

# Introduction to the Data Room

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# Outline

- Data Sources Overview & Access Data Room
- LSEG Workspace
- Bloomberg Terminal
- WRDS
- Other Databases & Wrap Up

# Data Sources at Goethe University



Check out our overview page on [Data Sources](#)

- All listed data sources are available via the [SAFE Data Room](#)
- Almost all the data we offer is available through [WRDS](#), [Refinitiv Workspace \(Eikon\)](#) and [Bloomberg Terminal](#) (with a few exceptions)





# Data Source Overview

To name just the most important...

- **Essentials:** Bloomberg Terminal, FactSet Workstation, LSEG Workspace (Eikon) incl. Datastream, S&P Capital IQ Pro (SNL Financials)
- **WRDS:** Compustat, CRSP, CRSP-Compustat Merged, IBES Academic, BoardEx, Orbis Europe M/L/VL, S&P Capital IQ, Option Metrics IvyDB EU + US, Ravenpack, CRSP Mutual Fund Database + Thomson Mutual Funds Holdings + MFLinks, TRACE



# Get in contact with us!

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# Who is allowed to access?

## Generally

- Students of Goethe University
- Researchers of Goethe University and SAFE
- For access to WRDS, more specific rules (see later)
- Details, please find [here](#)

# Making an Appointment (Scheduler)



SAFE data room PC 83 | SAFE data sources | Data room Scheduler

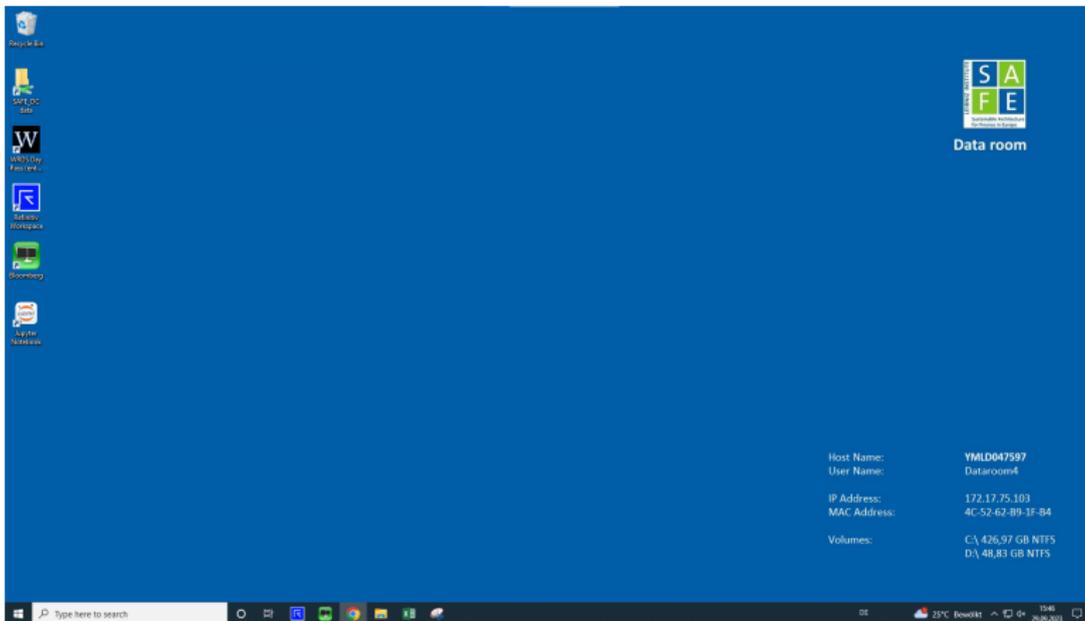
datacenter.safebankfurt.de/datacenter/\_scheduler/

Press | Contact | Intranet

Research Data Center | Data sources | Documentation | **Scheduler** | @Contact | [lick to see all news \\*\\* SAFE Research Data Semin](#)

Room	Workstation	Slot hours (N.B. data room is closed between 13.00-14.00)				
HfF E.02	pc 01 (**September)	10	11	14	15	16
HfF E.02	pc 02	10	11	12	14	15
HfF E.02	pc 03 (**September)	10	11	12	14	15
HfF E.02	pc 04	10	11	12	14	15
HfF E.02	pc 05 (**September)	10	11	12	14	15
HfF E.02	pc 06	10	11	12	14	15
HfF E.02	pc 07 (**September)	10	11	12	14	15
HfF E.02	pc 08 (**September)	10	11	12	14	15
HfF E.02	pc 09	10	11	12	14	15
HfF E.02	pc 10	10	11	12	14	15
HfF E.02	pc 11 (**September)	10	11	12	14	15
HfF E.02	pc 12	10	11	12	14	15
HfF E.02	pc 13 (**September)	10	11	12	14	15
HfF E.02	pc 14	10	11	12	14	15
HfF E.02	pc 15 (**September)	10	11	12	14	15

# The Home Desktop of Data Room PCs



# LSEG Workspace (formerly Refinitiv Workspace or Eikon)



Sample Layout - Market M.

WS

Monitor MON

GDAXI CH1

RIC	Name	Last	Pk. Chng	Hk. Chng	Close	Currency
GDAXI	XETRA DAX FRI	15,099.92	0.1%	+14.71	15,744.75	EUR
AG00HL.DE	ADIDAS AG	162.13	0.8%	+1.4	160.72	EUR
AI00DE	AIRBUS SE	123.52	0.6%	-0.8	134.32	EUR
ALV.DE	ALLIANZ SE	219.85	0.5%	-1.3	220.95	EUR
ASAP.DE	ASAP SE	41.85	0.2%	+0.09	41.70	EUR
BAYM.DE	BAY MOT WERKE	95.4	0.1%	-0.1	95.3	EUR
BAYN.DE	BEYER AG	61.26	0.8%	+0.36	61.86	EUR
BEB.DE	BECKERSDORF	120.15	0.2%	0.0	121	EUR
BENTAG.DE	BREITNAG SE	71	1.4%	-1.06	72.96	EUR
CBK.DE	COMMERZBANK	10.15	0.8%	-0.06	10.275	EUR
CONG.DE	CONTINENTAL AG	65.44	0.7%	-0.48	65.92	EUR
COV.DE	COVESTRO	50.06	0.6%	-0.34	50.42	EUR
DTG.DE	DANIELI TRUCK	31.96	-0.1%	-0.04	32	EUR
DBK.DE	DEUTSCHE BANK	8.919	-0.1%	-0.12	9.021	EUR
DRY.DE	DRYERES POST	31.89	0.8%	+0.26	31.53	EUR
EW1L.DE	EWING HC F POW	80.02	0.4%	-0.4	80.22	EUR
FBT.DE	FBT BOESSE	189.15	0.3%	-0.10	189.9	EUR
FTM.DE	FTI TELEKOM	196.74	0.0%	-0.06	196.68	EUR
FCO.DE	F. O. SCH. NAH	10.71	1.1%	+0.12	10.59	EUR
FRE.DE	FRESENUS SE	27.85	-1.1%	-0.31	28.26	EUR
HAN.DE	HANNOVER RUECK	205.8	0.0%	-0.1	205.9	EUR
HRE.DE	HERLENBERG MFG	71.96	0.6%	-0.04	72	EUR
INSAG.DE	INSEL AG	87.02	1.3%	+1.4	86.32	EUR
INTC.DE	INFINEON TECH	32.38	0.9%	+1.23	31.15	EUR
MER.DE	MERCEDES BENZ	64.61	0%	0	64.93	EUR
MKG.DE	MERCK KGAAH	154.75	0.3%	-0.55	154.2	EUR
MTA.DE	MTU AERO ENGIN	165.25	0.9%	-1.05	165.9	EUR

