The SASECRSP Interface Engine

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Overview

Introduction

The SASECRSP interface engine enables SAS users to access and process time series data residing in CRSPAccess databases and provides a seamless interface between CRSP, COMPUSTAT, and SAS data processing. Currently SASECRSP supports access of CRSP Stock databases, CRSP Indices databases and CRSP/Compustat Merged databases.

Opening a Database

The SASECRSP engine uses the LIBNAME statement to enable you to specify which CRSPAccess database you would like to access and how you would like to perform selection on that database.

To specify the database, you will supply the combination of a physical path to indicate the location of the CRSPAccess data files, and a set identifier (SETID) for identifying the database desired from those available at the physical path. Specify one SETID from the following table. Note that the CRSP environment variable CRSPDB_SASCAL must be defined before the SASECRSP engine can access the CRSPAccess database calendars that provide the time ID variables and enable the libname to successfully assign.

Table 1. CRSPAccess Databases SETIDs

SETID	Data Set
10	Daily CRSP Stock data
20	Monthly CRSP Stock data
200	CRSP/Compustat Merged (CCM) data
400	CRSP Indices data, monthly index groups
420	CRSP Indices data, monthly index series
440	CRSP Indices data, daily index groups
460	CRSP Indices data, daily index series

Usually you will not want to open the entire CRSPAccess database, so for efficiency purposes and ease of use, SASECRSP supports a variety of options for performing data selection on your CRSPAccess database with the LIBNAME statement. These options allow you to open and retrieve data for only the portion of the database you desire. The availability of some of these options depends on the type of database being opened.

CRSP Stock databases – When accessing the CRSP Stock databases, you can select which securities you wish to access by specifying their *PERMNO*s with the PERMNO= option. *PERMNO*^{TM}is CRSP's unique permanent issue identification

number and the primary key for their stock databases. Alternatively, a number of secondary keys can also be used to select stock data. For example, you could use the PERMCO= option to read selected securities based on CRSP's unique permanent company identification number, *PERMCO*[TM]. A full list of possible keys for accessing CRSP Stock data follows.

Table 2. Keys for Accessing CRSP Stock Data

Key	Access By
PERMNO	CRSP's unique permanent issue identification number. This is the primary key for CRSP Stock databases
PERMCO	CRSP's unique permanent company identification number
CUSIP	CUSIP number
HCUSIP	Historical CUSIPs
SICCD	Standard Industrial Classification (SIC) Code
TICKER	Ticker symbol (for active companies only)

CRSP/Compustat Merged databases – When accessing Compustat data via the CCM database, you can select which companies you wish to access by specifying their *GVKEY*s. *GVKEY*[TM] is Compustat's unique identifer and primary key. You can specify a *GVKEY* to include with the GVKEY= option. Two secondary keys, *PERMNO* and *PERMCO*, are also supported for access via their respective PERMNO= and PERMCO= options. A full list of possible keys for accessing CCM data follows.

Table 3. Keys for Accessing CCM Data

Key	Access By
GVKEY	Compustat's unique identifer and primary key for CCM database.
PERMNO	CRSP's unique permanent issue identification number.
PERMCO	CRSP's unique permanent company identification number.

CRSP Indices databases – When accessing CRSP Indices data, you can select which indices you wish to access by specifying their *INDNO*s. *INDNO*[TM] is the primary key for CRSP Indices databases. You can specify which *INDNO* to use with the INDNO= option. No secondary key access is supported for CRSP Indices. A full list of possible keys for accessing CRSP Indices data follows.

Table 4. Keys for Accessing Indices Data

Key	Access By
INDNO	CRSP's unique permanent index identifier number. This is the primary key for CRSP Indices databases and allows you to specify which index series or groups you wish to select.

Regardless of the database you are accessing, you can always use the INSET= and RANGE= options for subsetting and selection. The RANGE= option subsets the data time wise. The INSET= option allows you to specify which issues or companies you wish to select from the CRSP database by using an input SAS data set.

Using Your Opened Database

Once the LIBNAME is assigned, the database is opened. You can retrieve data for any member you wish in the opened database. For a complete description of available data sets and their fields, see "Summary of Available Data Sets". You can also use the SAS Data Step to perform further subsetting and to store the resulting time series into a SAS data set. Since CRSP and SAS use three different date representations, you can make use of the engine-provided CRSP date formats, informats, and functions for your data processing needs. Refer to the section "Understanding CRSP Date Formats, Informats, and Functions" on page 83, as well as Example 6 later in this chapter for more information on dates with SASECRSP.

SASECRSP for Version 9.1.3 supports Linux, Solaris 8 (SUNOS5.8), VMS (except 9.1.3 Service Pack 1), and Windows.

Getting Started

Structure of a SAS Data Set Containing Time Series Data

SAS requires time series data to be in a specific form that is recognizable by the SAS System. This form is a two-dimensional array, called a SAS data set, whose columns correspond to series variables and whose rows correspond to measurements of these variables at certain points in time. The time at which observations are recorded can be included in the data set as a time ID variable. Note that CRSP always sets the date to the end of a time period as opposed to the beginning, and SASECRSP follows this convention. So for example, the time ID variable for any particular month in a monthly time series always resolves to the last trading day of that month.

The SASECRSP engine provides several different time ID variables depending on the data member opened. For most members, a time ID variable called CALDT is provided. CALDT provides a calendar date down to the day, and is in a CRSP date format. This means dates are stored as an offset into an array of trading days or a trading day calendar. There are five different CRSP trading day calendars and the one used depends on the frequency of the data member. The CRSP date for a daily time series for example, would refer to a daily trading day calendar.

The five trading day calendars are: Annual, Quarterly, Monthly, Weekly and Daily. For your convenience, the format and informat for this field is set so the CRSP date is automatically converted to an Integer date representation when viewed or printed. For data programming, the SASECRSP engine provides 23 different user functions for date conversions between CRSP, SAS, and integer dates.

The CCM database contains fiscal members that are more complicated to handle because their dates are based on the fiscal calendar of the corresponding company. As such, a more comprehensive set of time ID variables are used for them. For fiscal time series, which consist of all period descriptors and items, the SASECRSP engine instead provides three time variables CRSPDT, RCALDT and FISCALDT. All three time ID variables provide the date down to the day but the format differs.

CRSPDT   This time ID variable provides a date in CRSP date format similar to CALDT. CRSPDT differs only in that its format and informat is not set for automated conversion to integer dates because this is already provided to you by FISCALDT and RCALDT. Note that data for fiscal members is stored fiscally so the date CRSPDT gives is one based on the fiscal calendar of the company.

FISCALDT   This time ID variable provides the same date CRSPDT does, but in integer format. It is the result of performing a CRSP to Integer date conversion on CRSPDT. Since the date CRSPDT holds is fiscal, FISCALDT is also fiscal.

RCALDT   This time ID variable is also an integer date, just like FISCALDT, but it has been shifted so the date is on calendar time as opposed to being fiscal.

For example, Microsoft's fiscal year ends in June so if you look at its annual period descriptor for the 2002 fiscal year, its time ID variables are 78 for CRSPDT, 20021231 for its FISCALDT, and 20020628 for RCALDT. In summary, a total of three time ID variables are provided for fiscal time series members. One is in CRSP date format, and the other two are in integer format with the only difference between the two integer variables being that one of them is based off the fiscal calendar of the company while the other is not.

For more on information on how CALDT, CRSPDT and how dates conversions are handled, see the section "Understanding CRSP Date Formats, Informats, and Functions" on page 83.

The CCM database also contain fiscal array members, which are all the segment data members. They are unlike the fiscal time series in that they are not associated with a calendar and furthermore, have their time ID variables embedded in the data as a data field. Generally both fiscal and calendar time ID variables are embedded. However, segment members *segsrc*, *segcur* and *segitm* only have a fiscal time ID variable embedded. For your convenience, SASECRSP calculates and provides CALYR, the calendar version of the embedded fiscal time ID variable for these three segment members. Note that due to limitations of the data, all segment member time ID variables provide dates only down to the year.

Reading CRSP Data Files

The SASECRSP engine supports reading time series, events, portfolios and group data from CRSPAccess databases. The SETID you specify determines the database that is read. See Table 1 for a list of possible databases. The CRSP environment variable CRSPDB_SASCAL must be defined before the SASECRSP engine can access the CRSPAccess database calendars that provide the time ID variables and enable the libname to successfully assign.

Using the SAS DATA Step

If desired, you can store the selected series in a SAS data set by using the SAS DATA step. You can also perform other operations on your data inside the DATA step. Once the data is in a SAS data set you can use it as you would any other SAS data set.

Using SAS Procedures

You can print the output SAS data set by using the PRINT procedure and report information concerning the contents of your data set by using the CONTENTS procedure.

You can also create a view of the CRSPAccess database by using the SQL procedure in conjunction with a SASECRSP *libref*. Refer to Example 11 later in this chapter for an example with Proc SQL.

Using CRSP Date Formats, Informats, and Functions

CRSP has historically used two different methods to represent dates, and SAS has used a third. The SASECRSP engine provides 23 functions, 15 informats, and 10 formats to enable you to easily translate the dates from one internal representation to another. See the section "Understanding CRSP Date Formats, Informats, and Functions" on page 83 for details.

Syntax

The SASECRSP engine uses standard engine syntax. Options used by SASECRSP are summarized in the following table.

Table 5. Summary of LIBNAME *libref* SASECRSP Statement Options

Option	Description
SETID=	Specify which CRSP database subset to open. This option is required. See Table 1 for complete list of supported SETIDs.
PERMNO=	Specify a CRSP PERMNO to be selected for access.
PERMCO=	Specify a CRSP PERMCO to be selected for access.
CUSIP=	Specify a current CUSIP to be selected for access.
HCUSIP=	Specify a historic CUSIP to be selected for access.
TICKER=	Specify a TICKER to be selected for access. (for active companies only)
SICCD=	Specify a SIC Code to be selected for access.
GVKEY=	Specify a Compustat GVKEY to be selected for access.
INDNO=	Specify a CRSP INDNO to be selected for access.
RANGE=	Specify the range of data to keep in format 'YYYYMMDD-YYYYMMDD' for calendar dates, or use format 'fYYYYMMDD-YYYYMMDD' for fiscal dates.
INSET=	Use a SAS data set named *setname* as input for issues.
CRSPLINKPATH=	Specify location of the CRSP Link history. This option is required for accessing CRSP data with Compustat's GVKEY.

The LIBNAME *libref* SASECRSP Statement

LIBNAME *libref* **SASECRSP** '*physical name*' options;

The physical name required by the libname statement should point to the directory of CRSPAccess data files where the CRSP database you wish to open is located. Note

that the physical name **must** end in a slash for UNIX platforms and a backslash for Windows platforms.

The CRSP environment variable CRSPDB_SASCAL must be defined before the SASECRSP engine can access the CRSPAccess database calendars and for the SASECRSP libname to resolve. This necessary environment variable should be defined automatically by either the CRSP software installation or, in later versions, the CRSP data installation. Since occasional instances occur where the variable is not set properly, always check to ensure the CRSPDB_SASCAL environment variable is set to the location where your most recent CRSP data resides. Remember to include the final slash or backslash required.

Once the libname is assigned, you will have access to all of the available data sets/members within the opened database. For a complete description of available data sets and their fields, see "Summary of Available Data Sets".

The following options can be used in the LIBNAME *libref* SASECRSP statement:

SETID=*crsp_setidnumber*
Specifies the CRSP database you wish to read from. This is a required option. You must choose one and only one SETID from seven possible values (see Table 1). The SETID can limit the frequency selection of time series that are included in the SAS data set.

As an example, to access monthly CRSP Stock data, you would use the following statements:

```
LIBNAME myLib sasecrsp 'physical-name'
   SETID=20;
```

PERMNO=*crsp_permnumber*
By default, the SASECRSP engine reads all keys for the CRSPAccess database that you specified in your SASECRSP *libref*. The PERMNO= option allows you to limit the data read from the CRSP database to only those *PERMNO*(s) (or other keys) you specify. *PERMNO*s are CRSP's unique permanent issue identification number. There is no limit to the number of *crsp_permnumber* options that you can use.

From a performance standpoint, the PERMNO= option does random access and reads *only* the data for the *PERMNO*s specified. This much faster than using for example, a Proc SQL to do selection because Proc SQL has to first read all the data before it can perform the selection.

The following libname statement is an example will only read data for Microsoft Corporation (PERMNO=10107) and International Business Machine Corporation (PERMNO=12490) and thus is very fast.

```
LIBNAME myLib sasecrsp 'physical-name'
   SETID=20
   PERMNO=10107
   PERMNO=12490;
```

The PERMCO=, CUSIP=, HCUSIP=, SICCD=, TICKER=, GVKEY=, and INDNO= options behave similarly and you can use them together with or in place of the PERMNO= option. For example you could have used the following statement to access monthly data for Microsoft and IBM:

```
LIBNAME myLib sasecrsp 'physical-name'
    SETID=20
    TICKER='MSFT'
    CUSIP=59491810;
```

Details on the use of these other key selection options are described separately later.

*PERMNO*s specified by this option can select the companies or issues to keep, but are not supported by all CRSPAccess databases. There are three types of CRSPAccess databases, CRSP Stock databases, CRSP/Compustat Merged (CCM) databases, and CRSP Indices databases. The PERMNO= option can be used with CRSP US Stock and CRSP/Compustat Merged databases. The following provides details on the use of the option on each type of database.

STK databases

*PERMNO*s are the primary key for CRSP Stock databases. Every *PERMNO* you specify with the PERMNO= option will keep one and only one issue.

CCM databases

PERMNO can be used as a secondary key for the CCM database through CRSPLink. Linking between the CRSP and Compustat databases is a complex, many to many relationship between *PERMNO/PERMCO*s and *GVKEY*s. When accessing CCM data by *PERMNO*, all *GVKEY*s that link to the given *PERMNO* will be amalgamated to provide seamless access to all linked data. Note however that accessing CCM data by *PERMNO* is logically different than accessing by its linked *GVKEY(s)*.

In particular, when the *PERMNO* you specify is linked to several different *GVKEY*s, one link is designated as the primary link. This designation is set by CRSP and its researchers, and is a part of the link information in the CCM database. As such, only data for the primary link will be retrieved for the header. For other members including all time series members, all links are examined but data is extracted only for the active period of the links and only if the data is within any possible user-specified date restriction. If two or more *GVKEY* to *PERMNO* links should overlap in time, data from the later (more recent) *GVKEY* is used. For more on CRSP links, see "Link Used Array" in the CRSP/Compustat Merged Database Guide.

For example, *PERMNO*=10083 is CRSP's unique issue identifier for Teknowledge Incorporated, and later (due to a name change) Cimflex Teknowledge Corporation. To access CCM data for IBM Corporation, Teknowledge Inc. and Cimflex Teknowledge Corp., you could use the following statement:

```
LIBNAME myLib1 sasecrsp 'physical-name'
    SETID=200
    GVKEY=6066      /* IBM */
    PERMNO=10083;   /* Teknowledge and Cimflex */
```

Teknowldge Inc. and Cimflex Corp. have separate *GVKEY*s in the CCM database, so the previous statement is actually an example of using one *PERMNO* to access data for several (linked) *GVKEY*s. The first link to *GVKEY*=11947 spans 03/05/1986 - 12/31/1988, and the second link to *GVKEY*=15495 spans 02/28/1989 - 09/09/1993.

An alternate way of accessing the data is by using directly, the linked *GVKEY*s as seen in this statement.

```
LIBNAME myLib2 sasecrsp 'physical-name'
   SETID=200
   GVKEY=6066
   GVKEY=11947
   GVKEY=15495;
```

These two libname statements look similar, but do **not perform the same operation**. **myLib1** assumes you are selecting the issue data for PERMNO=10083, so only observations from the CCM database that are **within** the time period of the used links are accessed. In the previous example for **myLib1**, only data from 03/05/1986 - 12/31/1988 will be extracted for GVKEY=11947 and only data from 02/28/1989 - 09/09/1993 will be extracted for GVKEY=15496.

Furthermore, while both *GVKEY*s 11947 and 15495 are linked to the *PERMNO*, 15495 is the primary link and when accessing the header, only 15495 will be used. If the two links overlap, the data from the later (more recent) *GVKEY* of 15495 is used.

In contrast, **mylib2** uses an open range for all three specified keys. If there is data overlapping in time between *GVKEY* 11947 and 15495, data for both is reported. Similarly, when accessing the header, data for both 11947 and 15497 are retrieved.

IND databases

PERMNO is not available as a key for accessing CRSP Indices databases. Use INDNO instead.

GVKEY=*crsp_gvkey*

The GVKEY= option is similar to the PERMNO= option and allows you to select using Compustat's Permanent SPC Identifier number (*GVKEY*) the companies or issues to keep. There is no limit to the number of *crsp_gvkey* options that you can use.

STK databases

GVKEY can serve as a secondary key for accessing CRSP Stock databases. This requires the additional use of the CRSPLINKPATH= option. Linking between the Compustat and CRSP databases is a complex, many to many relationship between *GVKEY*s and *PERMNO/PERMCO*s. When accessing CRSP data by *GVKEY*, **all links** of the specified *GVKEY* are followed and processed. No additional logic is applied. Links' ranges are ignored. Accessing CRSP data by *GVKEY* is identical to accessing CRSP data by all of its linked *PERMNO*s.

For example, Wolverine Exploration Co. and Amerac Energy Corp have different *PERMNO*s but the same *GVKEY* and there are two *identical* ways of accessing CRSP Stock data on these two entities.

```
LIBNAME myLib1 sasecrsp 'physical-name'
   SETID=10
   PERMNO=13638      /* Wolverine Exploration */
   PERMNO=84641;     /* Amerac Energy */

LIBNAME myLib2 sasecrsp 'physical-name'
   SETID=10
   CRSPLINKPATH='physical-name'
   GVKEY=1544;
```

The CRSPLINKPATH= option is required when accessing CRSP Stock databases by *GVKEY*. See the discussion later in this section on the CRSPLINKPATH= option.

CCM databases

GVKEY is the primary key for accessing the CCM database. Every *GVKEY* you specify will keep one and only one company.

IND databases

GVKEY is not available as a key for accessing CRSP Indices databases.

PERMCO=*crsp_permcompany*

The PERMCO= option is similar to the PERMNO= option and allows you to select data using CRSP's unique permanent company identification number (*PERMCO*) the companies or issues to keep. There is no limit to the number of *crsp_permcompany* options that you can use.

STK databases

PERMCO is a secondary key for accessing CRSP Stock databases. One *PERMCO* may map to multiple *PERMNO*s. Access by *PERMCO* is equivalent to access by all mapped *PERMNO*s.

CCM databases

PERMCO can also be used as a secondary key for accessing the CCM database. Linking between the CRSP and CCM databases is a complex, many to many relationship. When accessing CCM data by *PERMCO*, all linking *GVKEY*s are amalgamated and processed. Link active ranges are respected. Only data for the primary link is returned for the header. In cases when the active ranges of various links overlap, the most recent link is used. See PERMNO= option for more details.

IND databases

PERMCO is not available as a key for accessing CRSP Indices databases.

CUSIP=*crsp_cusip*

The CUSIP= option is similar to the PERMNO= option and allows you to select using the *CUSIP* number the companies or issues to keep. There is no limit to the number of *crsp_cusip* options that you can use.

STK databases

CUSIP is a secondary key for accessing CRSP Stock databases. One *CUSIP* maps to one *PERMNO*.

CCM databases

CUSIP is not available as a key for accessing CCM databases.

IND databases

CUSIP is not available as a key for accessing CRSP Indices databases.

HCUSIP=*crsp_hcusip*

The HCUSIP= option is similar to the PERMNO= option and allows you to select using the historical cusip *HCUSIP* number the companies or issues to keep. There is no limit to the number of *crsp_hcusip* options that you can use.

STK databases

HCUSIP is a secondary key for accessing CRSP Stock databases. One *HCUSIP* maps to one *PERMNO*.

CCM databases

HCUSIP is not available as a key for accessing CCM databases.

IND databases

HCUSIP is not available as a key for accessing CRSP Indices databases.

TICKER=*crsp_ticker*

The TICKER= option is similar to the PERMNO= option and allows you to select using *TICKER* symbol the companies or issues to keep. There is no limit to the number of *crsp_ticker* options that you can use.

STK databases

TICKER is a secondary key for accessing CRSP Stock databases. One *TICKER* maps to one *PERMNO*. Note that some *PERMNO*s will be inaccessible by *TICKER*.

CCM databases

TICKER is not available as a key for accessing CCM databases.

IND databases

TICKER is not available as a key for accessing CRSP Indices databases.

SICCD=*crsp_siccd*

The SICCD= option is similar to the PERMNO= option and allows you to select using the Standard Industrial Classification (SIC) Code (*SICCD*) the companies or issues to keep. There is no limit to the number of *crsp_siccd* options that you can use.

STK databases

SICCD is a secondary key for accessing CRSP Stock databases. One *SICCD* may map to multiple *PERMNO*s All *PERMNO*s that have once been classified under the specified *SICCD* will be mapped and data for them retrieved. Access by *SICCD* is equivalent to access by all *PERMNO*s that have ever been classified under the specified *SICCD*.

CCM databases

SICCD is not available as a key for accessing CCM databases.

IND databases

SICCD is not available as a key for accessing CRSP Indices databases.

INDNO=*crsp_indno*
The INDNO= option is similar to the PERMNO= option and allows you to select using CRSP's permanent index number *INDNO* the companies or issues to keep. There is no limit to the number of *crsp_indno* options that you can use.

STK databases

INDNO is not available as a key for accessing CRSP Stock databases, but can be used in the combined CRSP Stock and Indices databases.

CCM databases

INDNO is not available as a key for accessing CCM databases.

IND databases

INDNO is the primary key for accessing CRSP Indices databases. Every *INDNO* you specify keeps exactly one index series or group.

For example, you could use the following statement to access the CRSP NYSE Value-Weighted and Equal-Weighted daily market indices:

```
LIBNAME myLib3 sasecrsp 'physical-name'
   SETID=460
   INDNO=1000000    /* Value-Weighted */
   INDNO=1000001;   /* Equal-Weighted */
```

CRSPLINKPATH=*'crsp_linkpath'*
To access CRSP Stock data with *GVKEY*s, use the CRSPLINKPATH= option. CRSPLINKPATH= specifies the physical location where your CCM database resides. Note that the physical name **must** end in a slash for UNIX platforms and a backslash for Windows platforms.

RANGE=*'crsp_begdt-crsp_enddt'*
To limit the time range of data read from your CRSPAccess database, specify the RANGE= option in your SASECRSP *libref*, where *crsp_begdt* is the beginning date in YYYYMMDD format and *crsp_enddt* is the ending date of the range in YYYYMMDD format.

As an example, to access monthly stock data for Microsoft Corporation and for International Business Machine Corporation for the first quarter of 1999, you could use the following statement:

```
LIBNAME myLib sasecrsp 'physical-name'
   SETID=20
   PERMNO=10107
   PERMNO=12490
   RANGE='19990101-19990331';
```

The given beginning and ending dates are interpreted as calendar dates by default. If you wish these dates to be interpreted as fiscal dates, you must prepend the character 'f' to the range.

For example, this following statement will allow you to extract data for the 1994 fiscal year of both Microsoft and IBM.

```
LIBNAME myLib sasecrsp 'physical-name'
   SETID=20
   PERMNO=10107
   PERMNO=12490
   RANGE='f19940101-19941231';
```

The results of the previous statement is that data from actual calendar date 07/01/1993 to 06/30/1994 is extracted for Microsoft because its fiscal year end month is June, and data from 01/01/1994 to 12/31/1994 is extracted for IBM because its fiscal year end month is December. See Example 10 for a more detailed example.

