Morningstar Excel Add-In Reference Guide

Morningstar Excel Add-In - Reference Guide

Data Retrieval

Morningstar Add-In
Data Retrieval

Data Retrieval Functions

Morningstar Excel API provides five data retrieval functions:

1) MSDP
2) MSTS
3) MSDate
4) MSHOLDING
5) MSMEMBER

MSDP, MSTS, MSHOLDING functions work the same way for funds, stocks and accounts/model portfolios/custom benchmarks. All the examples below use funds or stocks for these three functions but you can apply the same logic to accounts/model portfolios/custom benchmarks by following the wizard to retrieve the global unique identifier (GUID) shown in the Formula Result Box to then get the corresponding data.

MSDP (Data Point)

Morningstar Add-In
MSDP (Data Point)

MSDP - Data Point

Retrieve discrete value

Requires 2 parameters: security identifier and data attribute identifier
Example: =MSDP("MORN","sector")

MSDP is designed for retrieving current data points such as stock name, Morningstar Category for a mutual fund share class. MSDP requires two parameters, security identifier and data attribute identifier.

Security identifiers are trading symbol (long form such as NAS:AAPL or short form such as AAPL), ISIN, and CUSIP. When security types are not traded on exchanges, you need to provide an identifier defined by Morningstar (SecID). This would apply to market indices, separate accounts, and pension/life products.

As mentioned above, the security identifier for accounts/model portfolios/custom benchmarks is the global unique identifier (GUID), which can only be found in Direct log file - shown in the Formula Result Box.

Data point or attribute identifier defines the data point uniquely. Therefore, the data point names in text serve as the data identifier. For example, "name" represents name, "close" represents security closing price, or "ret_market" represents market return. Parameter values are presented in quotation marks and separated by commas.

Examples

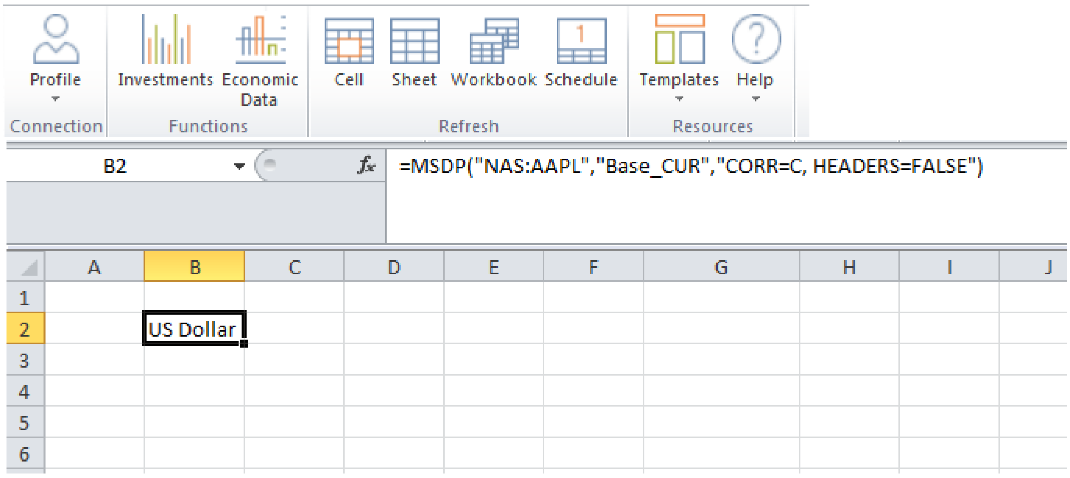
Morningstar Add-In

Examples

Examples

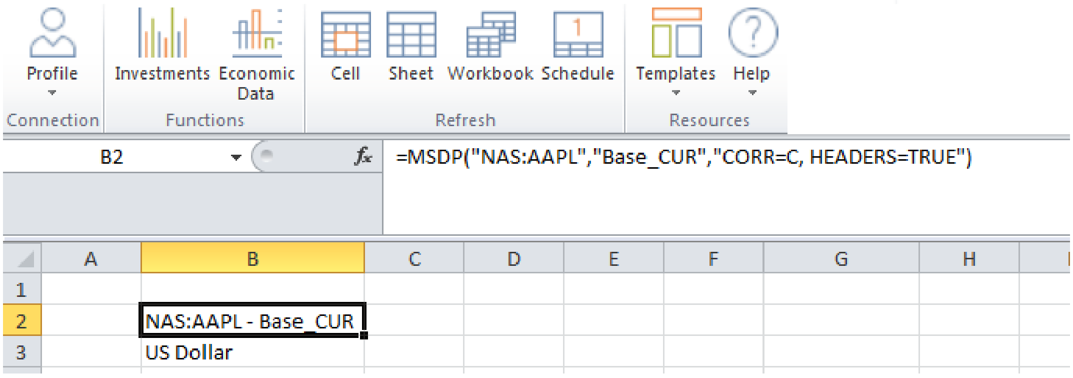
Example 1: for single security with single data point

=MSDP("NAS:AAPL", "Base_CUR","CORR=C,HEADERS=FALSE")



=MSDP("NAS:AAPL", "Base_CUR","CORR=C,HEADERS=FALSE")

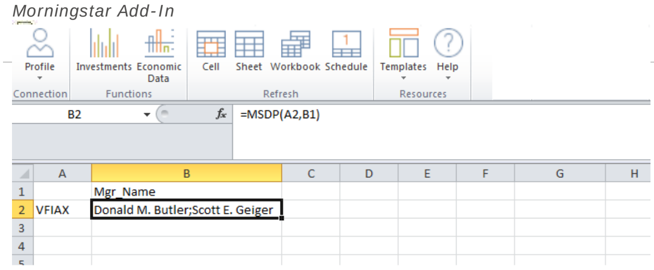
If a user changes the formula to =MSDP("NAS:AAPL", "Base_CUR","CORR=C,HEADERS=True"), then he will see the header in the screenshot below.



=MSDP(A2, B1)

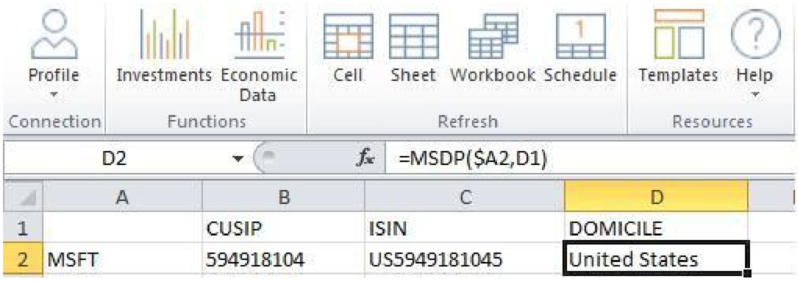
Examples

Morningstar Add-In



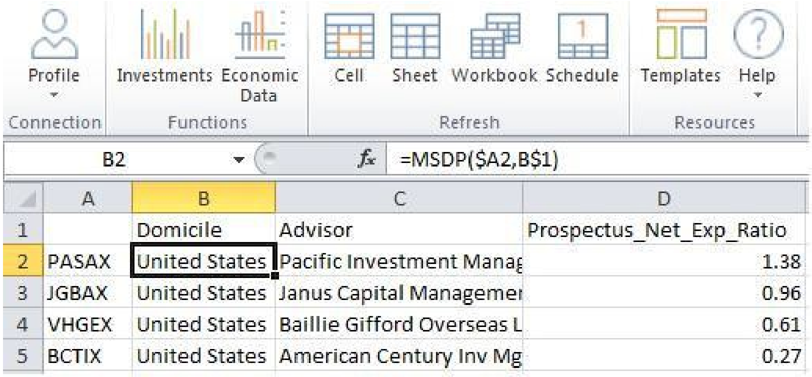
Example 2: for single security with multiple attributes

=MSDP($A2, B1) or MSDP($A2,C1) or MSDP($A2, D1)



Example 3: for multiple securities with multiple data points

=MSDP($A2, B$1)



MSTS (Time Series)

Morningstar Add-In
MSTS (Time Series)

MSTS - Time Series

Time series calculation
4 parameters required: security identifier, data attribute identifier, start date, end date

For most time series data like price, MSTS requires at least four parameters, but for custom calculation data points, MSTS requires more parameters dependent on the data point requirements. For example: to calculate an average, MSTS also requires source parameter; to calculate beta, MSTS requires source, benchmark, and RFP parameters - all dependent on your target data points.

Click Here for Guide on Custom Calculations
http://morningstardirect.morningstar.com/clientcomm/GuideOfCusCal.pdf

Relative dates can be applied
Example:=MSTS("SEQUX","return","01/01/2012","lmktclose")

MSTS is designed for retrieving data time series such as historical prices for stocks, NAVs for mutual fund, or historical calendar period returns for securities. MSTS requires a minimum of four parameters - security identifier, data point identifier, start date, and end date. For information on security identifier and data point identifier, refer to the MSDP section above. For start data and end data, the time range is defined for the intended data series. For example, function =MSTS("COLB", "close", "3/1/2011", "3/31/2011")" retrieves daily close price of Columbia Banking System, Inc. from 3/1/2011 to 3/31/2011.

Additional parameters are also offered to meet specific needs. For example, daily series can be displayed fully or at a lower frequency such as weekly or monthly. A maximum of fifteen parameters can be utilized to fully convey the return data requirements.

Examples

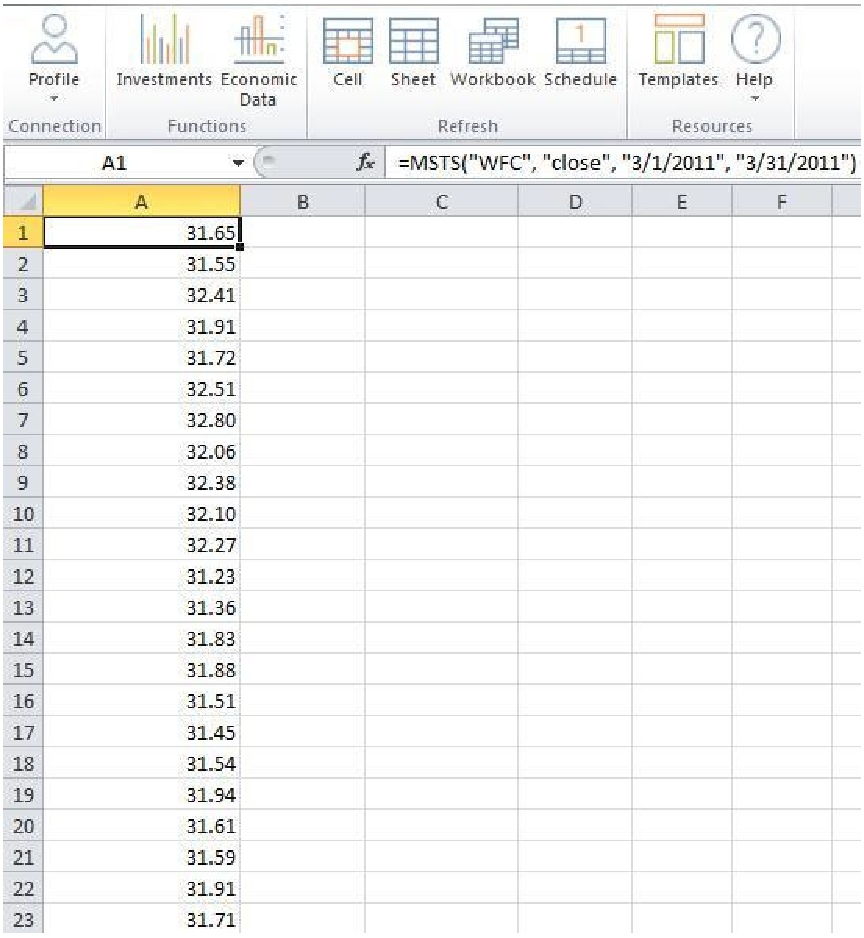
Morningstar Add-In

Examples

Examples

Example 1: to generate historical series

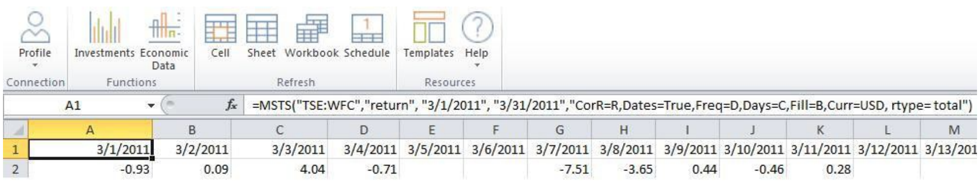
=MSTS("WFC", "close", "3/1/2011", "3/31/2011")



