



CRSP[®] RESEARCH DATA PRODUCTS

**CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND
DATABASE GUIDE**

FOR SAS, ASCII & R

WHO WE ARE:

Founded at the University of Chicago, CRSP has transformed the world of finance. More than 65 years ago, CRSP developed the first market database that allowed investors to measure historic rates of return for U.S. stocks, broadening the appeal of equity ownership. More than 15 years ago, CRSP launched investable indexes that have become trusted by investors globally, including managers of the world's largest mutual fund.

In February 2026, the acquisition of CRSP brought the CRSP Market Indexes—benchmarks for over \$3 trillion in U.S. equities—into the [Morningstar Indexes](#) family. Additionally, the CRSP Research Data Products, renowned for their academic rigor, historical depth, and accuracy, will further enhance Morningstar's equity research and data capabilities. This integration unites two trusted sources of market insight, reinforcing a shared commitment to transparency, quality, and investor-focused solutions.

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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, SAS and R formats.

Files for all formats share common names with the following File Extensions:

- SAS: *.sas7bdat
- ASCII: *.dat
- R: *.rds

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

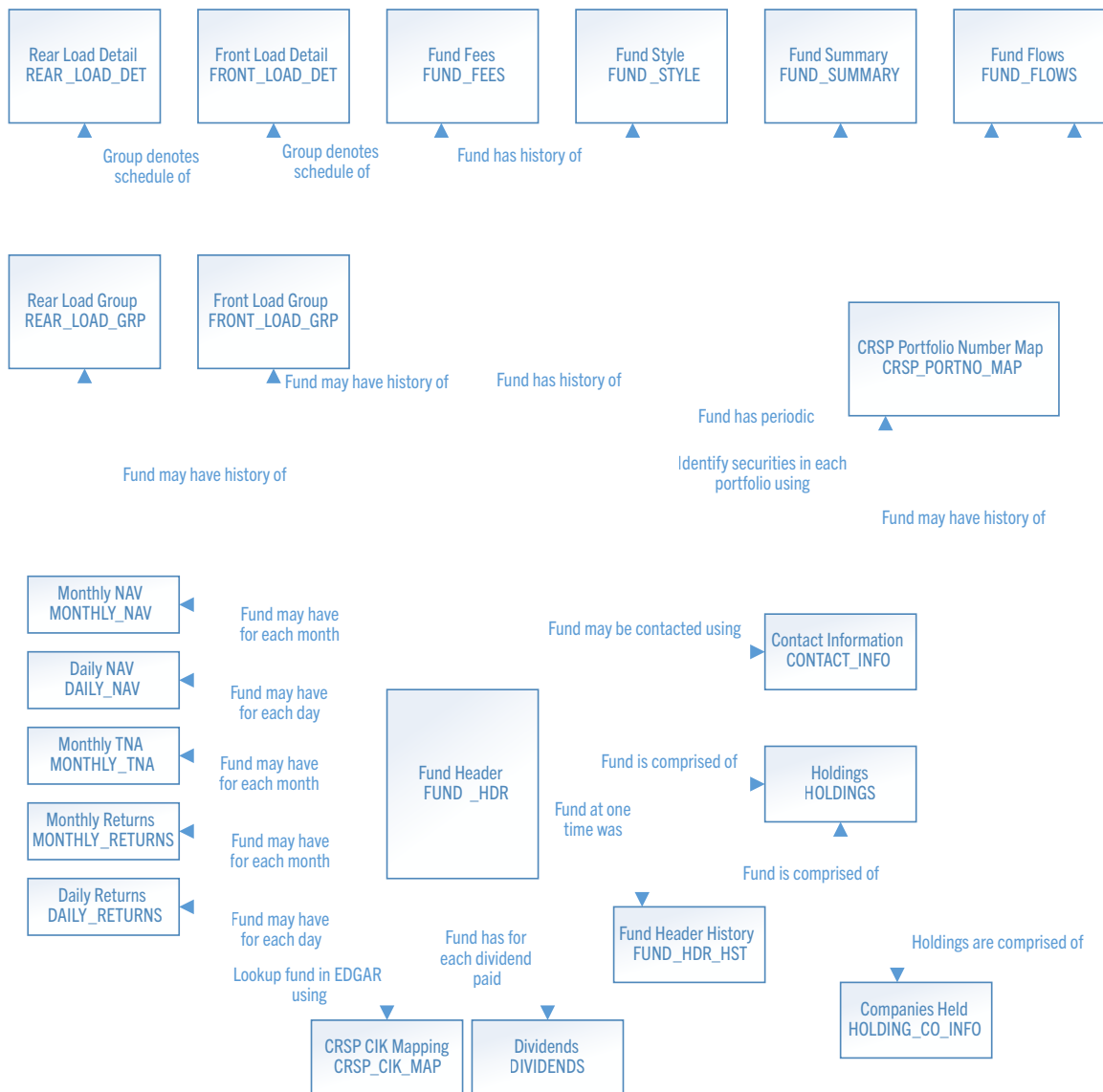
DATA MODEL FOR THE CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND DATABASE

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
crsp_cik_map	CRSP CIK mapping	EDGAR CIK mapping for each fund, fund series, and fund company
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_flows	Fund Flows	Fund Sales and Redemptions as of the last trading day of each month
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

Each data item in each table is associated with a Data Category. The Data Category identifies the type of item and the associated formats for use with SAS, ASCII, R, and SQL.