GDAXI

15,099.92 EUR 0.10% 75,006,360

14,979.81 52 Wk High 16,528.97 2023-07-31 WTD -1.8% 1W -0.7% Vol 3rd 66,922,802

14,948.08 52 Wk Low 12,000.43 2022-10-13 MTD -1.8% 1M -4.5% FE 12.00

19,174.83 52 Wk High 16,528.97 31-Jul-2023 DTD -0.8% 3M 5.20% Div Yield 3.54%

15,744.75 1st Low 921.18 29-Jun-1988 YTD 8.0% 1Y 19.17 Market Cap 1,415.67B

DAX PERFORMANCE IN: Germany Provider: STOXX AG Weighting: EUR DE000H49008

GDAXI CH1

New Release. What's new?

XETRA DAX FRI O 15734.7524 H 15838.4314 L 15701.4632 C 15893.9558 +74.2837 (+0.47%) USD-

Volume SMA 9 75,000k

2023 Feb Mar Apr 3 Jun Jul

08 Dec 2022 - 07 Jul 2023

GDAXI AND STOXX Global Finance N.

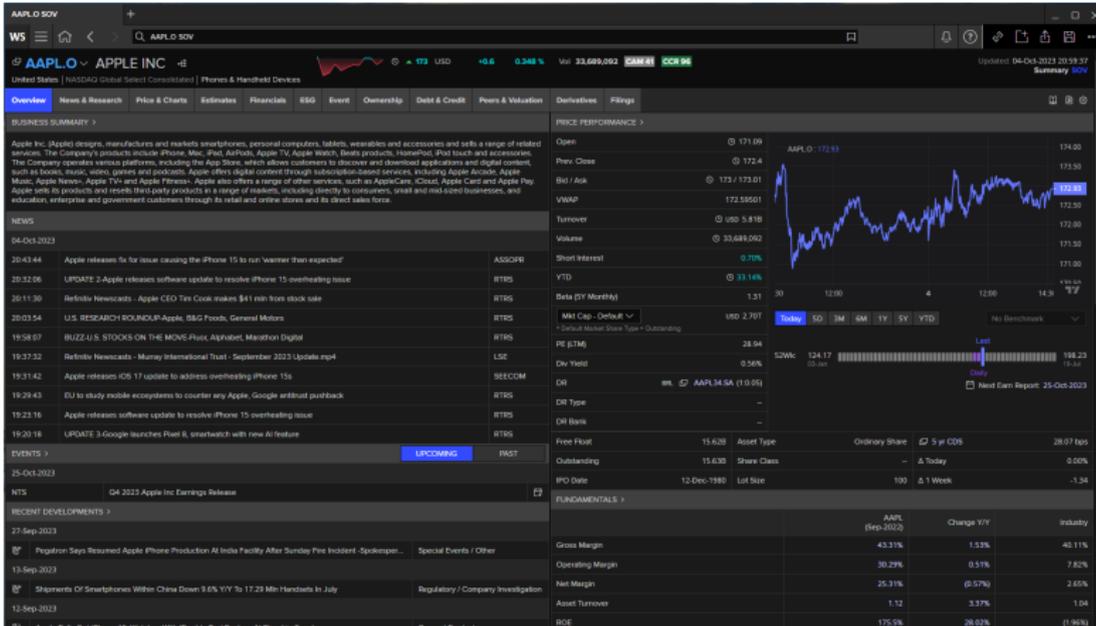
GDAXI AND STOXX NEWS

News Monitor will soon update to the latest version. Try News Monitor 2.0

Topics: GDAXI Search by RIC, topic, portfolio

Time	Headline	Source	Sentim.
19:26:44	2 European Stocks Close Slightly Lower After Volatile Session [Finanz Nachrichten [Switzerland]]	FINDEX	
19:16:56	LIVE MARKETS-LEI shows recession with or without inverted yield curve	RTBS	
19:07:10	UPDATE 2 European stocks slide for third day running as yields march higher	RTBS	
19:09:45	LIVE MARKETS-Fed vs ECB: who will cut rates faster? Bank	RTBS	
19:03:00	LIVE MARKETS-Positive on Brazil, more nuanced outlook for China - Lombard Odier	RTBS	
19:31:51	EURO STOXX INDEX, STOXX UP 0%; EURO ZONE BLUE CHIPS, STOXX50E UP 0%	RTBS	
19:31:49	FRANCE'S CAC 40, FCHI, SPAIN'S IBEX, BSE DOWN 0.1%	RTBS	
19:31:52	BRITAIN'S FTSE 100, FTSE DOWN 0.8%	RTBS	
19:31:52	GERMANY'S DAX, GDAXI UP 0%	RTBS	
19:31:49	EUROPE'S STOXX 600, STOXX DOWN 0%	RTBS	
19:27:13	LIVE MARKETS-Delta market: factories orders, ADP, etc.	RTBS	
19:27:13	GLOBAL MARKETS-Globul bond steepens, stringing slowdown fears	RTBS	

# Example: AAPL.O





## RICs (Reuters Identifier Codes)

- When searching for securities (e.g. shares, bonds, derivatives), Workspace offers the possibility to search for all known identifiers such as ISIN, CUSIP, WKN, ...
  - most commonly used in Workspace are internal identifiers called **RICs**.
- ⇒ "general" RIC Format (not always): **TICKER.EXCHANGE**
- ⇒ e.g. AAPL is the ticker and O stands for NASDAQ (check exchange abbreviations via **EXCHID01** command)
- ⇒ This can be an advantage because ISINs do not usually contain information about the exchange (usually they implicitly give the data points of the primary exchange, i.e. where the security is primarily traded or where the IPO took place)
- Since RICs (like ISINs, etc.) can change, LSEG also provides permanent identifiers (for Workspace) called **PermID**, see here [here](#)



# The Data Item Browser (DIB) command

The screenshot shows the Data Item Browser (DIB) interface for AAPL.O. The top bar displays 'AAPL.O DIB' and a search bar with 'AAPL.O DIB'. Below the search bar, the instrument is identified as 'APPLE INC (EQUITIES - ORDINARY SHARES)'. A search filter 'price' is applied, showing a list of data items. The 'Price Close' item is selected, and its details are shown on the right.