The RANGE= option can be used on all CRSP Stock, Indices and CCM members.

When this option is applied to segment data members however, the behavior is slightly different. First, the dates associated with segment member data records are in years and can only resolve to years. This is unique to only segment members. All other CRSP data members have a date resolution to the day. For example, monthly time series though monthly, resolve to the last trading day of the month. Segment members however have a maximum resolution of years because they are not mapped to a calendar in the CRSP/Compustat database. Hence when range restrictions are applied to segment members, only the 'YYYY' year portion of the range is considered.

Second, multiple dates are sometimes associated with a particular segment member record. In such cases the preferred date for use in determining the date range restriction is the data year as opposed to the source year. This multiple date behavior is also unique to only segment members. All other CRSP data members are associated with only one date,though it maybe across several different fields in different formats.

INSET='*setname[,keyfieldname,keyfieldtype,date1field,date2field,datetype]*'
When you specify a SAS data set named *setname* as input for issues, the SASECRSP engine assumes that a default PERMNO field containing selected CRSP PERMNOs is present in the data set. If the optional parameters are included, they must all be

specified. The only acceptable shorthand for dropping the parameters is to drop those at the very end, assuming they are all being omitted. Dropped parameters use their defaults.

The optional parameters are explained below:

keyfieldname Label of the field that contains the keys to be selected. Defaults to "PERMNO" if unspecified.

keyfieldtype Specifies the CRSPAccess key type of the provided keys. Possible key types are: *PERMNO*, *PERMCO*, *CUSIP*, *HCUSIP*, *TICKER*, *SICCD*, *GVKEY* or *INDNO*. Defaults to "PERMNO" if unspecified.

date1field Beginning date of the specific date range restriction being applied to this key. If either *date1field* or *date2field* is omitted, the default is for there to be no date range restriction.

date2field Ending date of the specific date range restriction being applied to this key. If either *date1field* or *date2field* is omitted, the default is for there to be no date range restriction.

datetype Indicates whether the provided beginning and ending dates are calendar dates or fiscal dates. A fiscal date type means the dates given are based on the fiscal calendar of its respective company or GVKEY. A calendar date means the dates are based on the standard Julian calendar.

The strings 'calendar' and 'fiscal' are used to indicate the respective date types. If unspecified, the default type is calendar.

It is important to note that fiscal dates are only applicable to members with fiscal data. Fiscal members consists of all period descriptors, items and segment members of the CCM database. If a fiscal date range is applied to non fiscal members, it will be ignored.

Individual date range restrictions specified by the inset can be used in combination with the RANGE= option on the libname. In such a case, only data from the intersection of the individual date restriction and the global RANGE= option date restriction are read.

Using the Inset Option

To better illustrate the use of the INSET= option, some examples follow:

Basic Inset Use: Providing a List of PERMNOs – In this example, we use the INSET= option to extract monthly data for a portfolio of three companies. No date range restriction is used.

```
data testin1;
   permno = 10107; output;
   permno = 12490; output;
   permno = 14322; output;
run;
```

```
LIBNAME mstk sasecrsp 'physical-name'
   SETID=20
   INSET='testin1';

proc print data=mstk.stkhead (keep=permno permco begdt enddt hcomnam htick);
run;
```

General Use of Inset for Specifying Lists of Keys – In the following example, we illustrate the use of the INSET= option to select a few Index Series from the Indices database, companies from the CCM database and securities from the Stock database. Libref 'ind2' is used for accessing the Indices database with the two specified INDNOs. Libref 'comp2' is used to access the CCM database with the two specified PERMCOs. Libref 'sec3' is used to access the Stock database with the three specified TICKERs. Note the use of shorthand in specifying the INSET= option. Date1field, date2field and datetype fields are all omitted, thereby using the default of no range restriction (though the range restriction set by the RANGE= on the libname statement still applies). For details including sample output, see Example 4

```
data indices;
    indno=1000000; output;  /* NYSE Value-Weighted Market Index */
    indno=1000001; output;  /* NYSE Equal-Weighted Market Index */
run;

libname ind2 sasecrsp "%sysget(CRSP_MSTK)" setid=420
    inset='indices,INDNO,INDNO' range='19990101-19990401';

title2 'Total Returns for NYSE Value and Equal Weighted Market Indices';
proc print data=ind2.tret label;
run;


data companies;
    permco=8045;  output;  /* Oracle */
    permco=20483; output;  /* Citigroup */
run;

libname comp2 sasecrsp "%sysget(CRSP_CST)" setid=200
    inset='companies,PERMCO,PERMCO' range='20040101-20040531';

title2 'Link Info of Selected PERMCOs';
proc print data=comp2.link label; run;
title2 'Dividends Per Share for Oracle and Citigroup';
proc print data=comp2.div label; run;


data securities;
    ticker='BAC'; output;  /* Bank of America */
    ticker='DUK'; output;  /* Duke Energy */
    ticker='GSK'; output;  /* GlaxoSmithKline */
run;

libname sec3 sasecrsp "%sysget(CRSP_MSTK)" setid=20
```

```
     inset='securities,TICKER,TICKER' range='19970820-19970920';

title2 'PERMNOs and General Header Info of Selected TICKERs';
proc print data=sec3.stkhead (keep=permno htick htsymbol) label;
run;
title2 'Average Price for Bank of America, Duke and GlaxoSmithKline';
proc print data=sec3.prc label; run;
```

Key-Specific Date Range Restriction with Insets – Suppose you not only want to select keys with your inset, but also wish to specify a date range restriction for each key individually. The following example shows how to do this. Again, shorthand allows us to omit the datetype field. The provided dates default to a calendar interpretation. For details including the sample output, see Example 5.

```
title2 'INSET=testin2 uses date ranges along with PERMNOs:';
title3 '10107, 12490, 14322, 25788';
title4 'Begin dates and end dates for each permno are used in the INSET';

data testin2;
    permno = 10107; date1 = 19980731; date2 = 19981231; output;
    permno = 12490; date1 = 19970101; date2 = 19971231; output;
    permno = 14322; date1 = 19950731; date2 = 19960131; output;
    permno = 25778; date1 = 19950101; date2 = 19950331; output;
run;

libname mstk2 sasecrsp "%sysget(CRSP_MSTK)" setid=20
    inset='testin2,PERMNO,PERMNO,DATE1,DATE2';

data b;
    set mstk2.prc;
run;

proc print data=b;
run;
```

Fiscal Date Range Restrictions with Insets – You can use fiscal dates on the date range restrictions inside insets by specifying the date type. This following example shows two identical accesses, except one's date range restriction is interpreted in fiscal terms. For details including sample output, see Example 10.

```
data comp_fiscal;
  /* Crude Petroleum & Natural Gas */
  compkey=2416; begdate=19860101; enddate=19861231;
      datetype='fiscal';   output;

  /* Commercial Intertech */
  compkey=3248; begdate=19940101; enddate=19941231;
      datetype='fiscal';   output;
run;
data comp_calendar;
  /* Crude Petroleum & Natural Gas */
  compkey=2416; begdate=19860101; enddate=19861231;
```

```
          datetype='calendar';    output;


  /* Commercial Intertech */
  compkey=3248; begdate=19940101; enddate=19941231;
        datetype='calendar';    output;
run;



LIBNAME fisclib sasecrsp "%sysget(CRSP_CST)"
   SETID=200
   INSET='comp_fiscal,compkey,gvkey,begdate,enddate,datetype';

LIBNAME callib sasecrsp "%sysget(CRSP_CST)"
   SETID=200
   INSET='comp_calendar,compkey,gvkey,begdate,enddate,datetype';


title2 'Quarterly Period Descriptors with Fiscal Date Range';
proc print data=fisclib.qperdes(drop = peftnt1 peftnt2 peftnt3 peftnt4
    peftnt5 peftnt6 peftnt7 peftnt8 candxc flowcd spbond spdebt sppaper);
run;

title2 'Quarterly Period Descriptors with Calendar Date Range';
proc print data=callib.qperdes(drop = peftnt1 peftnt2 peftnt3 peftnt4
    peftnt5 peftnt6 peftnt7 peftnt8 candxc flowcd spbond spdebt sppaper);
run;
```

Inset Ranges in Conjunction with the Libname Range – Sometimes you may wish
to specify individual date restrictions but also impose a common range. This exam-
ple demonstrates two companies each with its own date range restriction but both
subject to a common range set in the libname. As a result, data from 08/01/1999 to
02/01/2000 is retrieved for IBM, and data from 01/01/2001 to 04/21/2002 is retrieved
for Microsoft. For details including sample output see Example 11.

```
data two_companies;
  gvkey=6066;  date1=19800101; date2=20000201; output;
  gvkey=12141; date1=20010101; date2=20051231; output;
run;

LIBNAME mylib sasecrsp "%sysget(CRSP_CST)"
   SETID=200 INSET='two_companies,gvkey,gvkey,date1,date2'
   RANGE='19990801-20020421';

proc sql;
    select prcc.gvkey,prcc.caldt,prcc,ern
        from mylib.prcc as prcc, mylib.ern as ern
    where prcc.caldt = ern.caldt and
          prcc.gvkey = ern.gvkey;
quit;
```

Details

The SAS Output Data Set

You can use the SAS DATA step to write the selected CRSP or Compustat data to a SAS data set. This enables you to easily analyze the data using SAS. The name of the output data set is specified by you on the DATA statement. This causes the engine supervisor to create a SAS data set using the specified name in either the SAS WORK library or, if specified, the USER library.

The contents of the SAS data set include the DATE of each observation, the series names of each series read from the CRSPAccess database, event variables, and the label or description of each series/event or array.

You can use PROC PRINT and PROC CONTENTS to print your output data set and its contents. Alternatively, you can view your SAS output observations by opening the desired output data set in the SAS Explorer. You can also use PROC SQL with your SASECRSP libref to create a custom view of your data.

In general, CRSP missing values are represented as '.' in the SAS data set. However, when accessing the CCM database, CRSP uses certain Compustat missing codes which SASECRSP then converts into SAS missing codes. The following table shows the mapping of CRSP and SAS missing codes for the CCM database.

Table 6.   Mapping of Compustat and SAS Missing Codes

Compustat	SAS	Condition
0.0001	.	No data for data item
0.0002	.S	Data is only on a semi-annual basis
0.0003	.A	Data is only on an annual basis
0.0004	.C	Combined into other item
0.0007	.N	Data is not meaningful
0.0008	.I	Reported as insignificant

Missing value codes conform with Compustat's Strategic Insight and binary conventions for missing values. Refer to *Notes on Missing Values* in the second chapter of the *CRSP/Compustat Merged Database Guide* for more information on how CRSP handles Compustat missing codes.

Summary of Available Data Sets

Data sets are made available based on the type of CRSP database opened. The following table shows a summary view of the three types of CRSP databases and the data sets they make available. Details on the data sets including their specific fields can be found in sections immediately following the summary table. You can also always see the available data sets for an opened database via the SAS Explorer by opening a SASECRSP libref that you have previously assigned.

Summary of All Available Databases

Table 7. Summary of Available CRSP Databases

CRSP Database	Description	Details
CRSP Stock	CRSP Stock Data Objects	Table 11- Table 18
CCM	CRSP/COMPUSTAT Merged Data Objects	Table 19- Table 36
CRSP Indices	CRSP Indices Data Objects	Table 37- Table 61

Summary of All Stock Data Sets - CRSP Stock Members

Table 8. CRSP Stock Database

Stock Data Set Name	Description	Details
STKHEAD	Header Identification and Summary Data	Table 11
NAMES	Name History Array	Table 12
DISTS	Distribution Event Array	Table 13
SHARES	Shares Outstanding Observation Array	Table 14
DELIST	Delisting History Array	Table 15
NASDIN	Nasdaq Information Array	Table 16
PRC	Price or Bid/Ask Average Time Series	Table 17
RET	Returns Time Series	Table 17
BIDLO	Bid or Low Price Time Series	Table 17
ASKHI	Ask or High Price Time Series	Table 17
BID	Bid Time Series	Table 17
ASK	Ask Time Series	Table 17
RETX	Returns Without Dividends Time Series	Table 17
SPREAD	Spread Between Bid and Ask	Table 17
ALTPRC	Price Alternate Time Series	Table 17
VOL	Volume Time Series	Table 17
NUMTRD	Number of Trades Time Series	Table 17
ALTPRCDT	Price Alternate Date Time Series	Table 17
PORT1-PORT9	Portfolio Data for Portfolio Types 1-9	Table 18
GROUP16	Group Data for Group Type 16	Table 18

Summary of All CCM Data Sets - CRSP/ COMPUSTAT Merged Data Members

Table 9. CRSP/ COMPUSTAT Merged Database

CCM Data Set Name	Description	Details
CSTHEAD	COMPUSTAT Header Data	Table 19
CSTNAME	COMPUSTAT Description History Array	Table 20
LINK	CRSP COMPUSTAT Link History	Table 21
APERDES	Annual Period Descriptors Time Series	Table 22
QPERDES	Quarterly Period Descriptors Time Series	Table 23
IAITEMS	Annual Data Items	Table 24
IQITEMS	Quarterly Data Items	Table 25
BAITEMS	Bank Annual Data Items	Table 26
BQITEMS	Bank Quarterly Data Items	Table 27
PRCH	High Price Time Series	Table 28
PRCL	Low Price Time Series	Table 28
PRCC	Closing Price Time Series	Table 28
DIV	Dividends Per Share Time Series	Table 28
ERN	Earnings Per Share Time Series	Table 28
SHSTRD	Shares Traded Time Series	Table 28
DIVRTE	Annualized Dividend Rate Time Series	Table 28
RAWADJ	Raw Adjustment Factor Time Series	Table 28
CUMADJ	Cumulative Adjustment Factor Time Series	Table 28
BKV	Book Value Per Share Time Series	Table 28
CHEQVM	Cash Equivalent Distribution Time Series	Table 28
CSHOQ	Common Shares Outstanding Time Series	Table 28
NAVM	Net Asset Value Time Series	Table 28
OEPS12	Earnings/Share from Operations	Table 28
GICS	Global Industry Class. Std. code	Table 28
CPSPIN	S&P Index Primary Marker Time Series	Table 28
DIVFT	Dividends per share footnotes	Table 28
RAWADJFT	Raw adjustment factor footnotes	Table 28
COMSTAFT	Comparability status footnotes	Table 28
ISAFT	Issue status alert footnotes	Table 28
SEGSRC	Operating Segment Source History	Table 29
SEGPROD	Operating Segment Products History	Table 30
SEGCUST	Operating Segment Customer History	Table 31
SEGDTL	Operating Segment Detail History	Table 32
SEGNAICS	Operating Segment NAICS History	Table 33
SEGGEO	Geographic Segment History	Table 34
SEGCUR	Segment Currency Data	Table 35
SEGITM	Segment Item Data	Table 36

Summary of All CRSP Indices Data Sets - CRSP Indices Members

Table 10. CRSP Indices Database

Indices Data Set Name	Description	Details
INDHEAD	Index Header Data	Table 37
REBAL	Index Rebalancing History Arrays	Table 38
REBAL	Index Rebalancing History Group Arrays	Table 39
LIST	Index Membership List Arrays	Table 40
LIST	Index Membership List Groups Arrays	Table 41
USDCNT	Portfolio Used Count Array	Table 42
TOTCNT	Portfolio Total Count Array	Table 43
USDCNT	Portfolio Used Count Time Series Groups	Table 44
TOTCNT	Portfolio Total Count Time Series Groups	Table 45
USDVAL	Portfolio Used Value Array	Table 46
TOTVAL	Portfolio Total Value Array	Table 47
USDVAL	Portfolio Used Value Time Series Groups	Table 48
TOTVAL	Portfolio Total Value Time Series Groups	Table 49
TRET	Total Returns Time Series	Table 50
ARET	Appreciation Returns Time Series	Table 51
IRET	Income Returns Time Series	Table 52
TRET	Total Returns Time Series Groups	Table 53
ARET	Income Returns Time Series Groups	Table 54
IRET	Income Returns Time Series Groups	Table 55
TIND	Total Return Index Levels Time Series	Table 56
AIND	Appreciation Index Levels Time Series	Table 57
IIND	Income Index Levels Time Series	Table 58
TIND	Total Return Index Levels Groups	Table 59
AIND	Appreciation Index Levels Groups	Table 60
IIND	Income Index Levels Time Series Groups	Table 61

CRSP Stock Data Sets

STKHEAD Data Set - Header Identification & Summary Data

Table 11.

Fields	Label	Type
PERMNO	PERMNO	Numeric
PERMCO	PERMCO	Numeric
COMPNO	Nasdaq Company Number	Numeric
ISSUNO	Nasdaq Issue Number	Numeric
HEXCD	Exchange Code Header	Numeric
HSHRCD	Share Code Header	Numeric
HSICCD	Standard Industrial Class Code	Numeric
BEGDT	Begin of Stock Data	Numeric
ENDDT	End of Stock Data	Numeric
DLSTCD	Delisting Code Header	Numeric
HCUSIP	CUSIP Header	Character
HTICK	Ticker Symbol Header	Character
HCOMNAM	Company Name Header	Character
HTSYMBOL	Trading Symbol Header	Character
HNAICS	North American Industry Class Header	Character
HPRIMEXC	Primary Exchange Header	Character
HTRDSTAT	Trading Status Header	Character
HSECSTAT	Security Status Header	Character

NAMES Data Set - Name History Array

Table 12.

Fields	Label	Type
PERMNO	PERMNO	Numeric
NAMEDT	Names Date	Numeric
NAMEENDT	Names Ending Date	Numeric
SHRCD	Share Code	Numeric
EXCHCD	Exchange Code	Numeric
SICCD	Standard Industrial Class Code	Numeric
NCUSIP	CUSIP	Numeric
TICKER	Ticker Symbol	Character
COMNAM	Company Name	Character
SHRCLS	Share Class	Numeric
TSYMBOL	Trading Symbol	Character
NAICS	North American Industry Class System	Character
PRIMEXCH	Primary Exchange	Character
TRDSTAT	Trading Status	Character
SECSTAT	Security Status	Character

DISTS Data Set - Distribution Event Array

Table 13.

Fields	Label	Type
PERMNO	PERMNO	Numeric
DISTCD	Distribution Code	Numeric
DIVAMT	Dividend Cash Amount	Numeric
FACPR	Factor to Adjust Price	Numeric
FACSHR	Factor to Adjust Share	Numeric
DCLRDT	Distribution Declaration Date	Numeric
EXDT	Ex-Distribution Date	Numeric
RCRDDT	Record Date	Numeric
PAYDT	Payment Date	Numeric
ACPERM	Acquiring PERMNO	Numeric
ACCOMP	Acquiring PERMCO	Numeric

SHARES Data Set - Shares Outstanding Observation Array

Table 14.

Fields	Label	Type
PERMNO	PERMNO	Numeric
SHROUT	Shares Outstanding	Numeric
SHRSDT	Shares Observation Date	Numeric
SHRENDDT	Shares Observation End Date	Numeric
SHRFLG	Shares Outstanding Observation Flag	Numeric

DELIST Data Set - Delisting History Array

Table 15.

Fields	Label	Type
PERMNO	PERMNO	Numeric
DLSTDT	Delisting Date	Numeric
DLSTCD	Delisting Code	Numeric
NWPERM	New PERMNO	Numeric
NWCOMP	New PERMCO	Numeric
NEXTD	Delisting Next Price Date	Numeric
DLAMT	Delisting Amount	Numeric
DLRETX	Delisting Return Without Dividends	Numeric
DLPRC	Delisting Price	Numeric
DLPDT	Delisting Amount Date	Numeric
DLRET	Delisting Return	Numeric

NASDIN Data Set - Nasdaq Information Array

Table 16.

Fields	Label	Type
PERMNO	PERMNO	Numeric
TRTSCD	Nasdaq Traits Code	Numeric
TRTSDT	Nasdaq Traits Date	Numeric
TRTSENDT	Nasdaq Traits End Date	Numeric
NMSIND	Nasdaq National Market Indicator	Numeric
MMCNT	Market Maker Count	Numeric
NSDINX	Nasd Index Code	Numeric

Time Series Data Sets

Table 17.

Fields	Label	Type
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PRC	Price or Bid/Ask Average	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
RET	Returns	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
BIDLO	Bid or Low Price	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
ASKHI	Ask or High Price	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
BID	Bid	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
ASK	Ask	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
RETX	Returns w/o Dividends	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
SPREAD	Spread Between Bid Ask	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
ALTPRC	Price Alternate	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
VOL	Volume	Numeric

Table 17. (Time Series Data Sets continued)

Fields	Label	Type
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
NUMTRD	Number of Trades	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
ALTPRCDT	Alternate Price Date	Numeric

Portfolio and Group Data Sets

Table 18. PORT1 – Portfolio Data for Portfolio Type 1

Fields	Label	Type
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT1	Portfolio Assignment for Portfolio Type 1	Numeric
STAT1	Portfolio Statistic for Portfolio Type 1	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT2	Portfolio Assignment for Portfolio Type 2	Numeric
STAT2	Portfolio Statistic for Portfolio Type 2	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT3	Portfolio Assignment for Portfolio Type 3	Numeric
STAT3	Portfolio Statistic for Portfolio Type 3	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT4	Portfolio Assignment for Portfolio Type 4	Numeric
STAT4	Portfolio Statistic for Portfolio Type 4	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT5	Portfolio Assignment for Portfolio Type 5	Numeric
STAT5	Portfolio Statistic for Portfolio Type 5	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT6	Portfolio Assignment for Portfolio Type 6	Numeric
STAT6	Portfolio Statistic for Portfolio Type 6	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT7	Portfolio Assignment for Portfolio Type 7	Numeric

Table 18. (Portfolio Data Sets continued - PORT1-PORT9, GROUP16)

Fields	Label	Type
STAT7	Portfolio Statistic for Portfolio Type 7	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT8	Portfolio Assignment for Portfolio Type 8	Numeric
STAT8	Portfolio Statistic for Portfolio Type 8	Numeric
PERMNO	PERMNO	Numeric
CALDT	Calendar Trading Date	Numeric
PORT9	Portfolio Assignment for Portfolio Type 9	Numeric
STAT9	Portfolio Statistic for Portfolio Type 9	Numeric
PERMNO	PERMNO	Numeric
GRPDT	Group Beginning Date	Numeric
GRPENDDT	Group Ending Date	Numeric
GRPFLAG	Group Flag of Associated Index	Numeric
GRPSU	Group Subflag	Numeric

Compustat Data Sets

CSTHEAD Data Set - Compustat Header Data

Table 19.

