CRSP ZIMAN/REAL ESTATE DATA SERIES RELEASE NOTES

MARCH 2019 QUARTERLY UPDATE

FILE VERSION SPECIFICS

- The CRSP/Ziman Real Estate Data Series contains data through March 2019, available in April 2019.
- The data series contains 652 securities of which 222 are currently trading. The date range is from 19800102-20190329.
- This release may be installed on Windows and Linux. ASCII and SAS versions of the data series are available for all three platforms and in addition, a Microsoft Access database is available for Windows. The Zip files available for download include a version for each different set of files, found in the table in the zip file structure section below.

RESEARCH AND PROGRAMMING NOTES

Prices and indexes in this product begin in January of 1980. This is true even when the Ziman REIT Info table states that the REIT was in existence prior to 1980.

The base year for the CRSP/Ziman Indexes is 12/30/1994, at which point they are set to a value of 100. This differs from CRSP Market Indexes which are set to 100 on 12/29/1972.

Due to some inconsistent trading early in the time series, a few additional rules were implemented to improve the continuity of the portfolios used to calculate the indexes. Please refer to Chapter 2 of the CRSP/Ziman Real Estate Data Series Guide for an explanation of universe and price selection criteria.

201903 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
ADDS					
12329	ELLINGTON FINANCIAL INC	EFC	28852N10	3/4/2019	3/29/2019
DELISTS					
14034	OWENS REALTY MORTGAGE INC	ORM	69082810	7/1/2013	3/28/2019

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
13752	CYRUSONE INC	shares outstanding change from 108329 to 108258 for 20190214-present.
13700	WHEELER REAL ESTATE INV TR INC	shares outstanding change from 9453 to 9511 for 20181231-present.
13756	GLADSTONE LAND CORP	shares outstanding change from 16071 to 17891 for 20181231-20190218 and from 17891 to 18059 for 20190219-present.
79129	BROOKFIELD PROPERTY REIT INC	shares outstanding change from 127326 to 109805 for 20181231-present.
14220	Q T S REALTY TRUST INC	shares outstanding change from 51008 to 51022 for $20190228\mathchar`-20190328$ and from 51022 to 55256 for $20190329\mathchar`-present.$
49744	POTLATCHDELTIC CORP	shares outstanding change from 67570 to 67866 for 20190225-present.
79782	REGENCY CENTERS CORP	shares outstanding change from 167514 to 167506 for 20190213-present.
15279	UNITI GROUP INC	shares outstanding change from 178210 to 178981 for 20181025-20181230 and from 178981 to 180536 for 20181231-20190305.
85947	LASALLE HOTEL PROPERTIES	price change from \$34.749 to \$0.00 and ptype change from 12 to 13 on 20190131.
16266	REVEN HOUSING REIT INC	shares outstanding change from 10945 to 10952 for 20181231-20190227 and from 10952 to 11027 for 20190228-present.

PERMNO	COMPANY NAME	DESCRIPTION
17287	COLONY CREDIT REAL ESTATE INC	shares outstanding change from 83410 to 127810 for 20190228-20190328.
89823	GLADSTONE COMMERCIAL CORP	shares outstanding change from 29255 to 29437 for 20190213-present.
18259	MEDALIST DIVERSIFIED REIT INC	shares outstanding change from 2447 to 2322 for 20181231-present.
92343	RETAIL OPPORTUNITY INVST CORP	shares outstanding change from 113993 to 113996 for 20190215-present.
92680	A G N C INVESTMENT CORP	shares outstanding change from 536300 to 536339 for 20190222-present.
92948	OFFICE PROPERTIES INCOME TRUST	shares outstanding change from 192332 to 48083 for 20190102-20190102 and from 48083 to 48082 for 20190103-20190224 and from 48082 to 48083 for 20190225-present.
87289	SENIOR HOUSING PROPERTIES TRUST	shares outstanding change from 237731 to 237730 for 20181231-present.

201902 REIT SUMMARY

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
13752	CYRUSONE INC	shares outstanding change from 105838 to 105834 for 20181026-20181230 and from 105834 to 108329 for 20181231-present.
14252	GAMING & LEISURE PROPERTIES INC	shares outstanding change from 214038 to 214091 for 20181030-20181230 and from 214091 to 214212 for 20181231-present.
14279	EXTENDED STAY AMERICA INC	shares outstanding change from 188517 to 188288 for 20181029-20181230 and from 188288 to 188220 for 20181231-present.
14651	CARETRUST REIT INC	shares outstanding change from 83884 to 85867 for 20181231-20190114 and from 85867 to 88847 for 20190115-present.
17222	INDUSTRIAL LOGISTICS PPTYS TR	shares outstanding change from 110072 to 65075 for 20181227-present.
49744	POTLATCHDELTIC CORP	shares outstanding change from 62755 to 67570 for 20181231-present.
79782	REGENCY CENTERS CORP	shares outstanding change from 169443 to 167514 for 20181231-present.
83879	LAMAR ADVERTISING CO NEW	shares outstanding change from 84723 to 85085 for 20181101-20181230 and from 85085 to 85163 for 20181231-present.
85947	LASALLE HOTEL PROPERTIES	price change from \$34.749 to \$0.00 and ptype change from 12 to 13 on 20190131.
86996	S B A COMMUNICATIONS CORP NEW	shares outstanding change from 114244 to 113321 for 20181031-20181230 and from 113321 to 112433 for 20181231-present.
89617	EQUINIX INC	shares outstanding change from 80390 to 80722 for 20181231-present.
89823	GLADSTONE COMMERCIAL CORP	shares outstanding change from 28926 to 28988 for 20181030-20181230 and from 28988 to 29255 for 20181231-present.
90092	SABRA HEALTHCARE REIT INC	shares outstanding change from 178285 to 178307 on 20181231-present.
92343	RETAIL OPPORTUNITY INVST CORP	shares outstanding change from 113985 to 113993 on 20181231-present.
92680	A G N C INVESTMENT CORP	shares outstanding change from 477832 to 536300 on 20181231-present.