Data Item Name	Data Item Code	AAPL.O
Price Close	TR.PriceClose	172.4000
Price 52 Week High	TR.Price52WeekHigh	
Price 52 Week Low	TR.Price52WeekLow	
Price Target - Mean	TR.PriceTargetMean	
Price / EPS (SmartEstimate #)	TR.FwdPctEPSSmartEst	
Insider Transaction Price	TR.TransactionPrice	
Close Price	TR.CLOSEPRICE	
Bid Price	TR.BIDPRICE	
Ask Price	TR.ASKPRICE	
Mid Price	TR.MIDPRICE	
Indicative Auction Price	TR.INDICATIVEAUCTIONPRICE	
High Price	TR.HIGHPRICE	

**Price Close**  
TR.PriceClose  
172.4000 (AAPL.O)  
Definition:  
The latest available closing price, if there are no trades for the most recent completed tradable day, the most recent prior tradable day with trading activity is used, provided the last tradable day for the instrument is within 378 completed calendar days (54 weeks).  
Date: 10/03/2023  
Calc Date: 2023-10-04  
Currency: USD



# The META command I

Search All (Workspace) +

WS Search All (Workspace)

Apple Inc  
Ordinary Share — NASDAQ Global Select Consolidated  
AAPLO Ticker: AAPL | ISIN: US0378331005 | CUSIP: 037833100 | Wabarr: 908440 | Wertpapier: 865385

<b>Name:</b>	Apple Inc	<b>RIC:</b>	AAPL.O	<b>Type:</b>	Ordinary Share
<b>Source:</b>	NASDAQ Global Select Consolidated	<b>Asset Category:</b>	Ordinary Share	<b>Popularity:</b>	★★★★
<b>Currency:</b>	US Dollar	<b>Country/Region:</b>	United States	<b>Main Index:</b>	NASDAQ Composite Index
<b>Permissionable Entity:</b>	74	<b>Listing Status:</b>	Listed	<b>Website:</b>	https://www.apple.com/

**Symbology**

<b>Perm ID:</b>	55838974642	<b>Issuer PermID:</b>	4295805573	<b>ISIN:</b>	US0378331005
<b>CUSIP:</b>	037833100	<b>Valorem:</b>	908440	<b>Wertpapier:</b>	865385
<b>Ticker:</b>	AAPL	<b>Delayed RIC:</b>	!AAPL.O		

**History**

<b>Last change</b>	19-Jul-2002	<b>Previous SEDOL</b>	2046251	<b>More History</b>
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**Related Data**

Display Chart | News | Launch Time & Sales App

<b>Forecast Dividend</b>	AAPL.DVCF...	<b>Implied Volatility</b>	AAPLATM.V...	<b>TRBC</b>	Technology
<b>Cashflow RIC:</b>		<b>RIC:</b>		<b>Industry</b>	Technology Equipment
<b>Market Digest RIC:</b>	.AD.D	<b>Options Chains:</b>	!AAPL*U	<b>Sector:</b>	Computers, Phones & Household ... Phones & Handheld Devices Phones & Smart Phones

**Instruments**

Equities (142) | Bonds (101) | Commercial Paper (34) | Futures (30) | Options (2662) | Warrants (22001) | CDS (74)

# The META command II



Advanced Search - Eikon

INFO Click here to try the new version of Advanced Search

RESULTS (142)

AI Enter query Manage Columns Group

Issuer	RIC	Exchange	TRBC Sector	Type of Equity	Currency	Ex-Dividend ...	ISIN	CUSIP/ONS	SEDOL
Apple Inc	AAPL.O	NASDAQ Global Select Consolidated	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL34.SA	BIMF Bovespa SA Bolsa de Valores M...	Phones & Smart Phones	Brazilian Depository Receipt	Brazilian Real	11/08/2023	BRAAPL34R004	U03780113	B4GJY28
Apple Inc	AAPL.BA	Bolsa de Comercio de Buenos Aires	Phones & Smart Phones	Argentinian Depository Rece...	Argentinian Peso	11/08/2023	ARDEU116183	U0378GAA3	B6X2Y44
Apple Inc	AAPL.OQ	NASDAQ Stock Exchange Global Sele...	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	2046251
Apple Inc	02QVL	London Stock Exchange	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	BOYG0W0
Apple Inc	AAPL.Z	Cboe BZX Exchange - Nasdaq Global S...	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.DG	Cboe EDGX Exchange - Nasdaq Globa...	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.DE	Xetra	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.F	Frankfurt Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	4033819
Apple Inc	AAPL.B	Boston SE when trading NASDAQ Glob...	Phones & Smart Phones	Ordinary Share	US Dollar	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.RMPS	Moscow Interbank Currency Exchange ...	Phones & Smart Phones	Ordinary Share	Russian Ruble	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.CCP	Canadian Composite Quote/Trade	Phones & Smart Phones	Depository Receipt	Canadian Dollar	11/08/2023	CA03785Y1007	03785Y100	
Apple Inc	AAPLq.F	Frankfurt Stock Exchange	Phones & Smart Phones	Depository Receipt	Russian Ruble	11/08/2023	CA03785Y1007	03785Y100	BPDVW2
Apple Inc	AAPL.RME	Moscow Interbank Currency Exchange ...	Phones & Smart Phones	Ordinary Share	Russian Ruble	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.BE	Berlin Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.MU	Munich Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.MI	Milan Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	10/02/2023	US0378331005	037833100	
Apple Inc	AAPL.SP	Stuttgart Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.MX	Bolsa Mexicana de Valores S.A. de C.V.	Phones & Smart Phones	Ordinary Share	Mexican Peso	11/08/2023	US0378331005	037833100	B011001
Apple Inc	AAPL.D	Dusseldorf Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	AAPL.H	Hamburg Stock Exchange	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	
Apple Inc	APC3.CHE	CH - X Europe	Phones & Smart Phones	Ordinary Share	Euro	11/08/2023	US0378331005	037833100	



# The **SCREENER** command

**SCREENER** +

WS

**SCREEN** **REPORT**

Unsaved Screen

Currency: **EUR**

▼ **UNIVERSE** Public Companies **67.9K**

Include: Active, Public, Primary

Include: Indices, Lists, Portfolios, Screens, Stocks

Exclude: None

▼ **QUICK FILTERS**

Country of Exchange

Country of Incorporation

Company Market Cap

Average Daily Value Traded - 52 Weeks

TRBC Economic Sector Name

Counts

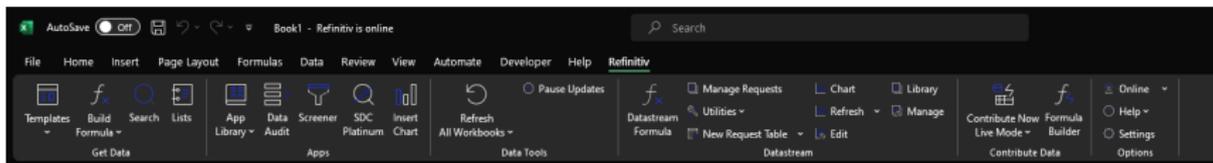
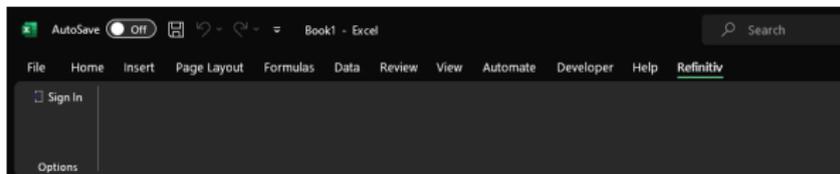
Country of Headquarters **969**