	A	B	C	D	E	F
1	31.65					
2	31.55					
3	32.41					
4	31.91					
5	31.72					
6	32.51					
7	32.80					
8	32.06					
9	32.38					
10	32.10					
11	32.27					
12	31.23					
13	31.36					
14	31.83					
15	31.88					
16	31.51					
17	31.45					
18	31.54					
19	31.94					
20	31.61					
21	31.59					
22	31.91					
23	31.71					

Example 2: to retrieve return data point by using "return" as data point identifier and specifying return type as the additional parameter

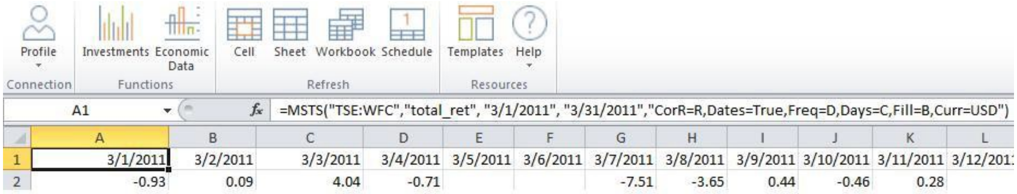
=MSTS("TSE:WFC","**return**", "3/1/2011", "3/31/2011","CorR=R,Dates=True,Freq=D,Days=C,Fill=B,Curr=USD, rtype= **total**")



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	3/1/2011	3/2/2011	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011	3/8/2011	3/9/2011	3/10/2011	3/11/2011	3/12/2011	3/13/201
2	-0.93	0.09	4.04	-0.71			-7.51	-3.65	0.44	-0.46	0.28		

Example 3: to retrieve return data point by using "return type" as data point identifier and achieve the same result

=MSTS("TSE:WFC","total_ret", "3/1/2011", "3/31/2011","CorR=R,Dates=True,Freq=D,Days=C,Fill=B,Curr=USD")

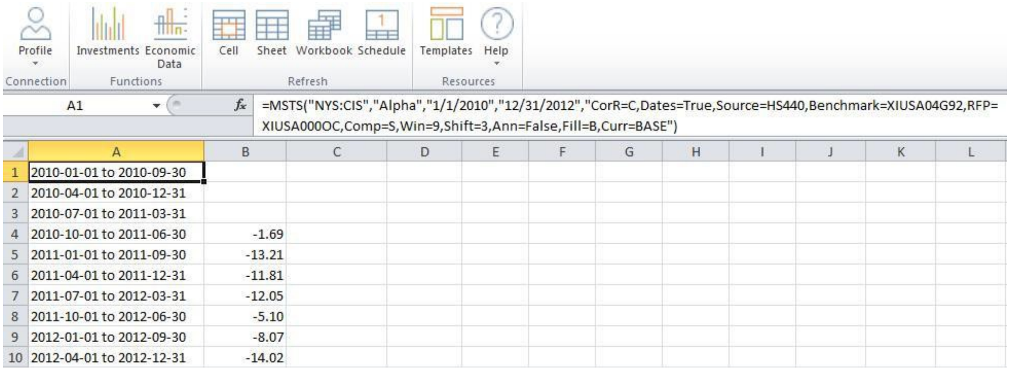


	A	B	C	D	E	F	G	H	I	J	K	L
1	3/1/2011	3/2/2011	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011	3/8/2011	3/9/2011	3/10/2011	3/11/2011	3/12/201
2	-0.93	0.09	4.04	-0.71			-7.51	-3.65	0.44	-0.46	0.28	

Example 4: to calculate alpha for stocks

=MSTS("NYS:CIS","Alpha","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HS440,Benchmark =XIUSA04G92,RFP=XIUSA000OC,Comp=S,Win=9,Shift=3,Ann=False,Fill=B,Curr=BASE")

HS440 is the ID of monthly market return
XIUSA04G92 is the ID of S&P 500 TR
XIUSA000OC is the ID of USTREAS T-Bill Auction Ave 3 Mon



	A	B	C	D	E	F	G	H	I	J	K	L
1	2010-01-01 to 2010-09-30											
2	2010-04-01 to 2010-12-31											
3	2010-07-01 to 2011-03-31											
4	2010-10-01 to 2011-06-30	-1.69										
5	2011-01-01 to 2011-09-30	-13.21										
6	2011-04-01 to 2011-12-31	-11.81										
7	2011-07-01 to 2012-03-31	-12.05										
8	2011-10-01 to 2012-06-30	-5.10										
9	2012-01-01 to 2012-09-30	-8.07										
10	2012-04-01 to 2012-12-31	-14.02										

In the examples above, we indicated the start and end date but there are many different ways to save time in specifying a time range clearly without having to type full values for start date and end date. Below are two groups of examples to apply relative dates.

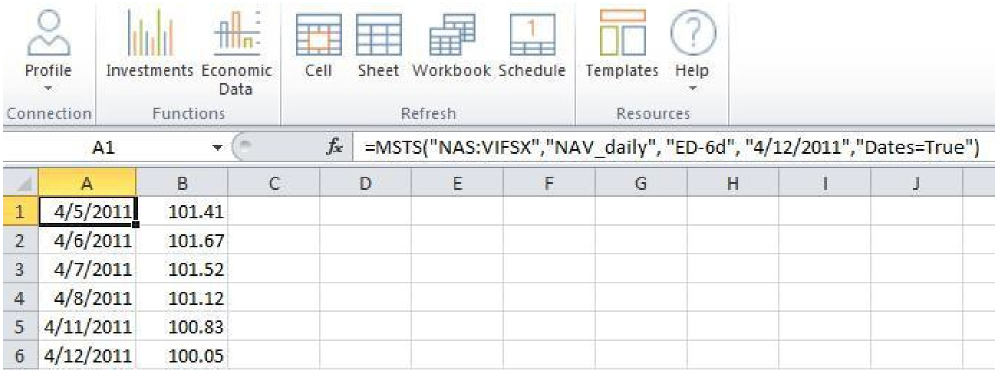
Group 1: Using "+" or "-" to define a date relative to a specific date

For example, with SD representing start date and ED representing end date, you can use "+" and "-" to define a date relative to a specific date. Date abbreviations are: D for working daily, W for week, M or C for month, Q for quarter, Y, X or G for year, S for half year. For detailed definition of these parameters, please refer to dash code part.

Example 1: when end date equals the start date plus six days

Example 2: Alternatively, when start date equals the end date minus six days

=MSTS("NAS:VIFSX","NAV_daily", "ED-6d", "4/12/2011","Dates=True")

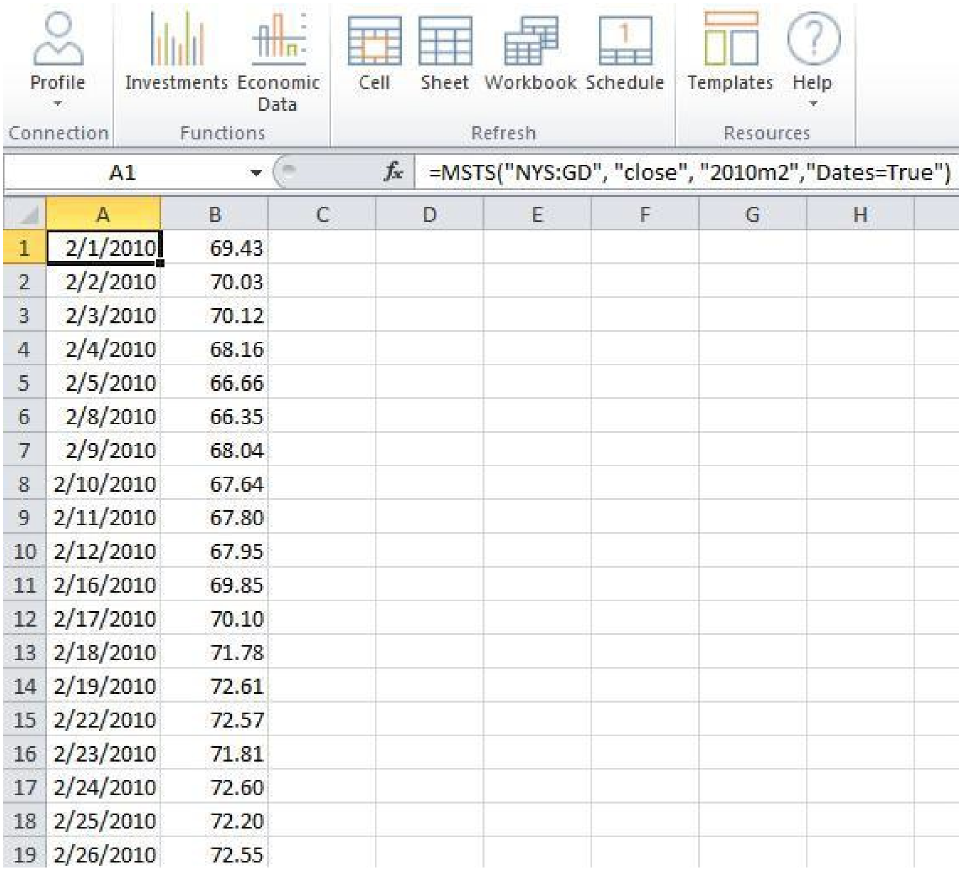


Group 2: Using frequency abbreviations to retrieve values for the whole calendar period

M represents monthly, Q represents quarterly, and S represents half year. Please note that a similar logic may be provided in a future release to address fiscal calendar periods.

Example 1: to retrieve daily closing prices for the month of February 2010

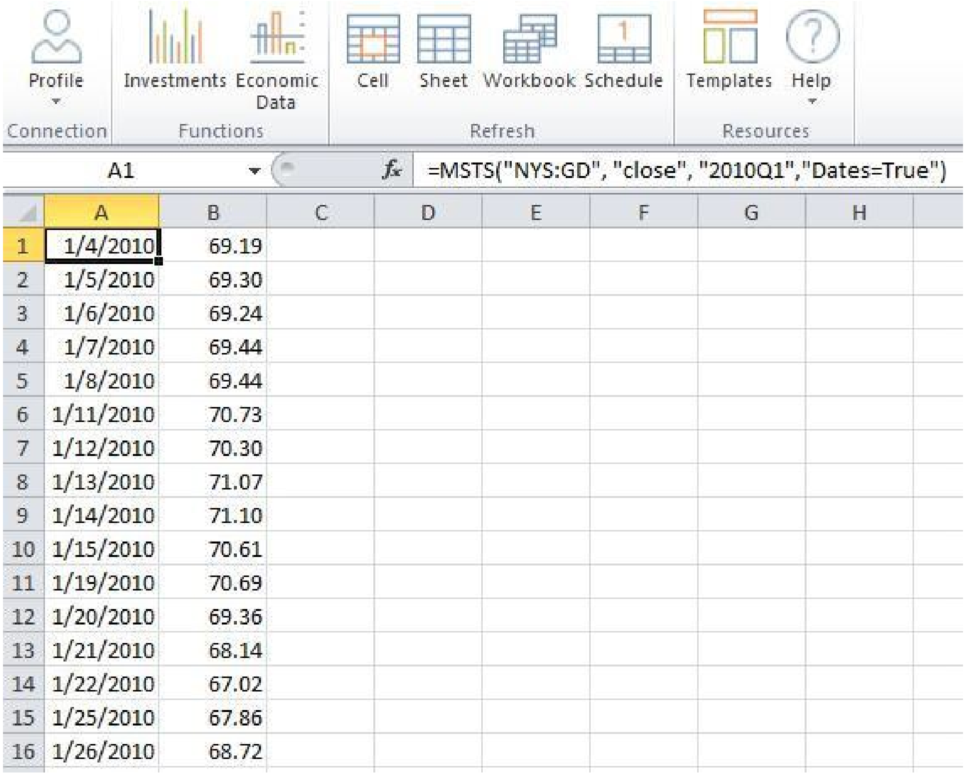
=MSTS("NYS:GD", "close", "2010m2","Dates=True")



