

CHICAGO BOOTH 

CRSP[®]

Center for Research in Security Prices

SURVIVOR-BIAS-FREE US MUTUAL FUND GUIDE

For SAS and ASCII

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CHICAGO BOOTH 

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CHAPTER 1: INTRODUCTION

INTRODUCTION TO THE CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND DATABASE

The CRSP Mutual Fund Database is designed to facilitate research on the historical performance of open-ended mutual funds by using survivor-bias-free data.

The CRSP Survivor-Bias-Free US Mutual Fund Database includes a history of each mutual fund's name, investment style, fee structure, holdings, and asset allocation. Also included are monthly total returns, monthly total net assets, monthly/daily net asset values, and dividends. Additionally, schedules of rear and front load fees, asset class codes, and management company contact information are provided. All data items are for publicly traded open-end mutual funds and begin at varying times between 1962 and 2008 depending on availability. The database is updated quarterly and distributed with a monthly lag. It is delivered in ASCII and SAS formats.

FILE OVERVIEW

DATA ACCURACY FOR THE CRSP SURVIVOR-BIAS-FREE MUTUAL FUND DATABASE

The CRSP Mutual Fund files are designed for research and educational use. CRSP expends considerable resources in the ongoing effort to check and improve data quality both historically, and in each current update. Data corrections to historical information are made as errors are identified and are detailed in the release notes that accompany each data cut.

Utilizing Lipper and other data as sources for the mutual fund database, CRSP is able to do extensive data cross-checking. Quality Assurance and Quality Control procedures have been used throughout the process of updating the CRSP mutual fund database with data from new sources. This included but was not limited to developing and carrying out testing plans based on process requirements and design and assuring that all steps of the process are documented and executed accordingly.

Results were independently verified by a dedicated group of database researchers which included random sample selection when appropriate.

KNOWN BIASES IN MUTUAL FUND DATA

The returns histories are sometimes duplicated in the database. For example, if a fund started in 1962 and split into four share classes in 1993, each new share class of the fund is permitted to inherit the entire return/performance history. This can create a bias when averaging returns across mutual funds.

A selection bias favoring the historical data files of the best past performing private funds that became public does exist. The SEC has recently begun permitting some funds (and eventually probably all funds) with prior returns histories as private funds to add these returns onto the beginning of their public histories. The effect of this is that only the successful private fund histories are included in the database.

FILE DEVELOPMENT AND DATA SOURCES

The CRSP Mutual Fund Database was created in 3 stages.

The original CRSP Mutual Fund Database contained open-end mutual fund data beginning December 1961 through December 1995. The database was developed by Mark M. Carhart for his 1995 dissertation submitted to the Graduate School of Business entitled, "Survivor Bias and Persistence in Mutual Fund Performance," to fill a need for lacking data coverage. Funding of the original project was provided by Eugene F. Fama and the Center for Research in Security Prices.

The Center for Research in Security Prices continued Mr. Carhart's work after his graduation. Historical data in the database were collected from printed sources, including the *Fund Scope Monthly Investment Company Magazine*, the *Investment Dealers Digest Mutual Fund Guide*, *Investor's Mutual Fund Guide*, the *United and Babson Mutual Fund Selector*, and the *Wiesenberger Investment Companies Annual Volumes*.

The data were compiled into an annual list of active mutual

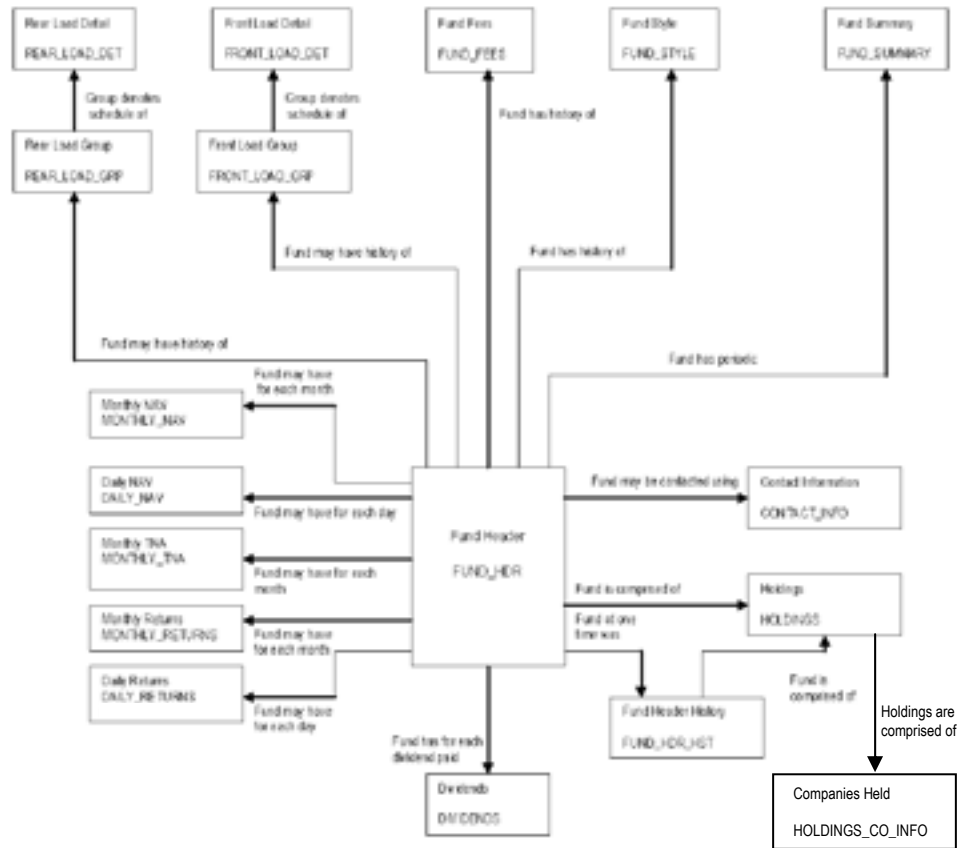
fund names and attributes, along with organizational history such as name changes, mergers, and liquidations. Monthly returns were calculated back to January 1962. Funds that were not in the *Wiesenberger Investment Companies Annual Volumes* or other printed materials were added, although instances of this were rare. As the last step in this second stage, the data were checked against original and secondary sources for any unusual entries and typographical errors.

Beginning with the December 2007 iteration of the database, current and historical data back to August of 1998 are provided electronically by Lipper and Thomson Reuters. New fund style data items have been added to the original database.

CHAPTER 2: DATA DESCRIPTIONS

DATA MODEL FOR THE CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND DATABASE

The below data model represents the relationships between the tables found in the database. As depicted, the Fund Header table is the central table for the database. This table contains the most recent information for all funds, both currently active and delisted. From this table researchers may branch out to other tables where information is grouped into categories; for instance Fund Fees, Monthly NAV, Holdings, and so on.



OVERVIEW AND TABLE LIST

The CRSP Survivor-Bias-Free US Mutual Fund Database provides open-ended mutual fund data beginning December 1961 for funds of all investment objectives, principally equity funds, taxable and municipal bond funds, international funds and money market funds.

The database consists of a group of tables listed in the Table Overview below. Following the Table Overview, a listing of variables and brief descriptions are provided for each individual table. Data availability differing from the December 1961 start date is noted where applicable.

DATABASE TABLES OVERVIEW

| TABLE | NAME | DEFINITION |
|------------------|------------------------------|---|
| contact_info | Contact Information | Current and historical contact information |
| daily_nav | Daily Net Asset Value | Net Asset Value for each trading day |
| daily_returns | Daily Returns | Returns for each trading day |
| dividends | Dividends | Fund dividends |
| front_load_det | Front Load Detail | Details of front load fees |
| front_load_grp | Front Load Group | Effective dates for front load fees |
| fund_fees | Fund Fees | Fees associated with each fund |
| fund_hdr | Fund Header | Most recent identification information for each fund |
| fund_hdr_hist | Historical Fund Header | Historical identification information for each fund |
| fund_style | Fund Style | Style attributes for each fund |
| fund_summary | Fund Summary | Summary data for each fund |
| holdings | Holdings | Portfolio holding information |
| holdings_co_info | Holdings Company Information | Information about companies held in portfolios |
| crsp_portno_map | CRSP PORTNO Map | Map to portfolio for security holdings info |
| monthly_nav | Monthly Net Asset Value | Net Asset Values as of the last trading day of each month |
| monthly_returns | Monthly Returns | Monthly holding period returns |
| monthly_tna | Monthly Total Net Assets | Total Net Assets as of the last trading day of each month |
| rear_load_det | Rear Load Detail | Details of rear load fees |
| rear_load_grp | Rear Load Group | Effective dates for rear load fees |

VARIABLE LISTINGS WITHIN TABLES

In the following tables, “*” designates items on which to key.

CONTACT INFORMATION “CONTACT_INFO”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------------|--------------|--|---------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *chgmt | DATE | Change Date – beginning of range for contact information | |
| chgenddt | DATE | Change End Date- end of range for contact information | |
| address1 | VARCHAR(40) | Management company address - Line 1 | Begins January 2000 |
| address2 | VARCHAR(40) | Management company address - Line 2 | Begins January 2000 |
| city | VARCHAR(30) | Management company city | Begins January 2000 |
| state | VARCHAR(2) | Management company state | Begins January 2000 |
| zip | CHAR(5) | Management company zip code | Begins January 2000 |
| phone_number | VARCHAR(12) | Management company phone number | Begins January 2000 |
| fund_toll_free | VARCHAR(12) | Fund company toll free number | Begins January 2000 |
| website | VARCHAR(256) | Website adress of fund or management company | Begins January 2008 |

DAILY NET ASSET VALUE “DAILY_NAV”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|--|--------------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Calendar date for which daily NAV applies | |
| dnav | FLOAT | Daily value of the fund’s underlying assets (including cash) minus its liabilities (fees, expenses, etc.) divided by the number of shares outstanding. | Begins September 2, 1998 |

DAILY RETURNS “DAILY_RETURNS”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|---|--------------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Calendar date for which return data applies | |
| dret | FLOAT | Total daily return per share associated with given date. See note below for more details. | Begins September 2, 1998 |

NOTE ABOUT RETURNS:

Daily and monthly returns values are calculated as a change in NAV including reinvested dividends from one period to the next. Navs are net of all management expenses and 12b-fees. Front and rear load fees are excluded.

Returns are calculated as follows:

$$R_t = \left[\frac{Nav_t * cumfact}{Nav_{t-1}} \right] - 1$$

Where $t-1$ may be up to 3 periods prior to t . The *cumfact* variable is calculated for the period in the following manner:

For each fund we calculate a total adjustment factor for each day the fund trades. The total adjustment factor starts out as 1 for a given day and then is modified depending on the types of dividends found for that fund and day.

Adjustment factors for each dividend on a given day are calculated as follows:

If first letter of *dis_type* is either C or D then $adj = dis_amt/reinvest_nav$

where from the Dividends table,

adj = Adjustment Factor

dis_amt = Distribution amount

reinvest_nav = Reinvestment amount of daily or monthly NAV

If the first letter of *dis_type* is a S then $adj = 1/spl_ratio$

where from the Dividends table,

adj = Adjustment Factor

spl_ratio = Split Ratio

The total adjustment factor, *totadj*, for a given day is updated for each dividend as follows:

If the *dis_type* = S then $totadj = totadj * adj$

If the *dis_type* = C or D then the $totadj = totadj + adj$

The dividend file is sorted in distribution type order which implies that when splits and cash dividends occur on the same day, the cash dividends are processed first.

Finally *cumfact* starts with the value of 1 and is calculated for the period of the return in the following manner: For each day in the holding period, $cumfact = cumfact * totadj$.

DIVIDENDS “DIVIDENDS”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|------------|---|----------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | Begins December 1961 |
| *caldt | DATE | Calendar date for which dividend applies | |
| *dis_type | VARCHAR(2) | <p>dis_type Description</p> <p>C Capital Gain No indication of term</p> <p>CB Qualified Short Term Capital Gain</p> <p>CH Non-Qualified Short Term Capital Gain</p> <p>CJ Pre-JGTRAA (The Jobs and Growth Tax Relief Reconciliation Act of 2003) Long Term Capital Gain</p> <p>CL Long-Term Capital Gain</p> <p>CM Medium-Term Capital Gain (ends 199808)</p> <p>CO Collectibles</p> <p>CP Super-Long-Term Capital Gain (For securities held more than 5 years)</p> <p>CQ Section 1202 Capital Gain (Small Business Stock Exclusion & Rollover of Gain Exclusion)</p> <p>CR Return of Capital</p> <p>CS Short-Term Capital Gain</p> <p>CT REIT Section 1250 Capital Gain</p> <p>CU Undistributed Capital Gain</p> <p>Long-Term (CL), Short-Term (CS), and Mid-Term (CM) Capital Gain codes are defined by the tax code. Most often the short-term gain is for an investment sold at a profit that was held for less than a year. Mid-term capital gain is defined as an investment sold at a profit that was held for more than one year. Mid-term capital gain is effective for the period between July 29, 1997- December 31, 1997, for investments held for more than one year but less than 18 months. In this same period, long-term capital gain is declared on those investments held for more than 18 months.</p> <p>dis_type Description</p> <p>D Income Dividend (ends 199808)</p> <p>DD Qualified Income Dividend</p> <p>DE Exempt Income Dividend</p> <p>DG Non-Qualified Income Dividend</p> <p>DT Income Dividend</p> <p>DU Untaxed dividends (ends 199808)</p> <p>DW Sum of Daily Accrual Dividends</p> <p>DY Interest Income Dividend</p> <p>S Split dividend</p> <p>In some cases, a fund may have both Taxable (DT) and Untaxed (DU or DE) Dividends. Tax-exempt funds may have a small portion of a taxable dividend. For tax-exempt funds, most if not all income dividends are exempt from federal income tax. However, it is possible that a tax-exempt fund could earn taxable interest income that would be distributed to shareholders as taxable income dividends.</p> | |
| dis_amt | FLOAT | Distribution Amount If dis_type = S (Split), dis_amt = 0 | |
| reinvest_nav | FLOAT | Reinvestment Price as reported by the fund. Represents the fund's NAV at which distributions are reinvested. If dis_type = S (Split), reinvest_nav=0 | |
| spl_ratio | FLOAT | Split ratio | |

FRONT LOAD DETAIL “FRONT_LOAD_DET”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-----------------|----------|---|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *front_group_no | INTEGER | Front Group Number - Unique identifier for the front load group. This item allows a schedule of front load fees to be grouped together. | |
| *dollar_amt | INTEGER | Dollar Amount of sales charge. Represents a breakpoint in a schedule of generally declining front load fees. If missing, front_load is the maximum front load for the fund. | Begins 1992 |
| front_load | FLOAT | Front load for investments represents maximum sales charge at breakpoint (represented in decimal format i.e. .075=7.5%) | |

FRONT LOAD GROUP “FRONT_LOAD_GRP”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-----------------|----------|---|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *front_group_no | INTEGER | Front Group Number – Unique identifier for the front load group. This item allows a schedule of front load fees to be grouped together. | |
| begdt | DATE | Load effective date range beginning and ending dates | |
| enddt | DATE | | |

LOAD DETAIL AND LOAD GROUP DATA STRUCTURES:

The data model uses a group and detail structure to allow efficiency in storing data and to allow the modeling of a schedule of fees. For instance, when a fund offers a schedule of different fees, front load fees often change with the level of investment, each breakpoint in that fee structure will have the same group identifier. A new group for a particular CRSP Fund Number is created only when the fees change. During each update, if the fund continues to charge the same fees, the only change is to the “end date” of the group.