Fields	Label	Type
GVKEY	GVKEY	Numeric
IPERM	Header CRSP issue PERMNO link	Numeric
ICOMP	Header CRSP company PERMCO link	Numeric
BEGYR	Annual date of earliest data (yyyy)	Numeric
ENDYR	Annual date of latest data (yyyy)	Numeric
BEGQTR	Quarterly date of earliest data (yyyy.q)	Numeric
ENDQTR	Quarterly date of latest data (yyyy.q)	Numeric
AVAILFLG	Code of available CST data types	Numeric
DNUM	industry code	Numeric
FILE	File identification code	Numeric
ZLIST	Exchange listing and S&P Index code	Numeric
STATE	State identification code	Numeric
COUNTY	County identification code	Numeric
STINC	State incorporation code	Numeric
FINC	Foreign incorporation code	Numeric
XREL	S&P Industry Index relative code	Numeric
STK	Stock ownership code	Numeric
DUP	Duplicate file code	Numeric
CCNDX	Current Canadian Index Code	Numeric
GICS	Global Industry Class. Std. code	Numeric
IPODT	IPO date	Numeric
BEGDT	First date of COMPUSTAT data	Numeric

Table 19. (CSTHEAD Data Set - Compustat Header Data continued)

Fields	Label	Type
ENDDT	Last date of COMPUSTAT data	Numeric
FUNDF1	Fundamental File Identification Code 1	Numeric
FUNDF2	Fundamental File Identification Code 2	Numeric
FUNDF3	Fundamental File Identification Code 3	Numeric
NAICS	North American Industry Class	Character
CPSPIN	Primary S&P index marker	Character
CSSPIN	Secondary S&P index marker	Character
CSSPII	Subset S&P index marker	Character
SUBDBT	Current S&P Subordinated Debt Rating	Character
CPAPER	Current S&P Commercial Paper Rating	Character
SDBT	Current S&P Senior Debt Rating	Character
SDBTIM	Current S&P Senior Debt Rating-Footnote	Character
CNUM	CUSIP issuer code	Character
CIC	Issuer number	Character
CONAME	Company name	Character
INAME	Industry name	Character
SMBL	Stock ticker symbol	Character
EIN	Employer Identification Number	Character
INCORP	Incorporation ISO Country Code	Character
RCST3	Reserved 3	Character

CSTNAME Data Set - Compustat Description History Array

Table 20.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CHGDT	Effective date of this description	Numeric
CHGENDDT	Last effective date of this description	Numeric
DNUM	industry code	Numeric
FILE	File identification code	Numeric
ZLIST	Exchange listing and S&P Index code	Numeric
STATE	State identification code	Numeric
COUNTY	County identification code	Numeric
STINC	State incorporation code	Numeric
FINC	Foreign incorporation code	Numeric
XREL	S&P Industry Index relative code	Numeric
STK	Stock ownership code	Numeric
DUP	Duplicate file code	Numeric
CCNDX	Current Canadian Index Code	Numeric
GICS	Global Industry Class Std. code	Numeric
IPODT	IPO date	Numeric
RCST1	reserved 1	Numeric

Table 20. (CSTNAME Data Set - Compustat Description History Array continued)

Fields	Label	Type
RCST2	reserved 2	Numeric
FUNDF1	Fundamental File Identification Code 1	Numeric
FUNDF2	Fundamental File Identification Code 2	Numeric
FUNDF3	Fundamental File Identification Code 3	Numeric
NAICS	North American Industry Class	Character
CPSPIN	Primary S&P index marker	Character
CSSPIN	Secondary S&P index marker	Character
CSSPII	Subset S&P index marker	Character
SUBDBT	Current S&P Subordinated Debt Rating	Character
CPAPER	Current S&P Commercial Paper Rating	Character
SDBT	Current S&P Senior Debt Rating	Character
SDBTIM	Current S&P Senior Debt Rating-Footnote	Character
CNUM	CUSIP issuer code	Character
CIC	Issuer number	Character
CONAME	Company name	Character
INAME	Industry name	Character
SMBL	Stock ticker symbol	Character
EIN	Employer Identification Number	Character
INCORP	Incorporation ISO Country Code	Character
RCST3	Reserved 3	Character

LINK Data Set - CRSP Compustat Link History

Table 21.

Fields	Label	Type
GVKEY	GVKEY	Numeric
LINKDT	First date link is valid	Numeric
LINKENDT	Last date link is valid	Numeric
NPERMNO	CRSP PERMNO linked	Numeric
NPERMCO	CRSP PERMCO linked	Numeric
LINKTYPE	Link type code	Character
LINKFLAG	Linking Flag	Character

APERDES Data Set - Annual Period Descriptors Time Series

Table 22.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric

Table 22. (APERDES Data Set - Annual Period Descriptors Time Series continued)

Fields	Label	Type
DATYR	Data Year	Numeric
DATQTR	Data Quarter	Numeric
FISCYR	Fiscal yearend month of data	Numeric
CALYR	Calendar year	Numeric
CALQTR	Calendar quarter	Numeric
UPCODE	Update code	Numeric
SRCDOC	Source document code	Numeric
SPBOND	S&P Senior Debt Rating	Numeric
SPDEBT	S&P Subordinated Debt Rating	Numeric
SPPAPER	S&P Commercial Paper Rating	Numeric
SPRANK	Common Stock Ranking	Numeric
MAJIND	Major Index Code	Numeric
INDIND	S&P Industry Index Code	Numeric
REPDT	Report date of quarterly earnings	Numeric
FLOWCD	Flow of funds statement format code	Numeric
CANDXC	Canadian index code	Numeric
PEFTNT1	Period Descriptor Footnote 1 Source Document Code	Character
PEFTNT2	Period Descriptor Footnote 2 Month of Deletion	Character
PEFTNT3	Period Descriptor Footnote 3 Year of Deletion	Character
PEFTNT4	Period Descriptor Footnote 4 Reason For Deletion	Character
PEFTNT5	Period Descriptor Footnote 5 Unused	Character
PEFTNT6	Period Descriptor Footnote 6 Unused	Character
PEFTNT7	Period Descriptor Footnote 7 Unused	Character
PEFTNT8	Period Descriptor Footnote 8 Unused	Character

QPERDES Data Set - Quarterly Period Descriptors Time Series

Table 23.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric
DATYR	Data Year	Numeric
DATQTR	Data Quarter	Numeric
FISCYR	Fiscal yearend month of data	Numeric
CALYR	Calendar year	Numeric
CALQTR	Calendar quarter	Numeric
UPCODE	Update code	Numeric
SRCDOC	Source document code	Numeric
SPBOND	S&P Senior Debt Rating	Numeric

Table 23. (QPERDES Data Set - Quarterly Period Descriptors Time Series continued)

Fields	Label	Type
SPDEBT	S&P Subordinated Debt Rating	Numeric
SPPAPER	S&P Commercial Paper Rating	Numeric
SPRANK	Common Stock Ranking	Numeric
MAJIND	Major Index Code	Numeric
INDIND	S&P Industry Index Code	Numeric
REPDT	Report date of quarterly earnings	Numeric
FLOWCD	Flow of funds statement format code	Numeric
CANDXC	Canadian index code	Numeric
PEFTNT1	Period Descriptor Footnote 1 Comparability Status	Character
PEFTNT2	Period Descriptor Footnote 2 Company Status Alert	Character
PEFTNT3	Period Descriptor Footnote 3 S&P Senior Debt Rating	Character
PEFTNT4	Period Descriptor Footnote 4 Reason For Deletion	Character
PEFTNT5	Period Descriptor Footnote 5 Unused	Character
PEFTNT6	Period Descriptor Footnote 6 Unused	Character
PEFTNT7	Period Descriptor Footnote 7 Unused	Character
PEFTNT8	Period Descriptor Footnote 8 Unused	Character

IAITEMS Data Set - Annual Data Items

Table 24.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric
IA1	Cash and Short Term Investments	Numeric
IA2	Receivables - Total	Numeric
IA3	Inventories - Total	Numeric
IA4	Current Assets - Total	Numeric
IA5	Current Liabilities Total	Numeric
IA6	Assets Total Liabilities and Stockholders' Equity Total	Numeric
IA7	Property, Plant, and Equipment Total (Gross)	Numeric
IA8	Property, Plant, and Equipment Total (Net)	Numeric
IA9	Long-Term Debt - Total	Numeric
IA10	Preferred Stock Liquidating Value	Numeric
IA11	Common Equity Tangible	Numeric
IA12	Sales (Net)	Numeric
IA13	Operating Income Before Depreciation	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA14	Depreciation and Amortization Income Statement)	Numeric
IA15	Interest Expense	Numeric
IA16	Income Taxes - Total	Numeric
IA17	Special Items	Numeric
IA18	Income Before Extraordinary Items	Numeric
IA19	Dividends - Preferred	Numeric
IA20	Income Before Extraordinary Items Adj for Com Stk Equiv Dollar Savings	Numeric
IA21	Dividends - Common	Numeric
IA22	Price - High	Numeric
IA23	Price - Low	Numeric
IA24	Price - Close	Numeric
IA25	Common Shares Outstanding	Numeric
IA26	Dividends Per Share by Ex-Date	Numeric
IA27	Adjustment Factor (Cumulative) by Ex-Date	Numeric
IA28	Common Shares Traded	Numeric
IA29	Employees	Numeric
IA30	Property, Plant, and Equipment Capital Expenditures (Schedule V)	Numeric
IA31	Investments and Advances Equity Method	Numeric
IA32	Investments and Advances - Other	Numeric
IA33	Intangibles	Numeric
IA34	Debt in Current Liabilities	Numeric
IA35	Deferred Taxes and Investment Tax Credit (Balance Sheet)	Numeric
IA36	Retained Earnings	Numeric
IA37	Invested Capital Total	Numeric
IA38	Minority Interest Balance Sheet)	Numeric
IA39	Convertible Debt and Preferred Stock	Numeric
IA40	Common Shares Reserved for Conversion - Total	Numeric
IA41	Cost of Goods Sold	Numeric
IA42	Labor and Related Expense	Numeric
IA43	Pension and Retirement Expense	Numeric
IA44	Debt - Due in One Year	Numeric
IA45	Advertising Expense	Numeric
IA46	Research and Development Expense	Numeric
IA47	Rental Expense	Numeric
IA48	Extraordinary Items and Discontinued Operations	Numeric
IA49	Minority Interest (Income Account)	Numeric
IA50	Deferred Taxes (Income Account)	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA51	Investment Tax Credit (Income Account)	Numeric
IA52	Net Operating Loss Carry Forward Unused Portion	Numeric
IA53	Earnings Per Share (Basic) - Including Extraordinary Items	Numeric
IA54	Common Shares Used to Calculate Earnings Per Share (Basic)	Numeric
IA55	Equity in Earnings	Numeric
IA56	Preferred Stock Redemption Value	Numeric
IA57	Earnings Per Share (Diluted) - Excluding Extraordinary Items	Numeric
IA58	Earnings Per Share (Basic) - Excluding Extraordinary Items	Numeric
IA59	Inventory Valuation Method	Numeric
IA60	Common Equity - Total	Numeric
IA61	Non-operating Income (Expense)	Numeric
IA62	Interest Income	Numeric
IA63	Income Taxes - Federal Current	Numeric
IA64	Income Taxes - Foreign Current	Numeric
IA65	Amortization of Intangibles	Numeric
IA66	Discontinued Operations	Numeric
IA67	Receivables Estimated Doubtful	Numeric
IA68	Current Assets - Other	Numeric
IA69	Assets - Other	Numeric
IA70	Accounts Payable	Numeric
IA71	Income Taxes Payable	Numeric
IA72	Current Liabilities Other	Numeric
IA73	Property, Plant, and Equipment - Construction in Progress (Net)	Numeric
IA74	Deferred Taxes (Balance Sheet)	Numeric
IA75	Liabilities - Other	Numeric
IA76	Inventories - Raw Materials	Numeric
IA77	Inventories - Work in Progress	Numeric
IA78	Inventories Finished Goods	Numeric
IA79	Debt - Convertible	Numeric
IA80	Debt - Subordinated	Numeric
IA81	Debt - Notes	Numeric
IA82	Debt - Debentures	Numeric
IA83	Long - Term Debt Other	Numeric
IA84	Debt - Capitalized Lease Obligations	Numeric
IA85	Common Stock	Numeric
IA86	Treasury Stock Memo Entry	Numeric
IA87	Treasury Stock Number of Common Shares	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA88	Treasury Stock - Total Dollar Amount	Numeric
IA89	Pension Costs - Unfunded Vested Benefits	Numeric
IA90	Pension Costs - Unfunded Past or Prior Service	Numeric
IA91	Debt - Maturing In Second Year	Numeric
IA92	Debt - Maturing In Third Year	Numeric
IA93	Debt - Maturing In Fourth Year	Numeric
IA94	Debt - Maturing In Fifth Year	Numeric
IA95	Rental Commitments Minimum - Five Years Total	Numeric
IA96	Rental Commitments Minimum - First Year	Numeric
IA97	Retained Earnings Unrestricted	Numeric
IA98	Order Backlog	Numeric
IA99	Retained Earnings Restatement	Numeric
IA100	Common Shareholders	Numeric
IA101	Interest Expense on Long-Term Debt	Numeric
IA102	Excise Taxes	Numeric
IA103	Depreciation Expense (Schedule VI)	Numeric
IA104	Short-Term Borrowing Average	Numeric
IA105	Short-Term Borrowings Average Interest Rate	Numeric
IA106	Equity In Net Loss (Earnings) (Statement of Cash Flows)	Numeric
IA107	Sale of Property, Plant, and Equipment (Statement of Cash Flows)	Numeric
IA108	Sale of Common and Preferred Stock (Statement of Cash Flows)	Numeric
IA109	Sale of Investments (Statement of Cash Flows)	Numeric
IA110	Funds from Operations Total (Statement Changes)	Numeric
IA111	Long-Term Debt Issuance (Statement of Cash Flows)	Numeric
IA112	Sources of Funds Total (Statement of Changes)	Numeric
IA113	Increase in Investment (Statement of Cash Flows)	Numeric
IA114	Long-Term Debt Reduction (Statement of Cash Flows)	Numeric
IA115	Purchase of Common and Preferred Stock (Statement of Cash Flows)	Numeric
IA116	Uses of Funds - Total (Statement of Changes)	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA117	Sales (Restated)	Numeric
IA118	Income Before Extraordinary Items (Restated)	Numeric
IA119	Earnings Per Share (Basic) - Excluding Extraordinary Items (Restated)	Numeric
IA120	Assets - Total (Restated)	Numeric
IA121	Working Capital (Restated)	Numeric
IA122	Pretax Income (Restated)	Numeric
IA123	Income Before Extraordinary Items (Statement of Cash Flows)	Numeric
IA124	Extraordinary Items & Discontinued Operations (Statement of Cash Flows)	Numeric
IA125	Depreciation and Amortization (Statement of Cash Flows)	Numeric
IA126	Deferred Taxes (Statement of Cash Flows)	Numeric
IA127	Cash Dividends (Statement of Cash Flows)	Numeric
IA128	Capital Expenditures (Statement of Cash Flows)	Numeric
IA129	Acquisitions (Statement of Cash Flows)	Numeric
IA130	Preferred Stock Carrying Value	Numeric
IA131	Cost of Goods Sold (Restated)	Numeric
IA132	Selling, General, and Administrative Expense (Restated)	Numeric
IA133	Depreciation and Amortization Restated	Numeric
IA134	Interest Expenses (Restated)	Numeric
IA135	Income Taxes - Total (Restated)	Numeric
IA136	Extraordinary Items and Discontinued Operations (Restated)	Numeric
IA137	Earnings Per Share (Basic) - Including Extraordinary Items Restated)	Numeric
IA138	Common Shares Used To Calculate Earnings Per Share (Basic) Restated	Numeric
IA139	Earnings Per Share (Diluted) - Excluding Extraordinary Items (Restated)	Numeric
IA140	Earnings Per Share (Diluted) - Including Extraordinary Items (Restated)	Numeric
IA141	Property, Plant, and Equipment - Total Net (Restated)	Numeric
IA142	Long-Term Debt - Total (Restated)	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA143	Retained Earnings (Restated)	Numeric
IA144	Stockholders' Equity (Restated)	Numeric
IA145	Capital Expenditures (Restated)	Numeric
IA146	Employees (Restated)	Numeric
IA147	Interest Capitalized	Numeric
IA148	Long-Term Debt Tied to Prime	Numeric
IA149	Auditor/Auditor's Opinion	Numeric
IA150	Foreign Currency Adjustment Income Account	Numeric
IA151	Receivables - Trade	Numeric
IA152	Deferred Charges	Numeric
IA153	Accrued Expense	Numeric
IA154	Debt - Subordinated Convertible	Numeric
IA155	Property, Plant, and Equipment - Buildings (Net)	Numeric
IA156	Property, Plant, and Equipment - Machinery and Equipment (Net)	Numeric
IA157	Property, Plant, and Equipment Natural Resources (Net)	Numeric
IA158	Property, Plant, and Equipment - Land and Improvements (Net)	Numeric
IA159	Property, Plant, and Equipment - Leases (Net)	Numeric
IA160	Prepaid Expense	Numeric
IA161	Income Tax Refund	Numeric
IA162	Cash	Numeric
IA163	Rental Income	Numeric
IA164	Rental Commitments Minimum - Second Year	Numeric
IA165	Rental Commitments Minimum - Third Year	Numeric
IA166	Rental Commitments Minimum - Fourth Year	Numeric
IA167	Rental Commitments Minimum - Fifth Year	Numeric
IA168	Compensating Balance	Numeric
IA169	Earnings Per Share (Diluted) - Including Extraordinary Items	Numeric
IA170	Pretax Income	Numeric
IA171	Common Shares Used to Calculate Earnings Per Share (Diluted)	Numeric
IA172	Net Income (Loss)	Numeric
IA173	Income Taxes - State Current	Numeric
IA174	Depletion Expense (Schedule VI)	Numeric
IA175	Preferred Stock Redeemable	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA176	Blank	Numeric
IA177	Net Income (Loss) (Restated)	Numeric
IA178	Operating Income After Depreciation	Numeric
IA179	Working Capital (Balance Sheet)	Numeric
IA180	Working Capital Change Total (Statement of Changes)	Numeric
IA181	Liabilities - Total	Numeric
IA182	Property, Plant, and Equipment - Beginning Balance (Schedule V)	Numeric
IA183	Accounting Changes Cumulative Effect	Numeric
IA184	Property, Plant, and Equipment Retirements (Schedule V)	Numeric
IA185	Property, Plant, and Equipment - Other Changes (Schedule V)	Numeric
IA186	Inventories - Other	Numeric
IA187	Property, Plant, and Equipment - Ending Balance (Schedule V)	Numeric
IA188	Debt - Senior Convertible	Numeric
IA189	Selling, General, and Administrative Expense	Numeric
IA190	Non-operating Income (Expense)	Numeric
IA191	Common Stock Equivalents - Dollar Savings	Numeric
IA192	Extraordinary Items	Numeric
IA193	Short-Term Investments	Numeric
IA194	Receivables - Current Other	Numeric
IA195	Current Assets - Other Excluding Prepaid Expenses	Numeric
IA196	Depreciation, Depletion and Amortization (Accumulated) (Balance Sheet)	Numeric
IA197	Price - Fiscal Year High	Numeric
IA198	Price - Fiscal Year Low	Numeric
IA199	Price - Fiscal Year Close	Numeric
IA200	Common Shares Reserved for Conversion Convertible Debt	Numeric
IA201	Dividends Per Share by Payable Date	Numeric
IA202	Adjustment Factor (Cumulative) by Payable Date	Numeric
IA203	Common Shares Reserved for Conversion Preferred Stock	Numeric
IA204	Goodwill	Numeric
IA205	Assets - Other Excluding Deferred Charges	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA206	Notes Payable	Numeric
IA207	Current Liabilities Other - Excluding Accrued Expenses	Numeric
IA208	Investment Tax Credit (Balance Sheet)	Numeric
IA209	Preferred Stock Nonredeemable	Numeric
IA210	Capital Surplus	Numeric
IA211	Income Taxes - Other	Numeric
IA212	Blank	Numeric
IA213	Sale of Prop, Plnt, & Equip & Sale of Invs Loss(Gain)(Stmt of Csh Flo)	Numeric
IA214	Preferred Stock Convertible	Numeric
IA215	Common Shares Reserved for Conversion Stock Options	Numeric
IA216	Stockholders' Equity Total	Numeric
IA217	Funds from Operations Other (Statement of Cash Flow)	Numeric
IA218	Sources of Funds Other (Statement of Changes)	Numeric
IA219	Uses of Funds - Other (Statement of Changes)	Numeric
IA220	Depreciation (Accumulated) Beginning Balance (Schedule VI)	Numeric
IA221	Depreciation (Accumulated) Retirements (Schedule VI)	Numeric
IA222	Depreciation (Accumulated) - Other Changes (Schedule VI)	Numeric
IA223	Depreciation (Accumulated) - Ending Balance (Schedule VI)	Numeric
IA224	Non-operating Income (Expense) (Restated)	Numeric
IA225	Minority Interest (Restated)	Numeric
IA226	Treasury Stock (Dollar Amount) - Common	Numeric
IA227	Treasury Stock (Dollar Amount) - Preferred	Numeric
IA228	Currency Translation Rate	Numeric
IA229	Common Shares Reserved for Conversion Warrants and Other	Numeric
IA230	Retained Earnings Cumulative Translation Adjustment	Numeric
IA231	Retained Earnings Other Adjustments	Numeric
IA232	Common Stock - Per Share Carrying Value	Numeric
IA233	Earnings per Share from Operations	Numeric
IA234	ADR Ratio	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA235	Common Equity Liquidation Value	Numeric
IA236	Working Capital Change Other - Increase (Decrease) (Stmnt of Changes)	Numeric
IA237	Income Before Extraordinary Items Available for Common	Numeric
IA238	Marketable Securities Adjustment (Balance Sheet)	Numeric
IA239	Interest Capitalized Net Income Effect	Numeric
IA240	Inventories - LIFO Reserve	Numeric
IA241	Debt - Mortgages and Other Secured	Numeric
IA242	Dividends - Preferred In Arrears	Numeric
IA243	Pension Benefits Present Value of Vested	Numeric
IA244	Pension Benefits Present Value of Nonvested	Numeric
IA245	Pension Benefits Net Assets	Numeric
IA246	Pension Discount Rate (Assumed Rate of Return)	Numeric
IA247	Pension Benefits Information Date	Numeric
IA248	Acquisition - Income Contribution	Numeric
IA249	Acquisitions - Sales Contribution	Numeric
IA250	Property, Plant, and Equipment - Other (Net)	Numeric
IA251	Depreciation (Accumulated) - Land and Improvements	Numeric
IA252	Depreciation (Accumulated) Natural Resources	Numeric
IA253	Depreciation (Accumulated) Buildings	Numeric
IA254	Depreciation (Accumulated) Machinery and Equipment	Numeric
IA255	Depreciation (Accumulated) - Leases	Numeric
IA256	Depreciation (Accumulated) Construction in Progress	Numeric
IA257	Depreciation (Accumulated) - Other	Numeric
IA258	Net Income Adjusted for Common Stock Equivalents	Numeric
IA259	Retained Earnings Unadjusted	Numeric
IA260	Property, Plant, and Equipment - Land and Improvements at Cost	Numeric
IA261	Property, Plant, and Equipment - Natural Resources at Cost	Numeric
IA262	Blank	Numeric
IA263	Property, Plant, and Equipment - Buildings at Cost	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA264	Property, Plant, and Equipment - Machinery and Equipment at Cost	Numeric
IA265	Property, Plant, and Equipment - Leases at Cost	Numeric
IA266	Property, Plant, and Equipment Construction in Progress at Cost	Numeric
IA267	Property, Plant, and Equipment - Other at Cost	Numeric
IA268	Debt Unamortized Debt Discount and Other	Numeric
IA269	Deferred Taxes Federal	Numeric
IA270	Deferred Taxes Foreign	Numeric
IA271	Deferred Taxes - State	Numeric
IA272	Pretax Income Domestic	Numeric
IA273	Pretax Income Foreign	Numeric
IA274	Cash & Cash Equivalent Increase (Decrease) (Statement of Cash Flows)	Numeric
IA275	Blank	Numeric
IA276	S&P Major Index Code Historical	Numeric
IA277	S&P Industry Index Code - Historical	Numeric
IA278	Fortune Industry Code Historical	Numeric
IA279	Fortune Rank	Numeric
IA280	S&P Long-Term Domestic Issuer Credit Rating Historical	Numeric
IA281	Blank	Numeric
IA282	S&P Common Stock Ranking	Numeric
IA283	S&P Short-Term Domestic Issuer Credit Rating - Historical	Numeric
IA284	Pension Vested Benefit Obligation	Numeric
IA285	Pension - Accumulated Benefit Obligation	Numeric
IA286	Pension - Projected Benefit Obligation	Numeric
IA287	Pension Plan Assets	Numeric
IA288	Pension - Unrecognized Prior Service Cost	Numeric
IA289	Pension - Other Adjustments	Numeric
IA290	Pension - Prepaid Accrued Cost	Numeric
IA291	Pension Vested Benefit Obligation Underfunded	Numeric
IA292	Periodic Postretirement Benefit Cost Net	Numeric
IA293	Pension - Accumulated Benefit Obligation (Underfunded)	Numeric
IA294	Pension - Projected Benefit Obligation (Underfunded)	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA295	Periodic Pension Cost (Net)	Numeric
IA296	Pension Plan Assets (Underfunded)	Numeric
IA297	Pension - Unrecognized Prior Service Cost (Underfunded)	Numeric
IA298	Pension - Additional Minimum Liability	Numeric
IA299	Pension - Other Adjustments (Underfunded)	Numeric
IA300	Pension - Prepaid Accrued Cost (Underfunded)	Numeric
IA301	Changes in Current Debt (Statement of Cash Flows)	Numeric
IA302	Accounts Receivable Decrease (Increase) (Statement of Cash Flows)	Numeric
IA303	Inventory - Decrease (Increase) (Statement of Cash Flows)	Numeric
IA304	Accounts Payable & Accrued Liabilities Inc (Decrease) (St Cash Flows)	Numeric
IA305	Income Taxes - Accrued Increase (Decrease) Statement of Cash Flow	Numeric
IA306	Blank	Numeric
IA307	Assets and Liabilities Other (Net Change) Statement of Cash Flow	Numeric
IA308	Operating Activities Net Cash Flow Statement of Cash Flow	Numeric
IA309	Short-Term Investments Change (Statement of Cash Flows)	Numeric
IA310	Investing Activities Other (Statement of Cash Flows)	Numeric
IA311	Investing Activities Net Cash Flow (Statement of Cash Flows)	Numeric
IA312	Financing Activities Other (Statement of Cash Flows)	Numeric
IA313	Financing Activities Net Cash Flow (Statement of Cash Flows)	Numeric
IA314	Exchange Rate Effect (Statement of Cash Flows)	Numeric
IA315	Interest Paid - Net (Statement of Cash Flows)	Numeric
IA316	Blank	Numeric
IA317	Income Taxes Paid (Statement of Cash Flows)	Numeric
IA318	Format Code (Statement of Cash Flows)	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA319	Dilution Adjustment	Numeric
IA320	S&P Subordinated Debt Rating	Numeric
IA321	Interest Income Total (Financial Services)	Numeric
IA322	Dilution Available Excluding	Numeric
IA323	Earnings per share from Operations (Diluted)	Numeric
IA324	Historical SIC Code	Numeric
IA325	Blank	Numeric
IA326	Blank	Numeric
IA327	Contingent Liabilities Guarantees	Numeric
IA328	Debt - Finance Subsidiary	Numeric
IA329	Debt - Consolidated Subsidiary	Numeric
IA330	Postretirement Benefit Asset (Liability) (Net)	Numeric
IA331	Pension Plans Service Cost	Numeric
IA332	Pension Plans Interest Cost	Numeric
IA333	Pension Plans Return on Plan Assets (Actual)	Numeric
IA334	Pension Plans - Other Periodic Cost Components (Net)	Numeric
IA335	Pension Plans - Rate of Compensation Increase	Numeric
IA336	Pension Plans Anticipated Long-Term Rate of Return on Plan Assets	Numeric
IA337	Risk-Adjusted Capital Ratio - Tier 1	Numeric
IA338	Blank	Numeric
IA339	Interest Expense Total (Financial Services)	Numeric
IA340	Net Interest Income (Tax Equivalent)	Numeric
IA341	Non-performing Assets Total	Numeric
IA342	Provision for Loan/Asset Losses	Numeric
IA343	Reserve for Loan/Asset Losses	Numeric
IA344	Net Interest Margin	Numeric
IA345	Blank	Numeric
IA346	Blank	Numeric
IA347	Blank	Numeric
IA348	Risk-Adjusted Capital Ratio - Total	Numeric
IA349	Net Charge-Offs	Numeric
IA350	Blank	Numeric
IA351	Current Assets Discontinued Operations	Numeric
IA352	Other Intangibles	Numeric
IA353	Long-Term Assets of Discontinued Operations	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA354	Other Current Assets Excluding Discontinued	Numeric
IA355	Other Assets Excluding Discontinued Operations	Numeric
IA356	Deferred Revenue Current	Numeric
IA357	Accumulated Other Comprehensive Income	Numeric
IA358	Deferred Compensation	Numeric
IA359	Other Stockholders' Equity Adjustments	Numeric
IA360	Acquisition/Merger Pretax	Numeric
IA361	Acquisition/Merger After-Tax	Numeric
IA362	Acquisition/Merger Basic EPS Effect	Numeric
IA363	Acquisition/Merger Diluted EPS Effect	Numeric
IA364	Gain/Loss Pretax	Numeric
IA365	Gain/Loss After-Tax	Numeric
IA366	Gain/Loss Basic EPS Effect	Numeric
IA367	Gain/Loss Diluted EPS Effect	Numeric
IA368	Impairments of Goodwill Pretax	Numeric
IA369	Impairments of Goodwill After-Tax	Numeric
IA370	Impairments of Goodwill Basic EPS Effect	Numeric
IA371	Impairments of Goodwill Diluted EPS Effect	Numeric
IA372	Settlement (Litigation /Insurance) Pretax	Numeric
IA373	Settlement (Litigation /Insurance) Aftertax	Numeric
IA374	Settlement (Litigation /Insurance) Basic EPS	Numeric
IA375	Settlement (Litigation /Insurance) Diluted EPS	Numeric
IA376	Restructuring Costs Pretax	Numeric
IA377	Restructuring Costs Aftertax	Numeric
IA378	Restructuring Costs Basic EPS Effect	Numeric
IA379	Restructuring Costs Diluted EPS Effect	Numeric
IA380	Writedowns Pretax	Numeric
IA381	Writedowns After-Tax	Numeric
IA382	Writedowns Basic EPS Effect	Numeric
IA383	Writedowns Diluted EPS Effect	Numeric
IA384	Other Special Items Pretax	Numeric
IA385	Other Special Items Aftertax	Numeric
IA386	Other Special Items Basic EPS Effect	Numeric