Germany

Identifier	Company Name	Country of Headquarters
<input type="checkbox"/>		
<input type="checkbox"/>	ADLG.DE Adler Real Estate AG	Germany
<input type="checkbox"/>	AGRG.F AGROB Immobilien AG	Germany
<input type="checkbox"/>	AEE1.D AEE Gold AG	Germany
<input type="checkbox"/>	AAHG.F Ahlers AG	Germany
<input type="checkbox"/>	ABKG.MU Aktienbrauerei Kaufbeuren AG	Germany
<input type="checkbox"/>	ALXA.F Alexanderwerk AG	Germany
<input type="checkbox"/>	ATWG.BE Allerthal-Werke AG	Germany
<input type="checkbox"/>	ALBG.MU Allgauer Brauhaus AG	Germany
<input type="checkbox"/>	BFGG.BE Bastfaserkontor AG	Germany
<input type="checkbox"/>	BAYGr.DE Bayer AG	Germany
<input type="checkbox"/>	PBBG.DE Deutsche Pfandbriefbank AG	Germany
<input type="checkbox"/>	BYWGr.DE BayWa AG	Germany
<input type="checkbox"/>	JFBG.SG Joh Friedrich Behrens AG	Germany
<input type="checkbox"/>	BEIG.DE Beiersdorf AG	Germany
<input type="checkbox"/>	ADCG.F AdCapital AG	Germany
<input type="checkbox"/>	GBFG.DE Biffinger SE	Germany
<input type="checkbox"/>	BOSSh.DE Hugo Boss AG	Germany
<input type="checkbox"/>	IPOKx.F Heidelberger Beteiligungsholding AG	Germany



# The Workspace Excel Add-In





# The Excel Formula Builder

Formula Builder

Instruments: **BMWG.DE** Search Instruments

DATA ITEMS Interval: Daily Search Data Items

Category: Standardized Fundamentals (2834)

- Income Statement (619)
  - Revenue (130)**
  - Operating (99)
  - Financial (17)
  - Other Non-Operating (14)
  - Special Items & Non-Recurring (42)
  - Taxation (22)
  - After-Tax Items (10)
  - Extraordinary Items (11)
  - Minority Interest, Preferred Dividend & Siml...
  - Net Income (3)
  - Other Comprehensive Income (18)
  - Shares & Per Share (INC) (108)
  - Supplemental (INC) (138)
- Balance Sheet (676)
- Cash Flow (211)

Fields:

- Revenue from Business Activities - Total
- Fees & Commissions Expense
- Investment Income - Gross - Investment
- Business-Related Financing Revenue - Other
- Interest & Dividend Income - Finance - Total
- Interest & Dividend Income/(Expense) - Net - Finance
- Interest Expense - Finance - Total
- Investment Income/(Expense) - Net - Insurance
- Investments & Loans - Business - Gain/(Loss)
- Net Commission & Fees Income/(Expense) - Business ...
- Net Premiums Earned
- Non-Interest Business Revenue/(Expense) - Net - Total
- Revenue from Business-Related Activities - Other - Total
- Revenue from Financing-Related Operations
- Revenue from Goods & Services
- Trusts & Fiduciary Income/Commission & Fees

Add All (130)

Description: **Revenue from Business Activities - Total**

TR.F.TotalRevenue

14261000000 (BMWG.DE)

Definition:

Revenue from Business Activities - Total [STLR] represents total revenue of a Company. Applicable to all Industries. Revenue from Business Activities - Total [STLR] includes: Industrial • Revenue from Goods & Services [SNTS] • Revenue from Financing-Related Operations [SFRO] • Revenue from Business-Related Activities - Other - Total [SOBR] Banks • Interest & Dividend Income - Net - Finance [SID] • Non-Interest Business Revenue - Net - Total [SNIB] Insurance • Net Premiums Earned [SPNE] • Investment Income - Net - Insurance [SNRV] • Investments & Loans - Business - Gain/Loss [SGL] • Business-Related Financing Revenue - Other [SOFB] • Revenue from Business-Related Activities - Other - Total [SOBR] Property • Revenue from Goods & Services [SNTS] • Revenue from Financing-Related Operations [SFRO] • Revenue from Business-Related Activities - Other - Total [SOBR] Investment • Investment Income - Gross - Investment [SGI] • Interest & Fees on Loans [STCF] • Investments & Loans - Business - Gain/Loss [SGL] • Business-Related Financing Revenue - Other [SOFB] • Revenue from Business-Related Activities - Other - Total [SOBR] • Operating Revenue - Capital Account [SORC] • Operating Revenue - Revenue Account [SOPS] Financial • Interest & Dividend Income - Finance - Total [SIDT] • Net Commission & Fees

Selected Items: **TR.F.TotalRevenue** Drag to Reorder Clear All

=RDPData("BMWG.DE";"TR.F.TotalRevenue")

Layout Update Frequency  Add data fields as cell references  Consolidate Formulas  Cancel Insert



# The CODEBOOK command

If you want a programmatic way to retrieve data, you can use the Python API; for example, you can use the **CODEBK** command; see the last slide of this presentation for more information.

The screenshot shows the CODEBOOK application interface. On the left, a file explorer displays a directory structure for '01. Data Retrieval and Discovery / 01.04. Eikon (Workspace) Data API /'. The file 'Eikon\_Data\_API\_Get\_Data.ipynb' is selected, showing it was last modified 3 months ago. Other files include 'Eikon\_Data\_API\_New.ipynb', 'Eikon\_Data\_API\_Symbology.ipynb', and 'Eikon\_Data\_API\_TimeSeries.ipynb', all also last modified 3 months ago.

The main editor window shows the content of 'Eikon\_Data\_API\_Get\_Data.ipynb'. It includes a 'Getting Help and Support' section with a link to the Eikon Data API Q&A Forum. Below that is a section titled 'Import the library and connect to Eikon or Refinitiv Workspace' with the following code:

```
[1]: import refinitiv.data.eikon as ek
ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')
```

Next is a section titled 'Snapshot real-time pricing' with the following code:

```
[2]: df, err = ek.get_data(['PEUP.PA', 'EUR-', 'JPY-'], {'BID', 'ASK'})
df
```

The output of the code is a table:

	Instrument	BID	ASK
[0]	PEUP.PA	<NA>	<NA>
[1]	EUR-	0.9975	0.9979
[2]	JPY-	136.71	136.74

At the bottom, there is a section titled 'Fundamental & Reference'.

# Capacity



- Excel: 10m data points per month in Datastream/workspace

$$\text{Datapoints} = \text{Universe} \cdot \text{Fields} \cdot \text{time points}$$

- (Python) API: (nearly) unrestricted



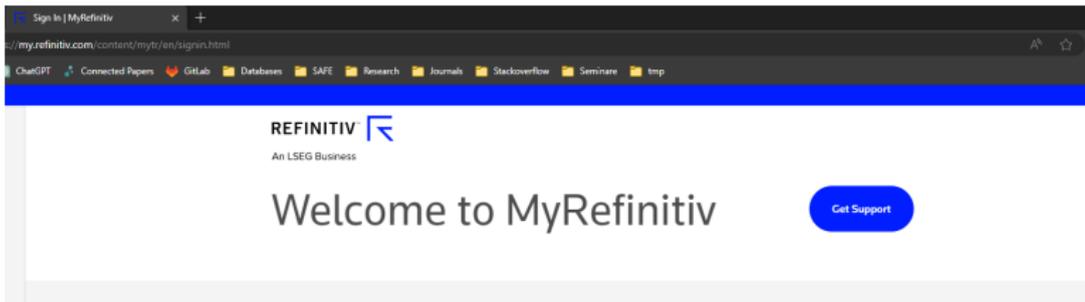
# Useful Links and Documentation

- [Q&A Forum](#)
- [Learning Center](#)
- [Quick Start Guide](#)



# The Workspace Helpdesk

- You can always contact us: [dataroom@safe-frankfurt.de](mailto:dataroom@safe-frankfurt.de)
  - ⇒ we have a lot of technical knowledge, not necessarily always in terms of content
  - ⇒ we can refer you to the Refinitiv Helpdesk: [my.refinitiv.com](https://my.refinitiv.com)





# The Workspace Helpdesk Problem...

Hi Philip,

Good day.