FUND FEES “FUND_FEES”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|--|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *begdt | DATE | Beginning of date range for fee information. For annual data, information is valid for the year portion of the begin date. | |
| enddt | DATE | End of date range for fee information | |
| actual_12b1 | FLOAT | Reported as the ratio of the total assets attributed to marketing and distribution costs. Represents the actual fee paid in the most recently completed fiscal year as reported in the Annual Report Statement of Operations. Represented in decimal format. <ul style="list-style-type: none"> -99 & 0 (prior to 1998) are used when no 12b-1 fee is reported. | Begins 1992 |
| max_12b1 | FLOAT | Maximum contractual 12b-1 fee. Represented in decimal format. <ul style="list-style-type: none"> A fund with an actual 12b-1 value of -99 may have a max_12b1 fee indicating the maximum even though none is currently being reported. Null values are used when no maximum value is reported. | Begins 1998 |
| exp_ratio | FLOAT | Expense Ratio as of the most recently completed fiscal year. Represented in decimal format. <p>Ratio of total investment that shareholders pay for the fund’s operating expenses, which include 12b-1 fees</p> <p>exp_ratio may include waivers and reimbursements, causing it to appear to be less than the fund management fee.</p> | |
| mgmt_fee | FLOAT | Management fee (\$)/ Average Net Assets (\$) <p>The fee is calculated using ratios based on the line items reported in the Statement of Operations. The management fee can be offset by fee waivers and/or reimbursements which will make this value differ from the contractual fees found in the prospectus. Reimbursements can lead to negative Management Fees.</p> | Begins 1998 |

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------------|----------|---|-------------------|
| turn_ratio | FLOAT | Fund Turnover Ratio. Minimum (of aggregated sales or aggregated purchases of securities), divided by the average 12-month Total Net Assets of the fund. If fiscal_yearend is present, turn_ratio is for the twelve months ending on fiscal_yearend. If fiscal_yearend is missing, then turn_ratio is for the twelve months ending on the begdt. | |
| fiscal_yearend | DATE | Effective date used for fees | |

FUND HEADER “FUND_HDR”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------------|--------------|---|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *crsp_portno | INTEGER | Portfolio Number Unique identifier for a security or a group of securities held in the fund's portfolio. A portfolio may be held by one or many different funds. | |
| crsp_cl_grp | INTEGER | Code used to associate different classes of a fund. Class Codes begin with 2000000. Codes are created through a name parsing and clean-up exercise and follow these rules: <ul style="list-style-type: none"> If a group of funds have the same resulting base after parsing and cleanup, for any overlapping time period, then they are considered to be sub-classes of the same fund during the overlapping range. If there is no overlap of date ranges, the funds are not considered part of the same group. If two groups share one or more funds, then they are assigned the same CRSP Class Group code. If a group overlaps in time with another group with the same Class Group Code but a different base name, then one of the groups is assigned a different code. This accounts for cases where different funds with multiple subclasses are combined. Each fund will share the class group when they share a base name, but a different group when they do not. Data available beginning August 31, 1998 | CRSP Class |
| fund_name | VARCHAR(140) | The full name of the fund | |
| nasdaq | VARCHAR (5) | NASDAQ ticker symbol. Available for NASDAQ listed funds only. | |
| ncusip | VARCHAR(9) | Fund CUSIP. Available for internal use by client only. Go to www.crsp.ChicagoBooth.edu/crsp/policies/index.html for CUSIP licensing information. | |
| first_offer_dt | DATE | Date when the fund was first offered | |
| mgmt_name | VARCHAR(80) | Management Company Name | |
| mgmt_cd | VARCHAR(4) | Management Company Code. An identifier for the Management Company. | December 1999 |
| mgr_name | VARCHAR(30) | Portfolio Manager Name | |
| mgr_dt | DATE | Date that the current portfolio manager assumed responsibility for the portfolio | |
| adv_name | VARCHAR(40) | Fund Advisor Name | December 1999 |
| open_to_inv | VARCHAR(1) | Identifies if the fund is open to investors: Y = Yes N = No | December 1999 |
| retail_fund | VARCHAR(1) | Identifies if a fund is a retail fund or not: Y = Yes N = No | December 1999 |
| Inst_fund | VARCHAR(1) | Identifies if a fund is an institutional fund: Y = Yes N = No | December 1999 |

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-----------------|------------|---|-------------------|
| m_fund | VARCHAR(1) | Identifies if a fund was originally a "M" fund: Y = Yes N = No Note: "M" funds are "dead" funds that were introduced to the database when originally built by Mark Carhart in order to eliminate survivor bias. | |
| index_fund_flag | VARCHAR(3) | Identifies if a fund is an index fund: B = Index-based fund - utilizes indexes as its primary filter for the purchase and sale of securities. This is accomplished by investing in the components of one or more indexes, or by investing in a small percentage of securities within the index in an attempt to capture the best performers. In each case, the option to invest a portion of assets outside the securities held by the index is left open. D = Pure Index fund - objective is to match the total investment performance of a publicly recognized securities market index. The fund will hold virtually all securities in the noted index with weightings equal to those in the index. E = Index fund enhanced - objective is to exceed the total investment performance of a publicly recognized securities market. This is accomplished by investing primarily in derivatives based on the index itself and/or the securities within the index, or by utilizing different weightings for the securities held by the index | June 2008 |
| vau_fund | | Y = Fund is a variable annuity underlying fund N = Fund is not a variable annuity underlying fund | |
| et_flag | VARCHAR(1) | Identifies if a fund is an ETF or ETN: F = ETF N = ETN | |
| end_dt | DATE | Date of latest NAV data | |
| dead_flag | VARCHAR(1) | Identifies if a fund is dead or still active: Y = Yes N = No | |
| delist_cd | VARCHAR(3) | Identifies the reason for the fund delisting: Delisting Codes (Post September 1998) Code Description L Liquidation M Merged Delisting Codes(Prior to September 1998) ? Don't know what happened to this fund CE Converted to close-end CLO Closed to new investment – not currently reporting L Liquidated L? Probably Liquidated M Merged M? Probably Merged R Removed at fund request RTO Fund or data for this fund was removed from the database (Data should not have been included) TFE Tax Free Exchange Fund (data was from Wiesenberger) VAS Variable annuity vehicle | |
| merge_fundno | INTEGER | CRSP Fundno of the fund that acquired the assets of the delisted fund | |

FUND HEADER HISTORY "FUND_HDR_HIST"

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-----------------|--------------|---|--|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *chgdt | DATE | Date that the header information was active | |
| chgenddt | DATE | Date that the header information became inactive | |
| *crsp_portno | INTEGER | Portfolio Number Unique identifier for a security or a group of securities held in the fund's portfolio. A portfolio may be held by one or many different funds. | Available for funds active anytime since July 2003 |
| crsp_cl_grp | INTEGER | Code used to associates different classes of a fund. Class Codes begin with 2000000. Codes are created through a name parsing and clean-up exercise and follow these rules: If a group of funds have the same resulting base after parsing and cleanup, for any overlapping time period, then they are considered to be sub-classes of the same fund during the overlapping range. If there is no overlap of date ranges, the funds are not considered part of the same group. If two groups share one or more funds, then they are assigned the same CRSP Class Group code. If a froup overlaps in time with another group with the same Class Group Code but a different base name, then one of the groups is assigned a different code. This accounts for cases where different funds with multiple subclasses are combined. Each fund will share the glass group when they share a base name, but a different group when they do not. Data available beginning August 31, 1998 | CRSP Class |
| fund_name | VARCHAR(140) | The full name of the fund | |
| nasdaq | VARCHAR (5) | NASDAQ ticker symbol. Available for NASDAQ listed funds only. | |
| ncusip | VARCHAR(9) | Fund CUSIP. Available for internal use by client only. Go to www.crsp.ChicagoBooth.edu/crsp/policies/index.html for CUSIP licensing information. | Begins 2001 |
| first_offer_dt | DATE | Date when the fund was first offered. | |
| mgmt_name | VARCHAR(80) | Management Company Name | Begins 1993 |
| mgmt_cd | VARCHAR(4) | Management Company Code. An identifier for the Management Company. | Begins December 1999 |
| mgr_name | VARCHAR(30) | Portfolio Manager Name | Begins 1993 |
| mgr_dt | DATE | Date that the current manager took control and assumed responsibility for the portfolio | Begins 1993 |
| adv_name | VARCHAR(40) | Fund Advisor Name | December 1999 |
| open_to_inv | VARCHAR(1) | Identifies if the fund is open to investors: Y = Yes N = No | December 1999 |
| retail_fund | VARCHAR(1) | Identifies if a fund is a retail fund or not: Y = Yes N = No | December 1999 |
| inst_fund | VARCHAR(1) | Identifies if a fund is an institutional fund: Y = Yes N = No | December 1999 |
| m_fund | VARCHAR(1) | Identifies if a fund was originally a "M" fund: Y = Yes N = No | |
| index_fund_flag | VARCHAR(3) | Identifies if a fund is an index fund: B = Index-based fund D = Index fund E = Index fund enhanced | Begins 2003 |

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------|------------|--|-------------------|
| vau_fund | | Y = Fund is a variable annuity underlying fund N = Fund is not a variable annuity underlying fund | |
| et_flag | VARCHAR(1) | Identifies if a fund is an ETF or ETN: F = ETF N = ETN | |

FUND STYLE “FUND_STYLE”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-------------------|-------------|--|------------------------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *begdt | DATE | Beginning date in range for fund style information | |
| enddt | DATE | End date for range for fund style information | |
| crsp_obj_cd | VARCHAR(4) | CRSP mapping of Strategic Insights, Wiesenberger, and Lipper objective codes into a continuous series, providing continuity. | CRSPObj |
| si_obj_cd | VARCHAR(3) | Strategic Insight objective code | Begins 1993 Ends September 1998 |
| accrual_fund | VARCHAR(1) | Yes or No flag identifying if fund is an accrual fund. Yes if there are daily accruals | Begins 1999 |
| sales_restrict | VARCHAR(1) | Yes or No flag identifying if fund has sales restrictions. Yes if it is an affinity or employee-only fund | Begins 1999 |
| wbrger_obj_cd | VARCHAR(5) | Wiesenberger Objective Code used to identify fund strategy. See Appendix A, page 15. | Available through 1993 |
| policy | VARCHAR(6) | Types of securities held by the fund identified by character codes | Available through 1990 |
| lipper_class | VARCHAR(4) | Lipper classification code | Begin December 31, 1999 |
| lipper_class_name | VARCHAR(42) | | Begin December 31, 1999 |
| lipper_obj_cd | VARCHAR(3) | Lipper prospectus objective code | Begin June 30, 1998 |
| lipper_obj_name | VARCHAR(42) | | Begin June 30, 1998 |
| lipper_asset_cd | VARCHAR(2) | 2 character code EQ - Equity Funds TX - Taxable Fixed Income Funds MB - Tax Free Fixed Income Funds | Begin December 31, 1999 |
| lipper_tax_cd | VARCHAR(10) | “Taxable” or “tax exempt” | Begin December 31, 1999 |