	A	B	C	D	E	F	G	H
1	2/1/2010	69.43						
2	2/2/2010	70.03						
3	2/3/2010	70.12						
4	2/4/2010	68.16						
5	2/5/2010	66.66						
6	2/8/2010	66.35						
7	2/9/2010	68.04						
8	2/10/2010	67.64						
9	2/11/2010	67.80						
10	2/12/2010	67.95						
11	2/16/2010	69.85						
12	2/17/2010	70.10						
13	2/18/2010	71.78						
14	2/19/2010	72.61						
15	2/22/2010	72.57						
16	2/23/2010	71.81						
17	2/24/2010	72.60						
18	2/25/2010	72.20						
19	2/26/2010	72.55						

Example 2: to retrieve daily closing prices for the first quarter of 2010

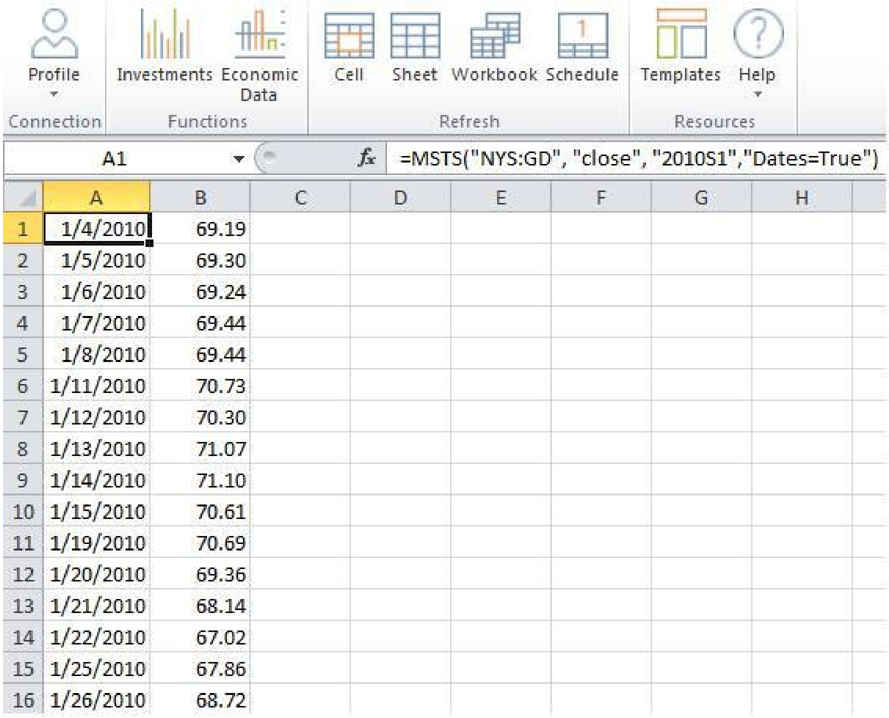
=MSTS("NYS:GD", "close", "2010Q1","Dates=True")



	A	B	C	D	E	F	G	H
1	1/4/2010	69.19						
2	1/5/2010	69.30						
3	1/6/2010	69.24						
4	1/7/2010	69.44						
5	1/8/2010	69.44						
6	1/11/2010	70.73						
7	1/12/2010	70.30						
8	1/13/2010	71.07						
9	1/14/2010	71.10						
10	1/15/2010	70.61						
11	1/19/2010	70.69						
12	1/20/2010	69.36						
13	1/21/2010	68.14						
14	1/22/2010	67.02						
15	1/25/2010	67.86						
16	1/26/2010	68.72						

Example 3: to retrieve daily closing prices for the first half of the year, 2010

=MSTS("NYS:GD", "close", "2010S1","Dates=True")



	A	B	C	D	E	F	G	H
1	1/4/2010	69.19						
2	1/5/2010	69.30						
3	1/6/2010	69.24						
4	1/7/2010	69.44						
5	1/8/2010	69.44						
6	1/11/2010	70.73						
7	1/12/2010	70.30						
8	1/13/2010	71.07						
9	1/14/2010	71.10						
10	1/15/2010	70.61						
11	1/19/2010	70.69						
12	1/20/2010	69.36						
13	1/21/2010	68.14						
14	1/22/2010	67.02						
15	1/25/2010	67.86						
16	1/26/2010	68.72						

Configuration Capability

The table below shows the full range of configuration capability. In the Possible Values column, the first value is considered the default value with the exception of the rtype parameter. Therefore, **if** you do not specify a parameter explicitly, Morningstar Add-In will use the first value by default.

Parameter Name	Description	Possible Values
CorR	Indicate whether retried values be displayed vertically or horizontally	C for the next cell in the same column
		R for the next cell in the same row
Dates	Show the dates or not	False for hide the dates
		True for show the dates
Freq	Base frequency of retuned data	1 for day to day return
		D for daily
		W for weekly
		M for monthly
		Q for quarterly
		S for semi annually
		Y for yearly
Days	Typically used to indicate whether to return values for all ctendar dcys, days ,,.;m act'JJal VIJ es in the datal da)<	T for returning data trading days
		W for returning data week days
		C for returning data of all calendar days
Fill	Dsigled to d.:.ai\,,Uh days \' UOOut real VIJ::s. like a ncn-tradflg days	B for showing blank
		P for carrying over the previous day's data
		C for carrying over the last available data
		0 for filling 0
Curr	ICurr.,-,0{ of the returred data	The three letter ISO currency code, in quotation marks, i.e., "EUR" for Euro.
Scale	Reduce result 10x times	0, 00, 000, 000,000, etc
rType	Apply only to return data points, indicate return type. Default value for Italy and UK mutual fund is post tax return; for other domiciled mutual fund is total return; For closed ends, ETF, stocks and market index are market return; for money market fund is total return; for separate account is gross return.	B2P for Bid Price Return
		B2B for Bid-Bid Return
		gross for Gross Return
		income for Income Return
		investor for Investor Return
		market for Market Return
		net for Net Return
		O2B for Offer Bid Return
		post_tax for Post-Tax Return
		price for Price Return
		total for Total Return
Ann	Retrieve anrwzed or not aMucff.ed day to day return.	False for not annualized day to day return
		True for annualized day to day return
Source	Source data used to calculate the target custom ca	Data Point ID, e.g. HP010 for Monthly Return
Benchmark	Benchmark used to calculate the selected custom c	SecID of securities
RFP	Risk-free proxy	SecID of securities
Comp	Compounding Method	S for standard; L for logarithmic;
Win	Rolling windows	Positive numbers
Shift	Window shift	Positive numbers

MSDate (Date)

Morningstar Add-In
MSDate (Date)

MSDate - Date

Retrieve dynamic dates
Examples: =MSDATE("lmktclose")

MSDate is designed to provide more convenience in defining time periods or effective dates. For example, MSDate can be used to dynamically retrieve last year end, last quarter end, last month end, last week end and last market close date. This function is considered necessary when you need to move time windows dynamically. Below is a table of these important dates.

Name	ID
Last market close	lmktclose
Last week end	lwend
Last month end	lmend
Last quarter end	lqend
Last year end	lyend
Last semi year end	lsyend

Examples

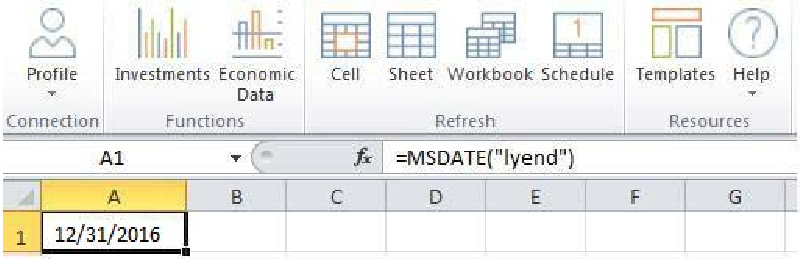
Morningstar Add-In

Examples

Examples

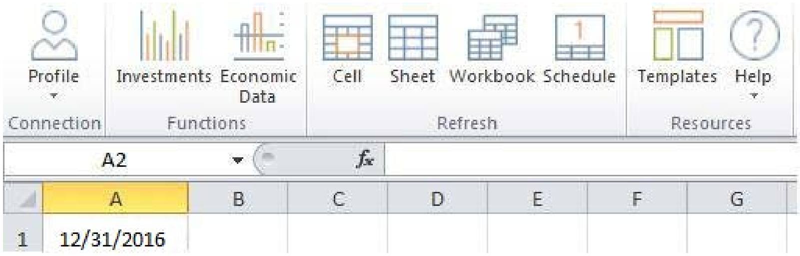
Example 1: to retrieve the date for last year end

=MSDATE("lyend")



Example 2: to retrieve the date for last quarter end

= MSDATE("lqend")



MSHOLDING (Holding Data)

Morningstar Add-In
MSHOLDING (Holding Data)

MSHOLDING (Holding Data)

Retrieve holding data
Require 2 parameters to retrieve latest holding: portfolio ID and position ID
Require 4 parameters to retrieve historical holding: portfolio ID, position ID, start date, end date
Example: =MSHOLDING("VFIAX","ISIN",)
=MSHOLDING("SAUSA000WL;SA","TICKER","1/1/2011","12/31/2011")

MSHOLDING is designed for retrieving holdings of portfolios. MSHOLDING requires at least two parameters to retrieve the latest holding, portfolio ID and position ID. Portfolio IDs are ticker, ISIN, CUSIP and Morningstar SecID, the same as security identifiers of MSDP and MSTS. Position IDs define the output IDs of holdings and could be ticker, ISIN, CUSIP and Morningstar SecID.

MSHOLDING requires a minimum of four parameters to get historical holdings, portfolio ID, position ID, start date and end date.

Additional parameters are offered to meet more needs. The table below shows all additional parameters.

Parameter Name	Parameter Value
Holding Type/HT	all/stocks/bonds/cash/other, default as "all".
Freq	A/D/M/Q/Y, A for all available portfolios, default as "A".
Name	True/False, default as true.
Weight	True/False, default as true.
Shares	True/False, optional parameter, default as false.
Market Value/MV	True/False, optional parameter, default as false.
Curr	True/False, optional parameter, default as false.

Examples

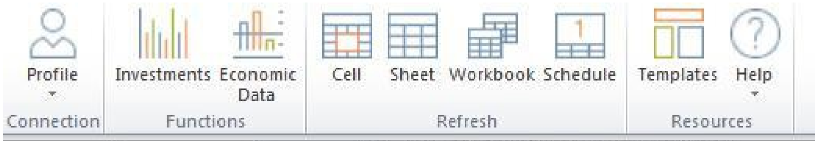
Morningstar Add-In

Examples

Examples

Example 1: to retrieve latest holdings for a fund

=MSHOLDING("FOUSA00CJ8","ISIN")

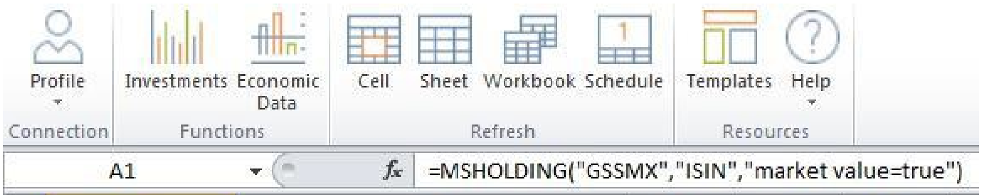


A1 =MSHOLDING("FOUSA00CJ8","ISIN")

	A	B	C	D
1	ISIN	Name	Weight	
2	US0268747849	American International Group Inc	12.54	
3	US59156R1086	MetLife Inc	8.83	
4	CH0044328745	ACE Ltd	6.38	
5	US7443201022	Prudential Financial Inc	5.47	
6	US5717481023	Marsh & McLennan Companies Inc	5.30	
7	US1712321017	Chubb Corp	4.76	
8	US0010551028	Aflac Inc	4.70	
9	US0200021014	Allstate Corp	4.52	
10	US89417E1091	Travelers Companies Inc	4.43	
11	US74251V1026	Principal Financial Group	2.99	
12	US4165151048	Hartford Financial Services Group Inc	2.75	
13	GB00B5BT0K07	Aon PLC	2.65	
14	US31635A1051	Fidelity Revere Str Tr	2.60	
15	US1152361010	Brown & Brown Inc	2.00	
16	US3635761097	Arthur J Gallagher & Co	1.89	