We have received your concern about downloading filing reports via Workspace's Python script.

Upon our initial check, your user ID: [schwedler@safe-frankfurt.de](mailto:schwedler@safe-frankfurt.de) is entitled for the student variant of Refinitiv Workspace, as per our agreement with the universities for access to our product, we are only able to provide full support to university personnel.

Given the current circumstance and type of access you have to workspace, we highly recommend to raise the data and product related questions to the following university personnel:

1. Librarian
2. Course Administrator
3. Professor
4. Lecturer
5. PhD Student
6. Student users with Academic Staff Add-on or AMR for Academic Staff Add-on

⇒ If you have difficulties with the helpdesk, contact us.



# How To Login I

Select Language for Analytics and Communication Functions:

**Bloomberg**

<Enter> or <GO> to begin

- ✓ English
- 日本語
- Français
- Deutsch
- Español
- Português
- Italiano
- 繁體中文
- 한국어
- 简体中文
- Русский
- Türkçe

To customize your News language experience type LANG <GO> after login.

[Contact Us](#)

S/N 463272-0 | SID 6790573-1 | Version 125.1.80

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# How To Login II



**Bloomberg**

Login Name

Password

Login

Forgot Login Name or Password?

Contact Us  
 Create a New Login

S/N 463272-0 | SID 6790573-1 | Version 125.1 | Netid X593

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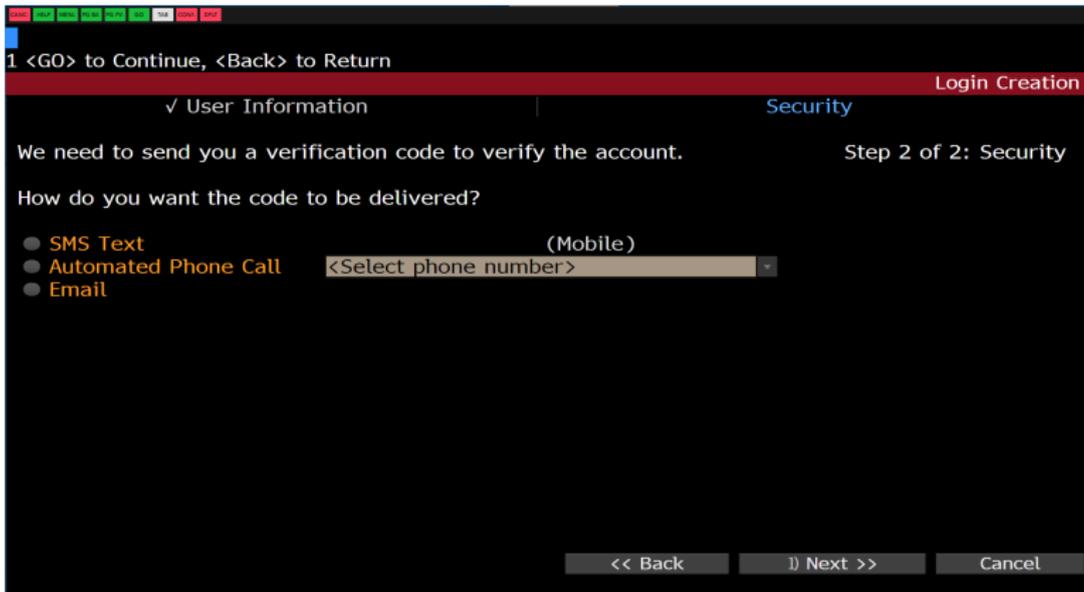


# How To Login III

The screenshot shows a terminal window with a dark background. At the top, there is a red header bar with the text "Please enter all required fields" on the left and "Login Creation" on the right. Below the header, the text "Welcome to the Bloomberg Terminal" is displayed. A paragraph of orange text reads: "Bloomberg logins are firm specific. If you are new to the firm, you will need to create your new Bloomberg Terminal Login." There are two questions with radio button options: "Who are you creating this login for?" with options "Myself" (selected) and "Someone else"; and "Have you ever been a Bloomberg Terminal User?" with options "Yes" and "No" (selected). At the bottom right, there are two buttons: "Next >>" and "Cancel".

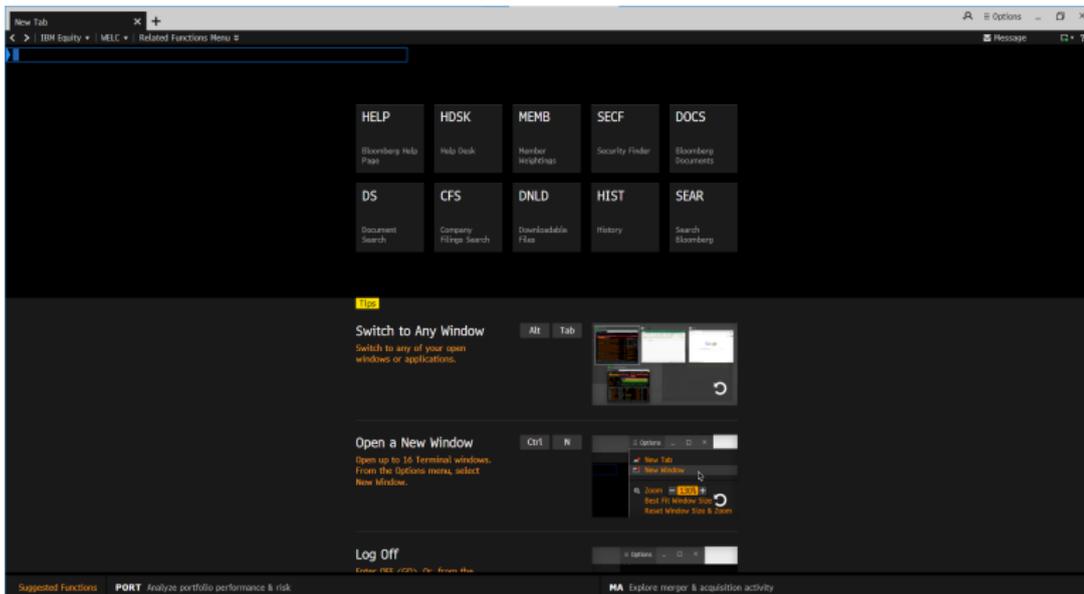


# How To Login IV





# The Bloomberg Terminal





# The Main Menu

 A screenshot of the Bloomberg Eikon application interface. The main menu is open, displaying a list of categories and sub-items. The categories include Markets, Professional Applications, Platforms, and Settings & Utilities. The Markets section lists various market types like Sovereign, Credit, and Money Markets. Professional Applications includes Portfolio Management & Risk, Pricing & Risk Solutions, and Order Management Systems. Platforms includes Launchpad - Custom Desktop, Bloomberg Data, Excel & BQ, and Bloomberg on Mobile. Settings & Utilities includes a link to Settings & Utilities. The interface also shows a search bar at the top, a navigation pane on the left, and a main content area with various tool tiles like MEMB, SECF, DOCS, DNLD, HIST, and SEAR. At the bottom, there are suggested functions for PORT and MA.
 