FUND SUMMARY “FUND_SUMMARY”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------------|------------|---|--|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Effective date for summary data | |
| summary_period | VARCHAR(1) | A = Annual Q = Quarterly M = Monthly | |
| nav_latest | FLOAT | Latest Month-end NAV | Begins 1961 with year-end values Switches to quarterly values in 2000 |
| nav_latest_dt | DATE | Latest Month-end NAV date | |
| tna_latest | FLOAT | Latest Month-end TNA Reported in millions, by convention, .01 reflects all total net asset values <=\$100,000. | Begins 1961 |
| tna_latest_dt | DATE | Latest Month-end TNA date | |
| yield | FLOAT | Income yield Calculated as the ratio of income distributions and NAV at the end of the period | Begins 1961 with year-end values Switches to quarterly values in 2000 |
| div_ytd | FLOAT | Calendar year-to-date dividend sum | |
| cap_gains_ytd | FLOAT | Calendar year-to-date capital gains sum | |
| nav_52w_h | FLOAT | 52 week high NAV | Begins 1998 |
| nav_52w_h_dt | DATE | Date of 52 week high NAV | Begins 1998 |
| nav_52w_l | FLOAT | 52 week low NAV | Begins 1998 |
| nav_52w_l_dt | DATE | Date of 52 week low NAV | Begins 1998 |
| unrealized_app_dep | FLOAT | Unrealized appreciation/depreciation reported in thousands | Begins 1998 |
| unrealized_app_dt | DATE | Effective date for unrealized appreciation/depreciation | Begins 1998 |
| asset_dt | DATE | Effective date of the asset allocations | |
| per_com | FLOAT | Amount of fund invested in common stocks | |
| per_pref | FLOAT | Amount of fund invested in preferred stocks | |
| per_conv | FLOAT | Amount of fund invested in convertible bonds | |
| per_corp | FLOAT | Amount of fund invested in corporate bonds | |
| per_muni | FLOAT | Amount of fund invested in municipal bonds | |
| per_govt | FLOAT | Amount of fund invested in government bonds | |
| per_oth | FLOAT | Amount of fund invested in other securities | |
| per_cash | FLOAT | Amount of fund invested in cash | |
| per_bond | FLOAT | Amount of fund invested in all bonds. Field is zero when a more granular breakdown of bond investments is available. This is a legacy category and will remain empty. | |
| per_abs | FLOAT | Amount of fund invested in Asset-Backed Securities | Begins October, 2010 |
| per_mbs | FLOAT | Amount of fund invested in Mortgage-Backed Securities | Begins October, 2010 |
| per_eq_oth | FLOAT | Amount of fund invested in other equities | Begins October, 2010 |
| per_fi_oth | FLOAT | Amount of fund invested in other fixed-income securities | Begins October, 2010 |
| maturity | FLOAT | Weighted average maturity in years | |
| maturity_dt | DATE | Effective date of Weighted average maturity value | |

HOLDINGS “HOLDINGS”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-------------------|----------|---|-----------------------|
| *crsp_portno | INTEGER | Portfolio number is the unique identifier for a security or a group of securities held in a fund's portfolio | |
| *report_dt | DATE | Date of holdings as reported by CRSP's sources | Begins September 2003 |
| *security_rank | INTEGER | Rank associated with the percentage of total net assets within the portfolio | |
| eff_dt | DATE | Date holdings information was received from CRSP's vendor. As a result, all effective dates are equal to or more current than report dates in the database. | |
| percent_tna | FLOAT | Security's percentage of the total net assets in the portfolio. Value on which the security rank is calculated. | |
| nbr_shares | INTEGER | Number of the security's shares held in the portfolio | |
| market_val | FLOAT | Market value of the security as of the report date shown on the record | |
| *crsp_company_key | INTEGER | Unique identifier for company information associated with holdings file | |

HOLDINGS COMPANY INFORMATION “HOLDINGS_CO_INFO”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|-------------------|--------------|---|-------------------|
| *crsp_company_key | INTEGER | Unique identifier for company information associated with holdings file | |
| security_name | VARCHAR(200) | Name of the security held | |
| cusip | VARCHAR(10) | CUSIP associated with the security | |
| permno | INTEGER | CRSP's permanent stock issue identifier. Available for issues covered in the CRSP universe. | |
| permco | INTEGER | CRSP's permanent company identifier. Available for companies covered in the CRSP universe. | |
| ticker | VARCHAR(6) | Ticker symbol given by the exchange | |
| coupon | FLOAT | Bond coupon rate | |
| maturity_dt | DATE | Date of bond maturity | |

CRSP PORTNO MAPPING “CRSP_PORTNO_MAP”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|--|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *crsp_portno | INTEGER | Portfolio number is the unique identifier for a security or a group of securities held in a fund's portfolio | |
| begdt* | DATE | Beginning date for which the map is valid | |
| enddt | DATE | Ending date for which the map is valid | |

MONTHLY NET ASSET VALUE “MONTHLY_NAV”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|--|----------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Calendar date for which monthly NAV applies | |
| mnav | FLOAT | Monthly value of the fund's underlying assets (including cash) minus its liabilities (fees, expenses, etc.) divided by the number of shares outstanding. | Begins December 1961 |

MONTHLY RETURNS “MONTHLY_RETURNS”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--|----------|--|----------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Calendar date for which monthly returns data apply | |
| mret | FLOAT | Total return per share as of month end. See note below for more details. | Begins December 1961 |
| NOTE ABOUT RETURNS: Please see the note with Daily Returns on page 6. | | | |

MONTHLY TOTAL NET ASSETS “MONTHLY_TNA”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|--------------|----------|--|--|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *caldt | DATE | Calendar date for which monthly TNA applies | |
| mtna | FLOAT | Monthly TNA is equal to total assets minus total liabilities as of month-end. Reported in millions of dollars. Beginning in September 1998, 0.1 reflects all total net asset values <= \$100,000. | Begins December 1961, annual data points through 1969, Quarterly through 1990 then Monthly |

REAR LOAD DETAIL “REAR_LOAD_DET”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------------|------------|--|---------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *rear_group_no | INTEGER | Rear Group Number - Unique identifier for the rear load group. This item allows a schedule of rear load fees to be grouped together. | |
| *load_type | VARCHAR(1) | R = Redemption C = Contingent Deferred Sales Charge (CDSC) D = The time period for these records are in days and not months as with the other types O = Historical records in which a distinction wasn't made between the R and C load types. The previous source simply referred to all these rear loads as "other load," hence the "O." | |
| inv_lvl | INTEGER | Dollar amount of investment level | Begins January 2008 |
| *time_period | INTEGER | When investment is held this number of months or less, the associated rear-load fee applies | |
| rear_load | FLOAT | Fee charged when withdrawing funds | |

REAR LOAD GROUP “REAR_LOAD_GRP”

| NAME | DATATYPE | DEFINITION | DATA AVAILABILITY |
|----------------|----------|--|-------------------|
| *crsp_fundno | INTEGER | Unique identifier for fund | |
| *rear_group_no | INTEGER | Rear Group Number - Unique identifier for the rear load group. This item allows a schedule of rear load fees to be grouped together. | |
| begdt | DATE | Beginning date for which the group was active | |
| enddt | DATE | Date for which the group became inactive | |

LOAD DETAIL AND LOAD GROUP DATA STRUCTURES:

The data model uses a group and detail structure to allow efficiency in storing data and to allow the modeling of a schedule of fees. For instance, when a fund offers a schedule of different fees, front load fees often change with the level of investment, each breakpoint in that fee structure will have the same group identifier. A new group for a particular CRSP Fund Number is created only when the fees change. During each update, if the fund continues to charge the same fees, the only change is to the “end date” of the group.

APPENDIX A: DATA CODE LISTING

POLICY CODES

(Fund Style Table. Variable Policy. Page 12)

| CODE | DESCRIPTION |
|--------|-----------------------------------|
| B&P | Bond and preferred stocks |
| Bal | Balanced fund |
| Bonds | Bonds |
| C & I | Canadian and international |
| CS | Common stocks |
| Flex | Flexible strategy |
| GS | Government securities |
| Hedge | Leverage and/or short-selling |
| I-S | Income fund |
| Leases | Holds equity in lease contracts |
| MF | Multi-manager fund |
| MM | Money market fund |
| Pfd | Preferred stocks |
| Spec | Sector or highly speculative fund |
| TF | Tax-free fund |
| TFE | Tax-free exchange fund |
| TFM | Tax-free money market fund |

CRSP STYLE CODE

The CRSP US Survivor-Bias-Free Mutual Funds database includes style and objective codes from three different sources over the life of the database. No single source exists for its full-time range.

- Wiesenberger Objective codes are populated between 1962 - 1993.
- Strategic Insight Objective codes are populated between 1993 - 1998.
- Lipper Objective codes begin 1998.

The CRSP Style Code builds continuity within the database by using the three afore mentioned codes as its base and provides consistency with those codes provided by our different sources.

The CRSP Style Code consists of up to four characters, with each position defined. Reading Left to Right, the four codes represent an increasing level of granularity. For example, a code for a particular mutual fund is EDYG, where:

E = Equity, D = Domestic, Y = Style, G = Growth

Codes with less than four characters exist, and it simply means that they are defined to a less granular level.