Table 24. (IAITEMS Data Set - Annual Data Items continued)

Fields	Label	Type
IA387	Other Special Items Diluted EPS Effect	Numeric
IA388	In Process Research & Development	Numeric
IA389	Thereafter Rent Commitments	Numeric
IA390	Accumulated Depreciation of Real Estate Property	Numeric
IA391	Total Real Estate Property	Numeric
IA392	Gain/Loss on Sale of Property	Numeric
IA393	Depreciation and Amortization of Property	Numeric
IA394	Goodwill Amortization	Numeric
IA395	See Footnote for 394	Numeric
IA396	Common Shares Issued	Numeric
IA397	Deferred Revenue Long-Term	Numeric
IA398	Stock Compensation Expense	Numeric
IA399	Implied Option Expense	Numeric
IA400	Blank	Numeric

IQITEMS Data Set - Quarterly Data Items

Table 25.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric
IQ1	Selling, General, and Administrative Expense	Numeric
IQ2	Sales (Net)	Numeric
IQ3	Minority Interest (Income Account)	Numeric
IQ4	Research and Development Expense	Numeric
IQ5	Depreciation and Amortization (Income Statement)	Numeric
IQ6	Income Taxes - Total	Numeric
IQ7	Earnings Per Share (Diluted) - Including Extraordinary Items	Numeric
IQ8	Income Before Extraordinary Items	Numeric
IQ9	Earnings Per Share (Diluted) - Excluding Extraordinary Items	Numeric
IQ10	Income Before Extraordinary Items - Adj for Com Stk Equiv Dollar Savings	Numeric
IQ11	Earnings Per Share (Basic) - Including Extraordinary Items	Numeric
IQ12	Price - Close 1st Month of Quarter	Numeric
IQ13	Price - Close 2nd Month of Quarter	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ14	Price - Close 3rd Month of Quarter	Numeric
IQ15	Common Shares Used to Calculate Earnings per Share (Basic)	Numeric
IQ16	Dividends per Share by Ex-Date	Numeric
IQ17	Adjustment Factor Cumulative by Ex-Date	Numeric
IQ18	Common Shares Traded	Numeric
IQ19	Earnings Per Share (Basic) - Excluding Extraordinary Items	Numeric
IQ20	Dividends - Common Indicated Annual	Numeric
IQ21	Operating Income Before Depreciation	Numeric
IQ22	Interest Expense	Numeric
IQ23	Pretax Income	Numeric
IQ24	Dividends - Preferred	Numeric
IQ25	Income Before Extraordinary Items Available for Common	Numeric
IQ26	Extraordinary Items and Discontinued Operations	Numeric
IQ27	Earnings Per Share (Basic) Excluding Extraordinary Items 12 Mo Moving	Numeric
IQ28	Common Shares Used to Calculate Earnings Per Share - 12 Month Moving	Numeric
IQ29	Interest Income Total (Financial Services)	Numeric
IQ30	Cost of Goods Sold	Numeric
IQ31	Non-operating Income (Expense)	Numeric
IQ32	Special Items	Numeric
IQ33	Discontinued Operations	Numeric
IQ34	Foreign Currency Adjustment (Income Account)	Numeric
IQ35	Deferred Taxes (Income Account)	Numeric
IQ36	Cash and Short Term Investments	Numeric
IQ37	Receivables - Total	Numeric
IQ38	Inventories - Total	Numeric
IQ39	Current Assets - Other	Numeric
IQ40	Current Assets - Total	Numeric
IQ41	Depreciation, Depletion and Amortization (Accumulated) (Balance Sheet)	Numeric
IQ42	Property, Plant, and Equipment - Total (Net)	Numeric
IQ43	Assets - Other	Numeric
IQ44	Assets - Total/Liabilities and Stockholders Equity-Total	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ45	Debt in Current Liabilities	Numeric
IQ46	Accounts Payable	Numeric
IQ47	Income Taxes Payable	Numeric
IQ48	Current Liabilities Other	Numeric
IQ49	Current Liabilities Total	Numeric
IQ50	Liabilities - Other	Numeric
IQ51	Long-Term Debt - Total	Numeric
IQ52	Deferred Taxes and Investment Tax Credit (Balance Sheet)	Numeric
IQ53	Minority Interest (Balance Sheet)	Numeric
IQ54	Liabilities - Total	Numeric
IQ55	Preferred Stock Carrying Value	Numeric
IQ56	Common Stock	Numeric
IQ57	Capital Surplus	Numeric
IQ58	Retained Earnings	Numeric
IQ59	Common Equity - Total	Numeric
IQ60	Stockholders' Equity Total	Numeric
IQ61	Common Shares Outstanding	Numeric
IQ62	Invested Capital Total	Numeric
IQ63	Price - High 1st Month of Quarter	Numeric
IQ64	Price - High 2nd Month of Quarter	Numeric
IQ65	Price - High 3rd Month of Quarter	Numeric
IQ66	Price - Low 1st Month of Quarter	Numeric
IQ67	Price - Low 2nd Month of Quarter	Numeric
IQ68	Price - Low 3rd Month of Quarter	Numeric
IQ69	Net Income (Loss)	Numeric
IQ70	Interest Expense Total (Financial Services)	Numeric
IQ71	Preferred Stock Redeemable	Numeric
IQ72	Dividends per Share by Payable Date	Numeric
IQ73	Working Capital Change Other - Increase (Decrease) (Stmnt of Changes)	Numeric
IQ74	Cash & Cash Equivalents Increase (Decrease) (Statement of Cash Flows)	Numeric
IQ75	Changes in Current Deb (Statement of Cash Flows)	Numeric
IQ76	Income Before Extraordinary Items (Statement of Cash Flows)	Numeric
IQ77	Depreciation and Amortization (Statement of Cash Flows)	Numeric
IQ78	Extraordinary Items & Discontinued Operation (Statement of Cash Flows)	Numeric
IQ79	Deferred Taxes (Statement of Cash Flows)	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ80	Equity in Net Loss (Earnings) (Statement of Cash Flows)	Numeric
IQ81	Funds from Operations Other (Statement of Cash Flows)	Numeric
IQ82	Funds from Operation Total (Statement of Charges)	Numeric
IQ83	Sale of Property, Plant and Equipment (Statement of Cash Flows)	Numeric
IQ84	Sale of Common and Preferred Stock (Statement of Cash Flows)	Numeric
IQ85	Sale of Investments (Statement of Cash Flows)	Numeric
IQ86	Long-Term Debt Issuance (Statement of Cash Flows)	Numeric
IQ87	Sources of Funds Other (Statement of Changes)	Numeric
IQ88	Sources of Funds Total (Statement of Changes)	Numeric
IQ89	Cash Dividends (Statement of Cash Flows)	Numeric
IQ90	Capital Expenditures (Statement of Cash Flows)	Numeric
IQ91	Increase in Investment (Statement of Cash Flows)	Numeric
IQ92	Long-Term Debt Reduction (Statement of Cash Flows)	Numeric
IQ93	Purchase of Common and Preferred Stock (Statement of Cash Flows)	Numeric
IQ94	Acquisitions (Statement of Cash Flows)	Numeric
IQ95	Uses of Funds - Other (Statement of Changes)	Numeric
IQ96	Uses of Funds - Total (Statement of Changes)	Numeric
IQ97	Net Interest Income (Tax Equivalent)	Numeric
IQ98	Treasury Stock Total Dollar Amount	Numeric
IQ99	Non-Performing Assets Total	Numeric
IQ100	Adjustment Factor (Cumulative) by Payable Date	Numeric
IQ101	Working Capital Change Total (Statement of Changes)	Numeric
IQ102	Sale of Prop, Plnt, & Equip & Sale of Invs Loss(Gain) (Stmt of Csh Flo)	Numeric
IQ103	Accounts Receivable Decrease (Increase) (Statement of Cash Flows)	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ104	Inventory - Decrease (Increase) (Statement of Cash Flows)	Numeric
IQ105	Accounts Payable & Accrued Liabilities Inc (Decrease) (St Cash Flows)	Numeric
IQ106	Income Taxes - Accrued Increase (Decrease) (Statement of Cash Flows)	Numeric
IQ107	Assets and Liabilities Other (Net Change) (Statement of Cash Flows)	Numeric
IQ108	Operating Activities Net Cash Flow (Statement of Cash Flows)	Numeric
IQ109	Short-Term Investments Change (Statement of Cash Flows)	Numeric
IQ110	Investing Activities Other (Statement of Cash Flows)	Numeric
IQ111	Investing Activities Net Cash Flow (Statement of Cash Flows)	Numeric
IQ112	Financing Activities Other (Statement of Cash Flows)	Numeric
IQ113	Financing Activities Net Cash Flow (Statement of Cash Flows)	Numeric
IQ114	Exchange Rate Effect (Statement of Cash Flows)	Numeric
IQ115	Interest Paid - Net (Statement of Cash Flows)	Numeric
IQ116	Income Taxes Paid (Statement of Cash Flows)	Numeric
IQ117	Accounting Changes Cumulative Effect	Numeric
IQ118	Property, Plant and Equipment - Total (Gross)	Numeric
IQ119	Extraordinary Items	Numeric
IQ120	Common Stock Equivalents Dollar Savings	Numeric
IQ121	Currency Translation Rate	Numeric
IQ122	Accounts Payable Expanded	Numeric
IQ123	Blank	Numeric
IQ124	Common Shares for Diluted EPS	Numeric
IQ125	Dilution Adjustment	Numeric
IQ126	Dilution Available Excluding	Numeric
IQ127..IQ170	Blank	Numeric
IQ171	Provision for Loan/Asset Losses	Numeric
IQ172	Reserve for Loan/Asset Losses	Numeric
IQ173	Net Interest Margin	Numeric
IQ174	Risk-Adjusted Capital Ratio - Tier 1	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ175	Risk-Adjusted Capital Ratio - Total	Numeric
IQ176	Net Charge-Offs	Numeric
IQ177	Earnings per Share from Operations	Numeric
IQ178	Earnings per Share from Operations	Numeric
IQ179	Earnings per Share (Diluted) - Excluding Extraordinary Items 12 Mo Mov	Numeric
IQ180	Earnings per Share from Operations (Diluted) 12 Months Moving	Numeric
IQ181	Earnings per Share from Operations (Diluted)	Numeric
IQ182..IQ232	Blank	Numeric
IQ233	Total Long-Term Investments	Numeric
IQ234	Goodwill	Numeric
IQ235	Other Intangibles	Numeric
IQ236	Other Long-Term Assets	Numeric
IQ237	Unadjusted Retained Earnings	Numeric
IQ238	Accumulated Other Comprehensive Income	Numeric
IQ239	Deferred Compensation	Numeric
IQ240	Other Stockholders' Equity Adjustments	Numeric
IQ241	Acquisition/Merger Pretax	Numeric
IQ242	Acquisition/Merger After-Tax	Numeric
IQ243	Acquisition/Merger Basic EPS Effect	Numeric
IQ244	Acquisition/Merger Diluted EPS Effect	Numeric
IQ245	Gain/Loss Pretax	Numeric
IQ246	Gain/Loss After-Tax	Numeric
IQ247	Gain/Loss Diluted EPS Effect	Numeric
IQ248	Gain/Loss Basic EPS Effect	Numeric
IQ249	Impairments of Goodwill Pretax	Numeric
IQ250	Impairments of Goodwill After-Tax	Numeric
IQ251	Impairments of Goodwill Basic EPS Effect	Numeric
IQ252	Impairments of Goodwill Diluted EPS Effect	Numeric
IQ253	Settlement (Litigation/Insurance) Pretax	Numeric
IQ254	Settlement (Litigation/Insurance) Aftertax	Numeric
IQ255	Settlement (Litigation/Insurance) Basic EPS	Numeric
IQ256	Settlement (Litigation/Insurance)Diluted EP	Numeric

Table 25. (IQITEMS Data Set - Quarterly Data Items continued)

Fields	Label	Type
IQ257	Restructuring Costs Pretax	Numeric
IQ258	Restructuring Costs Aftertax	Numeric
IQ259	Restructuring Costs Basic EPS Effect	Numeric
IQ260	Restructuring Costs Diluted EPS Effect	Numeric
IQ261	Writedowns Pretax	Numeric
IQ262	Writedowns After-Tax	Numeric
IQ263	Writedowns Basic EPS Effect	Numeric
IQ264	Writedowns Diluted EPS Effect	Numeric
IQ265	Other Special Items Pretax	Numeric
IQ266	Other Special Items Aftertax	Numeric
IQ267	Other Special Items Basic EPS Effect	Numeric
IQ268	Other Special Items Diluted EPS Effect	Numeric
IQ269	Accumulated Depreciation of Real Estate Property	Numeric
IQ270	Total Real Estate Property	Numeric
IQ271	Gain/Loss on Sale of Property	Numeric
IQ272	Depreciation and Amortization of Property	Numeric
IQ273	ADR Ratio	Numeric
IQ274	In Process Research & Development	Numeric
IQ275	Goodwill Amortization	Numeric
IQ276	See Footnote for 275	Numeric
IQ277	Common Shares Issued	Numeric
IQ278	Stock Compensation Expense	Numeric
IQ279	Blank	Numeric
IQ280	Blank	Numeric

