CRSP ZIMAN/REAL ESTATE DATA SERIES RELEASE NOTES

JULY 2016 MONTHLY UPDATE

FILE VERSION SPECIFICS

- The CRSP/Ziman Real Estate Data Series contains data through July 2016, shipped in August 2016.
- The data series contains 624 securities of which 223 are currently trading. The date range is from 19800102-20160729.
- This release that may be installed on three platforms: Windows, Linux, and Sun. 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.

201607 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
DELISTS					
13134	ROUSE PROPERTIES INC	RSE	77928710	11/28/2011	7/5/2016
92620	HATTERAS FINANCIAL CORP	HTS	41902R10	4/25/2008	7/11/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
49744	POTLACH CORP NEW	had a shares outstanding change to 40688 from 40519 from 20160531-20160630
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 22613 from 22984 from 20160531-20160630
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 100111 from 101979 from 20160531-20160630

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 and Solaris. 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\razyyyymm_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	11.7 MB	250 MB
Microsoft Access	11.4 MB	214 MB
SAS V 9.1	13.4 MB	265 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	monthly KEIT security data and muck	
crsp_names.sas7bdat	security name history of REITS and index	
crsp_names.sas7bndx	security name instory of KEITS and index	
crsp_ziman_daily_index.sas7bdat*	daily index results and index	
crsp_ziman_daily_index.sas7bndx*	daily index results and index	
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	REIT 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.