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER | |
|------------|--------------|---------------|----------------------------|---|--|---|--|
| Equity (E) | Domestic (D) | Sector (S) | Gold (G) | AU Gold Oriented Funds | GLD Equity Gold | GPM Gold and Precious Metals | |
| | | | Health (H) | H Health/Biotechnology Funds | HLT Equity USA Health | HLT Health Sector | |
| | | | Financial (F) | FS Financial Services Funds | FIN Equity USA Financial Sector | FIN Financial Sector | |
| | | | Natural Resources (N) | NR Natural Resources Funds | NTR Equity Natural Resources & Energy | ENR Energy/Natural Resources | |
| | | | Real Estate (R) | RE Real Estate Funds | RLE Equity USA Real Estate | | |
| | | | Technology (T) | TK Science & Technology Funds | TEC Equity USA Technology | TCH Technology Sector | |
| | | | Utilities (U) | UT Utility Funds | UTI Equity USA Utilities | UTL Utilities | |
| | | | Consumer Goods (G) | CG CONSUMER GOODS FUNDS | | | |
| | | | Commodities (C) | CMD COMMODITIES FUNDS | | | |
| | | | Consumer Services (S) | CS CONSUMER SERVICES FUNDS | | | |
| | | | Industrials (I) | ID INDUSTRIALS FUNDS | | | |
| | | | Materials (M) | BM BASIC MATERIALS FUNDS | | | |
| | | Telecom (A) | TL Telecommunication Funds | | | | |
| | | | | | SEC Equity USA Misc Sectors | | |
| | | Cap-based (C) | Large Cap (L) | SP S&P 500 Index Objective Funds | | | |
| | | | Mid Cap (M) | MC Mid-Cap Funds | GMC Equity USA Midcaps | | |
| | | | Small Cap (S) | SG Small-Cap Funds | SCG Equity USA Small Companies | SCG Small Capitalization Growth | |
| | | | Micro Cap (I) | MR Micro-Cap Funds | | | |
| | | Style (Y) | Growth (G) | CA Capital Appreciation Funds G Growth Funds | AGG Equity USA Aggressive Growth GRO Equity USA Growth | G Growth LTG Long-Term Growth MCG Maximum Capital Gains | |
| | | | Growth & Income (B) | GI Growth and Income Funds | GRI Equity USA Growth & Income ING Equity USA Income & Growth | GCI Growth and Current Income | |
| | | | Hedged (H) | LSE Long/Short Equity Funds EMN Equity Market Neutral Funds ABR ABSOLUTE RETURN FUNDS DL EQUITY LEVERAGE FUNDS | | | |
| | | | Short (S) | DSB Dedicated Short Bias Funds | | | |
| | | | Income (I) | EI Equity Income Funds | OPI Option Income | IEQ Equity Income | |
| | | | | | ENV Equity USA Environmental | | |
| | | Foreign (F) | Regional (R) | Canada (C) | CN Canadian Funds | ECN Equity Canada | |
| | | | | China (Q) | CH China Region Funds | ECH Equity Greater China | |
| | | | | Emerging Markets (M) | EM Emerging Markets Funds | EID Equity Global Emerging Markets | |
| | | | | European (E) | EU European Region Funds | ERP Equity European | |
| | | | | India (I) | INR INDIA REGION FUNDS | | |
| | | | | Japan (J) | JA Japanese Funds | EJP Equity Japan JPN Japanese Equity | |
| | | | | Latin America (L) | LT Latin American Funds | ELT Equity Latin America | |
| | | | | Pacific (P) | PC Pacific Region Funds | EPC Equity Asia Pacific Including Japan PAC Pacific Equity | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER | | |
|------------------|-------------|--------------------|--------------------------------|---------------------------------------|---|---------------------------------|--|--|
| Equity (E) | Foreign (F) | Regional (R) | Pacific Ex Japan (X) | XJ Pacific Ex Japan Funds | EPX Equity Asia Pacific Excluding Japan | | | |
| | | | | | ESC Equity Single Country | | | |
| | | Sector (S) | Gold (G) | | | | | |
| | | | Health (H) | GH GLOBAL HEALTH/ BIOTECHNOLOGY FUNDS | | | | |
| | | | Financial (F) | GFS GLOBAL FINANCIAL SERVICES FUNDS | | | | |
| | | | Natural Resources (N) | GNR GLOBAL NATURAL RESOURCES FUNDS | | | | |
| | | | Real Estate (R) | GRE GLOBAL REAL ESTATE FUNDS | | | | |
| | | | | IRE INTERNATIONAL REAL ESTATE FUNDS | | | | |
| | | | Technology (T) | GTK GLOBAL SCIENCE/ TECHNOLOGY FUNDS | | | | |
| | | | Utilities (U) | | | | | |
| | | | Consumer Goods (G) | | | | | |
| | | | Commodities (C) | | | | | |
| | | | Consumer Services (S) | | | | | |
| | | | Industrials (I) | GIF Global Infrastructure Funds | | | | |
| | | | Materials (M) | | | | | |
| | | Telecom (A) | | | | | | |
| | | | | | | EGX Equity Global Equity Sector | | |
| | | Cap-Based (C) | Large Cap (L) | | | | | |
| | | | Mid Cap (M) | | | | | |
| | | | Small Cap (S) | GS Global Small-Cap Funds | EGS Equity Global Small Company | | | |
| | | | | IS International Small-Cap Funds | EIS Equity International Small Company | | | |
| | | Micro Cap (I) | | | | | | |
| | | Style (Y) | Growth (G) | | | EGG Equity Global Growth | | |
| | | | | EIG Equity International Growth | | | | |
| | | | | EGT Equity Global Total Return | | | | |
| | | | | EIT Equity International Total Return | | | | |
| | | | IF International Funds | GLE Global Equity | | INT International Equity | | |
| | | | GL Global Funds | | | | | |
| Fixed Income (I) | Muni (U) | Short Duration (S) | SMD Short Municipal Debt Funds | LCA TxFr Bd Muni Short CA | | | | |
| | | | LFL TxFr Bd Muni Short FL | | | | | |
| | | | LKY TxFr Bd Muni Short KY | | | | | |
| | | | LMA TxFr Bd Muni Short MA | | | | | |
| | | | LMD TxFr Bd Muni Short MD | | | | | |
| | | | LMI TxFr Bd Muni Short MI | | | | | |
| | | | LNC TxFr Bd Muni Short NC | | | | | |
| | | | LNY TxFr Bd Muni Short NY | | | | | |
| | | | LTN TxFr Bd Muni Short TN | | | | | |
| | | | LVA TxFr Bd Muni Short VA | | | | | |
| | | | MSM TxFr Bd Fed Muni Short | | | | | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER |
|------------------|----------|---------------------------|---------|---|---|----------------------------|
| Fixed Income (I) | Muni (U) | Intermediate Duration (I) | | CAT California Intermdt Municipal Debt Funds | IAZ TxFr Bd Muni Intermediate AZ ICA TxFr Bd Muni Intermediate CA | |
| | | | | FLT Florida Intermediate Municipal Debt Fds | ICO TxFr Bd Muni Intermediate CO | |
| | | | | IMD Intermediate Municipal Debt Funds | ICT TxFr Bd Muni Intermediate CT IFL TxFr Bd Muni Intermediate FL | |
| | | | | MAT Massachusetts Intermediate Muni Debt Fds | IGA TxFr Bd Muni Intermediate GA IHI TxFr Bd Muni Intermediate HI | |
| | | | | OHT Ohio Intermediate Municipal Debt Fds | IKS TxFr Bd Muni Intermediate KS IKY TxFr Bd Muni Intermediate KY | |
| | | | | OST Other States Intermediate Muni Debt Fds | IMA TxFr Bd Muni Intermediate MA | |
| | | | | PAT Pennsylvania Intermediate Muni Debt Fds | IMD TxFr Bd Muni Intermediate MD | |
| | | | | VAT Virginia Intermediate Municipal Debt Funds | IMI TxFr Bd Muni Intermediate MI IMN TxFr Bd Muni Intermediate MN | |
| | | | | | IMT TxFr Bd Muni Intermediate MT | |
| | | | | | INC TxFr Bd Muni Intermediate NC | |
| | | | | | IND TxFr Bd Muni Intermediate ND | |
| | | | | | INJ TxFr Bd Muni Intermediate NJ INM TxFr Bd Muni Intermediate NM | |
| | | | | | INY TxFr Bd Muni Intermediate NY IOH TxFr Bd Muni Intermediate OH | |
| | | | | | IOR TxFr Bd Muni Intermediate OR | |
| | | | | | IPA TxFr Bd Muni Intermediate PA ISD TxFr Bd Muni Intermediate SD | |
| | | | | | ITN TxFr Bd Muni Intermediate TN ITX TxFr Bd Muni Intermediate TX | |
| | | | | | IVA TxFr Bd Muni Intermediate VA IVT TxFr Bd Muni Intermediate VT | |
| | | | | | IWA TxFr Bd Muni Intermediate WA | |
| | | | | | IWV TxFr Bd Muni Intermediate WV | |
| | | | | | MIM TxFr Bd Fed Muni Intermediate | |
| | | High Yield (H) | | | MHY TxFr Bd Fed Muni High Yield | MHY Municipal High-Yield |
| | | | | AL Alabama Municipal Debt Funds | MAL TxFr Bd Muni AL MAR TxFr Bd Muni AR | MBD Municipal Bond |
| | | | | AZ Arizona Municipal Debt Funds | MAZ TxFr Bd Muni AZ MCA TxFr Bd Muni CA | MSS Municipal Single State |
| | | | | CAG California Municipal Debt Funds | MCO TxFr Bd Muni CO MCT TxFr Bd Muni CT | |
| | | | | CAI California Insured Municipal Debt Funds | MDE TxFr Bd Muni DE MFL TxFr Bd Muni FL | |
| | | | | CAS California Sh-Intmtd Municipal Debt Fds | MGA TxFr Bd Muni GA MGN TxFr Bd Fed Muni General | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER |
|---------------------|----------|---------|---------|--|---|--------------|
| Fixed Income (I) | Muni (U) | | | CO Colorado Municipal Debt Funds | MHI TxFr Bd Muni HI MIA TxFr Bd Muni IA | |
| | | | | CT Connecticut Municipal Debt Funds | MID TxFr Bd Muni ID MIL TxFr Bd Muni IL | |
| | | | | FL Florida Municipal Debt Funds | MIN TxFr Bd Muni IN MIS TxFr Bd Fed Muni Insured | |
| | | | | FLI Florida Insured Municipal Debt Funds | MKS TxFr Bd Muni KS MKY TxFr Bd Muni KY | |
| | | | | GA Georgia Municipal Debt Funds | MLA TxFr Bd Muni LA MMA TxFr Bd Muni MA | |
| | | | | GM General Municipal Debt Funds | MMD TxFr Bd Muni MD MME TxFr Bd Muni ME | |
| | | | | HI Hawaii Municipal Debt Funds | MMI TxFr Bd Muni MI MMN TxFr Bd Muni MN | |
| | | | | HM High Yield Municipal Debt Funds | MMO TxFr Bd Muni MO MMS TxFr Bd Muni MS | |
| | | | | KS Kansas Municipal Debt Funds | MMT TxFr Bd Muni MT MNC TxFr Bd Muni NC | |
| | | | | KY Kentucky Municipal Debt Funds | MND TxFr Bd Muni ND MNE TxFr Bd Muni NE | |
| | | | | LA Louisiana Municipal Debt Funds | MNH TxFr Bd Muni NH MNJ TxFr Bd Muni NJ | |
| | | | | MA Massachusetts Municipal Debt Funds | MNM TxFr Bd Muni NM MNY TxFr Bd Muni NY | |
| | | | | MD Maryland Municipal Debt Funds | MOH TxFr Bd Muni OH MOK TxFr Bd Muni OK | |
| | | | | MDI Insured Municipal Debt Funds | MOR TxFr Bd Muni OR MPA TxFr Bd Muni PA | |
| | | | | MI Michigan Municipal Debt Funds | MPR TxFr Bd Muni PR MRI TxFr Bd Muni RI | |
| | | | | MN Minnesota Municipal Debt Funds | MSC TxFr Bd Muni SC MSD TxFr Bd Muni SD | |
| | | | | MO Missouri Municipal Debt Funds | MTN TxFr Bd Muni TN MTX TxFr Bd Muni TX | |
| | | | | NC North Carolina Municipal Debt Funds | MUT TxFr Bd Muni UT MVA TxFr Bd Muni VA | |
| | | | | NJ New Jersey Municipal Debt Funds | MVT TxFr Bd Muni VT MWA TxFr Bd Muni WA | |
| | | | | NY New York Municipal Debt Funds | MWI TxFr Bd Muni WI MWV TxFr Bd Muni WV | |
| | | | | NYI New York Insured Municipal Debt Funds | | |
| | | | | OH Ohio Municipal Debt Funds | | |
| | | | | OR Oregon Municipal Debt Funds | | |
| | | | | OSS Other States Short-Intmtd Muni Debt Fds | | |
| | | | | OTH Other States Municipal Debt Funds | | |
| | | | | PA Pennsylvania Municipal Debt Funds | | |
| | | | | SC South Carolina Municipal Debt Funds | | |
| | | | | SIM Short-Intmtd Municipal Debt Funds | | |
| | | | | TN Tennessee Municipal Debt Funds | | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER | |
|--|---------------------------------|--|--|------------------------------------|--|-----------------------------------|---------------------------------|
| Fixed Income (I) | Muni (U) | | | TX Texas Municipal Debt Funds | | | |
| | | | | VA Virginia Municipal Debt Funds | | | |
| | | | | WA Washington Municipal Debt Funds | | | |
| | Corporate (C) | Quality (Q) | | High Quality (H) | A Corporate Debt Funds A Rated | CHQ Tx Bd Corp High Quality | CHY Corporate High-Yield Bond |
| | | | | Medium Quality (M) | | CMQ Tx Bd Corp Medium Quality | CBD Corporate Bond |
| | | | | High Yield (Y) | BBB Corporate Debt Funds BBB-Rated | CHY Tx Bd Corp High Yield | |
| | | Duration (D) | | Short (S) | | CSM Tx Bd Corp Short | |
| | | | | Intermediate (I) | | CIM Tx Bd Corp Intermediate | |
| | | CPB Core Plus Bond Funds | | | | CPB Core Plus Bond Funds | CGN Tx Bd Corp Bond General |
| | CPR Tx Bd Corp Prime Rate | | | | | | |
| | Government (G) | TIPS (T) | | | IUT Treasury Inflation Protected Securities | | |
| | | | | | Duration (D) | Short (S) | SUS Short U.S. Government Funds |
| | | SUT Short U.S. Treasury Funds | | | | | |
| | | Intermediate (I) | IUG Intermediate U.S. Government Funds | GIM Tx Bd USA Govt Intermediate | | | |
| | | SIU Short-Intermediate U.S. Government Funds | | | | | |
| | GUS General U.S. Government Fds | GGN Tx Bd USA Govt General | GOV Government Securities | | | | |
| | GUT General U.S. Treasury Funds | | | | | | |
| | Money Market (M) | Muni (M) | | | CAM California Tax-Exempt Money Market Funds | TAL TxFr MM Muni AL | |
| | | | | | CTM Connecticut Tax-Exempt Money Market Fds | TAZ TxFr MM Muni AZ | |
| | | | | | MAM Massachusetts Tax-Exempt Money Market Fd | TBG TxFr MM Fed Muni Bank Managed | |
| MIM Michigan Tax-Exempt Money Market Funds | | | | | TCA TxFr MM Muni CA | | |
| NUM New Jersey Tax-Exempt Money Market Funds | | | | | TCT TxFr MM Muni CT | | |
| NYM New York Tax-Exempt Money Market Funds | | | | | TFG TxFr MM Fed Muni General | | |
| OHM Ohio Tax-Exempt Money Market Funds | | | | | TFI TxFr MM Fed Muni Instl | | |
| OTM Other States Tax-Exempt Money Market Fds | | | | | TFL TxFr MM Muni FL | | |
| PAM Pennsylvania Tax-Exempt Money Market Fds | | | | | TGA TxFr MM Muni GA | | |
| | | | | | TMA TxFr MM Muni MA | | |
| | | | | | TMD TxFr MM Muni MD | | |
| | | | | | TMI TxFr MM Muni MI | | |
| | | | | | TMN TxFr MM Muni MN | | |
| | | | | | TNC TxFr MM Muni NC | | |
| | TNJ TxFr MM Muni NJ | | | | | | |
| | TNY TxFr MM Muni NY | | | | | | |
| | TOH TxFr MM Muni OH | | | | | | |
| | TPA TxFr MM Muni PA | | | | | | |
| | TTN TxFr MM Muni TN | | | | | | |
| | TTX TxFr MM Muni TX | | | | | | |
| | TVA TxFr MM Muni VA | | | | | | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER |
|---------------------|------------------|------------------|--|--|--------------------------------|---------------------------|
| Fixed Income (I) | Money Market (M) | | | IMM Instl Money Market Funds | SBA Tx MM Bank Govt & Agency | MMF Money Market Fund |
| | | | | ITE Instl Tax-Exempt Money Market Funds | SBP Tx MM Bank Prime | TFM Tax-free Money Market |
| | | | | ITM Instl U.S. Treasury Money Market Funds | SBT Tx MM Bank Govt | TMM Taxable Money Market |
| | | | | IUS Instl U.S. Government Money Market Funds | SCU Tx MM Currency Funds | |
| | | | | MM Money Market Funds | SIA Tx MM Instl Govt & Agency | |
| | | | | TEM Tax-Exempt Money Market Funds | SIP Tx MM Instl Prime | |
| | | | | USS U.S. Government Money Market Funds | SIT Tx MM Instl Govt | |
| | | | | UST U.S. Treasury Money Market Funds | SPR Tx MM Prime | |
| | | | | | SUA Tx MM Govt & Agency | |
| | | | | | SUT Tx MM Govt | |
| | Foreign (F) | Money Market (M) | | SBE Tx MM Bank Prime Euro | | |
| | | | | SBY Tx MM Bank Prime Euro Yank | | |
| | | | | SIE Tx MM Instl Prime Euro | | |
| | | | | SIY Tx MM Instl Prime Euro Yank | | |
| | | | | SPE Tx MM Prime Euro | | |
| | | | | SPY Tx MM Prime Euro Yank | | |
| | | | EMD Emerging Markets Debt Funds | BGA Tx Bd Pan Americas | IBD International Bond | |
| | | | GLI Global Income Funds | BGE Tx Bd Global Emerging Market | MTG Government Mortgage-backed | |
| | | | INI International Income Funds | BGG Tx Bd Global Govt Bond | | |
| | | | SWM Short World Multi-Market Income Funds | BGN Tx Bd Global Bond General | | |
| | | | EML Emerging Markets Local Currency Debt Funds | BGS Tx Bd Global Bond Short | | |
| | | | | GBG Global Bond General | | |
| | | | | GBS Global Bond Short Maturity | | |
| | | | | BGC Global Corporation Fixed Income | | |
| | | | FLX Flexible Income Funds | CSI Tx Bd Strategic Income | IFL Flexible Income | |
| | | | GB General Bond Funds | CVR Convertibles | S Stability | |
| | | | HY High Current Yield Funds | | | |
| | | | IID Intermediate Investment Grade Debt Funds | | | |
| | | | MSI Multi-Sector Income Funds | | | |
| | | | SFI SPECIALTY FIXED INCOME FUNDS | | | |
| | | | SID Short Investment Grade Debt Funds | | | |
| | | | SII Short-Intmtd Investment Grade Debt Funds | | | |
| | | | USO Ultra-Short Obligations Funds | | | |

| LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 | LIPPER | STRATEGIC INSIGHTS | WIESENBERGER | | | |
|-----------------------|---------------------|---------|---------|--------|----------------------------------|--------------|--|-------|------------------------|
| Mixed FI & Equity (M) | Target Funds (T) | | | BT | Balanced Target Maturity Funds | | | | |
| | | | | TM | Target Maturity Funds | | | | |
| | | | | AGM | Alternative Global Macro Funds | BAL | Asset Allocation USA Balanced | I | Income |
| | | | | CV | Convertible Securities Funds | CPF | Asset Allocation USA Preferred | OTH | Other (not classified) |
| | | | | FX | Flexible Portfolio Funds | | | AAL | Asset Allocation |
| | | | | GX | Global Flexible Port Funds | EPR | Asset Allocation USA Principle Return | BAL | Balanced |
| | | | | I | Income Funds | | | G-I | |
| | | | | S | Specialty/Miscellaneous Funds | | | G-I-S | |
| | | | | B | Balanced Funds | FLG | Asset Allocation Global Flexible | G-S | |
| | | | | | | FLX | Asset Allocation USA Flexible | G-S-I | |
| | | | | | | BAL | Asset Allocation USA Balanced | GS | |
| | | | | | | IMX | Asset Allocation USA Income | I-G | |
| | | | | | | | | I-G-S | |
| | | | | | | | | I-S | |
| Other (O) | Mortgage-backed (M) | | | LP | Loan Participation Funds | GMA | Tx Bd USA Govt Mortgage Adj Returns | I-S-G | |
| | | | | ARM | Adjustable Rate Mortgage Funds | GMB | Tx Bd USA Govt Mortgage Backed | S-G-I | |
| | | | | GNM | GNMA Funds | | S-I | | |
| | | | | USM | U.S. Mortgage Funds | | S-I-G | | |
| | Currency (C) | | | CRX | CURRENCY FUNDS | | | | |
| | | | | ACF | Alternative Credit Focus Funds | | | | |
| | | | | AED | Alternative Event Driven Funds | | | | |
| | | | | AMS | Alternative Multi-Strategy Funds | | | | |
| | | | | EMP | Energy MLP Funds | | | | |
| | | | | MFF | Alternative Managed Futures Fund | | | | |
| | | | | ALT | Alternative Other Funds | | | | |
| | | | | STB | Stable Value Funds | | | | |

WIESENBERGER OBJECTIVE CODES

(Annual Volumes 1962-1993)

(Fund Style Table. Variable fwbrger_obj_cd. Page 12)

| CODE | DESCRIPTION |
|---------------------------------|-----------------------------|
| G | Growth |
| I | Income |
| S | Stability |
| (ANNUAL VOLUMES 1991-93) | |
| AAL | Asset allocation |
| BAL | Balanced |
| CBD | Corporate bond |
| CHY | Corporate high-yield bond |
| ENR | Energy/Natural resources |
| FIN | Financial sector |
| GCI | Growth and current income |
| GOV | Government securities |
| GPM | Gold and precious metals |
| HLT | Health sector |
| IBD | International bond |
| IEQ | Equity income |
| IFL | Flexible income |
| INT | International equity |
| LTG | Long-term growth |
| MBD | Municipal bond |
| MCG | Maximum capital gains |
| MHY | Municipal high-yield |
| MMF | Money market fund |
| MSS | Municipal single state |
| MTG | Government mortgage-backed |
| OTH | Other (not classified) |
| SCG | Small capitalization growth |
| TCH | Technology sector |
| TFM | Tax-free money market |
| TMM | Taxable money market |
| UTL | Utilities |

LIPPER OBJECTIVE AND CLASSIFICATION CODES

LIPPER OBJECTIVE CODES

Lipper's objective codes are assigned based on the language that the fund uses in its prospectus to describe how it intends to invest.

LIPPER FUND CLASSIFICATIONS

Classifications are assigned by Lipper to a specific population of equity funds and are based on how the fund invests. Lipper runs the actual holdings of the fund through an internal model to determine market cap and style versus a benchmark. They will look at U.S. Diversified Equity (USDE) funds and Global and International Equity (WEQ) funds, for example, and assign a classification such as large cap growth or small cap value.

Classifications are based on scores for a specific set of portfolio characteristics (P/E, P/B, etc).

For many funds (including all fixed income, all money markets, and some equity funds) the Lipper objective code will equal the classification. This is because underlying holdings for these products are not run through Lipper's model to assign classifications. For USDE and WEQ funds, the classification will be different than the objective.