New Tab

< > | IBM Equity | MLC | Related Functions Menu

Cancel X

Main Menu of Bloomberg Functions

Markets

- 1 Sovereign >
- 2 Credit >
- 3 Mortgages >
- 4 Money Markets >
- 5 Municipals >
- 6 Preferreds >
- 7 Equities >
- 8 Commodities >
- 9 Indices >
- 10 Currencies >
- 11 Derivatives & Structured Notes >
- 12 Communication & Community >
- 13 News & Research >
- 14 Economic Analysis >
- 15 Help & Customer Support >
- 16 About Bloomberg >

Professional Applications

- 17 Portfolio Management & Risk >
- 18 Pricing & Risk Solutions >
- 19 Order Management Systems >
- 20 Elec. Trading & Order Routing >
- 21 Bloomberg STP >
- 22 Tradebook >
- 23 Bloomberg Industry Group >

Platforms

- 24 Launchpad - Custom Desktop >
- 25 Bloomberg Data, Excel & BQ >
- 26 Bloomberg on Mobile >

Settings & Utilities

- 27 Settings & Utilities >

Result: 5414

Open a New Window

Open up to 16 Terminal windows. From the Options menu, select New Window.

Log Off

Suggested Functions

PORT Analyze portfolio performance & risk

MA Explore merger & acquisition activity



# Example: Equities

The screenshot displays the Bloomberg Eikon interface. A 'Main Menu of Bloomberg Functions > Equities' is open, listing various tools such as 'SEC', 'Market Surveillance', 'Top-Down Analysis', and 'Idea Generation'. The background shows a search result for 'IBM Equity' with a 'Result: 6451'. Below the menu, there is a section titled 'Open a New Window' with instructions on how to use the 'New Window' option from the 'Options' menu. At the bottom, there are 'Suggested Functions' including 'BIO' and 'FIRS'.



# The FLDS command

FLDS IBM Equity

< > | IBM Equity ▾ | FLDS ▾ | Menü: Verwandte Funktionen ▾

Nr.<GO> für Felddetails

IBM US Equity Quelle API Aktion Option

Suche nach Feldern Gewählte Felder (0)

price Aufruf Ranking Filter Equity Feldtyp Alle

	ID	Mnemonik	Ovrd	Wert
1)	PX386	INTERVAL_HIGH		150.57
2)	HS030	HIGH_LIFETIME		206.21990760
3)	HS031	LOW_LIFETIME		8.98451138
4)	RQ017	VWAP		129.6953
5)	P1131	BLOOMBERG_CLOSE_PRICE		129.22000000
6)	RX402	PX_AVG_10_YEARS_EPS		10.80
7)	OP006	DELTA	■	
8)	F0604	PX_AVG_10_YEARS_BASIC_...		13.83
9)	PR005	PX_LAST		129.78000000
10)	PR779	PX_SCALING_FACTOR		1.0000
11)	PR743	PX_EXCH_BASE		N.A.
12)	PR002	PX_BID	■	129.77000000
13)	PR006	PX_OPEN		129.47000000
14)	PR008	PX_LOW		129.42000000
15)	PR007	PX_HIGH		129.95410000
16)	PR004	PX_ASK	■	129.79000000
17)	RQ005	LAST_PRICE		129.78000000



# The Bloomberg Excel Add-In

The screenshot shows the Microsoft Excel interface with the Bloomberg ribbon selected. The ribbon includes the following groups and options:

- File**: Home, Insert, Page Layout, Formulas, Data, Review, View, Developer, Bloomberg
- Refinitiv**: Speed Style, Auto Color
- S&P Cap IQ Pro**: EMSX Panel
- Tell me what you want to do...**: Data Navigation, Help, Diagnostics, What's New Options
- Real-Time Updates**:
- Data Tools**: Refresh Selection, Populate Table
- Community**: Create New Note Manager, File Manager
- Library**: Template Library, Chart Library
- Find Fields Builder**: Find Fields, BQL Builder
- Function Spreadsheet Builder**: fx icon

The formula bar shows cell A1 is selected. The worksheet grid shows columns A through Q.



## Bloomberg Excel Functions

- **BDH**: Bloomberg Data History retrieves historical values (end-of-day or intra-day)  
$$= \text{BDH}(\textit{Security}, \textit{Field}, \textit{StartDate}, \textit{EndDate}, [\textit{option}])$$
- **BDP**: Bloomberg Data Point retrieves current or real-time values.  
$$= \text{BDP}(\textit{Security}, \textit{Field}, [\textit{option}])$$
- **BDS**: Bloomberg Data Set populates multiple cells with descriptive data for a security  
$$= \text{BDS}(\textit{Security}, \textit{Field}, [\textit{option}])$$
- **BQL**: Bloomberg Query Language is a separate approach that enables more-robust, SQL-like queries.  
$$= \text{BQL}(\textit{Instrument}, \textit{Function}, \textit{Range})$$

# Capacity I



## Monthly Downloading Limit

- Monthly limits comes from a proprietary model.
- This limit is based on unique securities and depends on the type of data being downloaded.
- For example: some of the data on the system such as intra-day is valued a little bit higher than historical end of day for any given list of securities.
- **We do not recommend more than 5000 to 7000 unique identifiers per month.**
- Once a security is used once in a month then if you use it again it will not count again towards the monthly limit.

# Capacity II



## Daily Downloading Limit

- The Daily API limit is 500,000 hits/per day.
- A “hit” is defined as one request for a single security/field pairing.

$$\text{Hits} = \text{Securities} \cdot \text{Fields} \cdot \text{time points}$$

## License Issue

- Bloomberg Anywhere License (Personalized)
  - Bloomberg Terminal License
- ⇒ not the same coverage, in particular for fixed income data



# No Capacity?

	A	B	C	D	E	F
1	#N/A Review					
2						
3						
4						
5						
6						
7						



# The Bloomberg Helpdesk I

The screenshot shows the Bloomberg Helpdesk interface in a browser window. The search bar contains the word "HELP". Below the search bar, the results are categorized into "FUNCTIONS" and "SECURITIES".

**FUNCTIONS**

- HELP**
- HELP AT HOME**: News Search for "HELP AT HOME"
- Menu +**: Help & Customer Support
- HSK**: Help Desk
- SEAR**: Search Bloomberg Help
- BQLX**: Help on BQL in Excel
- DAPI**: Overview of Desktop API **API Help**
- BHL**: Bloomberg Help and Learning

SEARCH WHAT IS THE LATEST NEWS ON TEMPORARY HELP COMPANIES?  
More Functions...

**SECURITIES**

- HELP IN Equity**: Helpage Finlease Ltd (India)
- BL362954 Corp**: HelpSystems Loan USD TL 11/30/2026
- USESTEMP Index**: US Employees on Nonfarm Payrolls Temporary Help Services SA
- HELPTEC LX Equity**: Luxcellence - Helvetia European Equity Class C1X (Luxembourg)
- BL362103 Corp**: HelpSystems Loan USD TL 11/30/2027
- BL346713 Corp**: Help at Home Loan USD TL 30/29/2027
- FHF Mktg**: First Help Financial LLC (Multiple Matches)
- HELPTEC LX Equity**: Luxcellence - Helvetia International Equity Ex Europe Class C1 (Luxembourg)

More Securities...

