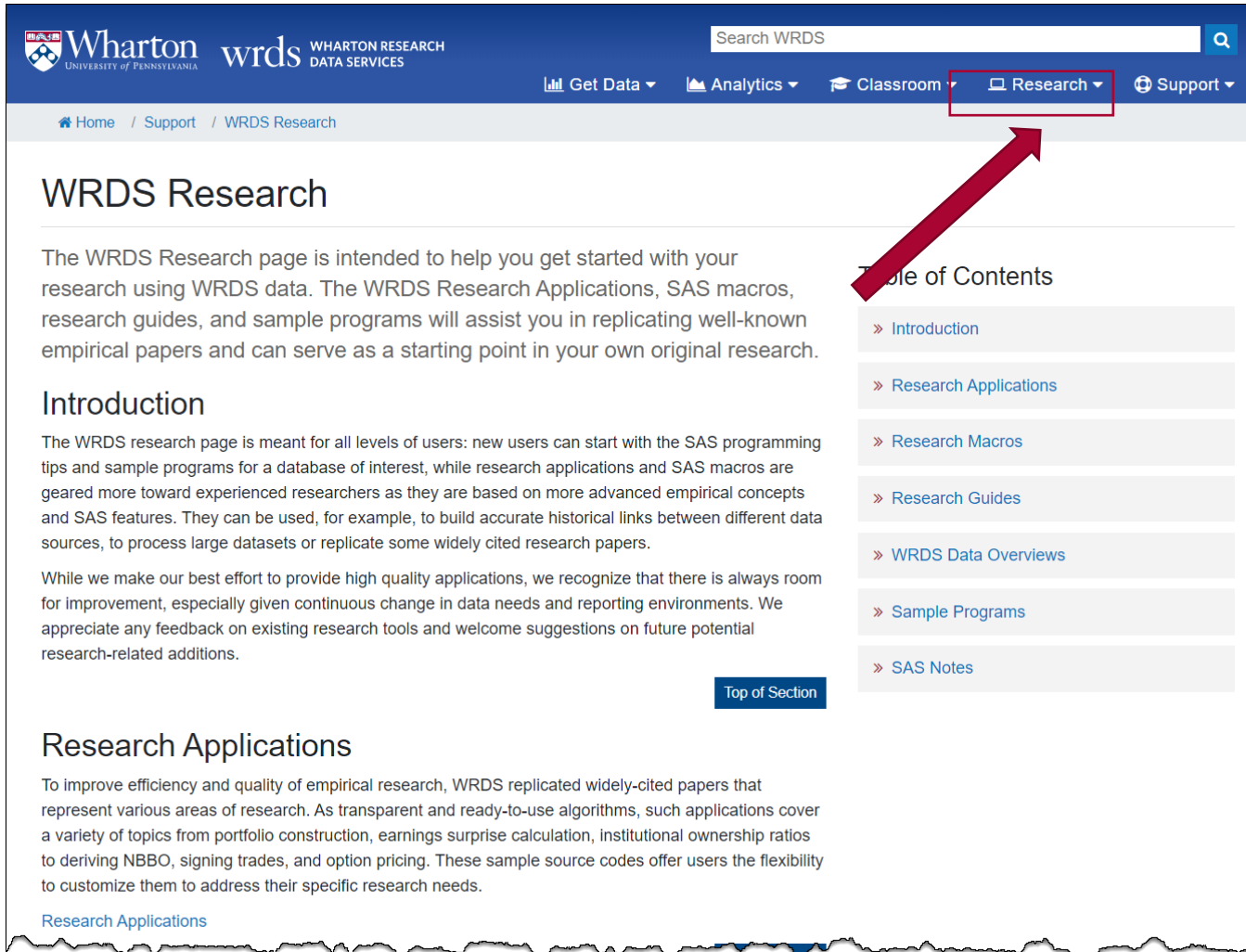
Future Value:

Rate:

Number of Years:

Calculate

# WRDS科研 (WRDS Research)



The screenshot shows the WRDS Research page. At the top, there is a navigation bar with the Wharton logo, the text 'wrds WHARTON RESEARCH DATA SERVICES', a search bar labeled 'Search WRDS', and several menu items: 'Get Data', 'Analytics', 'Classroom', 'Research', and 'Support'. The 'Research' menu item is highlighted with a red box, and a red arrow points from the 'WRDS Research' section header to it. Below the navigation bar, the page title 'WRDS Research' is displayed. The main content area includes an introductory paragraph, an 'Introduction' section with two paragraphs, and a 'Research Applications' section with one paragraph. A 'Table of Contents' sidebar is located on the right, listing links for 'Introduction', 'Research Applications', 'Research Macros', 'Research Guides', 'WRDS Data Overviews', 'Sample Programs', and 'SAS Notes'. A 'Top of Section' button is positioned below the first paragraph of the 'Introduction' section. At the bottom left, there is a link for 'Research Applications'.

Wharton wrds WHARTON RESEARCH DATA SERVICES

Search WRDS

Get Data Analytics Classroom **Research** Support

Home / Support / WRDS Research

## WRDS Research

The WRDS Research page is intended to help you get started with your research using WRDS data. The WRDS Research Applications, SAS macros, research guides, and sample programs will assist you in replicating well-known empirical papers and can serve as a starting point in your own original research.

### Introduction

The WRDS research page is meant for all levels of users: new users can start with the SAS programming tips and sample programs for a database of interest, while research applications and SAS macros are geared more toward experienced researchers as they are based on more advanced empirical concepts and SAS features. They can be used, for example, to build accurate historical links between different data sources, to process large datasets or replicate some widely cited research papers.

While we make our best effort to provide high quality applications, we recognize that there is always room for improvement, especially given continuous change in data needs and reporting environments. We appreciate any feedback on existing research tools and welcome suggestions on future potential research-related additions.

[Top of Section](#)

### Research Applications

To improve efficiency and quality of empirical research, WRDS replicated widely-cited papers that represent various areas of research. As transparent and ready-to-use algorithms, such applications cover a variety of topics from portfolio construction, earnings surprise calculation, institutional ownership ratios to deriving NBBO, signing trades, and option pricing. These sample source codes offer users the flexibility to customize them to address their specific research needs.

[Research Applications](#)

#### Table of Contents

- » [Introduction](#)
- » [Research Applications](#)
- » [Research Macros](#)
- » [Research Guides](#)
- » [WRDS Data Overviews](#)
- » [Sample Programs](#)
- » [SAS Notes](#)

# WRDS支持

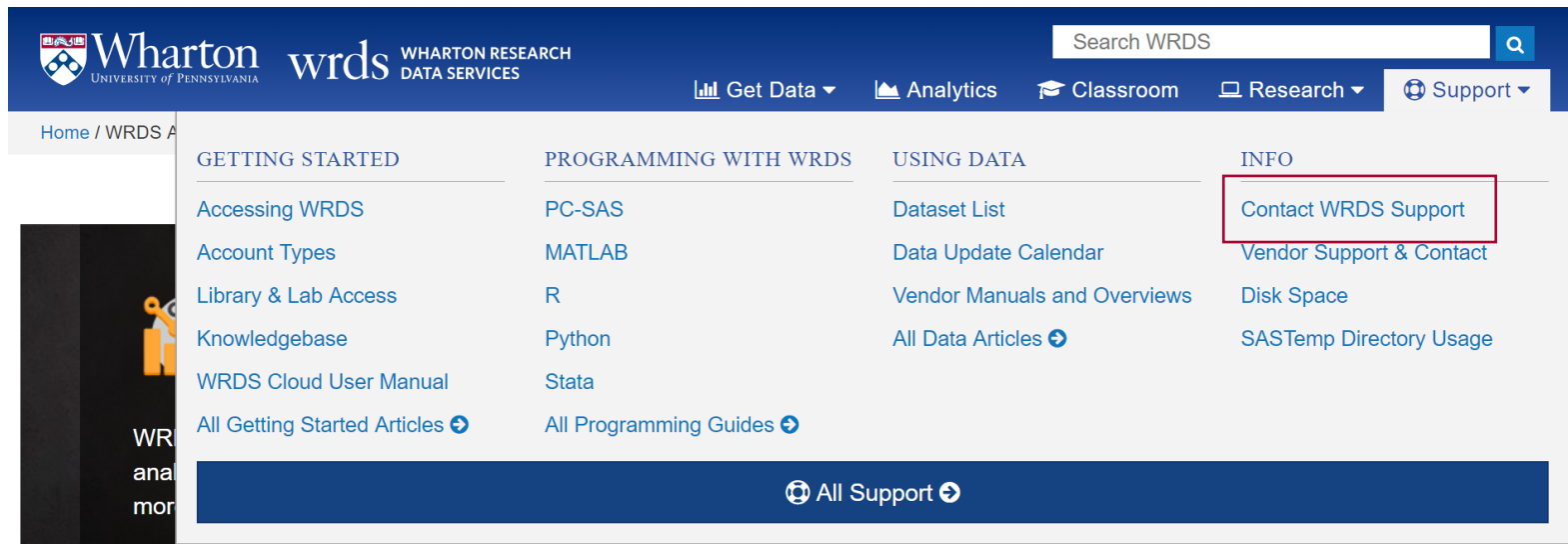
## • 在线支持:

- [DART Paths](#) →
- [Data Overviews](#)
- [Research Applications](#)
- [Sample Programs](#)
- [Data Update Calendar](#)
- [FAQs](#)

The screenshot displays the WRDS DART Videos website. At the top, the header reads "DART.Videos Data, Analytics, Research, Technology by wrds". Below this, a paragraph states: "Now, more than ever, access to data, analytics, research and technology (DART) is critical to your mission. From the classroom, boardroom, or home, for 25+ years WRDS has supported users with targeted solutions that underpin research, reinforce learning, and enable discovery." To the right, under "FEATURED TOOLS:", there are two video learning cards: "Research Data Overview of WRDS" and "Classroom by WRDS". Below the header, there are "Grid View" and "List View" buttons. A navigation bar includes "All Topics", "Information Professionals", "Instructors", and "Researchers". The main content area features a grid of video learning cards. The first card is titled "Research Data Overview of WRDS" and lists five categories: Pricing data, Fundamental data, Earnings and estimates data, Institutional ownership data, and Other types of data. The second card is "Introduction to Compustat | Part 1", the third is "Introduction to Compustat | Part 2", and the fourth is "CRSP Basics". Each card includes a "More »" link at the bottom.

# WRDS支持

- 联系WRDS：发送邮件至 [wrd-support@wharton.upenn.edu](mailto:wrd-support@wharton.upenn.edu) 或通过Contact WRDS Support提交问题。



The screenshot displays the Wharton WRDS website interface. At the top, the Wharton University of Pennsylvania logo is on the left, followed by the text 'wrds WHARTON RESEARCH DATA SERVICES'. A search bar labeled 'Search WRDS' is on the right. Below the header, navigation tabs include 'Get Data', 'Analytics', 'Classroom', 'Research', and 'Support'. The 'Support' tab is active, showing a dropdown menu with the following categories and links:

GETTING STARTED	PROGRAMMING WITH WRDS	USING DATA	INFO
<a href="#">Accessing WRDS</a>	<a href="#">PC-SAS</a>	<a href="#">Dataset List</a>	<a href="#">Contact WRDS Support</a>
<a href="#">Account Types</a>	<a href="#">MATLAB</a>	<a href="#">Data Update Calendar</a>	<a href="#">Vendor Support &amp; Contact</a>
<a href="#">Library &amp; Lab Access</a>	<a href="#">R</a>	<a href="#">Vendor Manuals and Overviews</a>	<a href="#">Disk Space</a>
<a href="#">Knowledgebase</a>	<a href="#">Python</a>	<a href="#">All Data Articles</a>	<a href="#">SASTemp Directory Usage</a>
<a href="#">WRDS Cloud User Manual</a>	<a href="#">Stata</a>		
<a href="#">All Getting Started Articles</a>	<a href="#">All Programming Guides</a>		

At the bottom of the dropdown menu, there is a blue button labeled 'All Support'.