Example 2: to retrieve market value of latest holdings

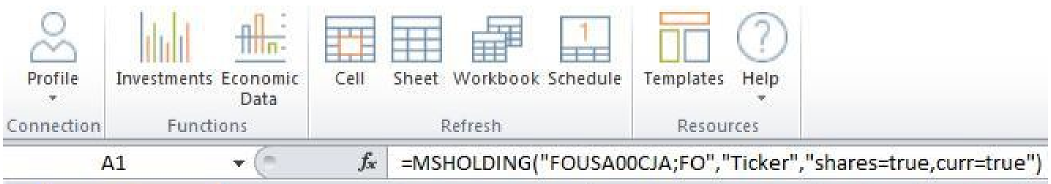
=MSHOLDING("GSSMX","ISIN","market value=true")



	A	B	C	D	E
1	ISIN	Name	Weight		
2	US38141W2733	Goldman Sachs FS Government FST	1.80		
3	US1652401027	Chesapeake Lodging Trust	1.15		
4	US7429621037	PrivateBancorp Inc	1.15		
5	US9478901096	Webster Financial Corp	1.10		
6	US70509V1008	Pebblebrook Hotel Trust	1.03		
7	US84763R1014	Spectrum Brands Holdings Inc	1.02		
8	US2974251009	Esterline Technologies	1.00		
9	US6780261052	Oil States International Inc	0.99		
10	US0639041062	Bank of the Ozarks Inc	0.98		
11	US12621E1038	CNO Financial Group Inc	0.96		
12	US7502361014	Radian Group Inc	0.94		
13	US86272T1060	Strategic Hotels & Resorts Inc	0.92		
14	US4219243098	Healthsouth Corp	0.91		

Example 3: to retrieve number of shares and currency of latest holdings

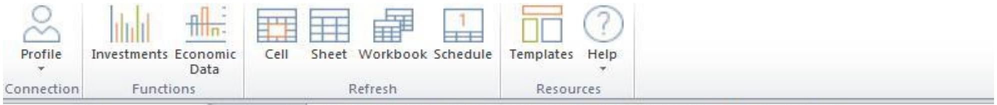
=MSHOLDING("FOUSA00CJA;FO","Ticker","shares=true,curr=true")



	A	B	C	D	E	F
1	Ticker	Name	Shares			
2	HD	Home Depot Inc	1,424,400.00			
3	AMZN	Amazon.com Inc	275,180.00			
4	PCLN	Priceline Group Inc	64,520.00			
5	TJX	TJX Companies Inc	823,100.00			
6	LB	L Brands Inc	616,683.00			
7	ORLY	O'Reilly Automotive Inc	203,686.00			
8	AZO	AutoZone Inc	68,363.00			
9	GIII	G-III Apparel Group Ltd	606,434.00			
10	LOW	Lowe's Companies Inc	441,000.00			
11	ROST	Ross Stores Inc	534,200.00			
12	NKE	Nike Inc Class B	184,820.00			
13	LULU	Lululemon Athletica Inc	263,757.00			
14	SIG	Signet Jewelers Ltd	121,700.00			
15	COST	Costco Wholesale Corp	109,043.00			
16	PVH	PVH Corp	126,000.00			
17	M	Macy's Inc	203,900.00			

Example 4: to retrieve historical holdings

=MSHOLDING("FOUSA00EMV;FO","CUSIP","1/1/2011","12/31/2011")

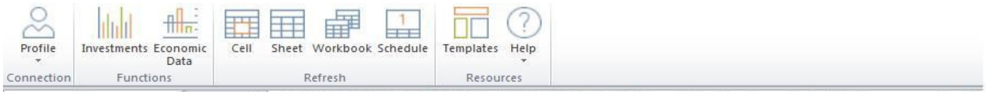


A1 =MSHOLDING("FOUSA00EMV;FO","CUSIP","1/1/2011","12/31/2011")

	A	B	C	D	E	F	G	H
1	CUSIP	Name	1/31/2011	2/28/2011	3/31/2011	4/30/2011	5/31/2011	6/30/2011
2	57582PAE0	Massachusetts St Go Ref Bd 5.25%	1.31	1.36	1.37	1.40	1.40	1.39
3	2491813T3	Denver Colo City & Cnty Arpt R Arpt S 5%						
4	709193JU1	Pennsylvania St Indl Dev Auth 5.5%						1.23
5	592247H78	Metropolitan Pier & Exposition Rev 5	1.00	1.03	1.04	1.05	1.07	1.07
6	419800DW4	Hawaii St Dept Budget & Fin Sp Rev 6.2%						
7	03255LBA6	Anaheim Calif Pub Fing Auth 6%						0.98
8	5925973P1	Metropolitan Transn Auth 5.5%						
9	64966GZA3	New York N Y Go Bds 5%			0.90	0.91	0.90	0.91
10	03255LAA7	Anaheim Calif Pub Fing Auth 6%	0.77	0.79	0.80	0.81	0.81	0.82
11	167592N67	Chicago Ill O Hare Intl Arpt R Rev 5.25	0.77	0.79	0.80	0.81	0.80	0.80
12	59334DEP5	Miami-Dade Cnty Fla Wtr & Swr Wtr 5.25%			0.73	0.75	0.75	0.75
13	341507XT3	Florida St Brd Ed Lottery Rev Lottery 5	0.70	0.71	0.73	0.74	0.73	0.74
14	251255K46	Detroit Mich Wtr Sply Sys Re Rev B 5.2	0.79	0.79	0.81	0.80	0.78	0.79
15	45884AWW9	Intermountain Pwr Agy Utah Pwr Ref Su 5%						0.75
16	45200FSX8	Illinois Fin Auth 6.25%						0.73
17	982674CP6	Wyandotte Cnty Kans City Kans Util 5.65%						
18	796253ZN5	San Antonio Tex Elec & Gas Rev Rev Bd 5%						
19	45200BBY3	Illinois Fin Auth 5.25%	0.74	0.74	0.76	0.75	0.74	0.74
20	74265LXF0	Private Colleges & Univs Auth 5.25%						0.69
21	2548394Z3	District Columbia Rev Rev Bds 5.75%						
22	65820HD67	North Carolina Med Care Commn Ref	0.63	0.65	0.66	0.66	0.67	0.68
23	686507BQ6	Orlando Fla Utils Commn Util S Rev 5.25%						

Example 5: to retrieve historical stock holdings

=MSHOLDING("PBFBX","ISIN","1/1/2012","6/30/2012","Freq=A,Holding type=stocks,MV=true,name=true")



A1 =MSHOLDING("PBFBX","ISIN","1/1/2012","6/30/2012","Freq=A,Holding type=stocks,MV=true,name=true")

	A	B	C	D	E	F	G	H
1	ISIN	Name	1/31/2012	2/29/2012	3/31/2012	4/30/2012	5/31/2012	6/30/2012
2	US26243X1090	Dryden Core Invt	20,015,890.00	20,084,637.00	20,175,065.00	20,222,586.00	20,290,281.00	20,336,223.00
3		Us 5yr Note (Cbt) Sep12	2,977,125.00	6,164,844.00	8,455,195.00	19,064,719.00	8,084,375.00	19,091,188.00
4	US74432D1046	Prudential Core Invt	7,676,934.00	9,426,721.00	12,743,857.00	11,866,592.00	5,518,633.00	10,297,033.00
5		Recv Pay Fix0.95 11/30/16						8,480,000.00
6	US0378331005	Apple, Inc.	6,755,904.00	8,028,112.00	8,872,156.00	8,354,632.00	8,145,993.00	8,000,800.00
7		Us 2yr Note (Cbt) Sep02	13,245,000.00	21,582,969.00	7,704,922.00	5,954,766.00	9,480,203.00	6,385,438.00
8		Recv Rec Fix0.93% 8/31/16						5,723,577.00
9	US30231G1022	Exxon Mobil Corporation	5,958,436.00	6,154,821.00	6,171,186.00	5,962,122.00	5,358,949.00	5,660,798.00
10		S&P500 Emini Index Sep12	3,074,270.00	2,592,360.00	5,191,840.00	5,644,080.00	3,862,140.00	4,543,940.00
11	US1667641005	Chevron Corp	3,957,447.00	4,189,335.00	4,117,158.00	3,973,836.00	3,617,022.00	3,607,256.00
12	US912828NU05	US Treasury Note 0.75%						3,307,608.00
13	US5949181045	Microsoft Corporation	3,157,141.00	2,799,881.00	2,657,819.00	2,562,016.00	2,898,946.00	3,197,053.00
14	US3696041033	General Electric Co	1,926,194.00	1,951,672.00	2,413,418.00	3,560,623.00	3,427,610.00	3,187,478.00
15		Ginnie Mae Jumbos TBA 4.5% 2042-07-01						3,022,851.00
16	US912833LR96	U S Treas Sec Stripped Int Pmt	2,724,737.00	2,688,901.00	2,606,511.00	2,717,202.00	2,868,881.00	2,844,392.00
17		Recv Pay Fix0.98% 8/31/16						2,840,000.00
18	US4592001014	International Business Machines Cor	2,280,577.00	3,313,130.00	3,513,875.00	3,383,894.00	3,113,599.00	2,687,465.00
19	US02R0426780	Freddie Mac Gold Single Family TBA 4.5% 2042-07-01						2,669,922.00
20		Recv Payfix 0.91 11/30/16						2,660,000.00
21	US92343V1044	Verizon Communications Inc	653,401.00	661,208.00	1,573,164.00	2,364,249.00	2,408,874.00	2,495,306.00
22	US4581401001	Intel Corp	2,549,530.00	2,593,920.00	2,816,622.00	2,763,320.00	2,483,224.00	2,486,445.00
23	US9497461015	Wells Fargo & Co	2,834,568.00	3,036,413.00	3,312,980.00	3,150,477.00	2,981,964.00	2,415,739.00

MSMEMBER (Fund Groups)

Morningstar Add-In
MSMEMBER (Fund Groups)

MSMEMBER (Fund groups)

Retrieve IDs of investment list or search saved in Direct

Require 3 parameters to retrieve IDs of investment list or search: Source ID, Group Value and Security ID.

Example: =MSMEMBER("L","SAMPLE-US OE","SecId")

MSMEMBER is designed for retrieving the IDs of all members of an investment list or a search, which is saved in Direct. MSMEMBER requires three parameters, Source ID, Group Value and Security ID. Source ID defines the source, "L" for investment list and "S" for search. Group Value is investment list name or search name. Security ID defines the output IDs of members and could be ISIN, Ticker, CUSIP, and SecID.

Additional parameter "CorR" is offered to indicate whether retried values are displayed vertically or horizontally, "C" for the next cell in the same column and "R" for the next cell in the same row.

Examples

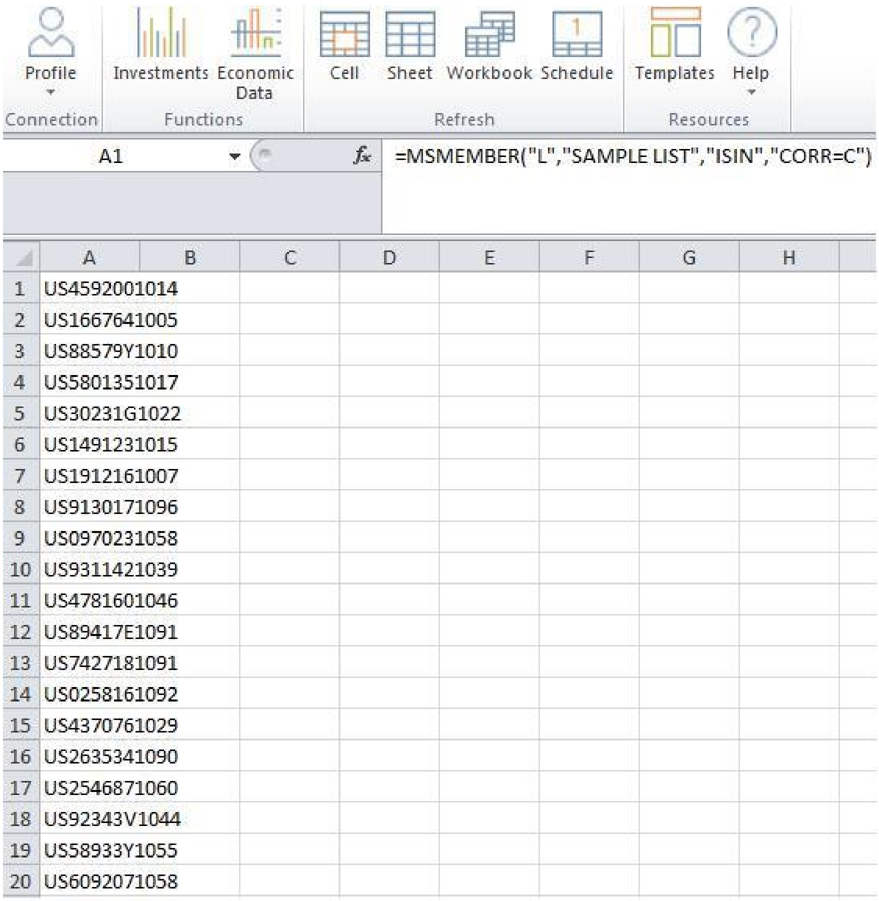
Morningstar Add-In

Examples

Examples

Example 1: to retrieve IDs of members for an investment list

=MSMEMBER("L","SAMPLE LIST","ISIN","CORR=C")



	A	B	C	D	E	F	G	H
1	US4592001014							
2	US1667641005							
3	US88579Y1010							
4	US5801351017							
5	US30231G1022							
6	US1491231015							
7	US1912161007							
8	US9130171096							
9	US0970231058							
10	US9311421039							
11	US4781601046							
12	US89417E1091							
13	US7427181091							
14	US0258161092							
15	US4370761029							
16	US2635341090							
17	US2546871060							
18	US92343V1044							
19	US58933Y1055							
20	US6092071058							

MSECON

Morningstar Add-In
MSECON

MSECON

Economic Data function (MSECON) allows you to retrieve the most impactful Economic Indicators. Type in any economic data keyword (i.e GDP, Jobs, etc) to get the latest and most reliable data powered by FRED and Action Economics.