BAITEMS Data Set - Bank Annual Data Items

Table 26.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric
BA1	Cash and Due from Bank	Numeric
BA2	U.S. Treasury Securities	Numeric
BA3	Securities of Other U.S. Government Agencies and Corporations	Numeric
BA4	Due from Banks (Memorandum Entry)	Numeric
BA5	Other Securities (Taxable)	Numeric
BA6	Total Taxable Investment Securities	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA7	Obligations of States and Political Subdivisions	Numeric
BA8	Total Investment Securities	Numeric
BA9	Geographic Designation Code	Numeric
BA10	Trading Account Securities	Numeric
BA11	Federal Funds Sold and Securities Purchased under Agreements to Resell	Numeric
BA12	Treasury Stock - Dollar Amount - Common	Numeric
BA13	Foreign Loans	Numeric
BA14	Real Estate Loans Total	Numeric
BA15	Real Estate Loans Insured or Guaranteed by U.S. Government	Numeric
BA16	Treasury Stock Dollar Amount Preferred	Numeric
BA17	Loans to Financial Institutions	Numeric
BA18	Loans for Purchasing or Carrying Securities	Numeric
BA19	Interest Income Total (Financial Services)	Numeric
BA20	Commercial or Industrial Loans	Numeric
BA21	Loans to Individuals for Household, Family, Other Consumer Expenditures	Numeric
BA22	Other Loans	Numeric
BA23	Loans (Gross)	Numeric
BA24	Unearned Discount/	Numeric
BA25	Income Interest on Due from Banks (Restated)	Numeric
BA26	Interest Income on Fed Funds Sold & Secs Purchased under Agmnt to Resell	Numeric
BA27	Other Interest Income (Restated)	Numeric
BA28	Bank Premises, Furniture, and Fixture	Numeric
BA29	Real Estate Other than Bank Premises	Numeric
BA30	Investments in Nonconsolidated Subsidiaries	Numeric
BA31	Direct Lease Financing	Numeric
BA32	Customers' Liability to this Bank on Acceptances Outstanding	Numeric
BA33	Other Assets	Numeric
BA34	Intangible Assets	Numeric
BA35	Aggregate Miscellaneous Assets	Numeric
BA36	Total Assets (Gross)	Numeric
BA37	Trading Account Income (Restated)	Numeric
BA38	Other Current Operating Revenue (Restated)	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA39	Interest Expense on Fed Funds Purch'd & Secs Sold under Agmnts to Repur	Numeric
BA40	Assets Held for Sale	Numeric
BA41	Total Demand Deposits	Numeric
BA42	Net Interest Margin	Numeric
BA43	Consumer Type Time Deposit	Numeric
BA44	Total Savings Deposits	Numeric
BA45	Money Market Certificates of Deposit	Numeric
BA46	All Other Time Deposit	Numeric
BA47	Total Time Deposits (Other than Savings)	Numeric
BA48	Risk-Adjusted Capital Ratio - Tier 1	Numeric
BA49	Interest on Long-Term Debt and Not Classified as Capital (Restated)	Numeric
BA50	Interest on Other Borrowed Money (Restated)	Numeric
BA51	Other Interest Expense (Restated)	Numeric
BA52	Salaries and Related Expenses (Restated)	Numeric
BA53	Total Deposits Worldwide	Numeric
BA54	Total Domestic Deposits	Numeric
BA55	Total Foreign Deposits	Numeric
BA56	Demand Deposits of IPC	Numeric
BA57	Time and Savings Deposits of IPC	Numeric
BA58	Deposits of U.S. Government	Numeric
BA59	Deposits of States and Political Subdivisions	Numeric
BA60	Deposits of Foreign Governments	Numeric
BA61	Deposits of Commercial Banks	Numeric
BA62	Certified and Officers Checks	Numeric
BA63	Other Deposits	Numeric
BA64	Risk-Adjusted Capital Ratio - Total	Numeric
BA65	Federal Funds Purchased & Securities Sold under Agreements to Repurchase	Numeric
BA66	Commercial Paper	Numeric
BA67	Long-Term Debt Not Classified as Capital	Numeric
BA68	Other Liabilities for Borrowed Money	Numeric
BA69	Total Borrowings	Numeric
BA70	Valuation Portion of Reserve for Loan Losses	Numeric
BA71	Mortgage Indebtedness	Numeric
BA72	Acceptances Executed by or for the Account of this Bank and Outstanding	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA73	Other Liabilities (Excluding Valuation Reserves)	Numeric
BA74	Deferred Portion of Reserve for Loan Losses	Numeric
BA75	Contingency Portion of Reserve for Loan Losses	Numeric
BA76	Total Liabilities (Excluding Valuation Reserves)	Numeric
BA77	Minority Interest in Consolidated Subsidiaries	Numeric
BA78	Reserve(s) for Bad Debt Losses on Loans	Numeric
BA79	Depreciation and Amortization	Numeric
BA80	Reserves on Securities	Numeric
BA81	Total Reserves on Loan and Securities	Numeric
BA82	Fixed Expense (Occupancy and Equipment - Net)(Restated)	Numeric
BA83	Other Current Operating Expense(Restated)	Numeric
BA84	Capital Notes and Debentures	Numeric
BA85	Minority Interest (Income Account)(Restated)	Numeric
BA86	Preferred Stock Par Value	Numeric
BA87	Number of Shares of Preferred Stock Outstanding	Numeric
BA88	Common Stock Par Value	Numeric
BA89	Number of Shares Authorized	Numeric
BA90	Number of Shares Outstanding	Numeric
BA91	Number of Shares Reserved for Conversion	Numeric
BA92	Treasury Stock - Cost	Numeric
BA93	Number of Treasury Shares Held	Numeric
BA94	Special Items	Numeric
BA95	Surplus	Numeric
BA96	Undivided Profits	Numeric
BA97	Reserves for Contingencies and Other Capital Reserves	Numeric
BA98	Total Extraordinary Items - Net of Taxes (Restated)	Numeric
BA99	Total Book Value	Numeric
BA100	Net Income Per Share Excluding Extraordinary Items (Restated)	Numeric
BA101	Total Liabilities, Reserves and Capital Accounts	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA102	Total Capital Accounts and Minority Interest (Invested Capital)	Numeric
BA103	Net Current Op Erngs Per Share - Excluding Extraordinary Items Fully	Numeric
BA104	Foreign Exchange Gains and Losses	Numeric
BA105	Interest and Fees on Loans	Numeric
BA106	Interest Inc on Federal Funds Sold & Secs Purchased und Agmnts to Resell	Numeric
BA107	Blank	Numeric
BA108	Interest and Discount on U.S. Treasury Securities	Numeric
BA109	Interest on Securities of U.S. Government Agencies and Corporations	Numeric
BA110	Interest and Dividends on Other Taxable Securities	Numeric
BA111	Total Taxable Investment Revenue	Numeric
BA112	Interest on Obligation of States & Political Subdivisions	Numeric
BA113	Other Interest Income	Numeric
BA114	Trading Account Interest (Memorandum Entry)	Numeric
BA115	Total Interest and Dividends on Investment	Numeric
BA116	Aggregate Loan and Investment Revenue	Numeric
BA117	Trust Department Income	Numeric
BA118	Service Charges on Deposit Accounts	Numeric
BA119	Other Svce Charges, Collection & Exchange Charges, Comms & Fees	Numeric
BA120	Trading Account Income	Numeric
BA121	Other Current Operating Revenue	Numeric
BA122	Interest on Due from Banks	Numeric
BA123	Aggregate Other Current Operating Revenue	Numeric
BA124	Total Current Operating Revenue	Numeric
BA125	Number of Employees	Numeric
BA126	Salaries and Wages of Officers and Employees	Numeric
BA127	Pension and Employee Benefits	Numeric
BA128	Average Fed Funds Purch'd & Securities Sold under Agmnts to Repurchase	Numeric
BA129	Interest on Deposits	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA130	Interest Exp on Fed Fnds Purch'd & Securities Sold under Agmnts to Repur	Numeric
BA131	Interest on Borrowed Money	Numeric
BA132	Interest on Long-Term Debt - Not Classified as Capital	Numeric
BA133	Total Interest on Deposits and Borrowing	Numeric
BA134	Interest on Capital Notes and Debentures	Numeric
BA135	Provision for Loan Losses	Numeric
BA136	Occupancy Expense of Bank Premises - Net	Numeric
BA137	Total Interest Expense	Numeric
BA138	Rental Income	Numeric
BA139	Furniture and Equipment Depreciation, Rental Cost, Servicing, Etc.	Numeric
BA140	Number of Employees(Restated)	Numeric
BA141	Number of Domestic Officers (Restated)	Numeric
BA142	Other Current Operating Expense	Numeric
BA143	Aggregate Other Current Operating Expense	Numeric
BA144	Total Current Operating Expense	Numeric
BA145	Current Operating Earnings before Income Tax	Numeric
BA146	Income Taxes Applicable to Current Operating Earnings	Numeric
BA147	Net Current Operating Earnings	Numeric
BA148	Minority Interest (Income Account)	Numeric
BA149	Net Current Operating Earnings after Minority Interest	Numeric
BA150	Average Cash and Due from Banks (Restated)	Numeric
BA151	Average Loans Domestic (Restated)	Numeric
BA152	Average Loans Foreign (Restated)	Numeric
BA153	Net Pre-Tax Profit or Loss on Securities Sold or Redeemed	Numeric
BA154	Average Fed Fnds Sold & Secs Purchased under Agmnts to Resell (Rest)	Numeric
BA155	Average Trading Account Securities(Restated)	Numeric
BA156	Average Deposits(Restated)	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA157	Tax Effect on Profit or Loss on Securities Sold or Redeemed	Numeric
BA158	Net Aft-Tax Profit/Loss on Secs Sld or Redmd Prior to Eff of Min Int	Numeric
BA159	Minority Interest in Aft-Tax Profit/Loss on Securities Sold or Redeemed	Numeric
BA160	Net After-Tax & Aft-Min Int Profit/Loss on Secs Sld or Redeemed	Numeric
BA161	Net Income	Numeric
BA162	Preferred Dividend Deductions	Numeric
BA163	Savings Due to Common Stock Equivalents	Numeric
BA164	Net Income Available for Common	Numeric
BA165	Net Current Operating Earnings Available for Common	Numeric
BA166	Interest and Fees on Loans (Restated)	Numeric
BA167	Taxable Investment Income (Restated)	Numeric
BA168	Non-Taxable Investment Income (Restated)	Numeric
BA169	Total Interest Income (Restated)	Numeric
BA170	Trust Department Income (Restated)	Numeric
BA171	Total Current Operating Revenue (Restated)	Numeric
BA172	Interest on Deposits (Restated)	Numeric
BA173	Total Interest on Deposits and Borrowing (Restated)	Numeric
BA174	Interest on Capital Notes and Debentures (Restated)	Numeric
BA175	Total Interest Expense (Restated)	Numeric
BA176	Provision for Loan Losses (Restated)	Numeric
BA177	Cash Dividends Declared on Common Stock	Numeric
BA178	Cash Dividends Declared on Preferred Stock	Numeric
BA179	Total Current Operating Expense (Restated)	Numeric
BA180	Current Operating Earnings before Income Tax (Restated)	Numeric
BA181	Income Taxes Applicable to Current Operating Earnings (Restated)	Numeric
BA182	Net After-Tax & Aft-Min Int Profit/Loss on Secs Sld/Redeemed (Rest)	Numeric
BA183	Net Income (Restated)	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA184	Net Current Operating Earnings Per Share (Restated)	Numeric
BA185	Total Extraordinary Items Net of Taxes	Numeric
BA186	Common Shares Used in Calculating Earnings Per Shares (Restated)	Numeric
BA187	Additions to Reserves for Bad Debts Due to Mergers and Absorptions	Numeric
BA188	Additions to Reserves for Bad Debts Due to Recoveries Credt'd to Rsrvs	Numeric
BA189	Deductions from Reserves for Bad Debts Due to Losses Charged to Reserves	Numeric
BA190	Net Credit/Charge to Reserves for Bad Debts from Loan Recs or Chg-offs	Numeric
BA191	Transfers to Reserves for Bad Debts from Inc and/or to/from Undiv Prfts	Numeric
BA192	Average Preferred Stoc Par Value (Restated)	Numeric
BA193	Net Current Operating Earnings Per Share Excluding Extraordinary Items	Numeric
BA194	Net Income per Share Excluding Extraordinary Items	Numeric
BA195	Net Income per Share Including Extraordinary Items	Numeric
BA196	Common Shares Used in Calculating Earnings per Share	Numeric
BA197	Net Cur Op Earnings per Shares - Exc Extraordinary Items & Fully Diluted	Numeric
BA198	Net Income per Share Excluding Extraordinary Items - Fully Diluted	Numeric
BA199	Net Income per Share Including Extraordinary Items - Fully Diluted	Numeric
BA200	Common Shares Used in Calculating Fully Diluted Earnings per Share	Numeric
BA201	Common Dividends Paid per Share by Ex-Date	Numeric
BA202	Annualized Dividend Rate	Numeric
BA203	Market Price - High	Numeric
BA204	Market Price - Low	Numeric
BA205	Market Price - Close	Numeric
BA206	Common Shares Traded	Numeric
BA207	Average Reserve for Bad Debt Losses on Loans(Restated)	Numeric
BA208	Number of Domestic Offices	Numeric
BA209	Number of Foreign Offices	Numeric

Table 26. (BAITEMS Data Set - Bank Annual Data Items continued)

Fields	Label	Type
BA210	Average Loans(Restated)	Numeric
BA211	Average Assets (Gross)	Numeric
BA212	Average Loans (Gross)	Numeric
BA213	Average Cash and Due from Banks	Numeric
BA214	Average Taxable Investments	Numeric
BA215	Average Non-Taxable Investments	Numeric
BA216	Average Deposits	Numeric
BA217	Average Deposits Time and Savings	Numeric
BA218	Average Deposits Demand	Numeric
BA219	Average Borrowings	Numeric
BA220	Average Fed Funds Sold & Secs Purchased under Agrmnts to Resell	Numeric
BA221	Average Book Value	Numeric
BA222	Average Fed Funds Purch'd & Secs Sold under Agmnts to Repurchase	Numeric
BA223	Average Taxable Investments (Restated)	Numeric
BA224	Average Non-Taxable Investments	Numeric
BA225	Average Assets(Restated)	Numeric
BA226	Average Deposits Time and Savings(Restated)	Numeric
BA227	Average Deposits Demand (Restated)	Numeric
BA228	Average Deposits Foreign (Restated)	Numeric
BA229	Average Borrowings (Restated)	Numeric
BA230	Average Long-Term Debt (Restated)	Numeric
BA231	Average Book Value (Restated)	Numeric
BA232	Adjustment Factor Cumulative by Ex-Date	Numeric

BQITEMS Data Set - Bank Quarterly Data Items

Table 27.

Fields	Label	Type
GVKEY	GVKEY	Numeric
CRSPDT	CRSP Date	Numeric
RCALDT	Raw Calendar Trading Date	Numeric
FISCALDT	Fiscal Trading Date	Numeric
BQ1	Cash and Due from Banks	Numeric
BQ2	U.S. Treasury Securities	Numeric
BQ3	Securities of Other U.S. Government Agencies and C	Numeric
BQ4	Due from Banks (Memorandum Entry)	Numeric
BQ5	Other Securities (Taxable)	Numeric
BQ6	Total Taxable Investment Securities	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ7	Obligations of States and Political Subdivisions	Numeric
BQ8	Total Investment Securities	Numeric
BQ9	Geographic Designation Code	Numeric
BQ10	Trading Account Securities	Numeric
BQ11	Federal Funds Sold & Secs Purch'd under Agrmnts to	Numeric
BQ12	S&P Senior Debt Rating	Numeric
BQ13	Unearned Discount/Income	Numeric
BQ14	Loans (Gross)	Numeric
BQ15	Treasury Stock Dollar Amount - Common	Numeric
BQ16	Treasury Stock - Dollar Amount - Preferred	Numeric
BQ17	Interest Income Total (Financial Services)	Numeric
BQ18	Assets Held for Sale	Numeric
BQ19	Bank Premises, Furniture, and Fixtures	Numeric
BQ20	Real Estate Other than Bank Premises	Numeric
BQ21	Investments in Nonconsolidated Subsidiaries	Numeric
BQ22	Direct Lease Financing	Numeric
BQ23	Customer's Liability to this Bank on Acceptances	Numeric
BQ24	Other Assets	Numeric
BQ25	Intangible Assets	Numeric
BQ26	Aggregate Miscellaneous Assets	Numeric
BQ27	Total Assets (Gross)	Numeric
BQ28	Net Interest Margin	Numeric
BQ29	Risk-Adjusted Capital Ratio - Tier 1	Numeric
BQ30	Total Demand Deposits	Numeric
BQ31	Average Investments	Numeric
BQ32	Average Loans (Gross)	Numeric
BQ33	Total Savings Deposits	Numeric
BQ34	Average Assets (Gross)	Numeric
BQ35	Average Deposits Demand	Numeric
BQ36	Total Time Deposits (Other than Savings)	Numeric
BQ37	Average Deposits Time and Savings	Numeric
BQ38	Average Deposits	Numeric
BQ39	Average Deposits Foreign	Numeric
BQ40	Average Borrowings	Numeric
BQ41	Average Total Stockholders' Equity	Numeric
BQ42	Total Deposits Worldwide	Numeric
BQ43	Total Domestic Deposit	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ44	Total Foreign Deposits	Numeric
BQ45	Risk-Adjusted Capital Ratio - Total	Numeric
BQ46	Federal Funds Purchased & Secs Sold under Agrmnts	Numeric
BQ47	Commercial Paper	Numeric
BQ48	Long-Term Debt - Not Classified as Capital	Numeric
BQ49	Other Liabilities for Borrowed Money	Numeric
BQ50	Total Borrowings	Numeric
BQ51	Depreciation and Amortization	Numeric
BQ52	Mortgage Indebtedness	Numeric
BQ53	Acceptances Executed by or for Account of this Ban	Numeric
BQ54	Other Liabilities (Excluding Valuation Reserves)	Numeric
BQ55	Special Items	Numeric
BQ56	Blank	Numeric
BQ57	Total Liabilities (Excluding Valuation Reserves)	Numeric
BQ58	Minority Interest in Consolidated Subsidiaries	Numeric
BQ59	Reserve(s) for Bad Debt Losses on Loans	Numeric
BQ60	Valuation Portion of Reserves for Loan Losses	Numeric
BQ61	Deferred Portion of Reserve for Loan Losses	Numeric
BQ62	Contingency Portion of Reserve for Loan Losses	Numeric
BQ63	Blank	Numeric
BQ64	Capital Notes and Debentures	Numeric
BQ65	Blank	Numeric
BQ66	Preferred Stock Par Value	Numeric
BQ67	Common Stock Par Value	Numeric
BQ68	Number of Shares Outstanding	Numeric
BQ69	Surplus	Numeric
BQ70	Undivided Profits	Numeric
BQ71	Reserves for Contingencies & Other Capital Reserve	Numeric
BQ72	Blank	Numeric
BQ73	Total Book Value	Numeric
BQ74	Blank	Numeric
BQ75	Total Liabilities, Reserves and Capital Accounts	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ76	Total Capital Accounts and Minority Interest (Invested Capital)	Numeric
BQ77	Report Date of Quarterly Earnings Per Share	Numeric
BQ78	Interest and Fees on Loans	Numeric
BQ79	Interest Inc on Fed Funds Sld & Secs Purchased under Agrmnts to Resell	Numeric
BQ80	Blank	Numeric
BQ81	Interest and Discount on U.S. Treasury Securities	Numeric
BQ82	Interest on Securities of U.S. Government Agencies	Numeric
BQ83	Interest and Dividends on Other Taxable Securities	Numeric
BQ84	Total Taxable Investment Revenue	Numeric
BQ85	Interest on Obligation of States and Political Subdivisions	Numeric
BQ86	Foreign Exchange Gains and Losses	Numeric
BQ87	Total Interest and Dividends on Investments	Numeric
BQ88	Other Interest Income	Numeric
BQ89	Trust Department Income	Numeric
BQ90	Service Charges on Deposit Accounts	Numeric
BQ91	Other Svce Charges, Collections & Exchange Charges	Numeric
BQ92	Trading Account Income	Numeric
BQ93	Other Current Operating Revenue	Numeric
BQ94	Interest on Due from Banks	Numeric
BQ95	Aggregate Other Current Operating Revenue	Numeric
BQ96	Total Current Operating Revenue	Numeric
BQ97	Salaries and Wages of Officers and Employees	Numeric
BQ98	Pension and Employee Benefits	Numeric
BQ99	Blank	Numeric
BQ100	Interest on Deposits	Numeric
BQ101	Interest Expense on Fed Funds Purchased & Secs Sld	Numeric
BQ102	Interest on Other Borrowed Money	Numeric
BQ103	Interest on Long-Term Debt - Not Classified as Cap	Numeric
BQ104	Total Interest Expense	Numeric
BQ105	Interest on Capital Notes and Debentures	Numeric
BQ106	Provision for Loan Losses	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ107	Occupancy Expense of Bank Premises - Net	Numeric
BQ108	Furniture and Equipment:Depreciation Rental, Costs, Servicing, Etc.	Numeric
BQ109	Blank	Numeric
BQ110	Other Current Operating Expense	Numeric
BQ111	Aggregate Other Current Operating Expense	Numeric
BQ112	Total Current Operating Expense	Numeric
BQ113	Current Operating Earnings before Income Tax	Numeric
BQ114	Income Taxes Applicable to Current Operating Earnings	Numeric
BQ115	Net Current Operating Earnings	Numeric
BQ116	Minority Interest (Income Account)	Numeric
BQ117	Net Current Operating Earnings after Minority Interest	Numeric
BQ118	Net Pre-Tax Profit or Loss on Securities Sold or Redeemed	Numeric
BQ119	Blank	Numeric
BQ120	Blank	Numeric
BQ121	Tax Effect on Profit or Loss on Securities Sold or Redeemed	Numeric
BQ122	Minority Interest in After-Tax Profit or Loss on Sec sold or Redeemed	Numeric
BQ123	Net After-Tax & After-Min Int Profit or Loss on Secs Sld or Redeemed	Numeric
BQ124	Net Income	Numeric
BQ125	Preferred Dividend Deductions	Numeric
BQ126	Savings Due to Common Stock Equivalents	Numeric
BQ127	Net Income Available for Common	Numeric
BQ128	Net Current Operating Earnings Available for Common	Numeric
BQ129	Cash Dividends Declared on Common Stock	Numeric
BQ130	Cash Dividends Declared on Preferred Stock	Numeric
BQ131	Net After-Tax Transfers bet Undivided Profits & Valuation Reserves	Numeric
BQ132	Total Extraordinary Items Net of Taxes	Numeric
BQ133	Net Credit or Charge to Reserves for Bad Debts for Loan Recs or Crg-Offs	Numeric
BQ134	Blank	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ135	Common Dividends Paid per Share by Payable Date	Numeric
BQ136	Adjustment Factor Cumulative by Payable Date	Numeric
BQ137	Net Current Operating Earnings per Share Excluding Extraordinary Items	Numeric
BQ138	Net Income per Share Excluding Extraordinary Items	Numeric
BQ139	Net Income per Share Including Extraordinary Items	Numeric
BQ140	Common Shares Used in Calculating Quarterly Earnings per Share	Numeric
BQ141	Net Cur Op Erns per Share - Excluding Extraordinary Items 12 Mo Moving	Numeric
BQ142	Net Income per Share Excluding Extraordinary Items 12 Mo Moving	Numeric
BQ143	Net Income per Share Including Extraordinary Items 12 Mo Moving	Numeric
BQ144	Common Shares Used in Calculating 12 Mo Moving Earnings per Share	Numeric
BQ145	Net Current Op Earngs per Share - Extraordinary	Numeric
BQ146	Net Income per Share Excluding Extraordinary Items Fully Diluted	Numeric
BQ147	Net Income per Share Including Extraordinary Items Fully Diluted	Numeric
BQ148	Common Shares Used in Calculating Quartly Fully Diluted Earnings per Shr	Numeric
BQ149	Net Cur Op Erngs/Share Ex Extrd Items Fully Diluted 12 Mo Mov	Numeric
BQ150	Net Inc/Share Excldg Extraordinary Items - Fully	Numeric
BQ151	Net Inc per Share Inc Extraordinary Items - Fully Diluted - 12 Mo Mov	Numeric
BQ152	Common Shrs Used in Calc 12 Mo Moving Fully Diluted 12 Mo Mov	Numeric
BQ153	Market Price 1st Month of Quarter High	Numeric
BQ154	Market Price 1st Month of Quarter Low	Numeric
BQ155	Market Price 1st Month of Quarter Close	Numeric
BQ156	Market Price 2nd Month of quarter High	Numeric

Table 27. (BQITEMS Data Set - Bank Quarterly Data Items continued)

Fields	Label	Type
BQ157	Market Price 2nd Month of Quarter Low	Numeric
BQ158	Market Price 2nd Month of Quarter Close	Numeric
BQ159	Market Price 3rd Month of quarter High	Numeric
BQ160	Market Price 3rd Month of Quarter Low	Numeric
BQ161	Market Price 3rd Month of Quarter Close	Numeric
BQ162	Common Dividends Paid per Share by Ex-Date	Numeric
BQ163	Annualized Dividend Rate	Numeric
BQ164	Common Shares Traded (Quarterly)	Numeric
BQ165	Adjustment Factor Cumulative by Ex-Date	Numeric

Time Series Data Sets

Table 28.