# WRDS-SSRN Research Paper Series

Search Results

Wharton Research Data Services (WRDS) Research Paper Series

Search Within







991,699 Total downloads | [Link to this page](#) | [Subscribe to this eJournal](#) (requires login)

Sort by:

1 2 3 4 ... 51 | Next

Go to page >

Viewing: 1 - 50 of 2,531 papers

-  [Snowbirds in Securities Trading: Canadian Brokers' U.S.-Bound Order Routing](#) Downloads **7**  
Number of pages: 42 • Posted: 04 Mar 2020  
Working Paper Series  
[Katya Malinova and Andreas Park](#)  
McMaster University - Michael G. DeGroote School of Business and University of Toronto - Finance Area
-  [Supply Chain Performance with A Target-Oriented Retailer](#) Downloads **18**  
Number of pages: 45 • Posted: 04 Mar 2020 • Last Revised: 14 Mar 2020  
Working Paper Series  
[Lucy Gongtao Chen and Qinshen Tang](#)  
NUS Business School, National University of Singapore and National University of Singapore (NUS) - Department of Analytics & Operations
-  [Hot-Stove Effects: The Impact of CEO Past Professional Experiences on Dividend Policy](#) Downloads **124**  
Number of pages: 47 • Posted: 01 Mar 2020 • Last Revised: 03 Mar 2020  
Working Paper Series  
[Matthew Faulkner and Luis García-Feijóo](#)  
San Jose State University and Florida Atlantic University - Department of Finance
-  [Leverage Dynamics under Segmented Equity and Debt Markets](#) Downloads **29**  
Number of pages: 35 • Posted: 28 Feb 2020 • Last Revised: 14 Mar 2020  
Working Paper Series  
[Hae Won \(Henny\) Jung, Jin Yu and Qi Zeng](#)  
University of Melbourne - Department of Finance, Monash University - Department of Banking and Finance and University of Melbourne - Department of Finance

 [Managerial Segmented Deal Characteristics and Takeover Performance](#) Downloads

# S&P-SSRN Research Paper Series

Search Results

S&P Global Market Intelligence Research Paper Series

Search Within

**S&P Global**  
Market Intelligence

S&P Global Market Intelligence Research Paper Series

- SPGMI: S&P Capital IQ data (Topic)
- SPGMI: Compustat fundamentals (Topic)
- SPGMI: Leveraged Commentary & Data (LCD) (Topic)
- SPGMI: Panjiva (Topic)
- SPGMI: RateWatch (Topic)
- SPGMI: SNL Energy data (Topic)
- SPGMI: SNL Financial data (Topic)
- SPGMI: SNL Insurance data (Topic)
- SPGMI: SNL Media & Telecommunications (Kagan) Data (Topic)
- SPGMI: SNL Metals & Mining data (Topic)
- SPGMI: SNL Real Estate data (Topic)

14,204,569 Total downloads | [Link to this page](#) | [Subscribe to this eJournal](#) (requires login)

Sort by:

1 2 3 4 ... 604 | Next

Go to page >

Viewing: 1 - 50 of 30,165 papers

-  [The Effect of Product Market Competition and Financing Constraints on Dividend Payout](#) Downloads  
4  
Number of pages: 10 • Posted: 21 Apr 2020  
Working Paper Series  
[Hussein Abdo](#) and [Aktham Issa Maghyreh](#)  
United Arab Emirates University (UAEU) - Department of Economics and Finance and United Arab Emirates University (UAEU)
-  [The Effect of an Acquirer's Life Cycle Stage on the Performance of M&As: Evidence from Mega and Non-Mega Deals in the US](#)  
Posted: 09 Apr 2020  
Working Paper Series  
[Svetlana Grigorieva](#) and [Angelina Egorova](#)  
National Research University Higher School of Economics and National Research University Higher School of Economics
-  [Tax Loss Measurement](#) Downloads  
43  
Number of pages: 40 • Posted: 07 Apr 2020  
Working Paper Series  
[Shane Heitzman](#) and [Rebecca Lester](#)  
University of South California Marshall School of Business and Ph.D. Graduate

# 联系WRDS

WRDS支持: [wrds-support@wharton.upenn.edu](mailto:wrds-support@wharton.upenn.edu)

张霞 Erica

亚太区客户拓展副总监

电话/微信: 18817669767

电子邮件: [xiazhan@wharton.upenn.edu](mailto:xiazhan@wharton.upenn.edu)

WRDS主页: [wrds-www.wharton.upenn.edu](http://wrds-www.wharton.upenn.edu)



微信公众号: WhartonWRDS





Wharton  
UNIVERSITY *of* PENNSYLVANIA

The Global Standard for Business Research

wrds