Examples

Morningstar Add-In
Examples

Examples

=MSECON("WORLD.INTEREST.RATES.10YEAR.TREASURY.YIELDS.GERMANY.QUARTERLY","Value","9/1/2012","8/31/2015","CorR=C,Dates=True,Days=T,Fill=B,AsofDate=8/31/2015,ShowCorrection=false,Ascending=false,AllVersions=true,LatestValue=false")

Dash Code Functions

Morningstar Add-In
Dash Code Functions

Dash Code Functions

Dash codes in the Morningstar Add-In are an extension of the data retrieval functions where you can specify the start and end date in relation to a chosen number of periods before the current date or specified end date (i.e. "Latest -w1" will set the date to the end of the previous week). Multiple dash codes can be used in one date function. You also have the benefit of setting up floating time periods.

Parameters

Morningstar Add-In
Parameters

Parameters

Latest - This will be yesterday's date as the current day's price will not have been collected yet. Latest can also be used in conjunction with the codes below by adding the codes onto the end of latest (e.g. Latest-m3)

For start dates only use the chosen end date plus a dash code. In the start date field if users enter just a dash code (e.g.'-w3' rather than 'latest-w3') the system will use the user specified end date and apply the dash code logic to that to find the start date. E.g. If the end date is 'latest-w2' and the start date is just '-w3'. The start date would go back 3 weeks from the end date (i.e. it would go back 5 weeks in total]

Examples below use a date of 12th April 2011 as the latest date. The actual date is the 13th of April.

+ / -D - Goes forward/back the required number of working days, only includes Mon-Friday days.
E.g. Latest-d5 will go back to 5th April 2011. (For a start date API would show this as 6th April 2011).

+ / -W - Goes forward/back the required number of weeks and then to the previous Saturday point. E.g. Latest-w1 would return the 2nd April 2011 (back one week to the 5th April (Tuesday) then go back to the prior Saturday. (For a start date API would show this as 3rd April 2011)

+ / -M - Goes forward/back the required number of Months and then to the previous Month end point. E.g. Latest-m0 it would go back to 31st March 2011. (For a start date API would show this as 1st April)

+ / -C - Goes forward/back the required number of Calendar months to the same date in the month E.g. Latest-c3 would go back to the 12th Jan 2011. (For a start date API would show this as 13th Jan)

+ / -Q - Goes forward/back the required number of quarters and then to the previous quarter end point E.g. Latest-Q2 would go back to 30th Sep 2010. (For a start date API would show this as 1st Oct 2010)

+ / -S - Goes forward/back the required number of 6 month periods then to the previous Dec/June end point
E.g. Latest-s1 would go back to 31st June 2010. (For a start date API would show this as 1st July 2010)

+ / -X - Goes forward/back the required number of years and then to the previous year end point
E.g. Latest-x4 would go back to 31st Dec 2006. (For a start date API would show this as 1st Jan 2007)

+ / -Y - Goes forward/back the required number of years and then to the previous month end point
E.g. Latest -y1 would go back to 31st March 2010. (For a start date API would show this as 1st April 2010)

+ / -G - Goes forward/back the required number of calendar years to the same point in the month
E.g. Latest -g1 would go back to 12th April 2010. (For a start date API would show this as 13th April 2010)

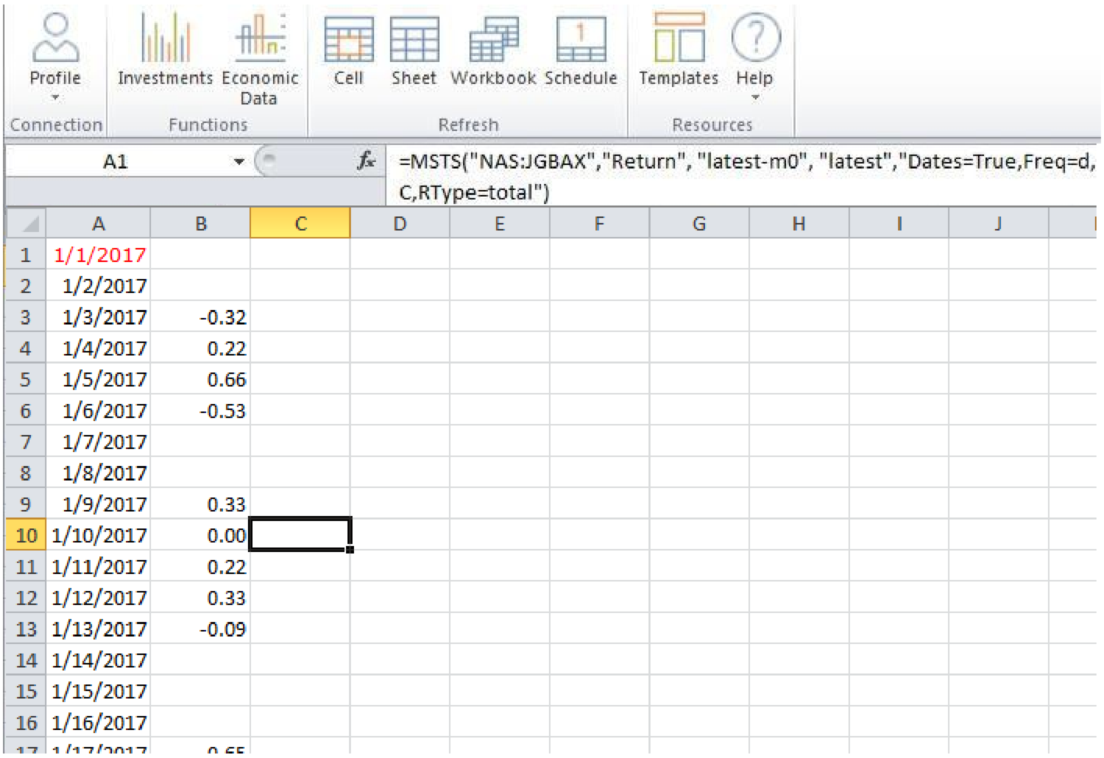
Manual Examples

Morningstar Add-In
Manual Examples

Manually write Dash Codes in MSTS function

Example 1 (generated on 9/29/2011): when latest=9/28/2011, start date=9/1/2011, end date=9/28/2011

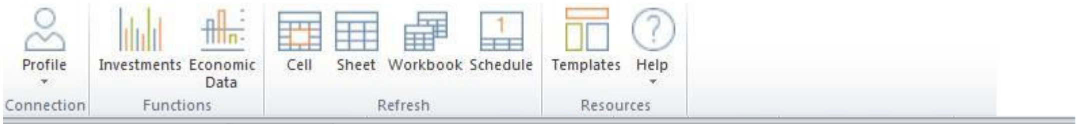
=MSTS("NAS:JGBAX","Return", "latest-m0", "latest","Dates=True,Freq=d,Days=C,RType=total")



	A	B	C	D	E	F	G	H	I	J
1	1/1/2017									
2	1/2/2017									
3	1/3/2017	-0.32								
4	1/4/2017	0.22								
5	1/5/2017	0.66								
6	1/6/2017	-0.53								
7	1/7/2017									
8	1/8/2017									
9	1/9/2017	0.33								
10	1/10/2017	0.00								
11	1/11/2017	0.22								
12	1/12/2017	0.33								
13	1/13/2017	-0.09								
14	1/14/2017									
15	1/15/2017									
16	1/16/2017									

Example 2 (generated on 9/29/2011): when latest=9/28/2011, start date=1/1/2010, end date=12/31/2010.

=MSTS("NYS:MMM","Close", "ED-1X", "latest-0X","Dates=True,Freq=d,Days=C,Fill=B")

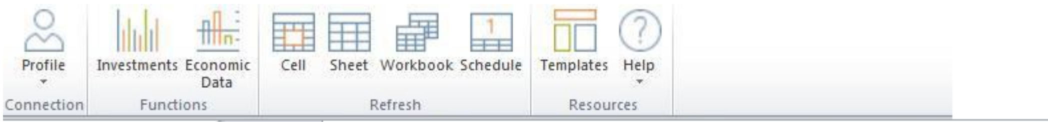


A1 =MSTS("NYS:MMM","Close", "ED-1X", "latest-0X","Dates=True,Freq=d,Days=C,Fill=B")

	A	B	C	D	E	F	G	H	I	J	K	L
1	1/1/2015	164.32										
2	1/2/2015	164.06										
3	1/3/2015											
4	1/4/2015											
5	1/5/2015	160.36										
6	1/6/2015	158.65										
7	1/7/2015	159.80										
8	1/8/2015	163.63										
9	1/9/2015	161.62										
10	1/10/2015											
11	1/11/2015											
12	1/12/2015	160.74										
13	1/13/2015	160.62										
14	1/14/2015	159.84										
15	1/15/2015	159.66										
16	1/16/2015	162.00										

Example 3 (generated on 9/29/2011): when latest=9/28/2011, start date=4/1/2011, end date=6/30/2011

=MSTS("NAS:PHDAX","NAV_daily", "ED-1Q", "lqend","Dates=True,Freq=d,Days=C")

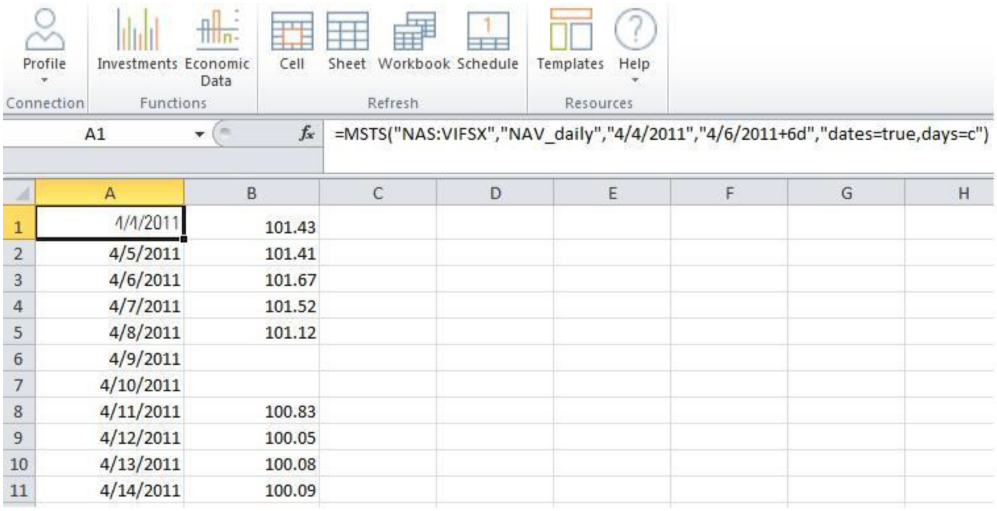


A1 =MSTS("NAS:PHDAX","NAV_daily", "ED-1Q", "lqend","Dates=True,Freq=d,Days=C")

	A	B	C	D	E	F	G	H	I	J	K	L
1	7/1/2016	8.57										
2	7/2/2016											
3	7/3/2016											
4	7/4/2016											
5	7/5/2016	8.57										
6	7/6/2016	8.56										
7	7/7/2016	8.60										
8	7/8/2016	8.65										
9	7/9/2016											
10	7/10/2016											
11	7/11/2016	8.70										
12	7/12/2016	8.74										
13	7/13/2016	8.72										
14	7/14/2016	8.74										

Example 4: when end date is specified to be April 6, 2011 plus 6 working days, i.e. April 14, 2011.

