

STOCK & INDEX RELEASE NOTES

NOVEMBER 2016 MONTHLY UPDATE

These release notes pertain to the November 2016 Monthly release of the CRSP US Stock and Index databases, available in December 2016.

SUN SOLARIS SUPPORT ENDING

In order to ensure that our subscribers continue to have robust and dependable data access, CRSP is retiring big-endian databases for use on Solaris platforms following publication of the December 2016 data cut that is available in January 2017. After this time CRSP databases will be available in flat file formats that can be used on all platforms, through our partner distributors such as WRDS and TQA, and for use with CRSP tools on the following CRSP-supported platforms:

- Windows 8.1 & 10 – 32-bit & 64-bit
- Red Hat Linux – 32-bit & 64-bit

Oracle's Solaris support at CRSP ended in June 2016. CRSP is making efforts to contact our subscribers impacted by this change to ensure a timely transition. Should you have immediate questions, please contact us at:

User Support – CRSP Research Products:

Support@crsp.ChicagoBooth.edu, or 312-263-6400 select # 2

NOVEMBER 2016 DATA EDITS

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|-------------------------------|--|------------|------------|
| 14877 | LIMBACH HOLDINGS INC | Added zero nameline for 20160712-20161115 to reflect off-exchange activity | 7/12/2016 | 11/15/2016 |
| 86536 | DIFFUSION PHARMACEUTICALS INC | Added zero namelines for 19981222-20161108 to reflect off-exchange activity | 12/22/1998 | 11/8/2016 |
| 11206 | AMERICAN ADVENTURE INC | Changed exchange code to 33 from 3 and security status to W from R for 19870326-19870512 | 3/26/1987 | 5/12/1987 |
| 15379 | MEDIGUS LTD | Changed sharecode from 11 to 12 for 20151109-20161130. | 11/9/2015 | 11/30/2016 |
| 85234 | CORECIVIC INC | Changed sharecode from 11 to 18 for 20130102-20161130 | 1/2/2013 | 11/30/2016 |
| 26650 | CONSOLIDATED TOMOKA LAND CO | Changed SIC Code from 3825 to 6552 from 20161021-20161130. | 10/21/2016 | 11/30/2016 |

FILE VERSION SPECIFICS

This table contains version specific information for the CRSP Stock Files with data ending November 2016. It contains the number of securities and information about the maximums of the event arrays.

| FILE CODE | # OF SECURITIES | MAX NAMES | MAX DISTS | MAX SHARES | MAX DELISTS | MAX GROUPS | MAX NASDIN | FIRST PERMNO | LAST PERMNO |
|-----------|-----------------|-----------|-----------|------------|-------------|------------|------------|--------------|-------------|
| DAZ | 31600 | 39 | 1538 | 2372 | 1 | 4 | 2615 | 10000 | 93436 |
| MAZ | 31571 | 39 | 1538 | 2372 | 1 | 4 | 2615 | 10000 | 93436 |

| CALENDAR | DATE RANGE | DATE INDEX RANGE |
|------------------------------|-------------------|------------------|
| Daily trading calendar | 19251231-20161130 | 1-24081 |
| Month-end trading calendar | 19251231-20161130 | 1-1092 |
| Year-end trading calendar | 19251231-20171229 | 1-93 |
| Quarter-end trading calendar | 19251231-20171229 | 1-369 |
| Weekly trading calendar | 19260102-20161130 | 1-4744 |

CRSPACCESS PRODUCT INFORMATION

To simplify installation for our subscribers, data are bundled into product groups. Information relevant to each product group is listed in the table below.