Data Set	Fields	Label	Type
PRCH –	GVKEY	GVKEY	Numeric
High Price	CALDT	Calendar Trading Date	Numeric
Time Series	PRCH	High Price	Numeric
PRCL –	GVKEY	GVKEY	Numeric
Low Price	CALDT	Calendar Trading Date	Numeric
Time Series	PRCL	Low Price	Numeric
PRCC –	GVKEY	GVKEY	Numeric
Closing Price	CALDT	Calendar Trading Date	Numeric
Time Series	PRCC	Closing Price	Numeric
DIV –	GVKEY	GVKEY	Numeric
Dividends Per Share	CALDT	Calendar Trading Date	Numeric
Time Series	DIV	Dividends Per share	Numeric
ERN –	GVKEY	GVKEY	Numeric
Earnings Per Share	CALDT	Calendar Trading Date	Numeric
Time Series	ERN	Earnings Per Share	Numeric
SHSTRD –	GVKEY	GVKEY	Numeric
Shares Traded	CALDT	Calendar Trading Date	Numeric
Time Series	SHSTRD	Shares Traded	Numeric
DIVRTE –	GVKEY	GVKEY	Numeric
Annualized Dividend Rate	CALDT	Calendar Trading Date	Numeric
Time Series	DIVRTE	Annual'd Dividend Rate	Numeric
RAWADJ –	GVKEY	GVKEY	Numeric
Raw Adjustment Factor	CALDT	Calendar Trading Date	Numeric

Table 28. (Time Series Data Sets continued)

Data Set	Fields	Label	Type
Time Series	RAWADJ	Raw Adjustment Factor	Numeric
CUMADJ –	GVKEY	GVKEY	Numeric
Cumulative Adjustment	CALDT	Calendar Trading Date	Numeric
Factor Time Series	CUMADJ	Cum. Adjust. Factor	Numeric
BKV –	GVKEY	GVKEY	Numeric
Book Value Per Share	CALDT	Calendar Trading Date	Numeric
Time Series	BKV	Book Value Per Share	Numeric
CHEQVM –	GVKEY	GVKEY	Numeric
Cash Equivalent	CALDT	Calendar Trading Date	Numeric
Distribution Time Series	CHEQVM	Cash Equivalent Dists	Numeric
CSHOQ –	GVKEY	GVKEY	Numeric
Common Shares	CALDT	Calendar Trading Date	Numeric
Outstanding			
Time Series	CSHOQ	Common Shares Outstand	Numeric
NAVM –	GVKEY	GVKEY	Numeric
Net Asset Value	CALDT	Calendar Trading Date	Numeric
Time Series	NAVM	Net Asset Value	Numeric
OEPS12 –	GVKEY	GVKEY	Numeric
Earnings/Share from	CALDT	Calendar Trading Date	Numeric
Operations Time Series	OEPS12	Earnings/Share from Op	Numeric
GICS –	GVKEY	GVKEY	Numeric
Global Industry	CALDT	Calendar Trading Date	Numeric
Class Std. code	GICS	Global Industry Class. Std. code	Numeric
CPSPIN –	GVKEY	GVKEY	Numeric
S&P Index Primary	CALDT	Calendar Trading Date	Numeric
MarkerTime Series	CPSPIN	S&P Index Primary Mar	Character
DIVFT –	GVKEY	GVKEY	Numeric
Dividends per Share	CALDT	Calendar Trading Date	Numeric
Footnotes Time Series	DIVFT	Div per share footnote	Character
RAWADJFT –	GVKEY	GVKEY	Numeric
Raw adjustment Factor	CALDT	Calendar Trading Date	Numeric
Footnotes Time Series	RAWADJFT	Raw adj factor footnot	Character
COMSTAFT –	GVKEY	GVKEY	Numeric
Comparability Status	CALDT	Calendar Trading Date	Numeric
Footnotes Time Series	COMSTAFT	Compar. status footnot	Character
ISAFT –	GVKEY	GVKEY	Numeric
Issue Status Alert	CALDT	Calendar Trading Date	Numeric
Footnotes Time Series	ISAFT	Issue stat alert footn	Character

SEGSRC Data Set - Operating Segment Source History

Table 29.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
RCST1	Reserved 1	Numeric
SSRCE	Source Document code	Character
SUCODE	Update code	Character
CURCD	ISO currency code	Character
SRCCUR	Source ISO currency code	Character
HNAICS	Segment Primary historical NAICS	Character

SEGPROD Data Set - Operating Segment Products History

Table 30.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
PDID	Product Identifier	Numeric
PSID	Segment Link segment identifier	Numeric
PSALE	External Revenues	Numeric
RCST1	Reserved 1	Numeric
PNAICS	Product NAICS code	Character
PSTYPE	Segment link segment type	Character
PNAME	Product Name	Character

SEGCUST Data Set - Operating Segment Customer History

Table 31.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
CDID	Customer Identifier (cio)	Numeric
CSID	Segment Link segment identifier	Numeric
CSALE	Customer Revenues	Numeric
RCST1	Reserved 1	Numeric
CTYPE	Customer type	Character
CGEOCD	Geographic area code	Character
CGEOAR	Geographic area type	Character

Table 31. (SEGCUST Data Set - Operating Segment Customer History continued)

Fields	Label	Type
CSTYPE	Segment link - segment type	Character
CNAME	Customer Name	Character

SEGDTL Data Set - Operating Segment Detail History

Table 32.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
SID	Segment Identifier	Numeric
RCST1	Reserved 1	Numeric
STYPE	Segment type	Character
SOPTP1	Operating segment type 1	Character
SOPTP2	Operating segment type 2	Character
SGEOTP	Geographic segment type	Character
SNAME	Segment Name	Character

SEGNAICS Data Set - Operating Segment NAICS History

Table 33.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
SID	Segment Identifier	Numeric
RANK	Ranking	Numeric
SIC	Segment SIC Code	Numeric
RST1	Reserved 1	Numeric
SNAICS	Segment NAICS code	Character
STYPE	Segment type	Character

SEGGEO Data Set - Geographic Segment History

Table 34.

Fields	Label	Type
GVKEY	GVKEY	Numeric
SRCYR	Segment Source year	Numeric
SRCFYR	Segment Source fiscal year end month	Numeric
CALYR	Calendar Year	Numeric
SID	Segment Identifier	Numeric

Table 34. (SEGGEO Data Set - Geographic Segment History continued)

Fields	Label	Type
RCST1	Reserved 1	Numeric
STYPE	Segment type	Character
SGEOCD	Geographic area code	Character
SGEOTP	Geographic segment type	Character

SEGCUR Data Set - Segment Currency Data

Table 35.

Fields	Label	Type
GVKEY	GVKEY	Numeric
DATYR	Segment Data year (year)	Numeric
DATFYR	Segment Data fiscal year end month (fyr)	Numeric
CALYR	Segment Calendar Year (cyr)	Numeric
SRCYRFYR	Segment Source year and source fiscal (fyr)	Numeric
XRATE	Period end exchange rate	Numeric
XRATE12	12-month moving Exchange rate	Numeric
SRCCUR	Source currency code	Character
CURCD	ISO Currency code (USD)	Character

SEGITM Data Set - Segment Item Data

Table 36.

Fields	Label	Type
GVKEY	GVKEY	Numeric
DATYR	Data year (year)	Numeric
FISCYR	Data Fiscal year end month (fyr)	Numeric
SRCYR	Source year	Numeric
SRCFYR	Source fiscal year end month	Numeric
CALYR	Data calendar year (cyr)	Numeric
SID	Segment Identifier	Numeric
EMP	Employees	Numeric
SALE	Net Sales	Numeric
OIBD	Operating income before depreciation	Numeric
DP	Depreciation and amortization	Numeric
OIAD	Operating income after depreciation	Numeric
CAPX	Capital expenditures	Numeric
IAT	Identifiable/total Assets	Numeric
EQEARN	Equity in earnings	Numeric
INVEQ	Investments at equity	Numeric
RD	Research and development	Numeric
OBKLG	Order backlog	Numeric
EXPORTS	Export sales	Numeric
INTSEG	Intersegment eliminations	Numeric
OPINC	Operating profit	Numeric
PI	Pretax income	Numeric
IB	Income Before Extraordinary Items	Numeric
NI	Net Income (loss)	Numeric
RCST1	Reserved 1	Numeric
RCST2	Reserved 2	Numeric
RCST3	Reserved 3	Numeric

Table 36. (SEGITM Data Set - Segment Item Data continued)

Fields	Label	Type
SALEF	Footnote 1 - sales	Character
OPINCF	Footnote 2 - operating profit	Character
CAPXF	Footnote 3 - capital expenditures	Character
EQEARNF	Footnote 4 - equity in earnings	Character
EMPF	Footnote 5 - employees	Character
RDF	Footnote 6 - research and development	Character
STYPE	Segment type	Character

CRSP Indices Data Sets

INDHEAD Data Set - CRSP Index Header Data

Table 37.

Fields	Label	Type
INDNO	Permanent index identification number	Numeric
INDCO	Permanent index group identification number	Numeric
PRIMFLAG	Index primary link	Numeric
PORTNUM	Portfolio number if subset series	Numeric
INDNAME	Index Name	Character
GROUPNAM	Index Group Name	Character

REBAL Data Set - Index Rebalancing History Arrays

Table 38.

Fields	Label	Type
INDNO	INDNO	Numeric
RBEGDT	Rebalancing beginning date	Numeric
RENDDT	Rebalancing ending date	Numeric
USDCNT	Count used as of rebalancing	Numeric
MAXCNT	Maximum count during period	Numeric
TOTCNT	Available count as of rebalancing	Numeric
ENDCNT	Count at end of period	Numeric
MINID	Identifier at minimum value	Numeric
MAXID	Identifier at maximum value	Numeric
MINSTA	Smallest statistic in period	Numeric
MAXSTA	Largest statistic in period	Numeric
MEDSTA	Median statistic in period	Numeric
AVGSTA	Average statistic in period	Numeric

REBAL Group Data Set - Index Rebalancing History Group Array

Table 39.

Fields	Label	Type
INDNO	INDNO	Numeric
RBEGDT1	Rebalancing beginning date for port 1	Numeric
RBEGDT2	Rebalancing beginning date for port 2	Numeric
RBEGDT3	Rebalancing beginning date for port 3	Numeric
RBEGDT4	Rebalancing beginning date for port 4	Numeric
RBEGDT5	Rebalancing beginning date for port 5	Numeric
RBEGDT6	Rebalancing beginning date for port 6	Numeric
RBEGDT7	Rebalancing beginning date for port 7	Numeric
RBEGDT8	Rebalancing beginning date for port 8	Numeric
RBEGDT9	Rebalancing beginning date for port 9	Numeric
RBEGDT10	Rebalancing beginning date for port 10	Numeric
RENDDT1	Rebalancing ending date for port 1	Numeric
RENDDT2	Rebalancing ending date for port 2	Numeric
RENDDT3	Rebalancing ending date for port 3	Numeric
RENDDT4	Rebalancing ending date for port 4	Numeric
RENDDT5	Rebalancing ending date for port 5	Numeric
RENDDT6	Rebalancing ending date for port 6	Numeric
RENDDT7	Rebalancing ending date for port 7	Numeric
RENDDT8	Rebalancing ending date for port 8	Numeric
RENDDT9	Rebalancing ending date for port 9	Numeric
RENDDT10	Rebalancing ending date for port 10	Numeric
USDCNT1	Count used as of rebalancing for port 1	Numeric
USDCNT2	Count used as of rebalancing for port 2	Numeric
USDCNT3	Count used as of rebalancing for port 3	Numeric
USDCNT4	Count used as of rebalancing for port 4	Numeric
USDCNT5	Count used as of rebalancing for port 5	Numeric
USDCNT6	Count used as of rebalancing for port 6	Numeric
USDCNT7	Count used as of rebalancing for port 7	Numeric
USDCNT8	Count used as of rebalancing for port 8	Numeric
USDCNT9	Count used as of rebalancing for port 9	Numeric
USDCNT10	Count used as of rebalancing for port10	Numeric
MAXCNT1	Maximum count during period for port 1	Numeric
MAXCNT2	Maximum count during period for port 2	Numeric
MAXCNT3	Maximum count during period for port 3	Numeric
MAXCNT4	Maximum count during period for port 4	Numeric
MAXCNT5	Maximum count during period for port 5	Numeric
MAXCNT6	Maximum count during period for port 6	Numeric

Table 39. (REBAL Group Data Set - Index Rebalancing History Group Array continued)

Fields	Label	Type
MAXCNT7	Maximum count during period for port 7	Numeric
MAXCNT8	Maximum count during period for port 8	Numeric
MAXCNT9	Maximum count during period for port 9	Numeric
MAXCNT10	Maximum count during period for port 10	Numeric
TOTCNT1	Available count as of rebalancing for port 1	Numeric
TOTCNT2	Available count as of rebalancing for port 2	Numeric
TOTCNT3	Available count as of rebalancing for port 3	Numeric
TOTCNT4	Available count as of rebalancing for port 4	Numeric
TOTCNT5	Available count as of rebalancing for port 5	Numeric
TOTCNT6	Available count as of rebalancing for port 6	Numeric
TOTCNT7	Available count as of rebalancing for port 7	Numeric
TOTCNT8	Available count as of rebalancing for port 8	Numeric
TOTCNT9	Available count as of rebalancing for port 9	Numeric
TOTCNT10	Available count as of rebalancing for port10	Numeric
ENDCNT1	Count at end of period for port 1	Numeric
ENDCNT2	Count at end of period for port 2	Numeric
ENDCNT3	Count at end of period for port 3	Numeric
ENDCNT4	Count at end of period for port 4	Numeric
ENDCNT5	Count at end of period for port 5	Numeric
ENDCNT6	Count at end of period for port 6	Numeric
ENDCNT7	Count at end of period for port 7	Numeric
ENDCNT8	Count at end of period for port 8	Numeric
ENDCNT9	Count at end of period for port 9	Numeric
ENDCNT10	Count at end of period for port 10	Numeric
MINID1	Identifier at minimum value for port 1	Numeric
MINID2	Identifier at minimum value for port 2	Numeric
MINID3	Identifier at minimum value for port 3	Numeric
MINID4	Identifier at minimum value for port 4	Numeric
MINID5	Identifier at minimum value for port 5	Numeric
MINID6	Identifier at minimum value for port 6	Numeric
MINID7	Identifier at minimum value for port 7	Numeric

Table 39. (REBAL Group Data Set - Index Rebalancing History Group Array continued)

Fields	Label	Type
MINID8	Identifier at minimum value for port 8	Numeric
MINID9	Identifier at minimum value for port 9	Numeric
MINID10	Identifier at minimum value for port 10	Numeric
MAXID1	Identifier at maximum value for port 1	Numeric
MAXID2	Identifier at maximum value for port 2	Numeric
MAXID3	Identifier at maximum value for port 3	Numeric
MAXID4	Identifier at maximum value for port 4	Numeric
MAXID5	Identifier at maximum value for port 5	Numeric
MAXID6	Identifier at maximum value for port 6	Numeric
MAXID7	Identifier at maximum value for port 7	Numeric
MAXID8	Identifier at maximum value for port 8	Numeric
MAXID9	Identifier at maximum value for port 9	Numeric
MAXID10	Identifier at maximum alue for port 10	Numeric
MINSTA1	Smallest statistic in period for port 1	Numeric
MINSTA2	Smallest statistic in period for port 2	Numeric
MINSTA3	Smallest statistic in period for port 3	Numeric
MINSTA4	Smallest statistic in period for port 4	Numeric
MINSTA5	Smallest statistic in period for port 5	Numeric
MINSTA6	Smallest statistic in period for port 6	Numeric
MINSTA7	Smallest statistic in period for port 7	Numeric
MINSTA8	Smallest statistic in period for port 8	Numeric
MINSTA9	Smallest statistic in period for port 9	Numeric
MINSTA10	Smallest statistic in period for port 10	Numeric
MAXSTA1	Largest statistic in period for port 1	Numeric
MAXSTA2	Largest statistic in period for port 2	Numeric
MAXSTA3	Largest statistic in period for port 3	Numeric
MAXSTA4	Largest statistic in period for port 4	Numeric
MAXSTA5	Largest statistic in period for port 5	Numeric
MAXSTA6	Largest statistic in period for port 6	Numeric
MAXSTA7	Largest statistic in period for port 7	Numeric
MAXSTA8	Largest statistic in period for port 8	Numeric
MAXSTA9	Largest statistic in period for port 9	Numeric
MAXSTA10	Largest statistic in period for port 10	Numeric
MEDSTA1	Median statistic in period for port 1	Numeric
MEDSTA2	Median statistic in period for port 2	Numeric
MEDSTA3	Median statistic in period for port 3	Numeric
MEDSTA4	Median statistic in period for port 4	Numeric
MEDSTA5	Median statistic in period for port 5	Numeric
MEDSTA6	Median statistic in period for port 6	Numeric
MEDSTA7	Median statistic in period for port 7	Numeric
MEDSTA8	Median statistic in period for port 8	Numeric
MEDSTA9	Median statistic in period for port 9	Numeric
MEDSTA10	Median statistic in period for port 10	Numeric
AVGSTA1	Average statistic in period for port 1	Numeric
AVGSTA2	Average statistic in period for port 2	Numeric

Table 39. (REBAL Group Data Set - Index Rebalancing History Group Array continued)

Fields	Label	Type
AVGSTA3	Average statistic in period for port 3	Numeric
AVGSTA4	Average statistic in period for port 4	Numeric
AVGSTA5	Average statistic in period for port 5	Numeric
AVGSTA6	Average statistic in period for port 6	Numeric
AVGSTA7	Average statistic in period for port 7	Numeric
AVGSTA8	Average statistic in period for port 8	Numeric
AVGSTA9	Average statistic in period for port 9	Numeric
AVGSTA10	Average statistic in period for port 10	Numeric

LIST Data Set - Index Membership List Arrays

Table 40.

Fields	Label	Type
INDNO	INDNO	Numeric
PERMNO	Issue identifier	Numeric
BEGDT	First date included	Numeric
ENDDT	Last date included	Numeric
SUBIND	Code for subcategory of list	Numeric
WEIGHT	Weight during range	Numeric

LIST Group Data Set - Index Membership List Group Arrays

Table 41.

Fields	Label	Type
INDNO	INDNO	Numeric
PERMNO1	Issue identifier	Numeric
BEGDT1	First date included	Numeric
ENDDT1	Last date included	Numeric
SUBIND1	Code for subcategory of list	Numeric
WEIGHT1	Weight during range	Numeric

USDCNT Data Set - Portfolio Used Count Array

Table 42.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
USDCNT	Portfolio Used Count	Numeric

TOTCNT Data Set - Portfolio Total Count Array

Table 43.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TOTCNT	Portfolio Used Count	Numeric

USDCNT Group Data Set - Portfolio Used Time Series Group

Table 44.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
USDCNT1	Used Count for Port 1	Numeric
USDCNT2	Used Count for Port 2	Numeric
USDCNT3	Used Count for Port 3	Numeric
USDCNT4	Used Count for Port 4	Numeric
USDCNT5	Used Count for Port 5	Numeric
USDCNT6	Used Count for Port 6	Numeric
USDCNT7	Used Count for Port 7	Numeric
USDCNT8	Used Count for Port 8	Numeric
USDCNT9	Used Count for Port 9	Numeric
USDCNT10	Used Count for Port 10	Numeric
USDCNT11	Used Count for Port 11	Numeric
USDCNT12	Used Count for Port 12	Numeric
USDCNT13	Used Count for Port 13	Numeric
USDCNT14	Used Count for Port 14	Numeric
USDCNT15	Used Count for Port 15	Numeric
USDCNT16	Used Count for Port 16	Numeric
USDCNT17	Used Count for Port 17	Numeric

TOTCNT Group Data Set - Portfolio Total Count Time Series Groups

Table 45.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TOTCNT1	Total Count for Port 1	Numeric
TOTCNT2	Total Count for Port 2	Numeric
TOTCNT3	Total Count for Port 3	Numeric
TOTCNT4	Total Count for Port 4	Numeric
TOTCNT5	Total Count for Port 5	Numeric
TOTCNT6	Total Count for Port 6	Numeric
TOTCNT7	Total Count for Port 7	Numeric
TOTCNT8	Total Count for Port 8	Numeric

Table 45. (TOTCNT Group Data Set - Portfolio Total Count Time Series Groups continued)

Fields	Label	Type
TOTCNT9	Total Count for Port 9	Numeric
TOTCNT10	Total Count for Port10	Numeric
TOTCNT11	Total Count for Port11	Numeric
TOTCNT12	Total Count for Port12	Numeric
TOTCNT13	Total Count for Port13	Numeric
TOTCNT14	Total Count for Port14	Numeric
TOTCNT15	Total Count for Port15	Numeric
TOTCNT16	Total Count for Port16	Numeric
TOTCNT17	Total Count for Port17	Numeric

USDVAL Data Set - Portfolio Used Value Array

Table 46.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
USDVAL	Portfolio Used Value	Numeric

TOTVAL Data Set - Portfolio Total Value Array

Table 47.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TOTVAL	Portfolio Total Value	Numeric

USDVAL Group Data Set - Portfolio Used Value Time Series Groups

Table 48.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
USDVAL1	Used Value for Port 1	Numeric
USDVAL2	Used Value for Port 2	Numeric
USDVAL3	Used Value for Port 3	Numeric
USDVAL4	Used Value for Port 4	Numeric
USDVAL5	Used Value for Port 5	Numeric
USDVAL6	Used Value for Port 6	Numeric
USDVAL7	Used Value for Port 7	Numeric
USDVAL8	Used Value for Port 8	Numeric
USDVAL9	Used Value for Port 9	Numeric
USDVAL10	Used Value for Port 10	Numeric
USDVAL11	Used Value for Port 11	Numeric

Table 48. (USDVAL Group Data Set - Portfolio Used Value Time Series Groups continued)

Fields	Label	Type
USDVAL12	Used Value for Port 12	Numeric
USDVAL13	Used Value for Port 13	Numeric
USDVAL14	Used Value for Port 14	Numeric
USDVAL15	Used Value for Port 15	Numeric
USDVAL16	Used Value for Port 16	Numeric
USDVAL17	Used Value for Port 17	Numeric

TOTVAL Group Data Set - Portfolio Total Value Time Series Groups

Table 49.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TOTVAL1	Total Value for Port 1	Numeric
TOTVAL2	Total Value for Port 2	Numeric
TOTVAL3	Total Value for Port 3	Numeric
TOTVAL4	Total Value for Port 4	Numeric
TOTVAL5	Total Value for Port 5	Numeric
TOTVAL6	Total Value for Port 6	Numeric
TOTVAL7	Total Value for Port 7	Numeric
TOTVAL8	Total Value for Port 8	Numeric
TOTVAL9	Total Value for Port 9	Numeric
TOTVAL10	Total Value for Port10	Numeric
TOTVAL11	Total Value for Port11	Numeric
TOTVAL12	Total Value for Port12	Numeric
TOTVAL13	Total Value for Port13	Numeric
TOTVAL14	Total Value for Port14	Numeric
TOTVAL15	Total Value for Port15	Numeric
TOTVAL16	Total Value for Port16	Numeric
TOTVAL17	Total Value for Port17	Numeric

TRET Data Set - Total Returns Time Series

Table 50.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TRET	Total Returns	Numeric

ARET Data Set - Appreciation Returns Time Series

Table 51.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
ARET	Appreciation Returns Time Series	Numeric

IRET Data Set - Income Returns Time Series

Table 52.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
IRET	Income Returns	Numeric

TRET Group Data Set - Total Returns Time Series Groups

Table 53.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TRET1	Total Returns for Port 1	Numeric
TRET2	Total Returns for Port 2	Numeric
TRET3	Total Returns for Port 3	Numeric
TRET4	Total Returns for Port 4	Numeric
TRET5	Total Returns for Port 5	Numeric
TRET6	Total Returns for Port 6	Numeric
TRET7	Total Returns for Port 7	Numeric
TRET8	Total Returns for Port 8	Numeric
TRET9	Total Returns for Port 9	Numeric
TRET10	Total Returns for Port 10	Numeric
TRET11	Total Returns for Port 11	Numeric
TRET12	Total Returns for Port 12	Numeric
TRET13	Total Returns for Port 13	Numeric
TRET14	Total Returns for Port 14	Numeric
TRET15	Total Returns for Port 15	Numeric
TRET16	Total Returns for Port 16	Numeric
TRET17	Total Returns for Port 17	Numeric

ARET Group Data Set - Appreciation Returns Time Series Groups

Table 54.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
ARET1	Appreciation Returns for Port 1	Numeric
ARET2	Appreciation Returns for Port 2	Numeric
ARET3	Appreciation Returns for Port 3	Numeric
ARET4	Appreciation Returns for Port 4	Numeric
ARET5	Appreciation Returns for Port 5	Numeric
ARET6	Appreciation Returns for Port 6	Numeric
ARET7	Appreciation Returns for Port 7	Numeric
ARET8	Appreciation Returns for Port 8	Numeric
ARET9	Appreciation Returns for Port 9	Numeric
ARET10	Appreciation Returns for Port 10	Numeric
ARET11	Appreciation Returns for Port 11	Numeric
ARET12	Appreciation Returns for Port 12	Numeric
ARET13	Appreciation Returns for Port 13	Numeric
ARET14	Appreciation Returns for Port 14	Numeric
ARET15	Appreciation Returns for Port 15	Numeric
ARET16	Appreciation Returns for Port 16	Numeric
ARET17	Appreciation Returns for Port 17	Numeric