=MSTS("NAS:VIFSX","NAV_daily","4/4/2011","4/6/2011+6d","dates=true,days=c")



User Interface Examples

Morningstar Add-In
User Interface Examples

Dash Codes in Investments Function

To enter dash codes in Data Retriever Dialog, choose the End Dash Codes option in the Start date and End date drop down. The default dash code of "End date" is latest. Therefore, if you do not add an End date, the default is latest.

MSDate Examples

Morningstar Add-In

MSDate Examples

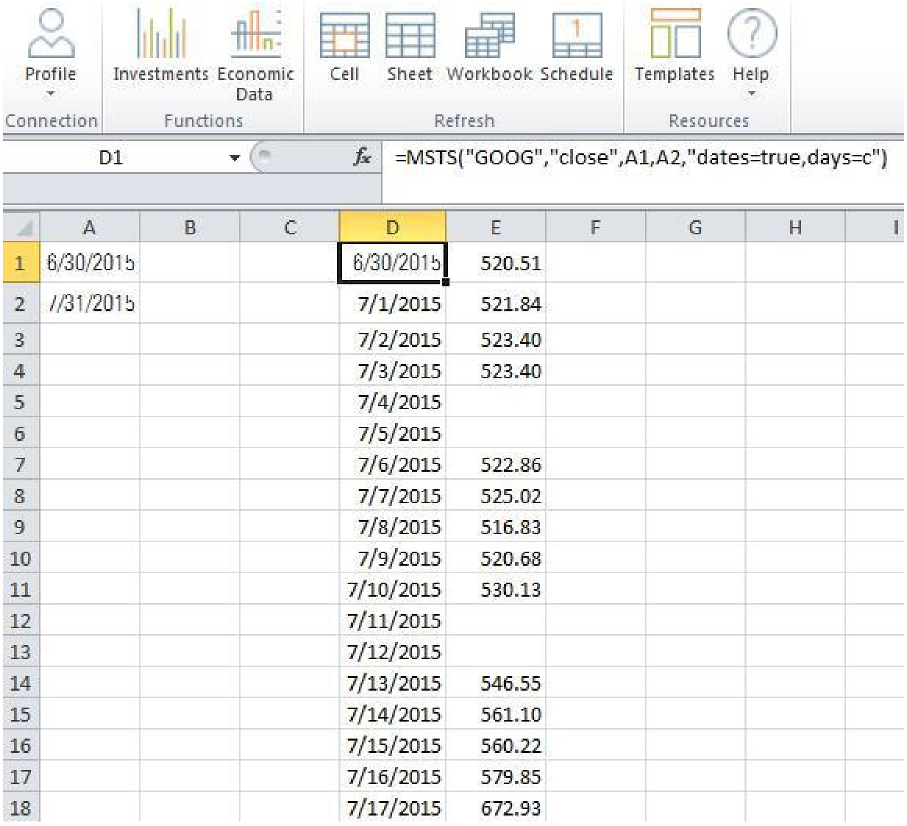
Use Dash Codes with MSDate

Dash code parameters can be used in MSDate function. When MSDates is referred to or included in MSTS as start date, API will automatically add one day for MSDate result and use it as start date for MSTS calculation.

Example 1 (generated on 9/29/2011): When lmktclose=9/28/2011, in MSTS start date=8/1/2011, end date=8/31/2011

=MSTS("GOOG","close",A1,A2,"dates=true,days=c")

A1: =MSDATE("lmktclose-1m")
A2: =MSDATE("lmktclose-0m")

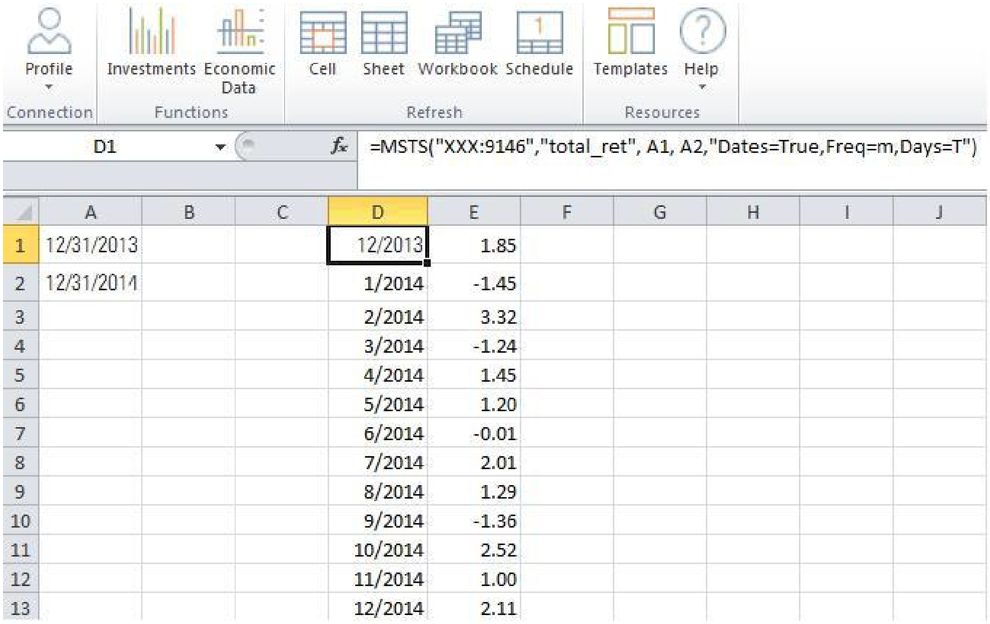


	A	B	C	D	E	F	G	H	I
1	6/30/2015			6/30/2015	520.51				
2	7/31/2015			7/1/2015	521.84				
3				7/2/2015	523.40				
4				7/3/2015	523.40				
5				7/4/2015					
6				7/5/2015					
7				7/6/2015	522.86				
8				7/7/2015	525.02				
9				7/8/2015	516.83				
10				7/9/2015	520.68				
11				7/10/2015	530.13				
12				7/11/2015					
13				7/12/2015					
14				7/13/2015	546.55				
15				7/14/2015	561.10				
16				7/15/2015	560.22				
17				7/16/2015	579.85				
18				7/17/2015	672.93				

Example 2 (generated on 9/29/2011): When latest=9/28/2011, in MSTS start date=1/1/2010, end date=12/31/2010

=MSTS("XXX:9146","total_ret", A1, A2,"Dates=True,Freq=m,Days=T")

A1: =MSDATE("latest-3s")
A2: =MSDATE("latest-1s")



	A	B	C	D	E	F	G	H	I	J
1	12/31/2013			12/2013	1.85					
2	12/31/2014			1/2014	-1.45					
3				2/2014	3.32					
4				3/2014	-1.24					
5				4/2014	1.45					
6				5/2014	1.20					
7				6/2014	-0.01					
8				7/2014	2.01					
9				8/2014	1.29					
10				9/2014	-1.36					
11				10/2014	2.52					
12				11/2014	1.00					
13				12/2014	2.11					

Custom Calculations

Morningstar Add-In
Custom Calculations

Custom Calculations

The Morningstar Add-In supports custom calculation data with the MSTS function. New Parameters added for custom calculation data include: Source, Benchmark, RFP, Comp, Win, Shift, and more. New options have also been added to the Investment Dialog for custom calculation settings.

Parameter Name		**Description**	**Possible Parameter Values**	**New Parameter or not?**
Security Identifier		Define the security	Ticker, ISIN, CUSIP, SecID, exchange:ticker, exchange:ISIN, exchange:CUSIP, SecID;Universe	N
Data Point Identifier		Define the data point	Data point names in text	N
Start Date/End Date		Define the time range of intended data series	Dates	N
Additional Parameter	Source	Source data used to calculate the target data points	Data Point ID, default to HP010 (Monthly Return)	Y
	Benchmark	Benchmark used to calculate the selected data points	SecID of securities	Y
	RFP	Risk-free proxy	SecID of securities	Y
	Comp	Compounding Method	S for standard; L for logarithmic; default to S;	Y
	Win*	Rolling windows	Positive numbers	Y
	Shift*	Window shift	Positive numbers	Y
	Ann	Retrieve annualized or not annualized data	True/False,	N
	Curr	Currency of the returned data	The three letter ISO currency code, i.e., "EUR" for Euro. Default to base currency.	N
	CorR	Indicate whether retried values be displayed vertically or horizontally	C for the next cell in the same column; R for the next cell in the same row; default to C	N
	Dates	Show the dates or not	True/False, default to false,	N

*Win and Shift parameters are used to add multiple periods at once. For example, a one year window with 1 month shift (win=12m,shift=1m), will add 12 months of data, separated by each month, i.e. 1/1/2011-12/31/2011, 2/1/2011-1/31/2012, 3/1/2011-2/29/2012.

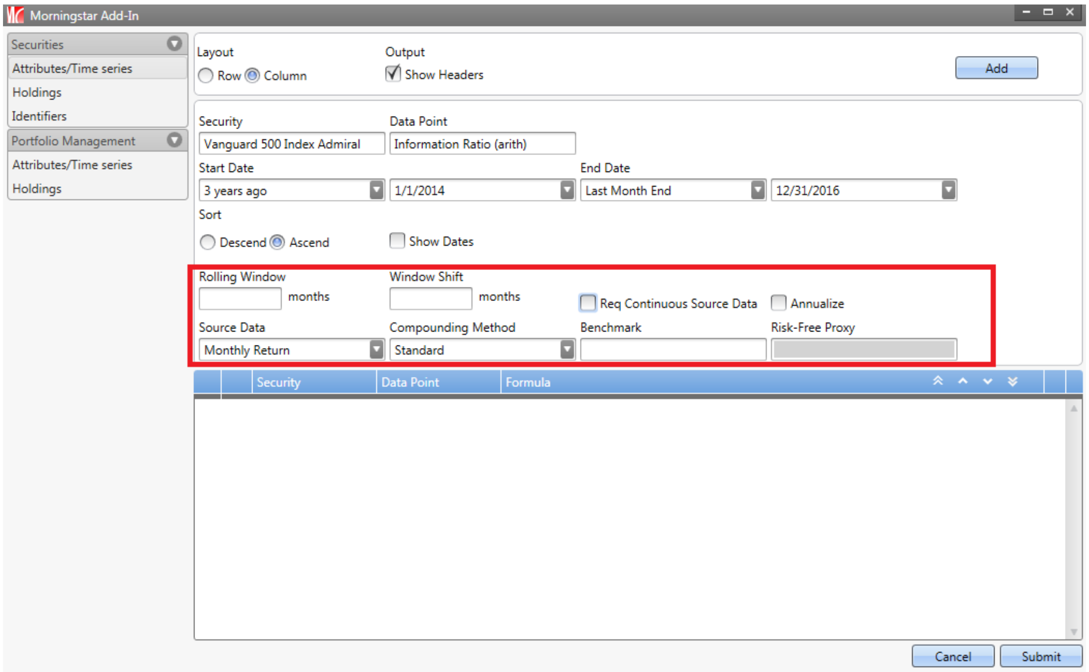
Please note that the Unit of Win and Shift should be consistent with frequency of source data. For example, when source is a monthly return, it's OK to write 'win=12m, shift=1m', or 'win=12, shift=1' in functions, but the Add-In will return N/A, if you set 'win=1y, shift=1m'.

Dialog for custom calculation data

There are six new options added for the custom calculation data shown in the red rectangle below.