| PRODUCT NAME | DATABASE | SIZE | INDEXES | PORTFOLIOS | COMPONENTS & DESCRIPTION |
|--|---|----------|---|----------------|---|
| CRSP 1925 US Stock and Index Database | FIZyyyyymm SIZyyyyymm (SAS/ASCII) | 4.1 GB | All CRSP indexes and portfolio assignments | All portfolios | DI - 1925 Daily US Stock & Index Database MI - 1925 Monthly US Stock & Index Database IF - CRSP Supplemental US Indexes |
| CRSP 1925 US Stock | FAZyyyyymm SAZyyyyymm (SAS/ASCII) | 3.7 GB | CRSP NYSE/ AMEX/ NASDAQ Value-weighted Market, CRSP NYSE/ AMEX/ NASDAQ Equal-weighted Market, S&P 500 Composite, NASDAQ Composite | | DA - 1925 Daily US Stock MA - 1925 Monthly US Stock IN - CRSP Limited US Indexes |
| CRSP 1962 US Stock | A6Zyyyyymm S6Zyyyyymm (SAS/ASCII) | 3.3 GB | CRSP NYSE/ AMEX/ NASDAQ Value-weighted Market, CRSP NYSE/ AMEX/ NASDAQ Equal-weighted Market, S&P 500 Composite, NASDAQ Composite | | D6 - 1962 Daily US Stock M6 - 1962 Monthly US Stock IN - CRSP Limited US Indexes |
| CRSP 1962 US Stock and Index Database | AXZyyyyymm SXZyyyyymm (SAS/ASCII) | 3.6 GB | See FIZ | All portfolios | DX - 1962 Daily US Stock & Index Database MX - 1962 Monthly US Stock & Index Database IF - CRSP Supplemental US Indexes |
| CRSP 1925 US Indexes | IFZyyyyymm SFZyyyyymm | 122 MB | | | IF - CRSP Supplemental US Indexes |
| CRSP/Compustat Merged Database | CMZyyyyymm | 10.37 GB | | | CM - Compustat Data formatted in CRSPAccess Database |
| Daily & Monthly Treasuries in CRSPSift | TRZyyyyymm | 278 MB | | | TR - Database format for use with CRSPSift |
| Daily & Monthly Treasuries Files | TFZyyyyymm | 1.75 GB | | | TF - Expanded daily and monthly files in EXCEL, SAS, and ASCII formats |
| Mutual Fund Database | MFZyyyyymm | 10 GB | | | MF - Mutual Funds |
| CRSP/Ziman Daily & Monthly REIT | RAZyyyyymm | 251 MB | | | RD - Daily REITs RM - Monthly REITs |

DELIVERY METHOD, INSTALLS, AND DATA FORMATS

DELIVERY

CRSP data delivery for all products is available only through the Cloud, utilizing IPSwitch's MOVEit Cloud product. (<https://crsp.moveitcloud.com>)

If you have not yet accessed your account, or need assistance, contact support@crsp.chicagobooth.edu, or call 312-263-6400, Option 2.

While DVDs are no longer available from CRSP, you are welcome to create your own once you have downloaded the data, and use as long as you have an active license to do so.

ZIP INSTALLS

CRSP uses a zip process for data installation. ZIP utilities that are standard on all platforms should work to unzip the databases. On Windows computers, CRSP recommends using 7-ZIP, which can be downloaded from this site: <http://www.7-zip.org/>

Several important items to note follow:

- All directories are extracted to lower case letters. For example: C:\crspdata\miz201308
- All Windows Users: Extracting a zipped file does not create an installed program in Windows. It will not show in the Windows Control Panel. When uninstalling the data, just delete the directories that contain the detailed files
- Red Hat Linux Users: If your version of Red Hat is earlier than 6.0, you will need to install an updated version of the "File Roller" program in order to install the data

ZIP FILE STRUCTURE AND PROCESS

Windows 7/XP Products:

| PRODUCT LABEL | PRODUCT NAME | FILE NAME |
|-----------------|------------------------------|---------------------|
| A6Z1_YYYYMM_SLD | CRSP 1962 US Stock | a6zyYYYYMM_cadb.zip |
| AXZ1_YYYYMM_SLD | CRSP 1962 US Stock and Index | axzyYYYYMM_cadb.zip |
| FAZ1_YYYYMM_SLD | CRSP 1925 US Stock | fazyYYYYMM_cadb.zip |
| FIZ1_YYYYMM_SLD | CRSP 1925 US Stock and Index | fizyYYYYMM_cadb.zip |
| IFZ1_YYYYMM_SGD | CRSP 1925 Indexes | ifzyYYYYMM_cadb.zip |