**Find an Answer Fast**  
Search all of Bloomberg by typing your query in the command line.

**Cycle Through Your Workflow**

**Suggested Functions** **EVTS** Search & analyze corporate events **ECFC** Estimate future economic trends



# The Bloomberg Helpdesk II

The screenshot shows the Bloomberg Helpdesk interface. The top navigation bar includes 'HELP Bloomberg Help Page', 'DOM JONES INDUS. AVG Index', and 'Related Functions Menu'. The main content area is titled 'Getting Started with the Bloomberg' and features a 'Live Help' section with a search bar and a 'Generate PDF' button. The 'Help & Support' section is expanded, showing a list of topics: 'Welcome', 'Host the Terminal', 'Help Resources', 'Navigating the Terminal', 'Current Line', 'Menu System', 'Functions', 'Security', 'Bloomberg Keyboard', 'Bloomberg Windows', 'Help & Support', 'Reference', 'Disaster Recovery', and 'FAQ'. The 'Help & Support' section contains the following text and list:

**Help & Support**

The green <help> (F1) key on the Bloomberg Terminal® keyboard connects you with fast answers and 24-hour comprehensive support, so you can find, interpret, and act upon the information and analyze you need. You can also get answers from the command line, access a roundup of recent Bloomberg enhancements, and request customized training.

- To learn more about a function from the function's Help Page, press the <help> key once from that function. For more: [Help Pages](#).
- To start a chat with Bloomberg's live 24-hour Help Desk, press the <help> key twice. For more: [Help Desk](#).
- To find answers fast using the Search Bloomberg (SEARCH) function, enter a keyword, phrase, or question in the command line, then make a selection from the autocomplete list or press <GO> for comprehensive search results. For more: [Bloomberg Search](#).
- To request personalized training with an Analytics Specialist, go to TRAI <GO>.
- To learn about new functionality and enhancements relevant to your market focus, go to DNEW <GO>.

[Return to Top](#)

**Help Pages**

Help Pages are online user guides designed to help you find fast answers, discover new business solutions, and get more from the Bloomberg Terminal®. A function's Help Page provides information specific to that function. This includes an explanation of the business solution the function provides along with how-to instructions, definitions, calculations, and links to related documents and videos.

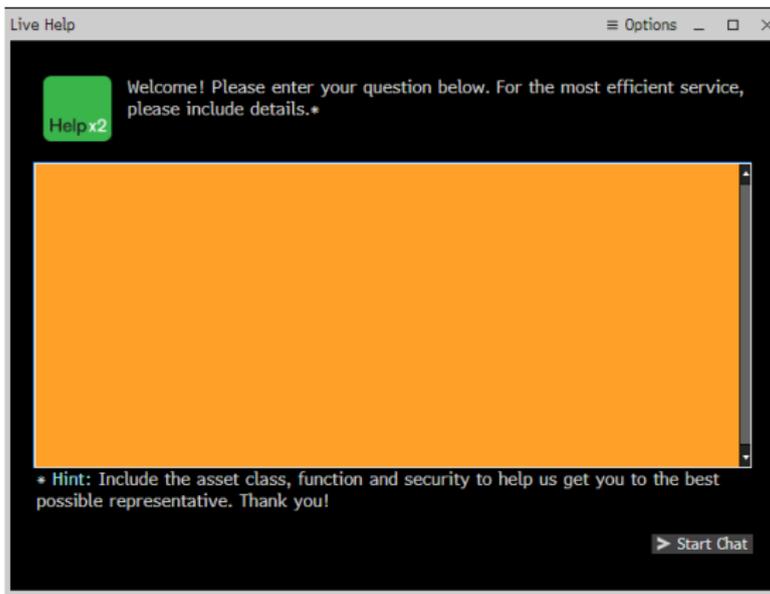
To access a function's Help Page, from the function, press the green <help> (F1) key once.



The screenshot also shows a terminal keyboard at the bottom with the F1 key highlighted in green. At the bottom of the interface, there are two buttons: 'Suggested Functions' and 'Find a person in the Bloomberg community'.



# The Bloomberg Helpdesk III





# How to access WRDS data

## There are two ways to retrieve data from WRDS

- Build a Query on the WRDS Webpage
- Use the (Python) API

## This is how you can access WRDS

- Bachelor and Master students: Day Pass account in the SAFE Data Room
- Researchers (Faculty, PhD Students, Research Assistants): Personal Account, use at **own computer**

**ONLY PERSONAL WRDS accounts are allowed to use the API!**  
(Sorry, we do not make the rules)

# Get WRDS Day Pass I



The screenshot shows a web browser window with the URL `wrds-www.wharton.upenn.edu/connect/`. The page features a dark blue header with the Wharton University of Pennsylvania logo and the WRDS (Wharton Research Data Services) logo. Navigation links for Analytics, Data, Classroom, About, Videos, and Demo are visible. The main content area is split into two columns. The left column, titled "Connect to WRDS", contains a form for email registration with a text input field containing `s8678570@stud.uni-frankfurt.de` and a "Submit" button. Below the form is a "Why do we ask for an email address?" section and an "Already have a personal WRDS account?" section with a "Log in using a personal WRDS account" link. The right column, titled "Welcome to WRDS!", provides a brief overview of the service and a "Connect with us on Facebook" link. A "Login" button is also present in the header area.

# Get WRDS Day Pass II



The screenshot shows a web browser window with the URL `wrds-www.wharton.upenn.edu/connect/`. The page header includes the Wharton University of Pennsylvania logo and navigation links: [Home](#), [Analytics](#), [Data](#), [Classroom](#), [About](#), [Videos](#), and [Demo](#). There are also utility links for [Login](#), [Register](#), [Password Reset](#), [Account Transfer](#), and [Contact](#). A login form with fields for `Username` and `Password` and a `Login` button is visible.

The main content area features two columns:

- Email Sent:** A notification stating, "We have just sent an email with the subject 'Your WRDS Day Pass' from wrds-support@wharton.upenn.edu to s8423067@stud.uni-frankfurt.de. Please click on the link in that email to sign in. Please also make sure that your email filtering does not mark emails from wrds-support@wharton.upenn.edu as junk mail."
- Welcome to WRDS!** A welcome message stating, "Wharton Research Data Services (WRDS) provides the leading business intelligence, data analytics, and research platform to global institutions - enabling comprehensive thought leadership, historical analysis, and insight into the latest innovations in research. For additional information, please see the About section." Below this is a link to "Connect with us on Facebook".

The footer contains the Wharton University of Pennsylvania logo and a list of links: [About WRDS](#), [WRDS FAQs](#), [WRDS News](#), [Our Team](#), [Ways to Use WRDS](#), [Using Two-Factor Auth](#), [WRDS Account Types](#), [Terms of Use](#), [Account Preferences](#), [Info / Support Request](#), [Privacy Policy](#), [Sample Data](#), [Conference Calendar](#), and [Impactful Research](#). A copyright notice at the bottom reads: "Unless otherwise noted, all material is © 1993-2023. The Wharton School, University of Pennsylvania. All rights reserved."