· Source data: Choose from a dropdown list of source data available for the target custom calculation data
· Benchmark: find benchmark name with auto look-up;

· Risk-free proxy: find risk-free proxy name with auto look-up;
· Compounding method: Choose from two method options: standard/logarithmic;
· Rolling window: set the time period for each calculation;
· Window shift: set how often each calculation is performed;



Custom Calculation data points available in Add-In

Full Name	Short Name
Alpha (non-excess return)	Alpha_non_excess_ret
Alpha	Alpha
Average	Average
Average Gain	Average_Gain
Average Loss	Average_Loss
Batting Average	Batting_Average
Beta (non-excess return)	Beta_non_excess_ret
Beta	Beta
Correlation (non-excess return)	Correlation_non_excess_ret
Correlation	Correlation
Down Capture Ratio	Down_Capture_Ratio

Down Capture Return	Down_Capture_Return
Downside Deviation	Downside_Deviation
Excess Return	Excess_Return
Excess Return (geo)	Excess_Return_geo
Information Ratio (arith)	Info_Ratio_arith
Information Ratio (geo)	Info_Ratio_geo
Kurtosis	Kurtosis
Loss Std Dev	Loss_Std_Dev
Max	Max
Median	Median
Min	Min
Relative Risk	Relative_Risk
Residual Std Dev (non-excess return)	Residual_Std_Dev_non_excess_ret
Residual Std Dev	Residual_Std_Dev
R2 (non-excess return)	R2_non_excess_ret
R2	R2
Semi Dev	Semi_Dev
Sharpe Ratio (arith)	Sharpe_Ratio_arith
Sharpe Ratio (geo)	Sharpe_Ratio_geo
Skewness	Skewness
Sortino Ratio (arith)	Sortino_Ratio_arith
Sortino Ratio (geo)	Sortino_Ratio_geo
Std Dev	Std_Dev
Tracking Error	Tracking_Error
Treynor Ratio (arith)	Treynor_Ratio_arith
Treynor Ratio (geo)	Treynor_Ratio_geo
Up Capture Ratio	Up_Capture_Ratio
Up Capture Return	Up_Capture_Return
Upside Deviation	Upside_Deviation
Calmar Ratio	Calmar_Ratio
Sum	Sum

Best Month	Best_Month
Worst Month	Worst_Month
Best Quarter	Best_Quarter
Worst Quarter	Worst_Quarter
Gain Std Dev	Gain_Std_Dev
Max Drawdown	Max_Drawdown
Max Drawdown # of Periods	Max_Drawdown_#_of_Periods
Max Drawdown Peak Date	Max_Drawdown_Peak_Date
Max Drawdown Valley Date	Max_Drawdown_Valley_Date
Up Period Percent	Up_Period_Percent
Down Period Percent	Down_Period_Percent
Longest Up-Streak # of Periods	Longest_Up_Streak_#_of_Periods
Longest Up-Streak Return	Longest_Up_Streak_Return
Longest Up-Streak Start Date	Longest_Up_Streak_Start_Date
Longest Up-Streak End Date	Longest_Up_Streak_End_Date
Longest Down-Streak # of Periods	Longest_Down_Streak_#_of_Periods
Longest Down-Streak Return	Longest_Down_Streak_Return
Longest Down-Streak Start Date	Longest_Down_Streak_Start_Date
Longest Down-Streak End Date	Longest_Down_Streak_End_Date
Up Number Ratio	Up_Number_Ratio
Up Percent Ratio	Up_Percent_Ratio
Down Number Ratio	Down_Number_Ratio
Down Percent Ratio	Down_Percent_Ratio
Sharpe Ratio	Sharpe_Ratio
First Value	First_Value
Last Value	Last_Value
First Date	First_Date
Last Date	Last_Date
Number of Observations	Number_of_Observations
Omega	Omega
Kappa(3)	Kappa(3)

Jarque-Bera	Jarque_Bera
Sortino Ratio	Sortino_Ratio
Sterling Ratio	Sterling_Ratio
Average Drawdown	Average_Drawdown
Appraisal Ratio (non-excess return)	Appraisal_Ratio_non_excess_ret
Std Error Alpha (non-excess return)	Std_Error_Alpha_non_excess_ret
Std Error Alpha	Std_Error_Alpha
Std Error Beta (non-excess return)	Std_Error_Beta_non_excess_ret
Std Error Beta	Std_Error_Beta
Bear Beta	Bear_Beta
Bear Correlation	Bear_Correlation
Bull Beta	Bull_Beta
Bull Correlation	Bull_Correlation
Efficiency Ratio (arith)	Efficiency_Ratio_arith
Coefficient of Variation	Coefficient_of_Variation
Gain/Loss Ratio	Gain/Loss_Ratio
Max Drawdown Recovery # of Periods	Max_Drawdown_Recovery_#_of_Periods
Max Drawdown Recovery Date	Max_Drawdown_Recovery_Date
Max Gain	Max_Gain
Max Gain # of Periods	Max_Gain_#_of_Periods
Max Gain Start Date	Max_Gain_Start_Date
Max Gain End Date	Max_Gain_End_Date
Appraisal Ratio	Appraisal_Ratio
Covariance (non-excess return)	Covariance_non_excess_ret
Covariance	Covariance
Downside Std Dev	Downside_Std_Dev
Upside Std Dev	Upside_Std_Dev
Gain Deviation	Gain_Deviation
Loss Deviation	Loss_Deviation
Efficiency Ratio (geo)	Efficiency_Ratio_geo
M-Squared	M_Squared

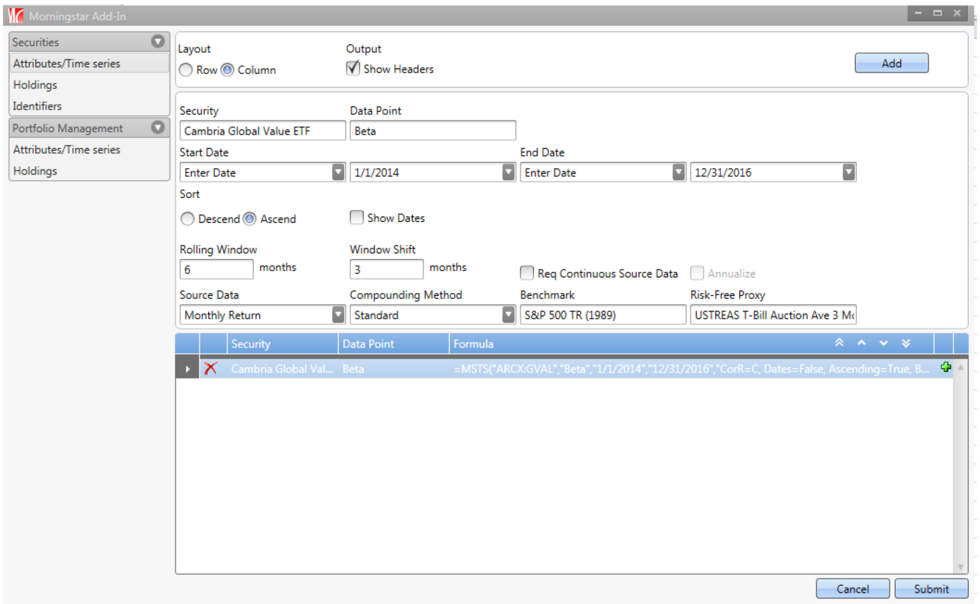
Std Dev Population	Std_Dev_Population
Up Number	Up_Number
Down Number	Down_Number
Overall Capture Ratio	Overall_Capture_Ratio
Semi Std Dev	Semi_Std_Dev
Semi Variance	Semi_Variance
Overall Deviation	Overall_Deviation
Average Absolute Deviation	Average_Absolute_Deviation
Max Absolute Deviation	Max_Absolute_Deviation

Examples

Morningstar Add-In
Examples

Examples

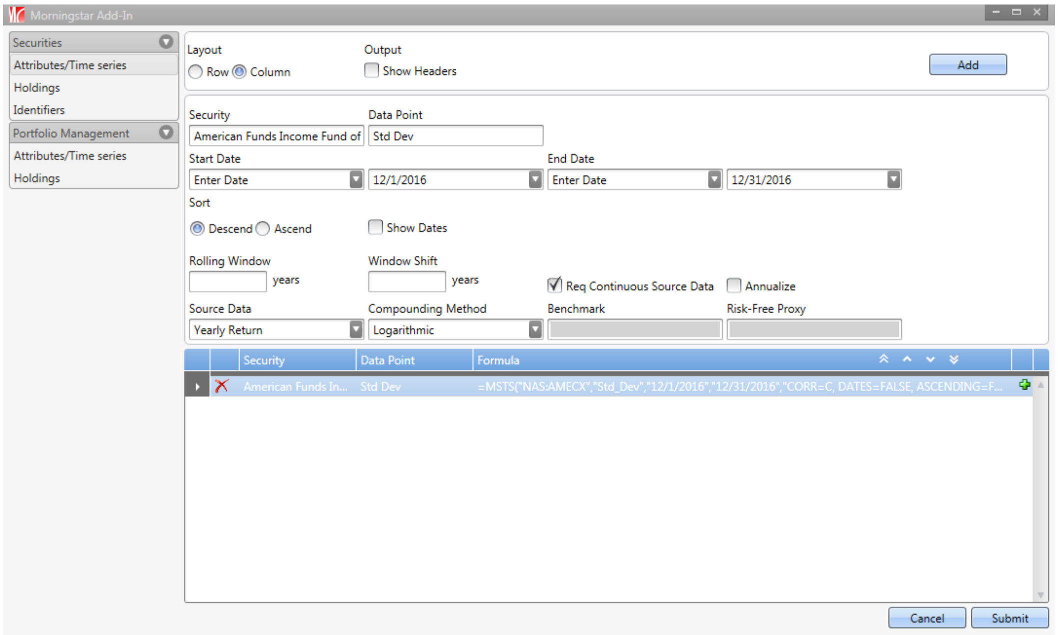
Example 1: get data with Dialog--calculate "beta" for funds



Results in Excel:

	ARCX:GVAL - Beta
2014-01-01 to 2014-06-30	
2014-04-01 to 2014-09-30	1.04
2014-07-01 to 2014-12-31	0.85
2014-10-01 to 2015-03-31	1.19
2015-01-01 to 2015-06-30	1.43
2015-04-01 to 2015-09-30	0.88
2015-07-01 to 2015-12-31	0.58
2015-10-01 to 2016-03-31	1.09
2016-01-01 to 2016-06-30	1.53
2016-04-01 to 2016-09-30	0.83
2016-07-01 to 2016-12-31	-0.20

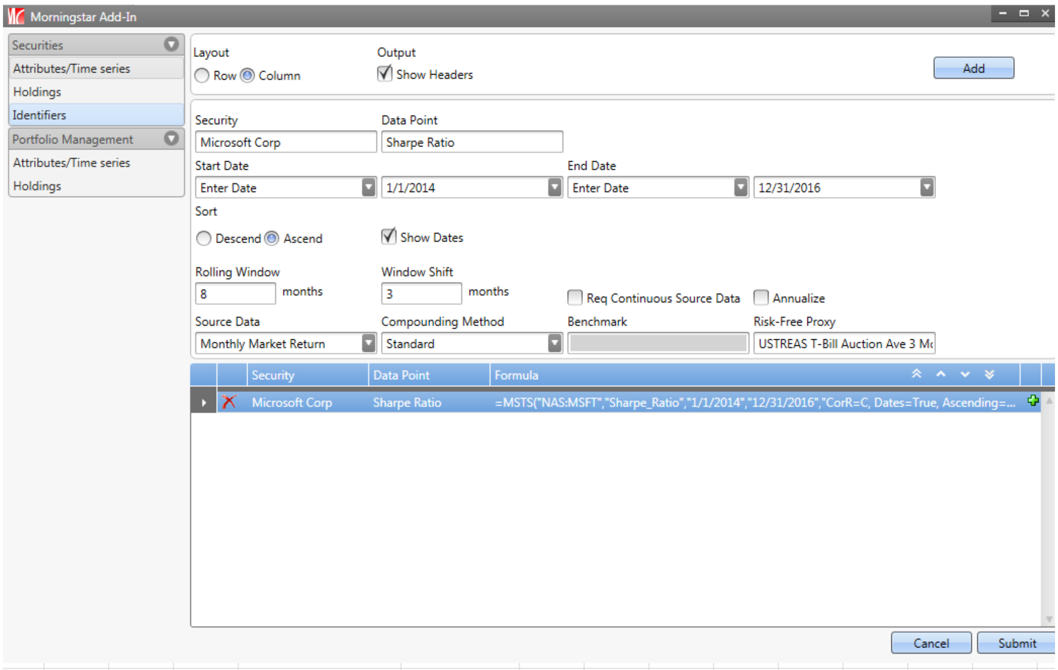
Example 2: get custom data with Dialog--calculate a single period "Std Dev" for funds