Data Category	Description	SAS Type	SAS Format	ASCII	SQL Type	R Type
Flag	One-character field - often just 'Y' and 'N'	Character	\$1.		char(1)	Text
Description	Wide character field containing text information	Character	\$w.		varchar(w)	Text
Id	Field containing an alphanumeric identifier	Character	\$w.		varchar(w)	Text
Mnemonic	Alphanumeric field containing a code value	Character	\$w.		varchar(w)	Text
Name	Alphanumeric field for names	Character	\$w.		varchar(w)	Text
Date	Date field	Numeric	yyyymmdd10.	YYYY-MM-DD	Date	date
Start Date	Start of a date range - paired with an end date	Numeric	yyyymmdd10.	YYYY-MM-DD	Date	date
End Date	End of a date range - paired with a start date	Numeric	yyyymmdd10.	YYYY-MM-DD	Date	date
Timestamp	Date and time, including seconds	Numeric	datetime	YYYY-MM-DD HH:MM:SS	Datetime	datetime
Amount	Fixed point number	Numeric	w.n	ww.nnnnn	Decimal (p,n)	float
Ratio	Calculated floating point number	Numeric	percentw.n	1.234567890123E+12	float	float
Value	Field with a wide range of values	Numeric	e20.	1.234567890123E+12	float (or decimal)	float
Code	Integer field that represents one or more characteristics	Numeric	w.	nnnn	Int	int
Key	Integer field that is used as a key	Numeric	w.	nnnnnnn	int	int

Data Category	Description	SAS Type	SAS Format	ASCII	SQL Type	R Type
Number	Integer value < 2,000,000,000	Numeric	w.	nnnnnnnnnn	int	int
Quantity	Integer field with some values in excess of 2,000,000,000	Numeric	commaw.	nnnnnnnnnnnnnn	bigint	float

Missing values are displayed as follows:

- ASCII missing values, regardless of type, is an empty string
- SAS missing values are an empty string for character fields and SAS missing (displayed as a.) for numeric fields
- R missing values are an empty string for character fields, and 'R' missing (displayed as N/A) for float, int, date and datetime.

VARIABLE LISTINGS WITHIN TABLES

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

CRSP CIK MAPPING "CRSP_CIK_MAP"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	CRSP unique identifier for fund		Key
	Comp_CIK	EDGAR Central Index Key identifier assigned to a fund management company	Company filings availability on EDGAR begins in Q4 1993	Key
	series_CIK	EDGAR Central Index Key Identifier assigned to a group of series of share classes issued against the same portfolio of assets	Company filings availability on EDGAR begins in Q4 1993	ID
	contract_CIK	EDGAR Central Index Key Identifier assigned a single share class/contract, analogous to crsp_fundno identifier	Company filings availability on EDGAR begins in Q4 1993	ID

CONTACT INFORMATION "CONTACT_INFO"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	chgdtd	Change Date – beginning of range for contact information		Start date
	chgenddt	Change End Date- end of range for contact information		End Date
	address1	Management company address - Line 1	Begins January 2000	Description
	address2	Management company address - Line 2	Begins January 2000	Description
	city	Management company city	Begins January 2000	Description
	state	Management company state	Begins January 2000	Description
	zip	Management company zip code	Begins January 2000	ID
	phone_number	Management company phone number	Begins January 2000	ID
	fund_toll_free	Fund company toll free number	Begins January 2000	ID
	website	Website address of fund or management company	Begins January 2008	Description

DAILY NET ASSET VALUE "DAILY_NAV"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Calendar date for which daily NAV applies		Date
	dnav	Daily value of the fund's underlying assets (including cash) minus its liabilities (fees, expenses, etc.) divided by the number of shares outstanding. Missing values represented by 'N' in SAS format. Missing value represented by -99 in ASCII format.	Begins September 2, 1998	Value

DAILY RETURNS “DAILY_RETURNS”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Calendar date for which return data applies		date
	dret	Total daily return per share associated with given date. See note below for more details. Missing values represented by 'R' in SAS format. Missing value represented by -99 in ASCII format.	Begins September 2, 1998	Ratio

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 from the calculation of NAV and therefore do not impact the calculation of returns.

Returns are calculated as follows:

$$R_t = \frac{Nav_t * cumfact}{Nav_{t-1}} - 1$$

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”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund	Begins December 1961	Key
2	caldt	Calendar date for which dividend applies		Date
3	dis_type	<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>		Mnemonic
	dis_amt	Distribution Amount If dis_type = S (Split), dis_amt = 0		Value
	reinvest_nav	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		Value
	spl_ratio	Split ratio		Ratio

FRONT LOAD DETAIL “FRONT_LOAD_DET”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	front_group_no	Front Group Number - Unique identifier for the front load group. This item allows a schedule of front load fees to be grouped together.		key
3	*dollar_amt	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	Value
	front_load	Front load for investments represents maximum sales charge at breakpoint (represented in decimal format i.e. .075=7.5%)		Ratio

FRONT LOAD GROUP “FRONT_LOAD_GRP”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	front_group_no	Front Group Number – Unique identifier for the front load group. This item allows a schedule of front load fees to be grouped together.		key
	begdt	Load effective date range beginning and ending dates		Start Date
	enddt			End Date

FUND FEES “FUND_FEES”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	begdt	Beginning of date range for fee information. For annual data, information is valid for the year portion of the begin date.		Start Date
	enddt	End of date range for fee information		End Date
	actual_12b1	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	Ratio
	max_12b1	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	Ratio
	exp_ratio	Expense Ratio as of the most recently completed fiscal year. Represented in decimal format. Ratio of total investment that shareholders pay for the fund’s operating expenses, which include 12b-1 fees exp_ratio may include waivers and reimbursements, causing it to appear to be less than the fund management fee.		Ratio
	mgmt_fee	Management fee (\$)/ Average Net Assets (\$) represented as % 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.	Begins 1998	Ratio

Sort	Name	Definition	Data Availability	data category
	turn_ratio	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.		Ratio
	fiscal_yearend	Effective date used for fees		Date

FUND FLOWS “FUND_FLOWS”