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|----------------------------------|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| A | Corporate Debt Funds A Rated | Funds invest primarily in corporate debt issues rated A or better or government issues. |
| ABR | Absolute-Return Funds | Funds that aim for positive returns in all market conditions. The funds are not benchmarked against a traditional long-only market index but rather have the aim of outperforming a cash or risk-free benchmark. |
| ACF | Alternative Credit Focus Funds | Funds that, by prospectus language, invest in a wide-range of credit-structured vehicles by using either fundamental credit research analysis or quantitative credit portfolio modelling trying to benefit from any changes in credit quality, credit spreads, and market liquidity. |
| AED | Alternative Event Driven Funds | Funds that, by prospectus language, seek to exploit pricing inefficiencies that may occur before or after a corporate event, such as a bankruptcy, merger, acquisition, or spinoff. Event Driven funds can invest in equities, fixed income instruments (investment grade, high yield, bank debt, convertible debt and distressed), options and other derivatives. |
| AGM | Alternative Global Macro Funds | Funds that, by prospectus language, invest around the world using economic theory to justify the decision-making process. The strategy is typically based on forecasts and analysis about interest rate trends, the general flow of funds, political changes, government policies, intergovernmental relations, and other broad systemic factors. These funds generally trade a wide range of markets and geographic regions, employing a broad range of trading ideas and instruments. |
| AL | Alabama Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Alabama, (double tax-exempt) or city, (triple tax-exempt). |
| ALT | Alternative Other Funds | Funds that, by prospectus language, seek total returns through the use of alternative investment strategies. These strategies include but are not limited to equity market neutral, long/short equity, global macro, event driven, credit focus or through the use of several different hedge-like strategies. |
| AMS | Alternative Multi-Strategy Funds | Funds that, by prospectus language, seek total returns through the management of several different hedge-like strategies. These funds are typically quantitatively driven to measure the existing relationship between instruments and in some cases to identify positions in which the risk-adjusted spread between these instruments represents an opportunity for the investment manager. |
| ARM | Adjustable Rate Mortgage Funds | Funds invest primarily in adjustable rate mortgage securities or other securities collateralized by or representing an interest in mortgages. |
| AU | Precious Metals Equity Funds | Funds invest primarily in shares of gold mines, gold-oriented mining finance houses, gold coins, or bullion. |
| AZ | Arizona Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Arizona, (double tax-exempt) or city, (triple tax-exempt). |
| B | Balanced Funds | Funds whose primary objective is to conserve principal by maintaining at all times a balanced portfolio of both stocks and bonds. Typically, the stock/bond ratio ranges around 60%/40%. |
| BBB | Corporate Debt Funds BBB-Rated | Funds invest primarily in corporate and government debt issues rated in the top four grades. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|--|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| BBBL | Corporate BBB_Rated Debt Funds (Leveraged) | Funds that invest primarily in a basket of futures contracts with the aim of reduced volatility and positive returns in any market environment. Investment strategies are based on proprietary trading strategies that include the ability to go long and/or short. |
| BM | Basic Materials Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in manufacturing chemicals; construction materials; glass; paper; forest products, and related packaging products; and metals, minerals, and mining products including steel. |
| BT | Balanced Target Maturity Funds | Funds that invest to provide a guaranteed return of investment at maturity (targeted periods). A portion of the assets is invested in zero coupon U.S. Treasury securities, while the remainder is in equity securities for long-term growth of capital and income. |
| CA | Capital Appreciation Funds | Funds that aim at maximum capital appreciation, frequently by means of 100% or more portfolio turnover, leveraging, purchasing unregistered securities, purchasing options, etc. The funds may take large cash positions. |
| CAG | California Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in California (double tax-exempt) or city (triple tax-exempt). |
| CAI | California Insured Municipal Debt Funds | Funds invest primarily in those securities that are exempt from taxation in California, and are insured as to timely payment. |
| CAM | California Tax-Exempt Money Market Funds | Funds invest in municipal obligations of California, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| CAS | California Sh-Intmtd Municipal Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in California, with dollar-weighted average maturities of one to five years. |
| CAT | California Intermdt Municipal Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in California, with dollar-weighted average maturities of five to ten years. |
| CG | Consumer Goods Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in manufacturing and distributing consumer goods such as food, beverages, tobacco, and nondurable household goods and personal products. |
| CH | China Region Funds | Funds that concentrate investments in equity securities whose primary trading markets or operations are in the China region or in a single country within this region. |
| CMA | Commodities Agriculture Funds | Funds that invest primarily in agricultural commodity-linked derivative instruments or physicals. |
| CMD | Commodities Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in trading commodities such as food, grains, metals, foreign currencies, future contracts, and financial instruments, which can be interchangeable with another product of the same type. |
| CME | Commodities Energy Funds | Funds that invest primarily in energy-related commodity-linked derivative instruments or physicals. |
| CMG | Commodities General Funds | Funds that invest primarily in a blended basket of commodity-linked derivative instruments or physicals. |
| CMM | Commodities Base Metals Funds | Funds that invest primarily in base-metal commodity-linked derivative instruments or physicals. |
| CMP | Commodities Precious Metals Funds | Funds that invest primarily in precious-metal commodity-linked derivative instruments or physicals. |
| CMS | Commodities Specialty Funds | Funds that invest primarily in commodity-linked derivative instruments or physicals of sectors or strategies not previously mentioned. These include leveraged or short-biased offerings. |
| CN | Canadian Funds | Funds that concentrate investments in equity securities of Canadian companies. |
| CO | Colorado Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Colorado, (double tax-exempt) or city, (triple tax-exempt). |
| CPB | Core Plus Bond Funds | Funds that invest at least 65% in domestic investment-grade debt issues (rated in the top four grades) with any remaining investment in non-benchmark sectors such as high-yield, global and emerging market debt. These funds maintain dollar-weighted average maturities of five to ten years. |
| CRX | Currency Funds | Funds that invest in US and foreign currencies. This is achieved through the use of short term money market instruments; derivatives (forwards, options, swaps) and cash deposits. |
| CS | Consumer Services Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in providing consumer services, including the services segment of hotels, restaurants, and other leisure facilities; media production and services; and consumer retail and services. |
| CT | Connecticut Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Connecticut, (double tax-exempt) or city, (triple tax-exempt). |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| CTM | Connecticut Tax-Exempt Money Market Funds | Funds invest in municipal obligations of Connecticut state, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| CV | Convertible Securities Funds | Funds invest primarily in convertible bonds and/or convertible preferred stock. |
| DL | Equity Leverage Funds | Diversified and non-diversified equity funds that seek daily investment results of more than 100% of the daily performance of a stated benchmark through any combination of futures contracts, derivatives, and leverage. |
| DM | Developed Market Funds | Funds that invest primarily in equity securities whose primary trading markets or operations are in countries (or a single country) outside of the U.S. that are generally considered developed. |
| DSB | Dedicated Short Bias Funds | Funds that employ portfolio strategies that consistently create a net short exposure to the market. This objective also includes short only funds, i.e. funds that pursue short sales of stock or stock index options. |
| EI | Equity Income Funds | Funds that, by prospectus language and portfolio practice, seek relatively high current income and growth of income by investing primarily in dividend-paying equity securities. Funds' gross or net yield must be at least 125% of the average gross or net yield of the U.S. diversified equity fund universe. |
| EIEI | Equity Income Funds | Funds that, by prospectus language and portfolio practice, seek relatively high current income and growth of income by investing primarily in dividend-paying equity securities. This funds' gross or net yield must be at least 125% of the average gross or net yield of the U.S. diversified equity fund universe. |
| ELCC | Extended U.S. Large-Cap Core Funds | Funds that combine long and short stock selection to invest in a diversified portfolio of U.S. large-cap equities, with a target net exposure of 100% long. Typical strategies vary between 110% long and 10% short to 160% long and 60% short. |
| EM | Emerging Markets Funds | Funds that seek long-term capital appreciation by investing primarily in emerging market equity securities, where emerging market is defined by a country's GNP per capita or other economic measures. |
| EMD | Emerging Markets Debt Funds | Funds seek either current income or total return by investing primarily in emerging market debt securities, where emerging market is defined by a country's GNP per capita or other economic measures. |
| EML | Emerging Markets Local Currency Debt Funds | Funds that seek either current income or total return by investing at least 65% of total assets in emerging market debt issues denominated in the currency of their market of issuance. |
| EMN | Equity Market Neutral Funds | Funds that employ portfolio strategies that generate consistent returns in both up and down markets by selecting positions with a total net market exposure of zero. |
| EMP | Energy MLP Funds | Funds that invest primarily in Master Limited Partnerships (MLPs) engaged in the transportation, storage and processing of minerals and natural resources. |
| EU | European Region Funds | Funds that concentrate investments in equity securities whose primary trading markets or operations are concentrated in the European region or a single country within this region. |
| FL | Florida Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Florida, (double tax-exempt) or city, (triple tax-exempt). |
| FLI | Florida Insured Municipal Debt Funds | In closed-End Funds: Funds that invests primarily in securities that are exempt from taxation in Florida and are insured as to timely payment. Florida insured municipal debt funds will be classified in Single-State Insured Municipal Debt Funds, with objective of Florida Insured Municipal Debt Funds (FLI) |
| FLT | Florida Intermediate Municipal Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in Florida, with dollar-weighted average maturities of five to ten years. |
| FLX | Flexible Income Funds | Funds emphasize income generation by investing at least 85% of assets in debt issues and preferred and convertible securities. |
| FS | Financial Services Funds | Funds invest primarily in equity securities of companies engaged in providing financial services, including but not limited to banks, finance companies, insurance companies, and securities/brokerage firms. |
| FX | Flexible Portfolio Funds | Funds that allocate investments across various asset classes, including domestic common stocks, bonds, and money market instruments with a focus on total return. |
| G | Growth Funds | Funds that normally invest in companies with long-term earnings expected to grow significantly faster than the earnings of the stocks represented in the major unmanaged stock indices. |
| GA | Georgia Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Georgia, (double tax-exempt) or city, (triple tax-exempt). |
| GB | General Bond Funds | Funds do not have any quality or maturity restrictions. Intend to keep a bulk of their assets in corporate and government debt issues. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|--|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| GEI | Global Equity Income Funds | Funds that, by prospectus language and portfolio practice, seek relatively high current income and growth of income by investing at least 65% or more of their portfolio in dividend-paying equity securities of domestic and foreign companies |
| GFS | Global Financial Service Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in providing financial services, including but not limited to banks, finance companies, insurance companies, and securities/brokerage firms. |
| GH | Global Health/Biotechnology Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in healthcare, medicine and biotechnology. |
| GI | Growth and Income Funds | Funds that combine a growth-of-earnings orientation and an income requirement for level and/or rising dividends. |
| GIF | Global Infrastructure Funds | Funds that invest primarily in equity securities of domestic and foreign companies engaged in an infrastructure industry, including but not limited to transportation, communication and waste management. |
| GL | Global Funds | Funds that invest at least 25% of their portfolio in securities traded outside of the United States and that may own U.S. securities as well. |
| GLCC | Global Large-Cap Core | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Large-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GLCG | Global Large-Cap Growth | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Large-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GLCV | Global Large-Cap Value | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Large-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GLI | Global Income Funds | Funds invest primarily in U.S. dollar and non-U.S. dollar debt securities of issuers located in at least three countries, one of which may be the United States. |
| GM | General & Insured Municipal Debt Funds | Funds invest primarily in municipal debt issues in the top four credit ratings. |
| GMLC | Global Multi-Cap Core | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Multi-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup BMI. |
| GMLG | Global Multi-Cap Growth | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Multi-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup BMI. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|---------------------------------|--|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| GMLV | Global Multi-Cap Value | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Multi-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup BMI. |
| GNM | GNMA Funds | Funds invest primarily in Government National Mortgage Association securities. |
| GNR | Global Natural Resources Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in natural resources. |
| GRE | Global Real Estate Funds | Funds that invest at least 25% but less than 75% of their equity portfolio in shares of companies engaged in the real estate industry that are strictly outside of the U.S. or whose securities are principally traded outside of the U.S. |
| GS | Global Small-Cap Funds | Fund that invest at least 25% of their portfolio in securities with primary trading markets outside the United States, and that limits at least 65% of their investments to companies with market capitalizations less than US \$1 billion at the time of purchase. |
| GSMC | Global Small/Mid-Cap Core | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Small/mid-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GSME | Global Small-/Mid-Cap Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) below Lipper's global large-cap floor. Combines Global Small/Mid-Cap Value Funds, Global Small/Mid-Cap Core Funds and Global Small/Mid-Cap Growth Funds into a new classification. |
| GSMG | Global Small/Mid-Cap Growth | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Small/mid-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GSMV | Global Small/Mid-Cap Value | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies both inside and outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World Broad Market Index. Small/mid-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World BMI. |
| GTK | Global Science/Technology Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in science and technology. |
| GUS | General U.S. Government Funds | Funds invest primarily in U.S. government and agency issues. |
| GUT | General U.S. Treasury Funds | Funds invest primarily in U.S. Treasury bills, notes, and bonds. |
| GX | Global Flexible Port Funds | Funds that allocate investments across various asset classes, including both domestic and foreign stocks, bonds, and money market instruments focused on total return. At least 25% of portfolio is invested in securities traded outside of the U.S. |
| H | Health/Biotechnology Funds | Funds invest primarily in shares of companies engaged in health care, medicine, and biotechnology. |
| HI | Hawaii Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Hawaii, (double tax-exempt) or city, (triple tax-exempt). |
| HM | High Yield Funds | Funds invest at least 50% of assets in lower rated municipal debt issues. |
| HY | High Current Yield Funds | Funds aim at high (relative) current yield from fixed income securities, have no quality or maturity restrictions, and tend to invest in lower grade debt issues. |
| I | Income Funds | Funds that normally seek a high level of current income through investing in income-producing stocks, bonds, and money market instruments. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| ID | Industrial Funds | Funds that invest primarily in the equity securities of domestic and foreign companies engaged in manufacturing and distributing capital goods including aerospace and defense, construction, engineering, and building products; electrical equipment; industrial machinery; commercial services and supplies including printing, employment, environmental, and office services; transportation services including airlines and couriers; and marine, road and rail, and transportation infrastructure. |
| IEI | International Equity Income Funds | Funds that, by prospectus language and portfolio practice, seek relatively high current income and growth of income by investing at least 65% or more of their portfolio in dividend-paying equity securities of foreign companies. |
| IF | International Funds | Funds that invest their assets in securities with primary trading markets outside of the United States. |
| IID | Intermediate Investment Grade Debt Funds | Funds invest primarily in investment grade debt issues (rated in top four grades) with dollar-weighted average maturities of five to ten years. |
| ILCC | International Large-Cap Core | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Large-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| ILCG | International Large-Cap Growth | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Large-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| ILCV | International Large-Cap Value | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) greater than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Large-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| IMD | Intermediate Municipal Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of five to ten years. |
| IMLC | International Multi-Cap Core | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Multi-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| IMLG | International Multi-Cap Growth | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Multi-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| IMLV | International Multi-Cap Value | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have 25% to 75% of their assets invested in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) above 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Multi-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| IMM | Instl Money Market Funds | Funds invest in high quality financial instruments rated in top 2 grades w/ dollar-weighted average maturities < 90 days. Require high minimum investments & have lower total expense ratios relative to other MM funds. Intend to keep a constant NAV. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| INI | International Income Funds | Funds invest primarily in non-U.S. dollar and U.S. dollar debt securities of issuers located in at least three countries, excluding the U.S., except in periods of market weakness. |
| INR | India Region Funds | Funds that concentrate their investments in equity securities with primary trading markets or operations concentrated in the India region. |
| IRE | International Real Estate Funds | Funds that invest at least 75% of their equity portfolio in shares of companies engaged in the real estate industry that are strictly outside of the U.S. or whose securities are principally traded outside of the U.S. |
| IS | International Small-Cap Funds | Funds that invest at least 65% of their assets in equity securities of non-United States companies with market capitalizations less than US \$1 billion at time of purchase. |
| ISMC | International Small/Mid-Cap Core | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Small/mid-cap core funds typically have an average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| ISMG | International Small/Mid-Cap Growth | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Small/mid-cap growth funds typically have an above-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| ISMV | International Small/Mid-Cap Value | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies strictly outside of the U.S. with market capitalizations (on a three-year weighted basis) less than 400% of the 75th market capitalization percentile of the S&P/Citigroup World ex-U.S. Broad Market Index. Small/mid-cap value funds typically have a below-average price-to-cash flow ratio, price-to-book ratio, and three-year sales-per-share growth value compared to the S&P/Citigroup World ex-U.S. BMI. |
| ITE | Instl Tax-Exempt Money Market Funds | Funds invest in municipal obligations w/ dollar-weighted average maturities of less than 90 days. Funds require high minimum investments, have lower total expense ratios relative to other money market funds, intend to keep a constant NAV. |
| ITM | Instl U.S. Treasury Money Market Funds | Funds invest principally in U.S. Treasury obligations with dollar-weighted average maturities of < 90 days. Funds require high minimum investments and have lower total expense ratios relative to other money market funds. Intend to keep a constant NAV. |
| IUG | Intermediate U.S. Government Funds | Funds invest primarily in securities issued or guaranteed by the U.S. government, its agencies, or its instrumentalities, with dollar-weighted average maturities of five to ten years. |
| IUS | Instl U.S. Government Money Market Funds | Funds invest principally in financial instruments issued or guaranteed by the U.S. government, its agencies, or instrumentalities with dollar-weighted average maturities of < 90 days. Require high minimum investments, have lower total expense ratios relative to other MM funds. Intend to keep a constant NAV. |
| IUT | Inflation Protected Bond Funds | Funds that invest primarily in inflation-indexed fixed income securities. Inflation-linked bonds are fixed income securities that are structured to provide protection against inflation. |
| JA | Japanese Funds | Funds that concentrate investments in equity securities of Japanese companies. |
| KS | Kansas Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Kansas, (double tax-exempt) or city, (triple tax-exempt). |
| KY | Kentucky Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Kentucky, (double tax-exempt) or city, (triple tax-exempt). |
| LA | Louisiana Municipal Debt Funds | Funds limit assets to those securities that are exempt from taxation in Louisiana, (double tax-exempt) or city, (triple tax-exempt). |
| LCCE | Large-Cap Core Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) greater than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Large-cap core funds have more latitude in the companies in which they invest. These funds typically have an average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P 500 Index. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| LCGE | Large-Cap Growth Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) greater than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Large-cap growth funds typically have an above-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P 500 Index. |
| LCVE | Large-Cap Value Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) greater than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Large-cap value funds typically have a below-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P 500 Index. |
| LP | Loan Participation Funds | Funds that invest primarily in participation interests in collateralized senior corporate loans which have floating or variable rates. |
| LSE | Long/Short Equity Funds | Funds that employ portfolio strategies that combine long holdings of equities with short sales of equity, equity options, or equity index options, the fund may be either net long or net short depending on the portfolio manager's view of the market. |
| LT | Latin American Funds | Funds that concentrate investments in equity securities with primary trading markets or operations concentrated in the Latin American region or in a single country within this region. |
| MA | Massachusetts Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Massachusetts, (double tax-exempt) or city, (triple tax-exempt). |
| MAM | Massachusetts Tax-Exempt Money Market Fd | Funds invest in municipal obligations of Massachusetts state, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| MAT | Massachusetts Intermediate Muni Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in Massachusetts, with dollar-weighted average maturities of five to ten years. |
| MATA | Mixed-Asset Target 2010 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon not to exceed the year 2010. |
| MATB | Mixed-Asset Target 2020 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2016 to December 31,2020. |
| MATC | Mixed-Asset Target 2030 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2026 to December 31,2030. |
| MATD | Mixed-Asset Target 2035 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2031 to December 31,2035. |
| MATE | Mixed-Asset Target 2050+ Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon exceeding the year 2045. |
| MATF | Mixed-Asset Target 2015 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2011 to December 31,2015. |
| MATG | Mixed-Asset Target 2025 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2021 to December 31,2025. |
| MATH | Mixed-Asset Target 2040 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2036 to December 31,2040. |
| MATI | Mixed-Asset Target 2045 Funds | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2041 to December 31,2045. |
| MATJ | Mixed-Asset Target Today Funds | Funds that, by portfolio practice, maintain a conservative mix of equity, bonds, cash, and cash equivalents designed to provide income to investors who are in or close to retirement. |
| MATK | Mixed-Asset Target 2055+ | Funds that seek to maximize assets for retirement or other purposes with an expected time horizon exceeding December 31, 2050. |
| MC | Mid-Cap Funds | Funds that by prospectus or portfolio practice invest primarily in companies with market capitalizations less than \$5 billion at the time of purchase. |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| MCCE | Mid-Cap Core Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Mid-cap core funds have more latitude in the companies in which they invest. These funds typically have an average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P MidCap 400 Index. |
| MCGE | Mid-Cap Growth Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Mid-cap growth funds typically have an above-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P MidCap 400 Index. |
| MCVE | Mid-Cap Value Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Mid-cap value funds typically have a below-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P MidCap 400 Index. |
| MD | Maryland Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Maryland, (double tax-exempt) or city, (triple tax-exempt). |
| MDI | Insured Municipal Debt Funds | Funds invest primarily in municipal debt issues insured as to timely payment. |
| MFF | Alternative Managed Futures Funds | Funds that invest primarily in a basket of futures contracts with the aim of reduced volatility and positive returns in any market environment. Investment strategies are based on proprietary trading strategies that include the ability to go long and/or short. |
| MI | Michigan Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Michigan, (double tax-exempt) or city, (triple tax-exempt). |
| MIM | Michigan Tax-Exempt Money Market Funds | Funds invest in municipal obligations of Michigan state (double tax-exempt) or city (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| MLCE | Multi-Cap Core Funds | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have between 25% to 75% of their assets invested in companies with market capitalizations (on a three-year weighted basis) above 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Multi-cap core funds have more latitude in the companies in which they invest. These funds typically have an average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SuperComposite 1500 Index. |
| MLGE | Multi-Cap Growth Funds | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have between 25% to 75% of their assets invested in companies with market capitalizations (on a three-year weighted basis) above 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Multi-cap growth funds typically have an above-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SuperComposite 1500 Index. |
| MLVE | Multi-Cap Value Funds | Funds that, by portfolio practice, invest in a variety of market capitalization ranges without concentrating 75% of their equity assets in any one market capitalization range over an extended period of time. Multi-cap funds typically have between 25% to 75% of their assets invested in companies with market capitalizations (on a three-year weighted basis) above 300% of the dollar-weighted median market capitalization of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Multi-cap value funds typically have a below-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SuperComposite 1500 Index. |
| MM | Money Market Funds | Funds invest in high quality financial instruments rated in top two grades with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| MN | Minnesota Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Minnesota, (double tax-exempt) or city, (triple tax-exempt). |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|---|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| MO | Missouri Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Missouri, (double tax-exempt) or city, (triple tax-exempt). |
| MR | Micro-Cap Funds | Funds that by prospectus or portfolio practice invest primarily in companies with market capitalizations less than \$300 million at the time of purchase. |
| MSI | Multi-Sector Income Funds | Funds seek current income by allocating assets among different fixed income securities sectors, (not primarily in one sector except for defensive purposes), including U.S. & foreign governments, with a significant portion rated below investment grade. |
| MTAA | Mixed-Asset Target Allocation Aggressive Growth Funds | Fund of funds that, by portfolio practice, maintain at least 80% of assets in equity securities, with the remainder invested in bonds, cash, and cash equivalents. |
| MTAC | Mixed-Asset Target Alloc Conserv Funds | Funds that by portfolio practice maintain a mix of between 20%-40% equity securities, with the remainder invested in bonds, cash, and cash equivalents. |
| MTAG | Mixed-Asset Target Alloc Growth Funds | Funds that by portfolio practice maintain a mix of between 60%-80% equity securities, with the remainder invested in bonds, cash, and cash equivalents. |
| MTAM | Mixed-Asset Target Alloc Moderate Funds | Funds that by portfolio practice maintain a mix of between 40%-60% equity securities, with the remainder invested in bonds, cash, and cash equivalents. |
| NC | North Carolina Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in North Carolina, (double tax-exempt) or city, (triple tax-exempt). |
| NJ | New Jersey Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in New Jersey, (double tax-exempt) or city, (triple tax-exempt). |
| NJM | New Jersey Tax-Exempt Money Market Funds | Funds invest in municipal obligations of New Jersey, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| NR | Natural Resources Funds | Funds invest primarily in natural resources stocks. |
| NY | New York Municipal Debt Funds | Funds that limit their assets to those securities that are exempt from taxation in New York, (double tax-exempt) or city, (triple tax-exempt). |
| NYI | New York Insured Municipal Debt Funds | Funds that invest at least 65% of their assets in those securities that are exempt from taxation in New York, and are insured as to timely payment. |
| NYM | New York Tax-Exempt Money Market Funds | Funds invest in municipal obligations of New York state, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep constant net asset value. |
| NYT | New York Intermdt Municipal Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in New York, with dollar-weighted average maturities of five to ten years. |
| OH | Ohio Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Ohio, (double tax-exempt) or city, (triple tax-exempt). |
| OHM | Ohio Tax-Exempt Money Market Funds | Funds invest in municipal obligations of Ohio state, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| OHT | Ohio Intermediate Municipal Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in Ohio, with dollar-weighted average maturities of five to ten years. |
| OR | Oregon Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Oregon, (double tax-exempt) or city, (triple tax-exempt). |
| OSS | Other States Short-Intmdt Muni Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of one to five years and are exempt from taxation on a specified city or state basis. |
| OST | Other States Intermediate Muni Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of five to ten years and are exempt from taxation on a specified city or state basis. |
| OTH | Other States Municipal Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of five to ten years and are exempt from taxation on a specified city or state basis. |
| OTM | Other States Tax-Exempt Money Market Funds | Funds invest in municipal obligations of other states, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep constant net asset value. |
| PA | Pennsylvania Municipal Debt Funds | Funds that limit assets to those securities that are exempt from taxation in Pennsylvania, (double tax-exempt) or city, (triple tax-exempt). |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
|---|--|---|
| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| PAM | Pennsylvania Tax-Exempt Money Market Funds | Funds invest in municipal obligations of Pennsylvania state, (double tax-exempt) or city, (triple tax-exempt) with dollar-weighted average maturities of less than 90 days. Intend to keep constant net asset value. |
| PAT | Pennsylvania Intermediate Muni Debt Funds | Funds invest primarily in municipal debt issues that are exempt from taxation in Pennsylvania, with dollar-weighted average maturities of five to ten years. |
| PC | Pacific Region Funds | Funds that concentrate investments in equity securities with primary trading markets or operations concentrated in the Western Pacific Basin region or a single country within this region. |
| RE | Real Estate Funds | Funds invest primarily in equity securities of domestic and foreign companies engaged in the real estate industry. |
| S | Specialty/Miscellaneous Funds | Funds that limit fund investments to a specific industry (e.g., transportation, retailing, or paper, etc.) or one that has not been classified into an existing investment objective. |
| SC | South Carolina Municipal Debt Funds | Funds that limit their assets to those securities that are exempt from taxation in South Carolina (double tax-exempt) or city (triple tax-exempt). |
| SCCE | Small-Cap Core Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 250% of the dollar-weighted median of the smallest 500 of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Small-cap core funds have more latitude in the companies in which they invest. These funds typically have an average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SmallCap 600 Index. |
| SCGE | Small-Cap Growth Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 250% of the dollar-weighted median of the smallest 500 of the middle 1,000 securities of the S&P SuperComposite 1500 Index. Small-cap growth funds typically have an above-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SmallCap 600 Index. |
| SCVE | Small-Cap Value Funds | Funds that, by portfolio practice, invest at least 75% of their equity assets in companies with market capitalizations (on a three-year weighted basis) less than 250% of the dollar-weighted median of the smallest 500 of the middle 1,000 securities of S&P SuperComposite 1500 Index. Small-cap value funds typically have a below-average price-to-earnings ratio, price-to-book ratio, and three-year sales-per-share growth value, compared to the S&P SmallCap 600 Index. |
| SESE | Specialty Diversified Equity Funds | Funds that, by portfolio practice, invest in all market capitalization ranges without restriction. These funds typically have distinctly different strategies and performance, resulting in a low coefficient of determination (r-squared) compared to other U.S. diversified equity funds. Examples of specialty diversified equity funds include enhanced index funds and market short funds. |
| SFI | Specialty Fixed Income | Funds that by portfolio practice invest in fixed income strategies that are outside Lipper's other fixed income classifications. These funds typically have distinctly different performance and strategies, including the use of short positions and leverage. |
| SG | Small-Cap Funds | Funds that by prospectus or portfolio practice invest primarily in companies with market capitalizations less than \$1 billion at the time of purchase. |
| SID | Short Investment Grade Debt Funds | Funds invest primarily in investment grade debt issues (rated in top four grades) with dollar-weighted average maturities of less than three years. |
| SII | Short-Intmtd Investment Grade Debt Funds | Funds invest primarily in investment grade debt issues (rated in top four grades) with dollar-weighted average maturities of one to five years. |
| SIM | Short-Intmtd Municipal Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of one to five years. |
| SIU | Short-Intermediate U.S. Government Funds | Funds invest primarily in securities issued or guaranteed by the U.S. government, its agencies, or its instrumentalities, with dollar-weighted average maturities of one to five years. |
| SMD | Short Municipal Debt Funds | Funds invest in municipal debt issues with dollar-weighted average maturities of less than three years. |
| SP | S&P 500 Index Objective Funds | Funds that are passively managed and commit by prospectus language to replicate the performance of the S&P 500 Index, including reinvested dividends. In addition, S&P 500 Index funds have limited expenses (advisor fee no higher than 0.50%). |