# Get WRDS Day Pass III



Your WRDS Day Pass 📧 23.09.2023 - 16:42 ☆

▼ Von WRDS ▲ Vollansicht 🗨 | 📄

 **Wharton**  
UNIVERSITY OF PENNSYLVANIA

 **wrds**  
WHARTON RESEARCH DATA SERVICES

Dear WRDS User,

Thank you for requesting a Day Pass for WRDS access. Your connection string is:

<https://wrds.wharton.upenn.edu/connections/324869482907929898a5c6cf4f05a8f8b0954c1e077ca345e01ba8e7296c>

The above link is valid for a 1 day pass to WRDS, enabling you to access the data to which your institution subscribes via the WRDS platform. Clicking on the link will take you directly to the WRDS website.

Please make sure to enter your email address on the query page of any jobs you run which may finish after this pass has expired. Obtaining any results which become available after this pass has expired will then simply require a new day pass.

Please note that your use of the WRDS website and other services offered by WRDS is contingent upon your acceptance of and agreement to the WRDS Terms of Use, available here:

<https://wrds-www.wharton.upenn.edu/users/faq/>

If you have any issues or questions, please reply directly to this email (wrds-support@wharton.upenn.edu).

Kind Regards,  
The WRDS Team

[Link mailed at 10:42:28 on 2023-09-29]

3819 Chestnut Street Suite 217  
Philadelphia, PA 19104  
United States

# Get WRDS Day Pass IV



WRDS Research Data Services

Search WRDS

Home

### Subscriptions

- Bank Regulatory 23
- Beta Suite by WRDS 2
- Blockholders 1
- BoardEx 48
- Bureau van Dijk 42
- CBOE Indexes 1
- Compustat - Capital IQ 104
- Contributed Data at ... 26
- CRSP 226
- CSMAR | Sample 7
- Fama-French Portfoli... 7
- Federal Judicial Center 7
- Federal Reserve Ban... 4
- Financial Ratios Suite... 4
- Historical SPDJI 2
- IBES 133
- Intraday Indicators by ... 3
- IRI 1
- Linking Queries by W... 12
- Macro Finance Society 27
- OTC Markets 1
- Pastor-Stambaugh an... 3
- Penn World Tables 2
- Peters and Taylor Tot... 1
- Philadelphia Stock Ex... 2
- Public Data 14
- RavenPack 23
- Research Quotient 1
- SEC Analytics Suite b... 20
- SEC Order Execution 1

### WRDS News

- 16 MAY WRDS will be enabling Multi-Factor authentication for SAS/Connect and ... May 16th, 2023
- 03 MAY Research on the asset market for pollutive plants named ... May 3rd, 2023

### Events

- 27 SEP AMBA & BGA Latin America Conference
- 11 OCT FIMA

### Analytics by WRDS

- SEC Analytics Suite
- U.S. Daily Event Study
- Intraday Indicators

### New Data

- 27 SEP NEW Revello Labs Data September 27th, 2023

# Build a Query



## BvD Orbis - Global Financials for Industrial Companies (in USD)

Query Form **Variable Descriptions** Manuals and Overviews Knowledge Base Data Preview

The source data of this web query form are ob\_w\_company\_id\_table\_\* and ob\_w\_ind\_g\_fins\_cfl\_usd\_\*.

### Step 1: Choose your date range.

Date variable(s):

2022-03-31 to 2023-03-31

### Step 2: Apply your company codes.

What format are your company codes?

BvD ID Number  LEI  ticker  ISIN

Select an option for entering your company codes:

Company Codes  Code List Name

Please enter company codes separated by a space.

Example:

[BvD ID Number] US942404110 US911144442

[ticker] AAPL MSFT

[ISIN] US0378331005 US5949181045

[LEI] HWUPKROKMP0U8FGXBT394

INR2EJN1ERAN0WSZP974

Save this code list to Saved Codes

-----Select Saved Codes List-----

# After you have made a Query



wrds WHARTON RESEARCH DATA SERVICES

Search WRDS

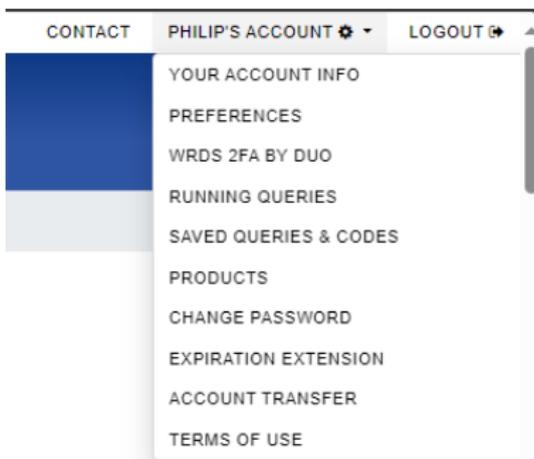
Get Data Analytics Classroom Videos Research Support

Home / Your Account / Queries / Query 7604554, for bvd\_orbis\_large

## Query 7604554, for bvd\_orbis\_large

Status:	Success <a href="#">Run</a>	Data Retention
Product:	bvd_orbis_large	Results data will be accessible for 2 days, until 2023-10-06, 17:31
Results:	<p>Result Size: 4 KiB      Result Count: 1 Rows</p> <p>Output Files:</p> <ul style="list-style-type: none"><li>~/wrds_query_output/fup6dnyhzdczjft.csv</li></ul> <p>Results are also in your home directory at <code>~/wrds_query_output/</code>. See WRDS Cloud: Access Web Query Output for more details.</p>	Notice
Timing:	<p>Elapsed Time: 8 seconds</p> <p>Submitted: 2023-10-04 17:31</p> <p>Work Begun: 2023-10-04 17:31</p> <p>Work Finished: 2023-10-04 17:31</p>	<p>Your use of WRDS and this data extract must comply with the <a href="#">WRDS Terms of Use</a>.</p> <p>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 <a href="#">Support form</a>.</p>
Input Parameters:	<a href="#">Toggle Input Parameters</a>	Citation instructions

# Find Your Query





# Access Your Query

The screenshot shows a JupyterLab interface with a file browser on the left and a data table in the main workspace. The file browser shows a directory structure with a file named 'fup5dryhdzjgfppt.csv' selected. The data table has the following columns and values:

	bvid	CATEGORY_OF_CO...	CTRYISO	CONSCODE	FILING_TYPE	CLOSDATE	CLOSDATE_year	CLOSDATE_s
1	US842404110	VERY LARGE COMP...	US	C1	Annual report	2022-09-24	2022	20220

⇒ This is hosted in the **WRDS Cloud**, a High Performance Computing cluster!

# Wrap Up



Hopefully you have learned

- how to get access to the data room
- which data sources are available and who to contact
- how to get started with Workspace (Eikon), Bloomberg, and WRDS
- how to find the documentation for the Excel-Addins
- how to find the documentation for the product specific symbology



## Last Comment and Advertisement

- It can be useful to also check the so-called APIs for retrieving data.
- I held a seminar on this topic six months ago, [see here](#)
- Considerations for using Excel add-ins or (Python) API:

Python API	Excel Add-in
systematic data retrieve	data exploration
large amounts of data	small amounts of data

# Thank you!