IRET Group Data Set - Income Returns Time Series Groups

Table 55.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
IRET1	Income Returns for Port 1	Numeric
IRET2	Income Returns for Port 2	Numeric
IRET3	Income Returns for Port 3	Numeric
IRET4	Income Returns for Port 4	Numeric
IRET5	Income Returns for Port 5	Numeric
IRET6	Income Returns for Port 6	Numeric
IRET7	Income Returns for Port 7	Numeric
IRET8	Income Returns for Port 8	Numeric
IRET9	Income Returns for Port 9	Numeric
IRET10	Income Returns for Port 10	Numeric
IRET11	Income Returns for Port 11	Numeric
IRET12	Income Returns for Port 12	Numeric
IRET13	Income Returns for Port 13	Numeric
IRET14	Income Returns for Port 14	Numeric
IRET15	Income Returns for Port 15	Numeric
IRET16	Income Returns for Port 16	Numeric
IRET17	Income Returns for Port 17	Numeric

TIND Data Set - Total Return Index Levels Time Series

Table 56.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TIND	Total Return Index Levels	Numeric

AIND Data Set - Appreciation Index Levels Time Series

Table 57.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
AIND	Appreciation Index Levels	Numeric

IIND Data Set - Income Index Levels Time Series

Table 58.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
IIND	Income Index Levels	Numeric

TIND Group Data Set - Total Return Index Levels Time Series Groups

Table 59.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
TIND1	Total Return Index Levels for Port 1	Numeric
TIND2	Total Return Index Levels for Port 2	Numeric
TIND3	Total Return Index Levels for Port 3	Numeric
TIND4	Total Return Index Levels for Port 4	Numeric
TIND5	Total Return Index Levels for Port 5	Numeric
TIND6	Total Return Index Levels for Port 6	Numeric
TIND7	Total Return Index Levels for Port 7	Numeric
TIND8	Total Return Index Levels for Port 8	Numeric
TIND9	Total Return Index Levels for Port 9	Numeric
TIND10	Total Return Index Levels for Port 10	Numeric
TIND11	Total Return Index Levels for Port 11	Numeric
TIND12	Total Return Index Levels for Port 12	Numeric
TIND13	Total Return Index Levels for Port 13	Numeric
TIND14	Total Return Index Levels for Port 14	Numeric
TIND15	Total Return Index Levels for Port 15	Numeric

Table 59. (TIND Group Data Set - Total Return Index Levels Time Series Groups continued)

Fields	Label	Type
TIND16	Total Return Index Levels for Port 16	Numeric
TIND17	Total Return Index Levels for Port 17	Numeric

AIND Group Data Set - Appreciation Index Levels Groups

Table 60.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
AIND1	Appreciation Index Levels for Port 1	Numeric
AIND2	Appreciation Index Levels for Port 2	Numeric
AIND3	Appreciation Index Levels for Port 3	Numeric
AIND4	Appreciation Index Levels for Port 4	Numeric
AIND5	Appreciation Index Levels for Port 5	Numeric
AIND6	Appreciation Index Levels for Port 6	Numeric
AIND7	Appreciation Index Levels for Port 7	Numeric
AIND8	Appreciation Index Levels for Port 8	Numeric
AIND9	Appreciation Index Levels for Port 9	Numeric
AIND10	Appreciation Index Levels for Port 10	Numeric
AIND11	Appreciation Index Levels for Port 11	Numeric
AIND12	Appreciation Index Levels for Port 12	Numeric
AIND13	Appreciation Index Levels for Port 13	Numeric
AIND14	Appreciation Index Levels for Port 14	Numeric
AIND15	Appreciation Index Levels for Port 15	Numeric
AIND16	Appreciation Index Levels for Port 16	Numeric
AIND17	Appreciation Index Levels for Port 17	Numeric

IIND Group Data Set - Income Index Levels Time Series Groups

Table 61.

Fields	Label	Type
INDNO	INDNO	Numeric
CALDT	Calendar Trading Date	Numeric
IIND1	Income Index Levels for Port 1	Numeric
IIND2	Income Index Levels for Port 2	Numeric
IIND3	Income Index Levels for Port 3	Numeric
IIND4	Income Index Levels for Port 4	Numeric
IIND5	Income Index Levels for Port 5	Numeric
IIND6	Income Index Levels for Port 6	Numeric
IIND7	Income Index Levels for Port 7	Numeric
IIND8	Income Index Levels for Port 8	Numeric
IIND9	Income Index Levels for Port 9	Numeric
IIND10	Income Index Levels for Port 10	Numeric
IIND11	Income Index Levels for Port 11	Numeric

Table 61. (IIND Group Data Set - Income Index Levels Time Series Groups continued)

Fields	Label	Type
IIND12	Income Index Levels for Port 12	Numeric
IIND13	Income Index Levels for Port 13	Numeric
IIND14	Income Index Levels for Port 14	Numeric
IIND15	Income Index Levels for Port 15	Numeric
IIND16	Income Index Levels for Port 16	Numeric
IIND17	Income Index Levels for Port 17	Numeric

Understanding CRSP Date Formats, Informats, and Functions

CRSP has historically used two different methods to represent dates, while SAS has used a third. The three formats are SAS Dates, CRSP Dates, and Integer Dates. The SASECRSP engine provides 23 functions, 15 informats, and 10 formats to enable you to easily translate the dates from one internal representation to another. A SASECRSP libname assign must be active to use these date access methods. See Example 6, "Converting Dates Using the CRSP Date Functions" for an example.

SAS dates are internally stored as the number of days since January 1, 1960. The SAS method is an industry standard and provides a great deal of flexibility, including a wide variety of informats, formats, and functions.

CRSP dates are designed to ease time series storage and access. Internally the dates are stored as an offset into an array of trading days or trading day calendar. Note that there are five different CRSP trading day calendars: Annual, Quarterly, Monthly, Weekly, and Daily. In this sense, there are five different types of CRSP dates, one for each frequency of calendar it references. The CRSP method provides fewer missing values and makes trading period calculations very easy. However, there are also many valid calendar dates that are not available in the CRSP trading calendars, and care must be taken when using other dates.

Integer dates are a way to represent dates that are platform independent and maintain the correct sort order. However, the distance between dates is not maintained.

The best way to illustrate these formats is with some sample data. The following table only shows CRSP Daily and Monthly dates.

Table 62. Date Representations for Daily and Monthly Data

Date	SAS Date	CRSP Date (Daily)	CRSP Date (Monthly)	Integer Date
July 31, 1962	942	21	440	19620731
August 31, 1962	973	44	441	19620831
December 30, 1998	14,243	9190	NA*	19981230
December 31, 1998	14,244	9191	877	19981231

* Not available if an exact match is requested.

Having an understanding of the internal differences in representing SAS dates, CRSP dates, and CRSP integer dates will help you use the SASECRSP formats, informats,

and functions effectively. Always keep in mind the frequency of the CRSP calendar that you are accessing when you specify a CRSP date.

The CRSP Date Formats

There are two types of formats for CRSP dates, and five frequencies are available for each of the two types. The two types are exact dates (CRSPDT*) and range dates (CRSPDR*), where the '*' can be A for annual, Q for quarterly, M for monthly, W for weekly, or D for daily. The ten types are: CRSPDTA, CRSPDTQ, CRSPDTM, CRSPDTW, CRSPDTD, CRSPDRA, CRSPDRQ, CRSPDRM, CRSPDRW, and CRSPDRD.

Here are some samples using the monthly and daily calendar as examples. The Annual (CRSPDTA and CRSPDRA), Quarterly (CRSPDTQ and CRSPDRQ), and the Weekly (CRSPDTW and CRSPDRW) work analogously.

Table 63.   Sample CRSPDT Formats for Daily and Monthly Data

Date	CRSP Date Daily , Monthly	CRSPDTD8. Daily Date	CRSPDRD8. Daily Range	CRSPDTM8. Monthly Date	CRSPDRM8. Monthly Range
July 31,1962	21 , 440	19620731	19620731 +	19620731	19620630-19620731
August31,1962	44 , 441	19620831	19620831 +	19620831	19620801-19620831
December30, 1998	9190 , NA *	19981230	19981230 +	NA*	NA*
December31, 1998	9191 , 877	19981231	19981231 +	19981231	19981201-19981231

+ Daily ranges will look similar to Monthly Ranges if they are Mondays or imme-
diately following a trading holiday.
* When working with exact matches, no CRSP monthly date exists for December 30, 1998.

The @CRSP Date Informats

There are three types of informats for CRSP dates, and five frequencies are available for each of the three types. The three types are exact (@CRSPDT*), range (@CRSPDR*), and backward (@CRSPDB*) dates, where * can be A for annual, Q for quarterly, M for monthly, W for weekly, or D for daily. The fifteen formats are: @CRSPDTA, @CRSPDTQ, @CRSPDTM, @CRSPDTW, @CRSPDTD, @CRSPDRA, @CRSPDRQ, @CRSPDRM, @CRSPDRW, @CRSPDRD, @CRSPDBA, @CRSPDBQ, @CRSPDBM, @CRSPDBW, and @CRSPDBD.

The five CRSPDT* informats find exact matches only. The five CRSPDR* informats look for an exact match, and if it is not found it goes forward, matching the CRSPDR* formats. The five CRSPDB* informats look for an exact match, and if it is not found it goes backward. Here is a sample using only the CRSP monthly calendar as an example, but the daily, weekly, quarterly, and annual frequencies work analogously.

Table 64. Sample @CRSP Date Informats Using Monthly Data

Input Date (Integer Date)	CRSP Date CRSPDTM	CRSP Date CRSPDRM	CRSP Date CRSPDBM	CRSPDTM8. Monthly Date	CRSPDRM8. Monthly Range
19620731	440	440	440	19620731	19620630-19620731
19620815	.(missing)	441	440	See below+	See below*
19620831	441	441	441	19620831	19620801-19620831

+ If missing, then missing. If 441, then 19620831. If 440, then 19620731.
* If missing, then missing. If 441, then 19620801-19620831. If 440, then 19620630-19620731.

The CRSP Date Functions

There are 23 date functions provided with the SASECRSP engine. These functions are used internally by the engine, but also are available to the end users. There are seven groups of functions. The first four have five functions each, one for each CRSP calendar frequency. The next two are for converting between SAS and Integer date formats. The last function does not convert between formats, but is a shifting function for shifting integer dates based on a fiscal calendar to normal calendar time. In this shift function, the second argument holds the fiscal year-end month of the fiscal calendar used.

Table 65. CRSP Date Functions

Function Group	Function Name	Argument One	Argument Two	Return Value
CRSP dates to Integer dates for December 31, 1998				
Annual	crspdcia	74	None	19981231
Quarterly	crspdciq	293	None	19981231
Monthly	crspdcim	877	None	19981231
Weekly	crspdciw	1905	None	19981231
Daily	crspdcid	9191	None	19981231
CRSP dates to SAS dates for December 31, 1998				
Annual	crspdcsa	74	None	14,244
Quarterly	crspdcsq	293	None	14,244
Monthly	crspdcsm	877	None	14,244
Weekly	crspdcsw	1905	None	14,244
Daily	crspdcsd	9191	None	14,244
Integer dates to CRSP dates exact is illustrated, but can be forward or backward				
Annual	crspdica	19981231	0	74
Quarterly	crspdicq	19981231	0	293
Monthly	crspdicm	19981231	0	877
Weekly	crspdicw	19981231	0	1905
Daily	crspdicd	19981231	0	9191
SAS dates to CRSP dates exact is illustrated, but can be forward or backward				
Annual	crspdsca	14,244	0	74
Quarterly	crspdscq	14,244	0	293
Monthly	crspdscm	14,244	0	877
Weekly	crspdscw	14,244	0	1905
Daily	crspdscd	14,244	0	9191
Integer dates to SAS dates for December 31, 1998				
Integer to SAS	crspdi2s	19981231	None	14,244
SAS dates to Integer dates for December 31, 1998				
SAS to Integer	crspds2i	14,244	None	19981231
Fiscal to Calendar Shifting of Integer dates for December 31, 1998				
Fiscal to Calendar Shift	crspdf2c	20021231	8	20020831

Examples

Example 1. Specifying PERMNOs and RANGE on the Libname Statement

This example shows how to setup a libname statement for extracting data for certain selected PERMNOs during a specific time period.

```
title2 'Define a range inside the data range';
title3 'My range is ( 19950101-19960630 )';

libname testit1 sasecrsp "%sysget(CRSP_MSTK)"
   setid=20
   permno=81871    /* Desired PERMNOs are selected   */
   permno=82200    /* via the libname PERMNO= option */
   permno=82224
   permno=83435
   permno=83696
   permno=83776
   permno=84788
   range='19950101-19960630';

data a;
   set testit1.ask;
run;

proc print data=a;
run;
```

Output 1.1. Printout of the ASK Monthly Time Series Data with RANGE

```
                    The SAS System                            1
              Define a range inside the data range
              My range is ( 19950101-19960630 )


        Obs       PERMNO    CALDT            ASK

         1        81871     19950731        18.25000
         2        81871     19950831        19.25000
         3        81871     19950929        26.00000
         4        81871     19951031        26.00000
         5        81871     19951130        25.50000
         6        81871     19951229        24.25000
         7        81871     19960131        22.00000
         8        81871     19960229        32.50000
         9        81871     19960329        30.25000
        10        81871     19960430        33.75000
        11        81871     19960531        27.50000
        12        81871     19960628        30.50000
        13        82200     19950831        49.50000
        14        82200     19950929        62.75000
        15        82200     19951031        88.00000
        16        82200     19951130       138.50000
        17        82200     19951229       139.25000
        18        82200     19960131       164.25000
        19        82200     19960229        51.00000
        20        82200     19960329        41.62500
        21        82200     19960430        61.25000
        22        82200     19960531            .
        23        82200     19960628        62.50000
        24        82224     19950929        46.50000
        25        82224     19951031        48.50000
        26        82224     19951130        47.75000
        27        82224     19951229        49.75000
        28        82224     19960131        49.00000
        29        82224     19960229        47.00000
        30        82224     19960329        53.00000
        31        82224     19960430        55.50000
        32        82224     19960531            .
        33        82224     19960628        51.00000
        34        83435     19960430        30.25000
        35        83435     19960531            .
        36        83435     19960628        21.00000
        37        83696     19960628        19.12500
```

Example 2. Using the Libname Statement to Access All Keys ♦ 89

Example 2. Using the Libname Statement to Access All Keys

To setup the libref to access all keys, no key options such as PERMNO=, TICKER= or GVKEY= can be specified on the libname statement. Nor can the INSET= option be used. Use of these options will cause the engine to limit access to only specified keys. When no such options are specified, the engine will correctly default to all keys in the database. Other libname options such as RANGE= can still be used normally.

In this example, no key specifying options are used forcing the engine to default to all PERMNOs in the monthly STK database. The range given on the libname behaves normally and data is limited to the first two months of 1995.

```
title2 'Define a range inside the data range ';
title3 'My range is ( 19950101-19950228 )';

libname testit2 sasecrsp "%sysget(CRSP_MSTK)"
    setid=20 range='19950101-19950228';

data b;
    set testit2.ask;
run;

proc print data=b (obs=30);
run;
```

Output 2.1. Printout of All PERMNOs of ASK Monthly with RANGE

```
                    The SAS System                              1
              Define a range inside the data range
               My range is ( 19950101-19950228 )

        Obs      PERMNO    CALDT            ASK

          1       10001    19950131         8.00000
          2       10001    19950228         8.00000
          3       10002    19950131        13.50000
          4       10002    19950228        13.50000
          5       10003    19950131         2.12500
          6       10003    19950228         2.25000
          7       10009    19950131        18.00000
          8       10009    19950228        18.75000
          9       10010    19950131         5.37500
         10       10010    19950228         4.87500
         11       10011    19950131        14.62500
         12       10011    19950228        13.50000
         13       10012    19950131         2.25000
         14       10012    19950228         2.12500
         15       10016    19950131         7.00000
         16       10016    19950228         8.50000
         17       10018    19950131         1.12500
         18       10018    19950228         1.12500
         19       10019    19950131        10.62500
         20       10019    19950228        11.62500
         21       10021    19950131        11.75000
         22       10021    19950228        12.00000
         23       10025    19950131        18.50000
         24       10025    19950228        19.00000
         25       10026    19950131        11.00000
         26       10026    19950228        11.75000
         27       10032    19950131        12.50000
         28       10032    19950228        12.75000
         29       10035    19950131        12.50000
         30       10035    19950228        12.00000
```

Example 3. Accessing One PERMNO Using No RANGE ◆ 91

Example 3. Accessing One PERMNO Using No RANGE

SASECRSP defaults to providing access the the entire range of available data when no range restriction is specified via the RANGE= option.

This example shows access of the entire range of available data for one particular PERMNO extracted from the monthly data set.

```
title2 'Select only PERMNO = 81871';
title3 'Valid trading dates (19890131--19981231)';
title4 'No range option, leave wide open';

libname testit3 sasecrsp '/mydata/crspeng/m_sampdata/'
    setid=20
    permno=81871;

data c;
    set testit3.ask;
run;

proc print data=c;
run;
```

Output 3.1. Printout of PERMNO = 81871 of ASK Monthly without RANGE

```
                    The SAS System                          1
                 Select only PERMNO = 81871
            Valid trading dates (19890131--19981231)
               No range option, leave wide open


       Obs      PERMNO      CALDT            ASK

         1       81871     19950731        18.25000
         2       81871     19950831        19.25000
         3       81871     19950929        26.00000
         4       81871     19951031        26.00000
         5       81871     19951130        25.50000
         6       81871     19951229        24.25000
         7       81871     19960131        22.00000
         8       81871     19960229        32.50000
         9       81871     19960329        30.25000
        10       81871     19960430        33.75000
        11       81871     19960531        27.50000
        12       81871     19960628        30.50000
        13       81871     19960731        26.12500
        14       81871     19960830        19.12500
        15       81871     19960930        19.50000
        16       81871     19961031        14.00000
        17       81871     19961129        18.75000
        18       81871     19961231        24.25000
        19       81871     19970131        29.75000
        20       81871     19970228        24.37500
        21       81871     19970331        15.00000
        22       81871     19970430        18.25000
        23       81871     19970530        25.12500
        24       81871     19970630        31.12500
        25       81871     19970731        35.00000
        26       81871     19970829        33.00000
        27       81871     19970930        26.81250
        28       81871     19971031        18.37500
        29       81871     19971128        16.50000
        30       81871     19971231        16.25000
        31       81871     19980130        22.75000
        32       81871     19980227        21.00000
        33       81871     19980331        22.50000
        34       81871     19980430        16.12500
        35       81871     19980529        11.12500
        36       81871     19980630        13.43750
        37       81871     19980731        22.87500
        38       81871     19980831        17.75000
        39       81871     19980930        24.25000
        40       81871     19981030        26.00000
```

Example 4. Specifying Keys Using the INSET= Option ⬧ 93

Example 4. Specifying Keys Using the INSET= Option

The INSET= option gives you the ability to select any companies and/or issues you want data for. In this example we select three CRSP Index Series from the Indices database, two companies from the CCM database and four securities from the Stock database for data extraction. Note that because each CRSP database may be in a different location and has to be opened separately, a total of three different librefs are used – one for each database.

```
data indices;
    indno=1000000; output;  /* NYSE Value-Weighted Market Index */
    indno=1000001; output;  /* NYSE Equal-Weighted Market Index */
run;

libname ind2 sasecrsp "%sysget(CRSP_MSTK)" setid=420
    inset='indices,INDNO,INDNO' range='19990101-19990401';

title2 'Total Returns for NYSE Value and Equal Weighted Market Indices';
proc print data=ind2.tret label;
run;


data companies;
    permco=8045;  output;  /* Oracle */
    permco=20483; output;  /* Citigroup */
run;

libname comp2 sasecrsp "%sysget(CRSP_CST)" setid=200
    inset='companies,PERMCO,PERMCO' range='20040101-20040531';

title2 'Link Info of Selected PERMCOs';
proc print data=comp2.link label; run;
title2 'Dividends Per Share for Oracle and Citigroup';
proc print data=comp2.div label; run;


data securities;
    ticker='BAC'; output;  /* Bank of America */
    ticker='DUK'; output;  /* Duke Energy */
    ticker='GSK'; output;  /* GlaxoSmithKline */
run;

libname sec3 sasecrsp "%sysget(CRSP_MSTK)" setid=20
    inset='securities,TICKER,TICKER' range='19970820-19970920';

title2 'PERMNOs and General Header Info of Selected TICKERs';
proc print data=sec3.stkhead (keep=permno htick htsymbol) label;
run;
title2 'Average Price for Bank of America, Duke and GlaxoSmithKline';
proc print data=sec3.prc label; run;
```

Output 4.1. Printout of Various Data Extracted Using INSET= Option

```
                            The SAS System                              1
            Total Returns for NYSE Value and Equal Weighted Market Indices

                              Calendar
                              Trading          Total
                  Obs      INDNO      Date        Returns

                   1     1000000    19990129      0.012544
                   2     1000000    19990226     -0.024157
                   3     1000000    19990331      0.028839
                   4     1000001    19990129     -0.007976
                   5     1000001    19990226     -0.040914
                   6     1000001    19990331      0.015400
                            The SAS System                              2
                    Link Info of Selected PERMCOs

                First date  Last date     CRSP      CRSP  Link
                 link is      link is     PERMNO    PERMCO type  Linking
      Obs    GVKEY   valid       valid    linked    linked code  Flag

       1    12142   19860312   20991231    10104      8045  LU     BBB
       2     3243   19861029   20991231    70519     20483  LC     BBB
                            The SAS System                              3
                 Dividends Per Share for Oracle and Citigroup

                              Calendar
                              Trading       Dividends
                  Obs      GVKEY      Date     Per share

                   1      12142    20040130     0.0000
                   2      12142    20040227     0.0000
                   3      12142    20040331     0.0000
                   4      12142    20040430     0.0000
                   5      12142    20040531     0.0000
                   6       3243    20040130     0.4000
                   7       3243    20040227     0.0000
                   8       3243    20040331     0.0000
                   9       3243    20040430     0.4000
                  10       3243    20040531     0.0000
                            The SAS System                              4
               PERMNOs and General Header Info of Selected TICKERs

                              Ticker      Trading
                              Symbol      Symbol
                  Obs      PERMNO   Header      Header

                   1       59408   BAC         BAC
                   2       27959   DUK         DUK
                   3       75064   GSK         GSK
                            The SAS System                              5
              Average Price for Bank of America, Duke and GlaxoSmithKline

                              Calendar      Price or
                              Trading       Bid/Ask
                  Obs      PERMNO    Date       Average

                   1       59408   19970829     59.75000
                   2       27959   19970829     48.43750
                   3       75064   19970829     39.93750
```