Sort	Name	Definition	Data Availability	data category
1	CRSP_PORTNO	CRSP unique identifier for holdings portfolio.		key
2	REPORT_DT	NSAR reporting date.	Filings availability on EDGAR begins Q4 1993	KEY
3	TRANS_DT	Last trading date of the month for reported monthly flows.	Filings availability on EDGAR begins Q4 1993	KEY
	NEW_SLS	Reported monthly total new subscriptions.	Filings availability on EDGAR begins Q4 1993	Value
	REIN_SLS	Reported monthly total of reinvestment subscriptions.	Filings availability on EDGAR begins Q4 1993	Value
	OTH_SLS	Reported monthly total of other sales.	Filings availability on EDGAR begins Q4 1993	Value
	REDEMP	Reported monthly total redemptions.	Filings availability on EDGAR begins Q4 1993	Value

FUND HEADER “FUND_HDR”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		key
	crsp_portno	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.		Key

Sort	Name	Definition	Data Availability	data category
	crsp_cl_grp	Code used to associate different share 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. 	Begins August 31, 1998	Code
	fund_name	The full name of the fund		Name
	ticker	NASDAQ ticker symbol. Available for NASDAQ listed funds only.		Mnemonic
	ncusip	Fund CUSIP. Available for internal use by client only. For CUSIP licensing information, go to: https://www.crsp.org/policies-statements .		ID
	first_offer_dt	Date when the fund was first offered		Date
	mgmt_name	Management Company Name		Name
	mgmt_cd	Management Company Code. An identifier for the Management Company.	Begins December 1999	ID
	mgr_name	Portfolio Manager Name		Name
	mgr_dt	Date that the current portfolio manager assumed responsibility for the portfolio		Date
	adv_name	Fund Advisor Name	Begins December 1999	Name
	open_to_inv	Identifies if the fund is open to investors: Y = Yes N = No	Begins December 1999	Flag
	retail_fund	Identifies if a fund is a retail fund or not: Y = Yes N = No	Begins December 1999	Flag
	Inst_fund	Identifies if a fund is an institutional fund: Y = Yes N = No	Begins December 1999	Flag
	m_fund	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.		Flag

Sort	Name	Definition	Data Availability	data category
	index_fund_flag	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	Begins June 30, 2003	Flag
	vau_fund	Y = Fund is a variable annuity underlying fund N = Fund is not a variable annuity underlying fund		Flag
	et_flag	Identifies if a fund is an ETF or ETN: F = ETF N = ETN		Flag
	end_dt	Date of latest NAV data		Date
	dead_flag	Identifies if a fund is dead or still active: Y = Yes N = No		Flag
	delist_cd	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		Mnemonic
	merge_fundno	CRSP Fundno of the fund that acquired the assets of the delisted fund		Key

FUND HEADER HISTORY “FUND_HDR_HIST”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	chgmt	Date that the header information was active		Start Date
	chgenddt	Date that the header information became inactive		End Date

Sort	Name	Definition	Data Availability	data category
	crsp_portno	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	Key
	crsp_cl_grp	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: <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 GLASS GROUP WHEN THEY SHARE A BASE NAME, BUT A DIFFERENT GROUP WHEN THEY DO NOT. 	Begins August 31, 1998	code
	fund_name	The full name of the fund		Name
	ticker	NASDAQ ticker symbol. Available for NASDAQ listed funds only.		Mnemonic
	ncusip	Fund CUSIP. Available for internal use by client only. Go to http://www.crsp.com/policies-statements for CUSIP licensing information.	Begins 2001	ID
	first_offer_dt	Date when the fund was first offered.		Date
	mgmt_name	Management Company Name	Begins 1993	Name
	mgmt_cd	Management Company Code. An identifier for the Management Company.	Begins December 1999	ID
	mgr_name	Portfolio Manager Name	Begins 1993	Name
	mgr_dt	Date that the current manager took control and assumed responsibility for the portfolio	Begins 1993	Date
	adv_name	Fund Advisor Name	Begins December 1999	Name
	open_to_inv	Identifies if the fund is open to investors: Y = Yes N = No	Begins December 1999	Flag
	retail_fund	Identifies if a fund is a retail fund or not: Y = Yes N = No	Begins December 1999	Flag
	inst_fund	Identifies if a fund is an institutional fund: Y = Yes N = No	Begins December 1999	Flag
	m_fund	Identifies if a fund was originally a "M" fund: Y = Yes N = No		Flag
	index_fund_flag	Identifies if a fund is an index fund: B = Index-based fund D = Index fund E = Index fund enhanced	Begins June 30, 2003	Flag
	vau_fund	Y = Fund is a variable annuity underlying fund N = Fund is not a variable annuity underlying fund		Flag

Sort	Name	Definition	Data Availability	data category
	et_flag	Identifies if a fund is an ETF or ETN: F = ETF N = ETN		Flag

FUND STYLE “FUND_STYLE”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	begdt	Beginning date in range for fund style information		Start Date
	enddt	End date for range for fund style information		end date
	crsp_obj_cd	CRSP mapping of Strategic Insights, Wiesenberger, and Lipper objective codes into a continuous series, providing continuity.		Mnemonic
	si_obj_cd	Strategic Insight objective code	Begins 1993 Ends September 1998	Mnemonic
	accrual_fund	Yes or No flag identifying if fund is an accrual fund. Yes if there are daily accruals	Begins 1999	flag
	sales_restrict	Yes or No flag identifying if fund has sales restrictions. Yes if it is an affinity or employee-only fund	Begins 1999	Flag
	wbrger_obj_cd	Wiesenberger Objective Code used to identify fund strategy. See Appendix A, page 30 .	Available through 1993	Mnemonic
	policy	Types of securities held by the fund identified by character codes	Available through 1990	Mnemonic
	lipper_class	Lipper classification code	Begins December 31, 1999	Mnemonic
	lipper_class_name		Begins December 31, 1999	Name
	lipper_obj_cd	Lipper prospectus objective code	Begins June 30, 1998	Mnemonic
	lipper_obj_name		Begins June 30, 1998	Name
	lipper_asset_cd	2 character code EQ - Equity Funds TX - Taxable Fixed Income Funds MB - Tax Free Fixed Income Funds	Begins December 31, 1999	Mnemonic
	lipper_tax_cd	“Taxable” or “tax exempt”	Begins December 31, 1999	Name