Red Hat Linux Products:

| PRODUCT LABEL | PRODUCT NAME | FILE NAME |
|-----------------|------------------------------|---------------------|
| A6Z1_YYYYMM_SLD | CRSP 1962 US Stock | a6zyYYYYMM_cadb.zip |
| AXZ1_YYYYMM_SLD | CRSP 1962 US Stock and Index | axzyYYYYMM_cadb.zip |
| FAZ1_YYYYMM_SLD | CRSP 1925 US Stock | fazyYYYYMM_cadb.zip |
| FIZ1_YYYYMM_SLD | CRSP 1925 US Stock and Index | fizyYYYYMM_cadb.zip |
| IFZ1_YYYYMM_SGD | CRSP 1925 Indexes | ifzyYYYYMM_cadb.zip |

Solaris SPARC Products:

| PRODUCT LABEL | PRODUCT NAME | FILE NAME |
|-----------------|------------------------------|----------------------|
| A6Z1_YYYYMM_SBD | CRSP 1962 US Stock | a6zyYYYYMM_sparc.zip |
| AXZ1_YYYYMM_SBD | CRSP 1962 US Stock and Index | axzyYYYYMM_sparc.zip |
| FAZ1_YYYYMM_SBD | CRSP 1925 US Stock | fazyYYYYMM_sparc.zip |
| FIZ1_YYYYMM_SBD | CRSP 1925 US Stock and Index | fizyYYYYMM_sparc.zip |
| IFZ1_YYYYMM_SGD | CRSP 1925 Indexes | ifzyYYYYMM_sparc.zip |

Flat File Products:

| PRODUCT NAME | FILE NAME |
|--------------|---------------------|
| SAS Zip | s*zyyyymm_sas.zip |
| ASCII Zip | s*zyyyymm_ascii.zip |

STEPS TO INSTALL:

- From the directory containing your downloaded zip file, right click (in Windows) or run File Roller (in Red Hat and Solaris)
- Set the extract destination to the current higher level directory where data is normally stored and unzip will add the rest of the path (default is C:\ in Windows or /home in Red Hat and Solaris)
- For example, in Windows, extracting to C:\ will install the data under C:\crspdata

Contact CRSP Client Services for assistance at: support@crsp.chicagobooth.edu or call 312-263-6400, Option 2.

SETTING ENVIRONMENT VARIABLES

The zip process will not automatically set environment variables for use with command line tools. The following steps will do so.

NOTE: CRSPSift does not use and therefore does not require environment variables.

LINUX AND SUN SOLARIS

NOTE: The new zip installs are now saving to directories with lower case letters – for example, ~/crspdata/diz201308

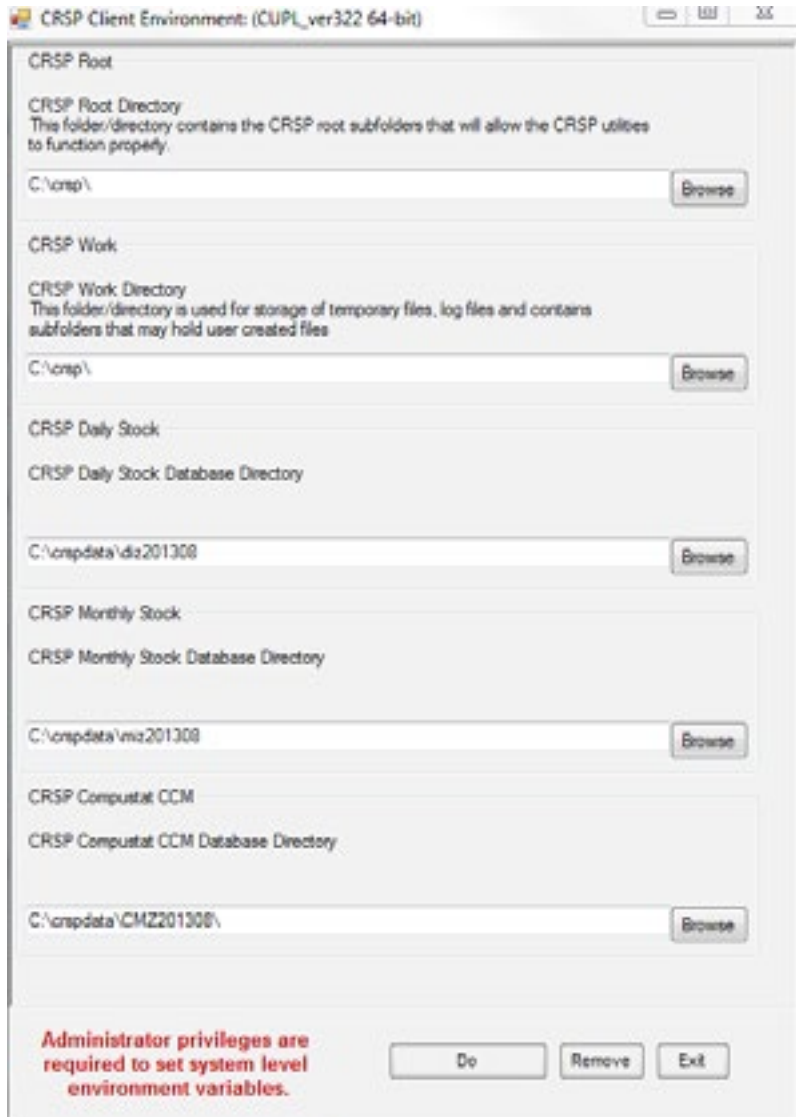
Check the current state of the environment variables by entering this command: `env | grep crsp`