201901 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
DELISTS					
13309	SELECT INCOME REIT	SIR	81618T10	03/07/2012	12/31/2018

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
14651	CARETRUST REIT INC	had a shares outstanding change from 83353 to 83884 on 20181102-present.
14279	OFFICE PROPERTIES INCOME TRUST	had a shares outstanding change from 99205 to 48084 on 20190102-present.

DELIVERY METHOD, INSTALLS, AND DATA FORMATS

DELIVERY

CRSP data delivery for all products is available through the "Cloud." By utilizing IPSwitch's MOVEit Cloud product (https:// crsp.moveitcloud.com, you can download data products either on demand, or with scheduled processes.

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:

- All directories are extracted to lower case letters. For example: C:\crspdata\raz201308
- 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:

Three separate zip files need to be unzipped separately. Unzip the files into the root or home or your target directory. For example, c:\ in Windows; /home for Linux. The unzip process will created the \crspdata subdirectory.

Note that the destination directories have also changed as part of this process:

Zip file on disk	Description	Install Path
razyyyymm_ascii	ASCII files	\crspdata\razyyyymm_ascii
razyyyymm_msaccess	MS Access tables	\crspdata\razyyymm_msaccess
razyyyymm_sas	SAS files	\crspdata\razyyyymm_sas

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

SYSTEM REQUIREMENTS

- SAS version 8 or higher, Microsoft Access, or an analytical tool of your choice
- Sufficient disk space to load and manipulate the data series.*

Data Series Format	Monthly Data Series	Daily/Monthly Data Series
ASCII	12.8 MB	273 MB
Microsoft Access	12.5 MB	235 MB
SAS V 9.1	14.5 MB	291 MB

*Additional disk space will be needed for data manipulation.

FILE NAME SPECIFICATIONS AND INSTALLATION

ASCII

All files contain variable-width records, ending with line-feeds, with pipe-delimited "I" fields. There are no header records. See Table Definitions in Chapter 3 of the guide for field order in each file.

File Name	Description
crsp_daily_data.txt*	daily REIT security data
crsp_header.txt	security REIT header data
crsp_monthly_data.txt	monthly REIT security data
crsp_names.txt	security name history of REITS
crsp_ziman_daily_index.txt*	daily index results
crsp_ziman_monthly_index.txt	monthly index results
index_type_map.txt	definitions of REIT indexes and characteristics
price_type.txt	definitions of available price types
Property_type.txt	definitions of available REIT property types
reit_type.txt	definitions of available REIT categories
sub_property_type.txt	definitions of available REIT property subtypes
ziman_reit_info.txt	REIT information

SAS

Column names and labels are embedded in the data sets. The full descriptions for fields can be found in the table definitions section of Chapter 3 of the guide.

File Name	Description	
crsp_daily_data.sas7bdat*	daily REIT security data and index	
crsp_daily_data.sas7bndx*		
crsp_header.sas7bdat	security REIT header data and index	
crsp_header.sas7bndx		
crsp_monthly_data.sas7bdat	monthly REIT security data and index	
crsp_monthly_data.sas7bndx		
crsp_names.sas7bdat	security name history of REITS and index	
crsp_names.sas7bndx	Security name instory of KEITS and muck	
crsp_ziman_daily_index.sas7bdat*	daily index results and index	
crsp_ziman_daily_index.sas7bndx*		
crsp_ziman_monthly_index.sas7bdat	monthly index results and index	
crsp_ziman_monthly_index.sas7bndx		
index_type_map.sas7bdat	definitions of REIT indexes and characteristics	
price_type.sas7bdat	definitions of available price types	
Property_type.sas7bdat	definitions of available REIT property types	
reit_type.sas7bdat	definitions of available REIT categories	
sub_property_type.sas7bdat	definitions of available REIT property subtypes	
ziman_reit_info.sas7bdat	RFIT information and index	
ziman_reit_info.sas7bndx		

MSACCESS

A Microsoft Access database is provided named reit_db.mdb containing all data tables. The database is in Access 2000 file format. The design view menu within Access can be used to view available fields, data types, and descriptions.