FUND SUMMARY “FUND_SUMMARY”

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Effective date for summary data		Date
	summary_period	A = Annual Q = Quarterly M = Monthly		Mnemonic

Sort	Name	Definition	Data Availability	data category
	nav_latest	Latest Month-end NAV	Begins 1961 with year-end values Switches to quarterly values in 2000	Value
	nav_latest_dt	Latest Month-end NAV date		Date
	tna_latest	Latest Month-end TNA Reported in millions, by convention, 0.1 reflects all total net asset values <=\$100,000.	Begins 1961	Value
	tna_latest_dt	Latest Month-end TNA date		Date
	yield	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	Ratio
	div_ytd	Calendar year-to-date dividend sum		Ratio
	cap_gains_ytd	Calendar year-to-date capital gains sum		Value
	nav_52w_h	52 week high NAV	Begins 1998	value
	nav_52w_h_dt	Date of 52 week high NAV	Begins 1998	Date
	nav_52w_l	52 week low NAV	Begins 1998	Value
	nav_52w_l_dt	Date of 52 week low NAV	Begins 1998	Date
	unrealized_app_dep	Unrealized appreciation/depreciation reported in thousands	Begins 1998	Value
	unrealized_app_dt	Effective date for unrealized appreciation/depreciation	Begins 1998	Date
	asset_dt	Effective date of the asset allocations		Date
	per_com	Amount of fund invested in common stocks		Ratio
	per_pref	Amount of fund invested in preferred stocks		Ratio
	per_conv	Amount of fund invested in convertible bonds		Ratio
	per_corp	Amount of fund invested in corporate bonds		Ratio
	per_muni	Amount of fund invested in municipal bonds		Ratio
	per_govt	Amount of fund invested in government bonds		Ratio
	per_oth	Amount of fund invested in other securities		Ratio
	per_cash	Amount of fund invested in cash		Ratio
	per_bond	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.		Ratio
	per_abs	Amount of fund invested in Asset-Backed Securities	Begins October, 2010	Ratio
	per_mbs	Amount of fund invested in Mortgage-Backed Securities	Begins October, 2010	Ratio
	per_eq_oth	Amount of fund invested in other equities	Begins October, 2010	Ratio
	per_fi_oth	Amount of fund invested in other fixed-income securities	Begins October, 2010	Ratio
	maturity	Weighted average maturity in years		Value
	maturity_dt	Effective date of Weighted average maturity value		Date

HOLDINGS “HOLDINGS”

Sort	Name	Definition	Data Availability	data category
1	crsp_portno	Portfolio number is the unique identifier for a security or a group of securities held in a fund's portfolio		Key
2	report_dt	Date of holdings as reported by CRSP's sources	Begins September 2003	Date
3	security_rank	Rank associated with the percentage of total net assets within the portfolio		Number
	eff_dt	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.		Date
	percent_tna	Security's percentage of the total net assets in the portfolio. Value on which the security rank is calculated.		Ratio
	nbr_shares	Number of the security's shares held in the portfolio		Number
	market_val	Market value of the security as of the report date shown on the record		Value
4	crsp_company_key	Unique identifier for company information associated with holdings file		Key

HOLDINGS COMPANY INFORMATION "HOLDINGS_CO_INFO"

Sort	Name	Definition	Data Availability	data category
1	crsp_company_key	Unique identifier for company information associated with holdings file		Key
	security_name	Name of the security held		Name
	cusip	CUSIP associated with the security		ID
	permno	CRSP's permanent stock issue identifier. Available for issues covered in the CRSP universe.		Key
	permco	CRSP's permanent company identifier. Available for companies covered in the CRSP universe.		Key
	ticker	Ticker symbol given by the exchange		Id
	coupon	Bond coupon rate		Ratio
	maturity_dt	Date of bond maturity		date

CRSP PORTNO MAPPING "CRSP_PORTNO_MAP"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
	crsp_portno	Portfolio number is the unique identifier for a security or a group of securities held in a fund's portfolio		Key
2	begdt	Beginning date for which the map is valid		Start Date
	enddt	Ending date for which the map is valid		End DAtE

MONTHLY NET ASSET VALUE "MONTHLY_NAV"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Calendar date for which monthly NAV applies		Date

Sort	Name	Definition	Data Availability	data category
	mnav	Monthly value of the fund's underlying assets (including cash) minus its liabilities (fees, expenses, etc.) divided by the number of shares outstanding. Missing values represented by 'N' in SAS format. Missing value represented by -99 in ASCII format.	Begins December 1961	Value

MONTHLY RETURNS "MONTHLY_RETURNS"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Calendar date for which monthly returns data apply		Date
	mret	Total return per share as of month end. See note below for more details. Missing values represented by 'R' in SAS format. Missing value represented by -99 in ASCII format.	Begins December 1961	Ratio
Note about returns: Please see the note with Daily Returns on page 6.				