- If you have admin privileges on your machine, open the .profile file, and make updates to the following lines to update the paths for the new data installed:
 - `CRSP_DSTK=<full path name>/<daily stock directory>` (example: `CRSP_DSTK=~ /crspdata/diz201308`)
 - `CRSP_MSTK==<full path name>/<monthly stock directory>` (example: `CRSP_DSTK=~ /crspdata/miz201308`)
 - `CRSP_IND=<full path name>/<index directory>` (example: `CRSP_IND=~ /crspdata/ifz201308`)
- If you are using the bash shell (or any Bourne-style shell), enter the same commands above and export each one. This will make changes for your current session only and does not save to the .profile file.
- A shell script is available to make changes that can be reused for each update done. Note that this will only make changes to your current session and does not save to the .profile file.
 - Navigate to where the CUPL tools are loaded and then enter: `cd accbin`
 - Start the script by entering: `./crsp_setup.sh`
 - The script will prompt for the following:
 - File name (*will be appended with .kshrc*)
 - Top level directory (this should be where CUPL tools are located (example: `~/crsp`))
 - Scratch directory for error messages – name can be anything
 - Enter path for daily stock directory (example: `~/crspdata/diz201308`)
 - Enter path for monthly stock directory (example: `~/crspdata/miz201308`)
 - Enter path for index directory (example: `~/crspdata/ifz201308`)
 - Enter path for CCM directory – enter to leave blank
 - Enter path for CST directory – enter to leave blank
 - Execute script by running: `./<file name created above>.kshrc` (*note there is a space between the two dots*)

WINDOWS:

The CRSP Client Environment utility provides users a way to check the location of the software and to set environment variables. The utility can be started by locating it under installed programs CRSPAccess/CRSP Client Environment, or by navigating to the /accbin folder where the CUPL tools are installed and running: `Client_Environment.exe` (screen shot is displayed below). After making any changes, be sure to log off and back into Windows for the settings to be saved.

Note: For subscribers of the CRSP Compustat Merged database, additional CCM database environments will be displayed for the location of the Compustat data.



The screenshot shows the 'CRSP Client Environment: (CUPL_ver322 64-bit)' window. It contains several sections for setting directory paths:

- CRSP Root:** CRSP Root Directory. This folder/directory contains the CRSP root subfolders that will allow the CRSP utilities to function properly. Path: `C:\crsp\`.
- CRSP Work:** CRSP Work Directory. This folder/directory is used for storage of temporary files, log files and contains subfolders that may hold user created files. Path: `C:\crsp\`.
- CRSP Daily Stock:** CRSP Daily Stock Database Directory. Path: `C:\crspdata\dsa201308`.
- CRSP Monthly Stock:** CRSP Monthly Stock Database Directory. Path: `C:\crspdata\msa201308`.
- CRSP Compustat CCM:** CRSP Compustat CCM Database Directory. Path: `C:\crspdata\CMZ201308\`.

At the bottom, there is a red warning: 'Administrator privileges are required to set system level environment variables.' and three buttons: 'Do', 'Remove', and 'Exit'.