Example 5. Specifying Ranges for Individual Keys with the INSET= Option

Insets let you define options specific to each individual key. In this example we use an inset to select four different PERMNOs and specify a different date restriction for each.

```
title2 'INSET=testin2 uses date ranges along with PERMNOs:';
title3 '10107, 12490, 14322, 25788';
title4 'Begin dates and end dates for each permno are used in the INSET';

data testin2;
    permno = 10107; date1 = 19980731; date2 = 19981231; output;
    permno = 12490; date1 = 19970101; date2 = 19971231; output;
    permno = 14322; date1 = 19950731; date2 = 19960131; output;
    permno = 25778; date1 = 19950101; date2 = 19950331; output;
run;

libname mstk2 sasecrsp "%sysget(CRSP_MSTK)" setid=20
    inset='testin2,PERMNO,PERMNO,DATE1,DATE2';

data b;
    set mstk2.prc;
run;

proc print data=b;
run;
```

Output 5.1.　Printout of PRC Monthly Time Series Using INSET= Option

```
                        The SAS System                          1
        INSET=testin2 uses date ranges along with PERMNOs:
                  10107, 12490, 14322, 25788
    Begin dates and end dates for each permno are used in the INSET


           Obs      PERMNO    CALDT              PRC

            1       10107    19980731        109.93750
            2       10107    19980831         95.93750
            3       10107    19980930        110.06250
            4       10107    19981030        105.87500
            5       10107    19981130        122.00000
            6       10107    19981231        138.68750
            7       12490    19970131        156.87500
            8       12490    19970228        143.75000
            9       12490    19970331        137.25000
           10       12490    19970430        160.50000
           11       12490    19970530         86.50000
           12       12490    19970630         90.25000
           13       12490    19970731        105.75000
           14       12490    19970829        101.37500
           15       12490    19970930        106.00000
           16       12490    19971031         98.50000
           17       12490    19971128        109.50000
           18       12490    19971231        104.62500
           19       14322    19950731         32.62500
           20       14322    19950831         32.37500
           21       14322    19950929         36.87500
           22       14322    19951031         34.00000
           23       14322    19951130         39.37500
           24       14322    19951229         39.00000
           25       14322    19960131         41.50000
           26       25778    19950131         49.87500
           27       25778    19950228         57.25000
           28       25778    19950331         59.37500
```

Example 6. Converting Dates Using the CRSP Date Functions ◆ 97

Example 6. Converting Dates Using the CRSP Date Functions

This example shows how to use the CRSP date functions and formats. The CRSPDTD formats are used for all the crspdt variables, while the YYMMDD format is used for the sasdt variables.

```
title2 'OUT= Data Set';
title3 'CRSP Functions for sasecrsp';
title4 'Always assign the libname sasecrsp first';

libname mstk sasecrsp "%sysget(CRSP_MSTK)" setid=20;

data a (keep = crspdt crspdt2 crspdt3
               sasdt sasdt2 sasdt3
               intdt intdt2 intdt3);
    format crspdt crspdt2 crspdt3 crspdtd8.;
    format sasdt sasdt2 sasdt3 yymmdd6.;
    format intdt intdt2 intdt3 8.;
    format exact 2.;
    crspdt = 1;
    sasdt = '2jul1962'd;
    intdt = 19620702;
    exact = 0;

/* Call the CRSP date to Integer function*/
    intdt2 = crspdcid(crspdt);

/* Call the SAS date to Integer function*/
    intdt3 = crspds2i(sasdt);

/* Call the Integer to Crsp date function*/
    crspdt2 = crspdicd(intdt,exact);

/* Call the Sas date to Crsp date conversion function*/
    crspdt3 = crspdscd(sasdt,exact);

/* Call the CRSP date to SAS date conversion function*/
    sasdt2 = crspdcsd(crspdt);

/* Call the Integer to Sas date conversion function*/
    sasdt3 = crspdi2s(intdt);
    run;

proc print;
    run;

title2 'Proc CONTENTS showing formats for sasecrsp';
proc contents data=a;
    run;
```

Output 6.1. Printout of Date Conversions Using the CRSP Date Functions

```
                              The SAS System                              1
                              OUT= Data Set
                         CRSP Functions for sasecrsp
                    Always assign the libname sasecrsp first


Obs crspdt   crspdt2  crspdt3   sasdt sasdt2 sasdt3   intdt   intdt2   intdt3

 1  19620702 19620702 19620702 620702 620702 620702 19620702 19620702 19620702
                              The SAS System                              2
                    Proc CONTENTS showing formats for sasecrsp


                           The CONTENTS Procedure

Data Set Name         WORK.A                      Observations         1
Member Type           DATA                        Variables            9
Engine                V9                          Indexes              0
Created               Wednesday, July 27,         Observation Length   72
                      2005 05:59:33 PM
Last Modified         Wednesday, July 27,         Deleted Observations 0
                      2005 05:59:33 PM
Protection                                        Compressed           NO
Data Set Type                                     Sorted               NO
Label
Data Representation   WINDOWS_32
Encoding              wlatin1  Western (Windows)


                      Engine/Host Dependent Information

  Data Set Page Size         8192
  Number of Data Set Pages   1
  First Data Page            1
  Max Obs per Page           113
  Obs in First Data Page     1
  Number of Data Set Repairs 0
  File Name                  C:\TEMP\SAS Temporary Files\_TD1352\a.sas7bdat
  Release Created            9.0101M3
  Host Created               XP_PRO


              Alphabetic List of Variables and Attributes

              #     Variable    Type    Len    Format

              1     crspdt      Num      8     CRSPDTD8.
              2     crspdt2     Num      8     CRSPDTD8.
              3     crspdt3     Num      8     CRSPDTD8.
              7     intdt       Num      8     8.
              8     intdt2      Num      8     8.
              9     intdt3      Num      8     8.
              4     sasdt       Num      8     YYMMDD6.
              5     sasdt2      Num      8     YYMMDD6.
              6     sasdt3      Num      8     YYMMDD6.
```

Example 7. Comparing Different Ways of Accessing CCM Data ⋄ 99

Example 7. Comparing Different Ways of Accessing CCM Data

You can use three different ways for selecting CCM data to access. They are by the primary key, *GVKEY*, or either of two secondary keys *PERMNO* and *PERMCO*. Here we demonstrate the three different ways.

In this example, we retrieve data on Cimflex Teknowledge Corp which was previously known as Teknowledge Inc. This company is considered a single entity by the CRSP Stock database, and is identified by *PERMNO*=10083 and *PERMCO*=8026. The Compustat database however, considers Teknowledge Inc and Cimflex Teknowledge Corp as two separate entities and each has its own *GVKEY*. Thus *PERMNO*=10083 maps to *GVKEY*s 11947 and 15495, and *PERMCO*=8026, has the identical relationship. Access by *PERMNO* and *PERMCO* are equivalent in this case, but differ from access by *GVKEY*. *PERMNO/PERMCO* access will only retrieve data within the active period of the links, and only the primary linked *GVKEY* is used for header access. In contrast *GVKEY* access provides wide-open, full data for both *GVKEY*s. See PERMNO= option for more details.

```
title1 'Comparing various access methods for CCM data';

/* assign libnames for the three different access methods */
libname crsp1a sasecrsp "%sysget(CRSP_CST)"
      setid=200 permno=10083 range='19870101-19900101';
libname crsp1b sasecrsp "%sysget(CRSP_CST)"
      setid=200 permco=8026 range='19870101-19900101';
libname crsp2 sasecrsp "%sysget(CRSP_CST)"
      setid=200 gvkey=11947 gvkey=15495 range='19870101-19900101';

/* Sample output of PERMNO access */
title2 'PERMNO=10083 access of CCM data';
title3 'Sales (Net)';
proc print data=crsp1a.iqitems(keep=gvkey rcaldt iq2);
    run;

/* Show how PERMNO and PERMCO access are the same */
title2 'Proc compare of PERMNO vs. PERMCO access of CCM data';
proc compare base=crsp1a.iqitems compare=crsp1b.iqitems brief;
run;


/* Sample output of GVKEY */
title2 'GVKEY=11947 and GVKEY=15495 access of CCM data';
title3 'Sales (Net)';
proc print data=crsp2.iqitems(keep=gvkey rcaldt fiscaldt iq2);
    run;

title3 'LINK: Link information';
proc print data=crsp2.link;
    run;
```

Output 7.1. Printout of PERMNO, PERMCO and GVKEY Access of CCM Data

```
                    Comparing various access methods for CCM data              1
                       PERMNO=10083 access of CCM data
                               Sales (Net)

                    Obs         GVKEY      RCALDT            IQ2

                     1         11947     19870331          4.5680
                     2         11947     19870630          5.0240
                     3         11947     19870930          4.4380
                     4         11947     19871231          3.8090
                     5         11947     19880331          3.5420
                     6         11947     19880630          2.5940
                     7         15495     19890331          6.4660
                     8         15495     19890630         10.1020
                     9         15495     19890929         12.0650
                    10         15495     19891229         10.8780
                    Comparing various access methods for CCM data              2
                 Proc compare of PERMNO vs. PERMCO access of CCM data


                            The COMPARE Procedure
                 Comparison of CRSP1A.IQITEMS with CRSP1B.IQITEMS
                               (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
                    Comparing various access methods for CCM data              3
                    GVKEY=11947 and GVKEY=15495 access of CCM data
                               Sales (Net)

                    Obs         GVKEY      RCALDT     FISCALDT           IQ2

                     1         11947     19870331    19870930          4.5680
                     2         11947     19870630    19871231          5.0240
                     3         11947     19870930    19880331          4.4380
                     4         11947     19871231    19880630          3.8090
                     5         11947     19880331    19880930          3.5420
                     6         11947     19880630    19881230          2.5940
                     7         11947     19880930    19890331          1.6850
                     8         11947     19881230    19890630          1.7080
                     9         15495     19880331    19880331         14.0660
                    10         15495     19880630    19880630         12.2770
                    11         15495     19880930    19880930          9.5960
                    12         15495     19881230    19881230          9.9800
                    13         15495     19890331    19890331          6.4660
                    14         15495     19890630    19890630         10.1020
                    15         15495     19890929    19890929         12.0650
                    16         15495     19891229    19891229         10.8780
                    Comparing various access methods for CCM data              4
                    GVKEY=11947 and GVKEY=15495 access of CCM data
                            LINK: Link information


     Obs    GVKEY    LINKDT    LINKENDT    NPERMNO    NPERMCO   LINKTYPE   LINKFLAG

      1     11947   19860305   19881231     10083       8026     LC         BBB
      2     15495   19890228   19930909     10083       8026     LC         BBB
```

Example 8. Comparing PERMNO and GVKEY Access of CRSP Stock Data ⬩ 101

Example 8. Comparing PERMNO and GVKEY Access of CRSP Stock Data

You can access CRSP data using *GVKEY*s. Access in this manner requires the use of the CRSPLINKPATH= option, and is **identical** to access by its corresponding *PERMNO(s)*. Links between *PERMNO*s and *GVKEYs* are used without reference to its active period – it is used solely for finding corresponding *GVKEY*s. In this example we show two ways of accessing CRSP Stock data. One by *PERMNO* and one by its corresponding *GVKEY*s. We then compare several of their members to show they are equal.

```
title 'Comparing PERMNO and GVKEY access of CRSP Stock data';

libname crsp1 sasecrsp "%sysget(CRSP_MSTK)"
    setid=20 permno=13638 permno=84641 range='19900101-19910101';

libname crsp2 sasecrsp "%sysget(CRSP_MSTK)"
    setid=20 crsplinkpath="%sysget(CRSP_CST)" gvkey=1544
    range='19900101-19910101';

title1 'PERMNO=13638 and PERMNO=84641 access of CRSP data';
title2 'CSTHEAD: Header data';
proc print data=crsp1.stkhead;
    run;

%macro compareMember(memb);
    title1 "Proc compare on &memb between PERMNO and GVKEY";
    proc compare base=crsp1.&memb compare=crsp2.&memb brief;
    %mend;

%compareMember(stkhead);
%compareMember(prc);
%compareMember(ret);
%compareMember(askhi);
%compareMember(vol);
```

Output 8.1. Comparing PERMNO and GVKEY access of CRSP Stock data

```
              PERMNO=13638 and PERMNO=84641 access of CRSP data            1
                         CSTHEAD: Header data

     Obs    PERMNO    PERMCO    COMPNO    ISSUNO HEXCD HSHRCD    HSICCD    BEGDT

      1     13638       325 60000324       428    3     11        1310 19721229
      2     84641       325 60000324         0    2     11        1382 19970331


     Obs    ENDDT DLSTCD HCUSIP    HTICK     HCOMNAM

      1 19921231   560    97789210            WOLVERINE EXPLORATION CO
      2 19980130   231    02351730            AMERAC ENERGY CORP


     Obs HTSYMBOL      HNAICS     HPRIMEXC     HTRDSTAT     HSECSTAT

      1 WEXC                        Q           A            R
      2                             A           A            R
               Proc compare on prc between PERMNO and GVKEY             2


                         The COMPARE Procedure
               Comparison of CRSP1.STKHEAD with CRSP2.STKHEAD
                            (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
               Proc compare on ret between PERMNO and GVKEY             3


                         The COMPARE Procedure
                  Comparison of CRSP1.PRC with CRSP2.PRC
                            (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
               Proc compare on askhi between PERMNO and GVKEY          4


                         The COMPARE Procedure
                  Comparison of CRSP1.RET with CRSP2.RET
                            (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
               Proc compare on vol between PERMNO and GVKEY             5


                         The COMPARE Procedure
                 Comparison of CRSP1.ASKHI with CRSP2.ASKHI
                            (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
               Proc compare on vol between PERMNO and GVKEY             6


                         The COMPARE Procedure
                  Comparison of CRSP1.VOL with CRSP2.VOL
                            (Method=EXACT)

NOTE: No unequal values were found. All values compared are exactly equal.
```

Example 9. Using Fiscal Date Range Restriction   ⋄   103

Example 9. Using Fiscal Date Range Restriction

Sometimes you want to compare companies by fiscal years. Fiscal date range restriction gives you this flexibility. In this example we show how one might use this feature to extract data such as Earnings Per Share for several companies for the 1994 fiscal year.

```
title 'Extract data for fiscal year 1994 for several companies';

libname crsp1 sasecrsp "%sysget(CRSP_CST)"
    setid=200 gvkey=6066 gvkey=12141 gvkey=10107
    range='f19940101-19941231';

data rnd_eps (keep = gvkey rcaldt fiscaldt iq4 iq9 iq19 iq69);
    set crsp1.iqitems;
run;

proc print data=rnd_eps label;
run;
```

Output 9.1. Comparing PERMNO and GVKEY access of CRSP Stock data

```
          Extract data for fiscal year 1994 for several companies          1



                    Raw
                  Calendar       Fiscal      Research and
                  Trading       Trading      Development
   Obs    GVKEY     Date          Date         Expense

    1      6066    19940331     19940331      1100.0000
    2      6066    19940630     19940630      1092.0000
    3      6066    19940930     19940930      1053.0000
    4      6066    19941230     19941230      1118.0000
    5     12141    19930930     19940331       134.0000
    6     12141    19931231     19940630       150.0000
    7     12141    19940331     19940930       156.0000
    8     12141    19940630     19941230       170.0000
    9     10107    19940331     19940331          A
   10     10107    19940630     19940630          A
   11     10107    19940930     19940930          A
   12     10107    19941230     19941230       100.9630


        Earnings Per
           Share       Earnings Per
        (Diluted) -    Share (Basic)
         Excluding      - Excluding
        Extraordinary  Extraordinary    Net Income
   Obs     Items          Items           (Loss)

    1      0.6300         0.6400         392.0000
    2      1.1300         1.1400         688.0000
    3      1.1600         1.1800         710.0000
    4      2.0300         2.0600        1231.0000
    5      0.7900         0.7900         239.0000
    6      0.9500         0.9500         289.0000
    7      0.8400         0.8400         256.0000
    8      0.5900         0.5900         362.0000
    9      0.4600         0.4600          11.3890
   10      0.7100         0.7100          17.3670
   11      0.7600         0.7600          18.8070
   12      0.5400         0.5400          13.4190
```

Note how we kept two time ID variables. Raw Calendar Trading Date provides the actual calendar date. Fiscal Trading Date provides the date according to its companies fiscal calendar which is dependent upon when their fiscal year-end month is. Observation 8 for example is Microsoft's 4th fiscal quarter, hence a Fiscal Trading Date of 12/30/1994. Since Microsoft's fiscal year ends in June, this 4th fiscal quarter corresponds to the 2nd calendar quarter of the year, so the Raw Calendar Trading Date shows 06/30/1994. The shift calculation of six-months (in this case), required to compute the Raw Calendar Trading Date is done automatically by the SASECRSP engine.

Keep in mind that fiscal date ranges are only applicable to fiscal members. When fiscal date range restrictions are applied to non-fiscal members, they are ignored.

The missing value '.A' seen in observations nine through twelve indicate the data is only reported annually.

Example 10. Using Different Types of Range Restrictions in the INSET

You can specify both calendar and fiscal date range restrictions with the INSET= option. In this example, we show how to use both types of date range restrictions.

Two INSETs, nearly identical save the type of their date range restriction are used for accessing the same database. Despite the many similarities, the difference of the date range restriction type results in dissimilar output.

It should be noted that the specification of the datetype in the INSET= option for *comp_calendar* is not required. The default is the calendar type.

```
data comp_fiscal;
  /* Crude Petroleum & Natural Gas */
  compkey=2416; begdate=19860101; enddate=19861231;
      datetype='fiscal';   output;

  /* Commercial Intertech */
  compkey=3248; begdate=19940101; enddate=19941231;
      datetype='fiscal';   output;
run;
data comp_calendar;
  /* Crude Petroleum & Natural Gas */
  compkey=2416; begdate=19860101; enddate=19861231;
      datetype='calendar';   output;

  /* Commercial Intertech */
  compkey=3248; begdate=19940101; enddate=19941231;
      datetype='calendar';   output;
run;


LIBNAME fisclib sasecrsp "%sysget(CRSP_CST)"
   SETID=200
   INSET='comp_fiscal,compkey,gvkey,begdate,enddate,datetype';

LIBNAME callib sasecrsp "%sysget(CRSP_CST)"
   SETID=200
   INSET='comp_calendar,compkey,gvkey,begdate,enddate,datetype';


title2 'Quarterly Period Descriptors with Fiscal Date Range';
proc print data=fisclib.qperdes(drop = peftnt1 peftnt2 peftnt3 peftnt4
    peftnt5 peftnt6 peftnt7 peftnt8 candxc flowcd spbond spdebt sppaper);
run;

title2 'Quarterly Period Descriptors with Calendar Date Range';
proc print data=callib.qperdes(drop = peftnt1 peftnt2 peftnt3 peftnt4
    peftnt5 peftnt6 peftnt7 peftnt8 candxc flowcd spbond spdebt sppaper);
run;
```

Output 10.1. Using Inset with Different Types of Ranges

```
                           The SAS System                            1
            Quarterly Period Descriptors with Fiscal Date Range

    Obs     GVKEY     CRSPDT     RCALDT     FISCALDT    DATYR    DATQTR    FISCYR

     1       2416        242    19860630    19860331    1986       1         3
     2       2416        243    19860930    19860630    1986       2         3
     3       2416        244    19861231    19860930    1986       3         3
     4       2416        245    19870331    19861231    1986       4         3
     5       3248        274    19940131    19940331    1994       1        10
     6       3248        275    19940429    19940630    1994       2        10
     7       3248        276    19940729    19940930    1994       3        10
     8       3248        277    19941031    19941230    1994       4        10

    Obs   CALYR   CALQTR   UPCODE   SRCDOC   SPRANK   MAJIND   INDIND    REPDT

     1    1986      2        3        53       17       0        0          0
     2    1986      3        3        53       18       0        0          0
     3    1986      4        3        53       18       0        0          0
     4    1987      1        3        53       21       0        0          0
     5    1993      4        3        53       16       0        0       1994054
     6    1994      1        3        53       16       0        0       1994146
     7    1994      2        3        53       16       0        0       1994236
     8    1994      3        3        53       16       0        0       1994349
                           The SAS System                            2
           Quarterly Period Descriptors with Calendar Date Range

    Obs     GVKEY     CRSPDT     RCALDT     FISCALDT    DATYR    DATQTR    FISCYR

     1       2416        241    19860331    19851231    1985       4         3
     2       2416        242    19860630    19860331    1986       1         3
     3       2416        243    19860930    19860630    1986       2         3
     4       2416        244    19861231    19860930    1986       3         3
     5       3248        274    19940131    19940331    1994       1        10
     6       3248        275    19940429    19940630    1994       2        10
     7       3248        276    19940729    19940930    1994       3        10
     8       3248        277    19941031    19941230    1994       4        10

    Obs   CALYR   CALQTR   UPCODE   SRCDOC   SPRANK   MAJIND   INDIND    REPDT

     1    1986      1        3        53       17       0        0          0
     2    1986      2        3        53       17       0        0          0
     3    1986      3        3        53       18       0        0          0
     4    1986      4        3        53       18       0        0          0
     5    1993      4        3        53       16       0        0       1994054
     6    1994      1        3        53       16       0        0       1994146
     7    1994      2        3        53       16       0        0       1994236
     8    1994      3        3        53       16       0        0       1994349
```

As always when dealing with fiscal date range restrictions of any type, whether in an inset or as part of a range option, they are not applicable to and ignored when used with non-fiscal members.

Example 11. Using INSET Ranges with the Libname RANGE Option ⬥ 107

Example 11. Using INSET Ranges with the Libname RANGE Option

It is possible to specify both individual range restrictions with an INSET and a global date range restriction via the RANGE= option on the libname statement. In such cases, only observations satisfying *both* date range restrictions will be returned. The effective range restriction becomes the intersection of the two specified range restrictions. If this intersection is empty, no observations will be returned.

In this example, we attempt to extract data for two companies, IBM and Microsoft. Each has an individual range restriction specified in the inset. Furthermore, a global range restriction is set by the RANGE= option on the libname statement. As a result the effective date range restriction for IBM becomes 08/01/1999 - 02/01/2000, and 01/01/2001 - 04/21/2002 for Microsoft.

```
data two_companies;
  gvkey=6066;  date1=19800101; date2=20000201; output;
  gvkey=12141; date1=20010101; date2=20051231; output;
run;

LIBNAME mylib sasecrsp "%sysget(CRSP_CST)"
   SETID=200 INSET='two_companies,gvkey,gvkey,date1,date2'
   RANGE='19990801-20020421';

proc sql;
    select prcc.gvkey,prcc.caldt,prcc,ern
        from mylib.prcc as prcc, mylib.ern as ern
    where prcc.caldt = ern.caldt and
          prcc.gvkey = ern.gvkey;
quit;
```

For more about using Proc SQL, refer to the chapter on SQL in *Base SAS Procedures Guide*.

Output 11.1. Mixing INSET Ranges with the RANGE= Option

```
                      The SAS System                              1

              Calendar
               Trading       Closing      Earnings
     GVKEY       Date          Price     Per Share

      6066    19990831       124.5625       4.1950
      6066    19990930       121.0000       4.3650
      6066    19991029        98.2500       4.3650
      6066    19991130       103.0625       4.3650
      6066    19991231       107.8750       4.2500
      6066    20000131       112.2500       4.2500
     12141    20010131        30.5313       0.9500
     12141    20010228        29.5000       0.9500
     12141    20010330        27.3438       0.9500
     12141    20010430        33.8750       0.9500
     12141    20010531        34.5900       0.9500
     12141    20010629        36.5000       0.7250
     12141    20010731        33.0950       0.7250
     12141    20010831        28.5250       0.7250
     12141    20010928        25.5850       0.6000
     12141    20011031        29.0750       0.6000
     12141    20011130        32.1050       0.6000
     12141    20011231        33.1250       0.5650
     12141    20020131        31.8550       0.5650
     12141    20020228        29.1700       0.5650
     12141    20020328        30.1550       0.5900
```

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