MONTHLY TOTAL NET ASSETS "MONTHLY_TNA"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	caldt	Calendar date for which monthly TNA applies		Date
	mntna	Monthly TNA is equal to total assets minus total liabilities as of month-end. Reported in millions of dollars. Missing values represented by 'T' in SAS format. Missing value represented by -99 in ASCII format. 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	Value

REAR LOAD DETAIL "REAR_LOAD_DET"

Sort	Name	Definition	Data Availability	data category
1	crsp_fundno	Unique identifier for fund		Key
2	rear_group_no	Rear Group Number - Unique identifier for the rear load group. This item allows a schedule of rear load fees to be grouped together.		Key
3	load_type	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."		Mnemonic
	inv_lvl	Dollar amount of investment level	Future use	Number
4	time_period	When investment is held this number of months or less, the associated rear-load fee applies		Amount
	rear_load	Fee charged when withdrawing funds		Value

REAR LOAD GROUP “REAR_LOAD_GRP”

Sort	Name	Definition	Data Availability	data category
1	CRSP_FUNDNO	UNIQUE IDENTIFIER FOR FUND		KEY
	REAR_GROUP_NO	REAR GROUP NUMBER - UNIQUE IDENTIFIER FOR THE REAR LOAD GROUP. THIS ITEM ALLOWS A SCHEDULE OF REAR LOAD FEES TO BE GROUPED TOGETHER.		KEY
2	BEGDT	BEGINNING DATE FOR WHICH THE GROUP WAS ACTIVE		START DATE
	ENDDT	DATE FOR WHICH THE GROUP BECAME INACTIVE		END DATE

APPENDIX A: DATA CODE LISTING

POLICY CODES

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 (O)	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		
Equity (E)	Domestic (D)	Cap-based (C)	Large Cap (L)	SP S&P 500 Index Objective Funds				
			Mid Cap (M)	MC Mid-Cap Funds SPMC S&P Midcap 400 Index 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		
		Equity (E)	Domestic (D)	Style (Y)	Hedged (H)	ABR ABSOLUTE RETURN FUNDS DL EQUITY LEVERAGE FUNDS EMN Equity Market Neutral Funds LSE Long/Short Equity Funds		
					Short (S)	DSB Dedicated Short Bias Funds		

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER		
Equity (E)			Income (I)	EI Equity Income Funds	OPI Option Income	IEQ Equity Income		
					ENV Equity USA Environmental			
				PS Income and Preferred Stock Funds				
	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			
			Pacific Ex Japan (X)	XJ Pacific Ex Japan Funds	EPX Equity Asia Pacific Excluding Japan			
					ESC Equity Single Country			
				Sector (S)	Gold (O)			
					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)					
Foreign (F)	Sector (S)	Consumer Goods (G)						
		Commodities (C)						
		Consumer Services (S)						
		Industrials (I)	GIF Global Infrastructure Funds					
		Materials (M)						
		Telecom (A)						

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER
					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	
			Total Return (T)		EGT Equity Global Total Return EIT Equity International Total Return	
					IF International Funds FM Frontier Markets Funds GL Global Funds	GLE Global Equity INT International Equity
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	
Fixed Income (I)	Muni (U)	Intermediate Duration (I)		CAT California Intermdt Municipal Debt Funds FLT Florida Intermediate Municipal Debt Fds IMD Intermediate Municipal Debt Funds MAT Massachusetts Intermediate Muni Debt Fds	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	

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER
Fixed Income (I)	Muni (U)	Intermediate Duration (I)		OHT Ohio Intermediate Municipal Debt Fds	IKS TxFr Bd Muni Intermediate KS	
				OST Other States Intermediate Muni Debt Fds	IKY TxFr Bd Muni Intermediate KY	
				PAT Pennsylvania Intermediate Muni Debt Fds	IMA TxFr Bd Muni Intermediate MA	
				VAT Virginia Intermediate Municipal Debt Funds	IMD TxFr Bd Muni Intermediate MD	
					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	

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER	
Fixed Income (I)	Muni (U)		AL	Alabama Municipal Debt Funds	MAL TxFr Bd Muni AL	MBD Municipal Bond MSS Municipal Single State	
		AZ	Arizona Municipal Debt Funds	MAR TxFr Bd Muni AR	MAZ TxFr Bd Muni AZ		
		CAG	California Municipal Debt Funds	MCA TxFr Bd Muni CA	MCO TxFr Bd Muni CO		
		CAI	California Insured Municipal Debt Funds	MCT TxFr Bd Muni CT	MDE TxFr Bd Muni DE		
		CAS	California Sh-Intmdt Municipal Debt Fds	MFL TxFr Bd Muni FL	MGA TxFr Bd Muni GA		MGN TxFr Bd Fed Muni General
		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	MMDTxFr Bd Muni MD	MME TxFr Bd Muni ME		
		HI	Hawaii Municipal Debt Funds	MMI TxFr Bd Muni MI	MMNTxFr Bd Muni MN		
		HM	High Yield Municipal Debt Funds	MMOTxFr Bd Muni MO	MMSTxFr 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	MNMTxFr 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		

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER		
Fixed Income (I)	Muni (U)			MO Missouri Municipal Debt Funds	MTN TxFr Bd Muni TN			
				NC North Carolina Municipal Debt Funds	MTX TxFr Bd Muni TX			
				NJ New Jersey Municipal Debt Funds	MUT TxFr Bd Muni UT			
				NY New York Municipal Debt Funds	MVA TxFr Bd Muni VA			
				NYI New York Insured Municipal Debt Funds	MVT TxFr Bd Muni VT			
				OH Ohio Municipal Debt Funds	MWA TxFr Bd Muni WA			
				OR Oregon Municipal Debt Funds	MWI TxFr Bd Muni WI			
				OSS Other States Short-Intmdt Muni Debt Fds	MWV TxFr Bd Muni WV			
				OTH Other States Municipal Debt Funds				
				PA Pennsylvania Municipal Debt Funds				
				SC South Carolina Municipal Debt Funds				
				SIM Short-Intmdt Municipal Debt Funds				
				TN Tennessee Municipal Debt Funds				
				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			
Government (G)			TIPS (T)		CPB Core Plus Bond Funds	CGN Tx Bd Corp Bond General CPR Tx Bd Corp Prime Rate		
		IUT Treasury Inflation Protected Securities						
		Duration (D)			Short (S)	SUS Short U.S. Government Funds	GSM Tx Bd USA Govt Short	
					Intermediate (I)	SUT Short U.S. Treasury Funds		
			IUG Intermediate U.S. Government Funds	GIM Tx Bd USA Govt Intermediate				