| LIPPER OBJECTIVE AND CLASSIFICATION CODES | | |
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| Fund Style Table. Variables lipper_class, lipper_class_name, lipper_obj_cd, lipper_obj_name. Page 12) | | |
| CODE | OBJECTIVE CLASS NAME | DESCRIPTION |
| SPSP | S&P 500 Index Objective Funds | Funds that are passively managed and commit by prospectus language to replicate the performance of the S&P 500 Index, including reinvested dividends. In addition, S&P 500 Index funds have limited expenses (advisor fee no higher than 0.50%). |
| SSIM | Single-State Insured Municipal Debt Funds | In Open-End and Closed-End Funds; Funds that limit assets to those securities exempt from taxation in a specified state (double tax-exempt) or city (triple tax-exempt) and are insured as to timely payment. Due to the introduction of the Single-State Insured Municipal Debt Funds (SSIM) classification, the New York Insured Municipal Debt FUNDS (NYI) and California Insured Municipal Debt Funds (CAI) classifications will not be available after May 23, 2008. These classifications will be collapsed into the Single-State Insured Municipal Debt Funds classification; however, Lipper will continue to maintain the NYI and CAI objectives. |
| STB | Stable Value Funds | Funds that aim to provide income while limiting price fluctuations by investing primarily in guaranteed investment contracts (GICs) or wrapped bonds (synthetic GICs). |
| SUS | Short U.S. Government Funds | Funds invest primarily in securities issued or guaranteed by the U.S. government, its agencies, or its instrumentalities, with dollar-weighted average maturities of less than three years. |
| SUT | Short U.S. Treasury Funds | Fund invests primarily in U.S. Treasury bills, notes and bonds with dollar-weighted average maturities of less than three years. |
| SWM | Short World Mult-Market Income Funds | Funds that invest in non-U.S. dollar and U.S. dollar debt instruments and, by policy, keep a dollar-weighted average maturity of less than five years. |
| TEM | Tax-Exempt Money Market Funds | Funds invest in high quality municipal obligations with dollar-weighted average maturities of less than 90 days. Intend to keep a constant net asset value. |
| TK | Science & Technology Funds | Funds invest primarily in science and technology stocks. |
| TL | Telecommunication Funds | Funds invest primarily in equity securities of domestic and foreign companies engaged in the development, manufacture, or sales of telecommunications services or equipment. |
| TM | Target Maturity Funds | Funds invest principally in zero-coupon U.S. Treasury securities or in coupon-bearing U.S. government securities targeted to mature in a specific year. |
| TN | Tennessee Municipal Debt Funds | Funds that limit its assets to those securities that are exempt from taxation in Tennessee, (double tax-exempt) or city, (triple tax-exempt). |
| TX | Texas Municipal Debt Funds | Funds that limit their assets to those securities that are exempt from taxation in Texas (double tax-exempt) or city (triple tax-exempt). |
| USM | U.S. Mortgage Funds | Funds invest primarily in mortgages/securities issued or guaranteed as to principal and interest by the U.S. government and certain federal agencies. |
| USO | Ultra-Short Obligations Funds | Funds invest primarily in investment grade debt issues, or better, and maintains a portfolio dollar-weighted average maturity between 91 days and 365 days. |
| USS | U.S. Government Money Market Funds | Funds invest principally in financial instruments issued or guaranteed by the U.S. government, its agencies, or its instrumentalities, with dollar-weighted average maturities of less than 90 days. Intend to keep a constant NAV. |
| UST | U.S. Treasury Money Market Funds | Funds invest principally in U.S. Treasury obligations with dollar-weighted average maturities of less than 90 days. Intend to keep a constant net asset value. |
| UT | Utility Funds | Funds invest primarily in utility shares. |
| VA | Virginia Municipal Debt Funds | Funds that limit their assets to those securities that are exempt from taxation in Virginia, (double tax-exempt) or city, (triple tax-exempt). |
| VAT | Virginia Intermediate Municipal Debt Funds | Funds that invest at least 65% of its assets in municipal debt issues that are exempt from taxation in Virginia, with dollar-weighted average maturities of five to ten years. |
| WA | Washington Municipal Debt Funds | Funds that limit their assets to those securities that are exempt from taxation in Washington (double tax-exempt) or city (triple tax-exempt). |
| XJ | Pacific Ex Japan Funds | Funds that concentrate investments in equity securities with primary trading markets or operations concentrated in the Pacific region (including Asian countries) and that specifically does not invest in Japan. |

STRATEGIC INSIGHTS OBJECTIVE CODES

| STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED (Fund Style Table. Variable: si_obj_cd. Page 12) | |
|--|---------------------------------------|
| CODE | CODE NAME |
| AGG | Equity USA Aggressive Growth |
| BAL | Asset Allocation USA Balanced |
| BGA | Tx Bd Pan Americas |
| BGC | Global Corporation Fixed Income |
| BGE | Tx Bd Global Emerging Market |
| BGG | Tx Bd Global Govt Bond |
| BGN | Tx Bd Global Bond General |
| BGS | Tx Bd Global Bond Short |
| CGN | Tx Bd Corp Bond General |
| CHQ | Tx Bd Corp High Quality |
| CHY | Tx Bd Corp High Yield |
| CIM | Tx Bd Corp Intermediate |
| CMQ | Tx Bd Corp Medium Quality |
| CPF | Asset Allocation USA Preferred |
| CPR | Tx Bd Corp Prime Rate |
| CSI | Tx Bd Strategic Income |
| CSM | Tx Bd Corp Short |
| CVR | Convertibles |
| ECH | Equity Greater China |
| ECN | Equity Canada |
| EGG | Equity Global Growth |
| EGS | Equity Global Small Company |
| EGT | Equity Global Total Return |
| EGX | Equity Global Equity Sector |
| EID | Equity Global Emerging Markets |
| EIG | Equity International Growth |
| EIS | Equity International Small Company |
| EIT | Equity International Total Return |
| EJP | Equity Japan |
| ELT | Equity Latin America |
| ENV | Equity USA Environmental |
| EPC | Equity Asia Pacific Including Japan |
| EPR | Asset Allocation USA Principle Return |
| EPX | Equity Asia Pacific Excluding Japan |
| ERP | Equity European |
| ESC | Equity Single Country |
| FIN | Equity USA Financial Sector |
| FLG | Asset Allocation Global Flexible |
| FLX | Asset Allocation USA Flexible |
| GBG | Global Bond General |
| GBS | Global Bond Short Maturity |
| GGN | Tx Bd USA Govt General |
| GIM | Tx Bd USA Govt Intermediate |

STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED

(Fund Style Table. Variable: si_obj_cd. Page 12)

| CODE | CODE NAME |
|-------------|-------------------------------------|
| GLD | Equity Gold |
| GLE | Global Equity |
| GMA | Tx Bd USA Govt Mortgage Adj Returns |
| GMB | Tx Bd USA Govt Mortgage Backed |
| GMC | Equity USA Midcaps |
| GRI | Equity USA Growth & Income |
| GRO | Equity USA Growth |
| GSM | Tx Bd USA Govt Short |
| HLT | Equity USA Health |
| IAZ | TxFr Bd Muni Intermediate AZ |
| ICA | TxFr Bd Muni Intermediate CA |
| ICO | TxFr Bd Muni Intermediate CO |
| ICT | TxFr Bd Muni Intermediate CT |
| IFL | TxFr Bd Muni Intermediate FL |
| IGA | TxFr Bd Muni Intermediate GA |
| IHI | TxFr Bd Muni Intermediate HI |
| IKS | TxFr Bd Muni Intermediate KS |
| IKY | TxFr Bd Muni Intermediate KY |
| IMA | TxFr Bd Muni Intermediate MA |
| IMD | TxFr Bd Muni Intermediate MD |
| IMI | TxFr Bd Muni Intermediate MI |
| IMN | TxFr Bd Muni Intermediate MN |
| IMT | TxFr Bd Muni Intermediate MT |
| IMX | Asset Allocation USA Income |
| INC | TxFr Bd Muni Intermediate NC |
| IND | TxFr Bd Muni Intermediate ND |
| ING | Equity USA Income & Growth |
| INJ | TxFr Bd Muni Intermediate NJ |
| INM | TxFr Bd Muni Intermediate NM |
| INY | TxFr Bd Muni Intermediate NY |
| IOH | TxFr Bd Muni Intermediate OH |
| IOR | TxFr Bd Muni Intermediate OR |
| IPA | TxFr Bd Muni Intermediate PA |
| ISC | TxFr Bd Muni Intermediate SC |
| ISD | TxFr Bd Muni Intermediate SD |
| ITN | TxFr Bd Muni Intermediate TN |
| ITX | TxFr Bd Muni Intermediate TX |
| IVA | TxFr Bd Muni Intermediate VA |
| IVT | TxFr Bd Muni Intermediate VT |
| IWA | TxFr Bd Muni Intermediate WA |
| IWV | TxFr Bd Muni Intermediate WV |
| JPN | Japanese Equity |
| LCA | TxFr Bd Muni Short CA |

| STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED | |
|--|-------------------------------|
| (Fund Style Table. Variable: si_obj_cd. Page 12) | |
| CODE | CODE NAME |
| LFL | TxFr Bd Muni Short FL |
| LKY | TxFr Bd Muni Short KY |
| LMA | TxFr Bd Muni Short MA |
| LMD | TxFr Bd Muni Short MD |
| LMI | TxFr Bd Muni Short MI |
| LNC | TxFr Bd Muni Short NC |
| LNY | TxFr Bd Muni Short NY |
| LTN | TxFr Bd Muni Short TN |
| LVA | TxFr Bd Muni Short VA |
| MAL | TxFr Bd Muni AL |
| MAR | TxFr Bd Muni AR |
| MAZ | TxFr Bd Muni AZ |
| MCA | TxFr Bd Muni CA |
| MCO | TxFr Bd Muni CO |
| MCT | TxFr Bd Muni CT |
| MDE | TxFr Bd Muni DE |
| MFL | TxFr Bd Muni FL |
| MGA | TxFr Bd Muni GA |
| MGN | TxFr Bd Fed Muni General |
| MHI | TxFr Bd Muni HI |
| MHY | TxFr Bd Fed Muni High Yield |
| MIA | TxFr Bd Muni IA |
| MID | TxFr Bd Muni ID |
| MIL | TxFr Bd Muni IL |
| MIM | TxFr Bd Fed Muni Intermediate |
| MIN | TxFr Bd Muni IN |
| MIS | TxFr Bd Fed Muni Insured |
| MKS | TxFr Bd Muni KS |
| MKY | TxFr Bd Muni KY |
| MLA | TxFr Bd Muni LA |
| MMA | TxFr Bd Muni MA |
| MMD | TxFr Bd Muni MD |
| MME | TxFr Bd Muni ME |
| MMI | TxFr Bd Muni MI |
| MMN | TxFr Bd Muni MN |
| MMO | TxFr Bd Muni MO |
| MMS | TxFr Bd Muni MS |
| MMT | TxFr Bd Muni MT |
| MNC | TxFr Bd Muni NC |
| MND | TxFr Bd Muni ND |
| MNE | TxFr Bd Muni NE |
| MNH | TxFr Bd Muni NH |
| MNJ | TxFr Bd Muni NJ |

| STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED | |
|--|-----------------------------------|
| (Fund Style Table. Variable: si_obj_cd. Page 12) | |
| CODE | CODE NAME |
| MNM | TxFr Bd Muni NM |
| MNY | TxFr Bd Muni NY |
| MOH | TxFr Bd Muni OH |
| MOK | TxFr Bd Muni OK |
| MOR | TxFr Bd Muni OR |
| MPA | TxFr Bd Muni PA |
| MPR | TxFr Bd Muni PR |
| MRI | TxFr Bd Muni RI |
| MSC | TxFr Bd Muni SC |
| MSD | TxFr Bd Muni SD |
| MSM | TxFr Bd Fed Muni Short |
| MTN | TxFr Bd Muni TN |
| MTX | TxFr Bd Muni TX |
| MUT | TxFr Bd Muni UT |
| MVA | TxFr Bd Muni VA |
| MVT | TxFr Bd Muni VT |
| MWA | TxFr Bd Muni WA |
| MWI | TxFr Bd Muni WI |
| MWV | TxFr Bd Muni WV |
| NTR | Equity Natural Resources & Energy |
| OPI | Option Income |
| PAC | Pacific Equity |
| RLE | Equity USA Real Estate |
| SBA | Tx MM Bank Govt & Agency |
| SBE | Tx MM Bank Prime Euro |
| SBP | Tx MM Bank Prime |
| SBT | Tx MM Bank Govt |
| SBY | Tx MM Bank Prime Euro Yank |
| SCG | Equity USA Small Companies |
| SCU | Tx MM Currency Funds |
| SEC | Equity USA Misc Sectors |
| SIA | Tx MM Instl Govt & Agency |
| SIE | Tx MM Instl Prime Euro |
| SIP | Tx MM Instl Prime |
| SIT | Tx MM Instl Govt |
| SIY | Tx MM Instl Prime Euro Yank |
| SPE | Tx MM Prime Euro |
| SPR | Tx MM Prime |
| SPY | Tx MM Prime Euro Yank |
| SUA | Tx MM Govt & Agency |
| SUT | Tx MM Govt |
| TAL | TxFr MM Muni AL |
| TAZ | TxFr MM Muni AZ |

| STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED | |
|--|-------------------------------|
| (Fund Style Table. Variable: si_obj_cd. Page 12) | |
| CODE | CODE NAME |
| TBG | TxFr MM Fed Muni Bank Managed |
| TCA | TxFr MM Muni CA |
| TCT | TxFr MM Muni CT |
| TEC | Equity USA Technology |
| TFG | TxFr MM Fed Muni General |
| TFI | TxFr MM Fed Muni Instl |
| TFL | TxFr MM Muni FL |
| TGA | TxFr MM Muni GA |
| TMA | TxFr MM Muni MA |
| TMD | TxFr MM Muni MD |
| TMI | TxFr MM Muni MI |
| TMN | TxFr MM Muni MN |
| TNC | TxFr MM Muni NC |
| TNJ | TxFr MM Muni NJ |
| TNY | TxFr MM Muni NY |
| TOH | TxFr MM Muni OH |
| TPA | TxFr MM Muni PA |
| TTN | TxFr MM Muni TN |
| TTX | TxFr MM Muni TX |
| TVA | TxFr MM Muni VA |
| UTI | Equity USA Utilities |

APPENDIX B: SAS SAMPLE PROGRAMS

The intent of the following sample programs is to demonstrate usage of mutual fund data with SAS.

PORTFOLIO.SAS SAS SAMPLE PROGRAM 1

The intent of this sample program is to demonstrate the relationship between CRSP_FUNDNO, CRSP_PORTNO, and crsp_company_key using the Holdings, CRSP_PORTNO Map, and CRSP Company Info tables. Holdings are extracted for a specified fund, but the program may be modified to extract holdings for a group of funds.

```
/*This sample program will retrieve the most recent Holdings information for CRSP_Fundno  
002761.
```

```
    An output SAS dataset called portfolio.sas7bdat and an output file in EXCEL called  
portfolio.xls are created */
```

```
/*Define the libname. The first libname points to the directory where the Mutual Fund  
database is located.
```

```
The second libname points to the directory where the output files will be saved.*/
```

```
libname mfdb 'C:\crspdata\MFZ200803\sas\data\';
```

```
libname mfdbOut 'C:\Temp\mfdb\';
```

```
/* Retrieve the associated CRSP_portno from crsp_portno_map dataset and retrieve the most  
recent holdings data from Holdings dataset. */
```

```
proc sql;
```

```
create table temp1 as
```

```
select b.crsp_fundno, a.crsp_portno, a.report_dt, a.security_rank, a.eff_dt, a.percent_  
tna, a.nbr_shares, a.market_val, a.crsp_company_key
```

```
from mfdb.holdings as a, mfdb.crsp_portno_map as b
```

```
where a.crsp_portno=b.crsp_portno
```

```
and b.crsp_fundno=002761
```

```
group by a.crsp_portno
```

```
having report_dt eq max(report_dt);
```

```
quit;
```

```
/* Retrieve the holdings company information from Holdings_co_info dataset. */
```

```
proc sort data=temp1 out=temp1_order; by crsp_company_key; run;
```

```
data temp2;
```

```
merge temp1_order(in=in1) mfdb.holdings_co_info(in=in2);
```

```
by crsp_company_key;
```

```
if in1 and in2;
```

```
run;
```

```
proc sort data=temp2 out=mfdbOut.portfolio; by security_rank; run;
```

```
/*Delete all temporary datasets.*/
```

```
proc datasets; delete temp1 temp1_order temp2;quit; run;
```

```
/*Export to EXCEL*/
```

```
proc export data=mfdbOut.portfolio
  outfile='c:\temp\mfdb\portfolio.xls'
  dbms=excel
  replace;
run;
```

| crso_fundno | crso_portno | report_dt | security_rank | eff_dt | percent_tna | nbr_shares | market_val | crsp_co_key | security_name |
|-------------|-------------|------------|---------------|------------|-------------|------------|------------|-------------|------------------|
| 2761 | 1000396 | 12/31/2007 | 1 | 12/31/2007 | 4.93166861 | 1014900 | 99835713 | 12193 | SCHLUMBERGER LTD |
| 2761 | 1000396 | 12/31/2007 | 2 | 12/31/2007 | 4.72399866 | 138300 | 95631684 | 5965 | GOOGLE INC |

COMPANIES HELD BY GROWTH FUNDS.SAS

SAS SAMPLE PROGRAM 2

Users may wish to identify securities held in a fund type and count the number of portfolios within that fund type that hold each of the funds' holdings.

In this sample, using the Lipper Objective Code, Growth funds are selected. Using CRSP_FUNDNO and CRSP_PORTNO, portfolios are identified for the funds that are included, and companies within the portfolios are identified by linking CRSP_PORTNO and crsp_company_key. The number of times each company is in a used portfolio is counted and sorted.

```
/* Find the companies most widely held by growth fund portfolios */
/* select funds with portfolio numbers and have "Growth" as their Lipper
Objective Code */
```

```
libname sample 'C:\crspdata\MFX200803\data';
```

```
data funds_w_port (keep = crsp_fundno crsp_portno);
set sample.fund_hdr;
if crsp_portno > ' ';
run;
```

```
data Gfunds_w_port (keep = crsp_fundno crsp_portno lipper_obj_cd);
merge funds_w_port (in=wport) sample.fund_style;
by crsp_fundno;
if wport;
if lipper_obj_cd = 'G';
run;
```

```
proc sql;
```

```
create table Growth_ports as
select unique crsp_portno from gfunfs_w_port;
quit;

/* find and count the companies held be growth portfolios */

data growth_port_companies (keep = crsp_portno crsp_company_key);
merge growth_ports(in = growth) sample.holdings;
by crsp_portno;
if growth;
run;

proc sql;
create table ugrowth_port_companies as
select unique crsp_portno, crsp_company_key
from growth_port_companies;
quit;

proc sql;
create table comp_port_cnt as
select crsp_company_key, count(*) as port_cnt
from ugrowth_port_companies
group by crsp_company_key;

/* merge with company info table to obtain company name, then sort in descending
order*/

data companies_in_growth (keep = security_name port_cnt);
merge comp_port_cnt (in=growcomp) sample.holdings_co_info;
by crsp_company_key;
if growcomp;
run;

/* show the number of portfolios that hold a particular company */

proc sort data = companies_in_growth;
by descending port_cnt;
run;
```

CLASS_OBJ_FREQ.SAS
SAS SAMPLE PROGRAM 3

An Objective Frequency table is created that indicates the number and percentage of portfolios each security is held.

```
/* For each Lipper objective code and Class code count the number of portfolios
that hold a given security. */

libname mfdb 'c:\crspdata\MFX200803\data\';

proc sql;

/* Merge Fund style Fund Header and Holdings Tables, assigning the related CRSP_
PORTNO, and lipper_class to each holdings observation */
create table merge as
select distinct lipper_class, lipper_obj_cd, Fund_hdr.crsp_portno, Holdings.crsp_
company_key, Holdings_co_info.security_name
from mfdb.Fund_style, mfdb.Fund_hdr, mfdb.Holdings, mfdb.Holdings_co_info
where lipper_class ne '' AND Fund_style.crsp_fundno = Fund_hdr.crsp_fundno AND
Fund_hdr.crsp_portno = Holdings.crsp_portno AND Holdings.crsp_company_key =
Holdings_co_info.crsp_company_key
order by lipper_class
;
quit;

/* create a frequency report for each lipper class and objective code*/

proc freq data=merge order=freq noprint;
by lipper_class;
tables crsp_company_key / nocum out=classfreq;
quit;

/* re-sort the merge dataset by lipper objective code before creating the
frequency report */

proc sort data=merge;
by lipper_obj_cd;
run;

proc freq data = merge order=freq noprint;
by lipper_obj_cd;
tables crsp_company_key / nocum out=objfreq;
quit;
```