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER
Fixed Income (I)				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 TAZ TxFr MM Muni AZ	
			CTM Connecticut Tax-Exempt Money Market Fds	TBG TxFr MM Fed Muni Bank Managed		
			MAM Massachusetts Tax-Exempt Money Market Fd	TCA TxFr MM Muni CA TCT TxFr MM Muni CT		
			MIM Michigan Tax-Exempt Money Market Funds	TFG TxFr MM Fed Muni General TFI TxFr MM Fed Muni Instl		
	Money Market (M)			NUM New Jersey Tax-Exempt Money Market Funds	TFL TxFr MM Muni FL TGA TxFr MM Muni GA	
				NYM New York Tax-Exempt Money Market Funds	TMA TxFr MM Muni MA TMD TxFr MM Muni MD	
				OHM Ohio Tax-Exempt Money Market Funds	TMI TxFr MM Muni MI TMN TxFr MM Muni MN	
				OTM Other States Tax-Exempt Money Market Fds	TNC TxFr MM Muni NC TNJ TxFr MM Muni NJ	
				PAM Pennsylvania Tax-Exempt Money Market Fds	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	
				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 SIA Tx MM Instl Govt & Agency SIP Tx MM Instl Prime SIT Tx MM Instl Govt		
			MM Money Market Funds	SPR Tx MM Prime		
			TEM Tax-Exempt Money Market Funds	SUA Tx MM Govt & Agency SUT Tx MM Govt		
			USS U.S. Government Money Market Funds			
			UST U.S. Treasury Money Market Funds			

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER
Fixed Income (I)	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		
	Foreign (F)			EMD Emerging Markets Debt Funds	BGA Tx Bd Pan Americas	IBD International Bond
				EML Emerging Markets Local Currency Debt Funds	BGE Tx Bd Global Emerging Market	MTG Government Mortgage-backed
				GHY Global High Yield Funds	BGG Tx Bd Global Govt Bond	
				GLI Global Income Funds	BGN Tx Bd Global Bond General	
				INI International Income Funds	BGS Tx Bd Global Bond Short	
				SWM Short World Multi-Market Income Funds	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		
				HYL High Yield Leveraged Funds		
				IID Intermediate Investment Grade Debt Funds		
				MSI Multi-Sector Income Funds		
				ARB Absolute Return Bond Funds		
				SFI Specialty Fixed Income Funds		
				SID Short Investment Grade Debt Funds		
				SII Short-Intmdt Investment Grade Debt Funds		
				USO Ultra-Short Obligations Funds		
				SHY Short High Yield Funds		
Mixed FI & Equity (M)	Target Funds (T)			BT Balanced Target Maturity Funds		
				MATL Mixed-Asset Target 2060 Funds		
				MATM Mixed-Asset Target 2060+ Funds		
				TM Target Maturity Funds		

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LIPPER	STRATEGIC INSIGHTS	WIESENBERGER
Mixed FI & Equity (M)				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)
				EMM Emerging Markets Mixed Asset Funds	EPR Asset Allocation USA Principle Return	AAL Asset Allocation
				FX Flexible Portfolio Funds		BAL Balanced
				GX Global Flexible Port Funds		G-I
				I Income Funds		G-I-S
				S Specialty/Miscellaneous Funds		
				B Balanced Funds	BAL Asset Allocation USA Balanced	G-S
					FLG Asset Allocation Global Flexible	G-S-I
					FLX Asset Allocation USA Flexible	GS
					IMX Asset Allocation USA Income	I-G
						I-G-S
						I-S
						S-G-I
						S-I
						S-I-G
Other (O)	Mortgage-backed (M)			LP Loan Participation Funds	GMA Tx Bd USA Govt Mortgage Adj Returns	
				ARM Adjustable Rate Mortgage Funds	GMB Tx Bd USA Govt Mortgage Backed	
				GNM GNMA Funds		
				USM U.S. Mortgage Funds		
				Currency (C)	CRX CURRENCY FUNDS	
					ACF Alternative Credit Focus Funds	
				AED Alternative Event Driven Funds		
				ALT Alternative Other Funds		
				AMS Alternative Multi-Strategy Funds		
				EMP Energy MLP Funds		
				MFF Alternative Managed Futures Fund		
				OS Options Arbitrage/Option Strategies Funds		
				RR Real Return Funds		
				STB Stable Value Funds		

WIESENBERGER OBJECTIVE CODES
(ANNUAL VOLUMES 1962-1993)
(FUND STYLE TABLE. VARIABLE WBRGER_OBJ_CD. PAGE 15)

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.

(FUND STYLE TABLE. VARIABLES LIPPER_CLASS, LIPPER_CLASS_NAME, LIPPER_OBJ_CD, LIPPER_OBJ_NAME. PAGE 16)

Code	Objective Class Name	Description	Where USed
A	Corporate Debt Funds A Rated	Funds invest primarily in corporate debt issues rated A or better or government issues.	C,0
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.	C,0
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 modeling trying to benefit from any changes in credit quality, credit spreads, and market liquidity.	(C,0)
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.	(C,0)
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	(C,0)
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).	C,0
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.	(C,0)
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.	(C,0)

Code	Objective Class Name	Description	Where USed
ARB	Absolute Return Bond Funds	Funds that aim for positive returns in all market conditions and invest primarily in debt securities. 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.	
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.	C,0
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%.	0
BBB	Corporate Debt Funds BBB-Rated	Funds invest primarily in corporate and government debt issues rated in the top four grades.	C,0
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.	C
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.	C,0
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.	0
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).	C,0
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.	C,0
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.	C,0
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.	C,0
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.	C,0
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.	C,0
CMA	Commodities Agriculture Funds	Funds that invest primarily in agricultural commodity-linked derivative instruments or physicals.	C

Code	Objective Class Name	Description	Where USed
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.	0
CME	Commodities Energy Funds	Funds that invest primarily in energy-related commodity-linked derivative instruments or physicals.	C
CMG	Commodities General Funds	Funds that invest primarily in a blended basket of commodity-linked derivative instruments or physicals.	C
CMM	Commodities Base Metals Funds	Funds that invest primarily in base-metal commodity-linked derivative instruments or physicals.	C
CMP	Commodities Precious Metals Funds	Funds that invest primarily in precious-metal commodity-linked derivative instruments or physicals.	C
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.	C
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 dollarweighted average maturities of five to ten years	(C)
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.	C,0
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.	C,0
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).	
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.	C,0
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.	C,0
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.	C,0
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.	C,0
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.	0

Code	Objective Class Name	Description	Where USed
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.	C
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.	C
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.	C,0
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.	C,0
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.	C,0
EMM	Emerging Markets Mixed Asset Funds	Funds that seek long-term capital appreciation by investing primarily in a mix of emerging market equity and debt securities. "Emerging market" is defined by a country's GNP per capita or other economic measures.	
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.	C,0
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.	C,0
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.	C,0
FM	Frontier Markets Funds	Funds that seek long-term capital appreciation by investing at least 65% of total assets in frontier market equity securities. "Frontier market" is defined by a country's GNP per capita or other economic measures.	
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.	C,0
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.	C,0
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.	0
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.	C,0

Code	Objective Class Name	Description	Where USed
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	C
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.	C,0
GH	Global Health/Biotechnology Funds	Funds that invest primarily in the equity securities of domestic and foreign companies engaged in healthcare, medicine and biotechnology.	C,0
GHY	Global High Yield Funds	Funds that aim at high (relative) current yield from both domestic and foreign fixed income securities, have no quality or maturity restrictions, and tend to invest in lower-grade debt issues.	
GI	Growth and Income Funds	Funds that combine a growth-of-earnings orientation and an income requirement for level and/or rising dividends.	0
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	(C,0)
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.	C,0
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.	C
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.	C
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.	C
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.	C,0
GM	General & Insured Municipal Debt Funds	Funds invest primarily in municipal debt issues in the top four credit ratings.	C,0
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.	C

Code	Objective Class Name	Description	Where USed
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.	C
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.	C
GNM	GNMA Funds	Funds invest primarily in Government National Mortgage Association securities.	C,0
GNR	Global Natural Resources Funds	Funds that invest primarily in the equity securities of domestic and foreign companies engaged in natural resources.	C,0
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.	C,0
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.	0
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.	C
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.	

Code	Objective Class Name	Description	Where USed
GTK	Global Science/Technology Funds	Funds that invest primarily in the equity securities of domestic and foreign companies engaged in science and technology.	C,0
GUS	General U.S. Government Funds	Funds invest primarily in U.S. government and agency issues.	C,0
GUT	General U.S. Treasury Funds	Funds invest primarily in U.S. Treasury bills, notes, and bonds.	C,0
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.	C,0
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.	C,0
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.	C,0
I	Income Funds	Funds that normally seek a high level of current income through investing in income-producing stocks, bonds, and money market instruments.	
ID	Industrials 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.	C,0
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.	C
IF	International Funds	Funds that invest their assets in securities with primary trading markets outside of the United States.	0
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.	C,0
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.	C
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.	C
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.	C

Code	Objective Class Name	Description	Where USed
IMD	Intermediate Municipal Debt Funds	Funds invest in municipal debt issues with dollar-weighted average maturities of five to ten years.	C,O
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.	C
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.	C
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.	C
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.	C,O
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.	C,O
INR	India Region Funds	Funds that concentrate their investments in equity securities with primary trading markets or operations concentrated in the India region.	C,O
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.	C,O
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.	O
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.	C

Code	Objective Class Name	Description	Where USed
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.	C
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.	C
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.	C,0
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.	C,0
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.	C,0
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.	C,0
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.	C,0
JA	Japanese Funds	Funds that concentrate investments in equity securities of Japanese companies.	C,0
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.	C
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.	C

Code	Objective Class Name	Description	Where USed
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.	C
LP	Loan Participation Funds	Funds that invest primarily in participation interests in collateralized senior corporate loans which have floating or variable rates.	C,0
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.	C,0
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.	C,0
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 Fund	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.	C
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.	C
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.	C
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.	C
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.	C
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.	C
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.	C
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.	C
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.	C
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.	C
MATL	Mixed-Asset Target 2060 Funds	Funds that seek to maximize assets for retirement or other purposes with an expected time horizon from January 1, 2056, to December 31, 2060.	
MATM	Mixed-Asset Target 2060+ Funds	Funds that seek to maximize assets for retirement or other purposes with an expected time horizon exceeding December 31, 2060.	
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.	0

Code	Objective Class Name	Description	Where USed
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.	C
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.	C
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.	C
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	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.	C,O
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.	C
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.	C

Code	Objective Class Name	Description	Where USed
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.	C
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).	
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.	O
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.	C,O
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	(C)
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.	C
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.	C
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.	C
MTRI	Retirement Income Funds	Funds designed to combine professional asset management with professionally managed withdrawals to assist investors in retirement.	(C)
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.	C,O
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.	C,O

Code	Objective Class Name	Description	Where USed
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).	
OS	Options Arbitrage/Option Strategies Funds	Funds that employ various strategies to capture “the spread” between similar options through inefficiencies in the market or funds and use portfolio strategies where the manager focuses on options to generate the bulk of the portfolio’s return.	
OSS	Other States Short-Intmtd 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.	C,0
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.	C,0
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.	C,0
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).	C,0
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.	C,0
RR	Real Return Funds	Funds that seek to maximize real return through investing primarily in domestic and foreign inflation-protected securities across asset classes.	
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.	C,0
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.	C

Code	Objective Class Name	Description	Where USed
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.	C
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.	C
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.	C
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.	C,0
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.	0
SHY	Short High Yield Funds	Funds that aim at high (relative) current yield from domestic fixed income securities, with dollar-weighted average maturities of less than three years, and tend to invest in lower-grade debt issues.	
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.	C,0
SII	Short-Intmdt 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.	C,0
SIM	Short-Intmdt Municipal Debt Funds	Funds invest in municipal debt issues with dollar-weighted average maturities of one to five years.	C,0
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.	C,0
SMD	Short Municipal Debt Funds	Funds invest in municipal debt issues with dollar-weighted average maturities of less than three years.	C,0
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%).	0
SPMC	S&P Midcap 400 Index Funds	Funds that are passively managed and are designed to replicate the performance of the S&P Midcap 400 Index.	
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%).	C,0

Code	Objective Class Name	Description	Where USed
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).	C,0
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.	C,0
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.	C,0
SWM	Short World Multit-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.	C,0
TK	Science & Technology Funds	Funds invest primarily in science and technology stocks.	C,0
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.	C,0
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.	C,0
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.	C,0
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.	C,0
UT	Utility Funds	Funds invest primarily in utility shares.	C,0
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.	C,0

STRATEGIC INSIGHTS OBJECTIVE CODES

STRATEGIC INSIGHTS OBJECTIVE CODES - DETAILED

(FUND STYLE TABLE.
VARIABLE: SI_OBJ_CD. PAGE
15)

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

Code	Code Name
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
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

Code	Code Name
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
IWW	TxFr Bd Muni Intermediate WV
JPN	Japanese Equity
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
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

Code	Code Name	Code	Code Name
MIS	TxFr Bd Fed Muni Insured	SBT	Tx MM Bank Govt
MKS	TxFr Bd Muni KS	SBY	Tx MM Bank Prime Euro Yank
MKY	TxFr Bd Muni KY	SCG	Equity USA Small Companies
MLA	TxFr Bd Muni LA	SCU	Tx MM Currency Funds
MMA	TxFr Bd Muni MA	SEC	Equity USA Misc Sectors
MMD	TxFr Bd Muni MD	SIA	Tx MM Instl Govt & Agency
MME	TxFr Bd Muni ME	SIE	Tx MM Instl Prime Euro
MMI	TxFr Bd Muni MI	SIP	Tx MM Instl Prime
MMN	TxFr Bd Muni MN	SIT	Tx MM Instl Govt
MMO	TxFr Bd Muni MO	SIY	Tx MM Instl Prime Euro Yank
MMS	TxFr Bd Muni MS	SPE	Tx MM Prime Euro
MMT	TxFr Bd Muni MT	SPR	Tx MM Prime
MNC	TxFr Bd Muni NC	SPY	Tx MM Prime Euro Yank
MND	TxFr Bd Muni ND	SUA	Tx MM Govt & Agency
MNE	TxFr Bd Muni NE	SUT	Tx MM Govt
MNH	TxFr Bd Muni NH	TAL	TxFr MM Muni AL
MNJ	TxFr Bd Muni NJ	TAZ	TxFr MM Muni AZ
MNM	TxFr Bd Muni NM	TBG	TxFr MM Fed Muni Bank Managed
MNY	TxFr Bd Muni NY	TCA	TxFr MM Muni CA
MOH	TxFr Bd Muni OH	TCT	TxFr MM Muni CT
MOK	TxFr Bd Muni OK	TEC	Equity USA Technology
MOR	TxFr Bd Muni OR	TFG	TxFr MM Fed Muni General
MPA	TxFr Bd Muni PA	TFI	TxFr MM Fed Muni Instl
MPR	TxFr Bd Muni PR	TFL	TxFr MM Muni FL
MRI	TxFr Bd Muni RI	TGA	TxFr MM Muni GA
MSC	TxFr Bd Muni SC	TMA	TxFr MM Muni MA
MSD	TxFr Bd Muni SD	TMD	TxFr MM Muni MD
MSM	TxFr Bd Fed Muni Short	TMI	TxFr MM Muni MI
MTN	TxFr Bd Muni TN	TMN	TxFr MM Muni MN
MTX	TxFr Bd Muni TX	TNC	TxFr MM Muni NC
MUT	TxFr Bd Muni UT	TNJ	TxFr MM Muni NJ
MVA	TxFr Bd Muni VA	TNY	TxFr MM Muni NY
MVT	TxFr Bd Muni VT	TOH	TxFr MM Muni OH
MWA	TxFr Bd Muni WA	TPA	TxFr MM Muni PA
MWI	TxFr Bd Muni WI	TTN	TxFr MM Muni TN
MWV	TxFr Bd Muni WV	TTX	TxFr MM Muni TX
NTR	Equity Natural Resources & Energy	TVA	TxFr MM Muni VA
OPI	Option Income	UTI	Equity USA Utilities
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		

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 gfunds_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;

```

SCLASS_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;

```