Results in Excel:

2016-01-01 to 2016-12-31	16.21

Example 3: get data with Dialog--calculate "sharp ratio" for stocks



Results in Excel:

	NAS:MSFT - Sharpe_Ratio
2014-01-01 to 2014-08-31	1.02
2014-04-01 to 2014-11-30	1.07
2014-07-01 to 2015-02-28	0.16
2014-10-01 to 2015-05-31	0.08
2015-01-01 to 2015-08-31	-0.01
2015-04-01 to 2015-11-30	0.43
2015-07-01 to 2016-02-29	0.29
2015-10-01 to 2016-05-31	0.32
2016-01-01 to 2016-08-31	0.12
2016-04-01 to 2016-11-30	0.24

Example 4: get data with function--calculate "average" for funds

Formula:

=MSTS("NAS:VFIAX","Average","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HP010,Win=5,Shift=1,Fill=B,Curr=BASE")
HP010 is ID of monthly return

Results in Excel:

=MSTS("NAS:VFIAX","Average","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HP010,Win=5,Shift=1,Fill=B,Curr=BASE")

B	C	D	E	F	G	H	I
2010-01-01 to 2010-05-31	-0.18						
2010-02-01 to 2010-06-30	-0.50						
2010-03-01 to 2010-07-31	0.28						
2010-04-01 to 2010-08-31	-1.83						
2010-05-01 to 2010-09-30	-0.36						
2010-06-01 to 2010-10-31	2.00						
2010-07-01 to 2010-11-30	3.05						
2010-08-01 to 2010-12-31	2.98						
2010-09-01 to 2011-01-31	4.36						
2010-10-01 to 2011-02-28	3.26						
2010-11-01 to 2011-03-31	2.50						

Example 5: get data with function--calculate "Alpha" for stocks

Formula:
=MSTS("NYS:CIS","Alpha","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HS440,Benchmark=XIUSA04G92,RFP=XIUSA000OC,Comp=S,Win=9,Shift=3,Ann=False,Fill=B,Curr=BASE")
HS440 is ID of monthly market return; XIUSA04G92 is ID of S&P 500 TR; XIUSA000OC is ID of USTREAS T-Bill Auction Ave 3 Mon;

Results in Excel:

=MSTS("NYS:CIS","Alpha","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HS440,Benchmark=XIUSA04G92,RFP=XIUSA0
False,Fill=B,Curr=BASE")

B	C	D	E	F	G	H	I
2010-01-01 to 2010-09-30							
2010-04-01 to 2010-12-31							
2010-07-01 to 2011-03-31							
2010-10-01 to 2011-06-30	-1.69						
2011-01-01 to 2011-09-30	-13.21						
2011-04-01 to 2011-12-31	-11.81						
2011-07-01 to 2012-03-31	-12.05						
2011-10-01 to 2012-06-30	-5.10						
2012-01-01 to 2012-09-30	-8.07						
2012-04-01 to 2012-12-31	-14.02						

Example 6: get data with function--calculate "Tracking Error" for separate accounts

Formula:

=MSTS("F00000HGPT","TRACKING_ERROR","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HPD10,Benchmark=XIUSA04G92,Comp=L,Win=8,Shift=2,Ann=False,Fill=B,Curr=BASE")

HPD10 is ID of monthly gross return; XIUSA04G92 is ID of S&P 500 TR; logarithmic as compounding method;

Results in Excel:

=MSTS("F00000HGPT","TRACKING_ERROR","1/1/2010","12/31/2012","CorR=C,Dates=True,Source=HPD10,Benchmark
False,Fill=B,Curr=BASE")

B	C	D	E	F	G	H
2010-01-01 to 2010-08-31	2.29					
2010-03-01 to 2010-10-31	2.33					
2010-05-01 to 2010-12-31	2.56					
2010-07-01 to 2011-02-28	2.31					
2010-09-01 to 2011-04-30	1.80					
2010-11-01 to 2011-06-30	1.61					
2011-01-01 to 2011-08-31	1.29					
2011-03-01 to 2011-10-31	1.97					
2011-05-01 to 2011-12-31	2.13					
2011-07-01 to 2012-02-29	2.13					
2011-09-01 to 2012-04-30	1.45					
2011-11-01 to 2012-06-30	1.85					
2012-01-01 to 2012-08-31	1.49					
2012-03-01 to 2012-10-31	1.59					
2012-05-01 to 2012-12-31						

Accounts / Model Portfolios / Custom Benchmarks

Morningstar Add-In
Accounts / Model Portfolios / Custom Benchmarks

Accounts / Model Portfolios / Custom Benchmarks

For accounts, Morningstar Add-In supports discrete data with MSDP function, time series data with MSTS function, and holding data with MSHOLDING function;

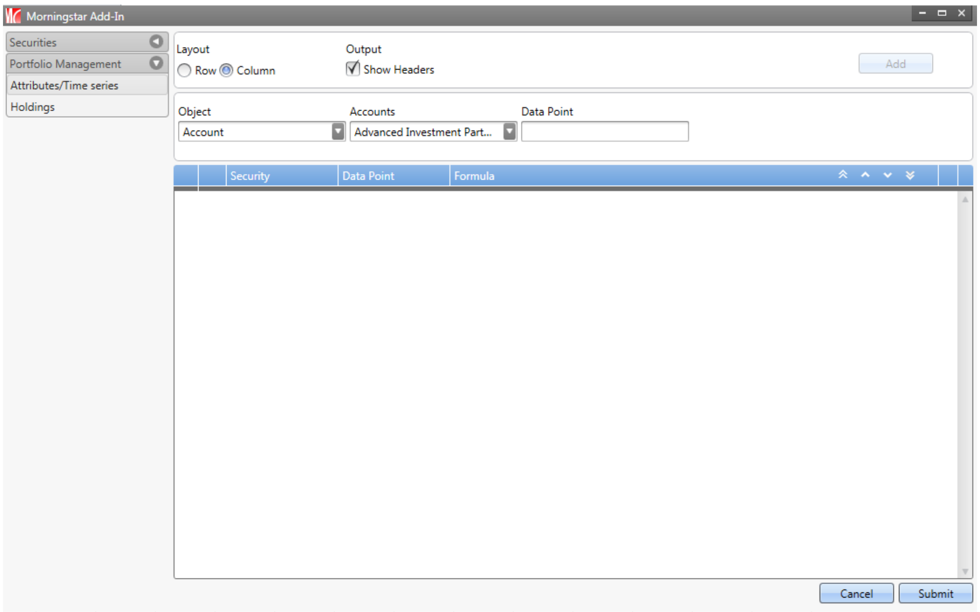
Trailing return, trailing risk, return, return index, portfolio stats, custom cal and holding data have also been enabled for accounts in the Add-In;

Getting data for accounts is similar as getting data for Funds/Stocks, except that, security identifier for accounts is GUID.

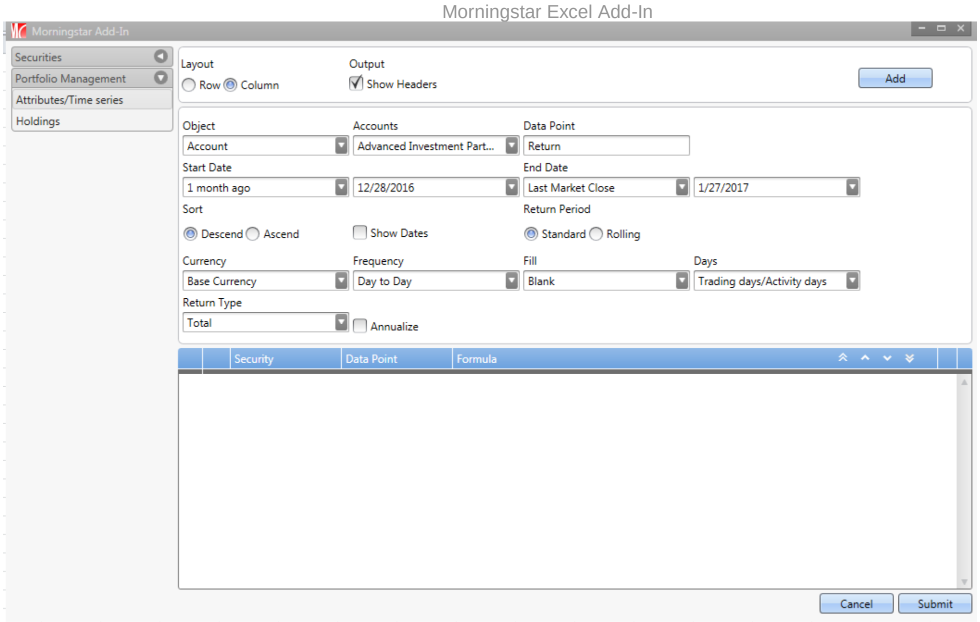
Dialog for accounts

Securities tab is for funds, stocks, indices and separate accounts.

Portfolio Management tab is for accounts, model portfolios and custom benchmarks.



Once you enter your data point, you will be able to then select the applicable options.



Object: Three options - Accounts, Model portfolios and Custom benchmarks; Accounts is the default option.

Accounts: The name of this box changes according to the selected options from Object;

When users click Portfolio Management tab and select the Attributes/Time Series sub-tab, as the default option of Object box is Accounts, the default name of this box is Accounts. The Add-In reads all accounts the users saved in Direct. When users select Model portfolios in the Object box, the box name will change to Model portfolios. Add-in will read all Model portfolios the users saved in Direct. The same logic is applied to the Custom benchmark option.

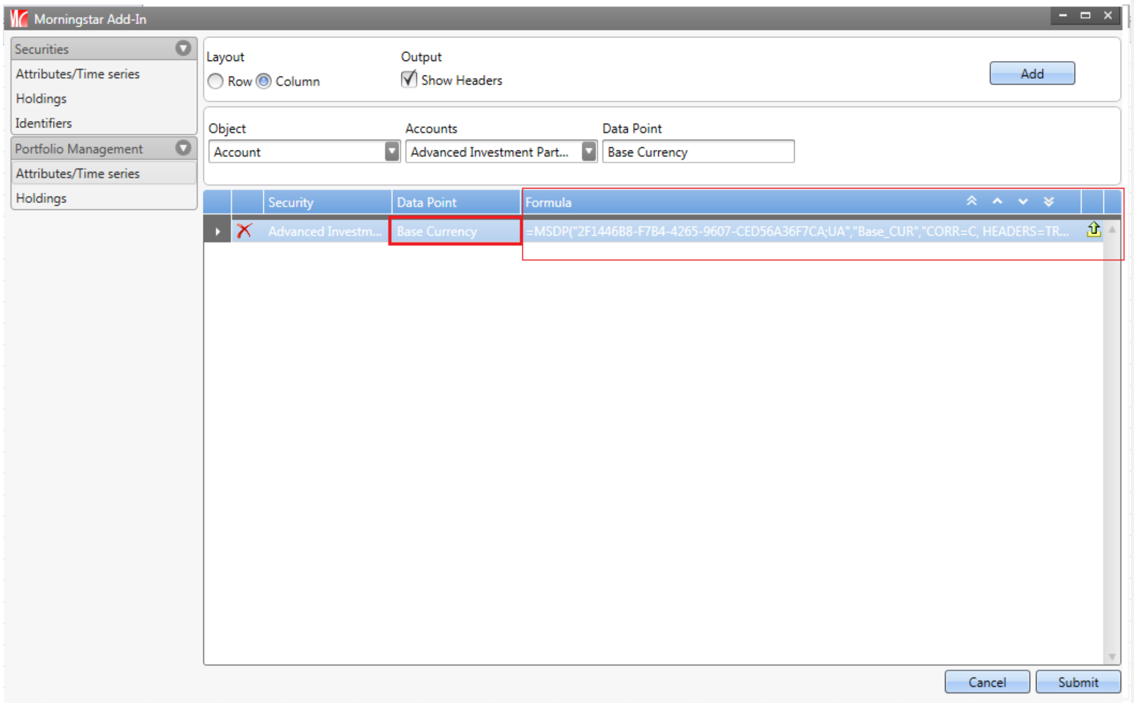
Other settings work the same as Attributes/Time Series tab and Holdings tab for Securities.

Examples

Morningstar Add-In
Examples

Examples

Example 1: get base currency with MSDP for accounts

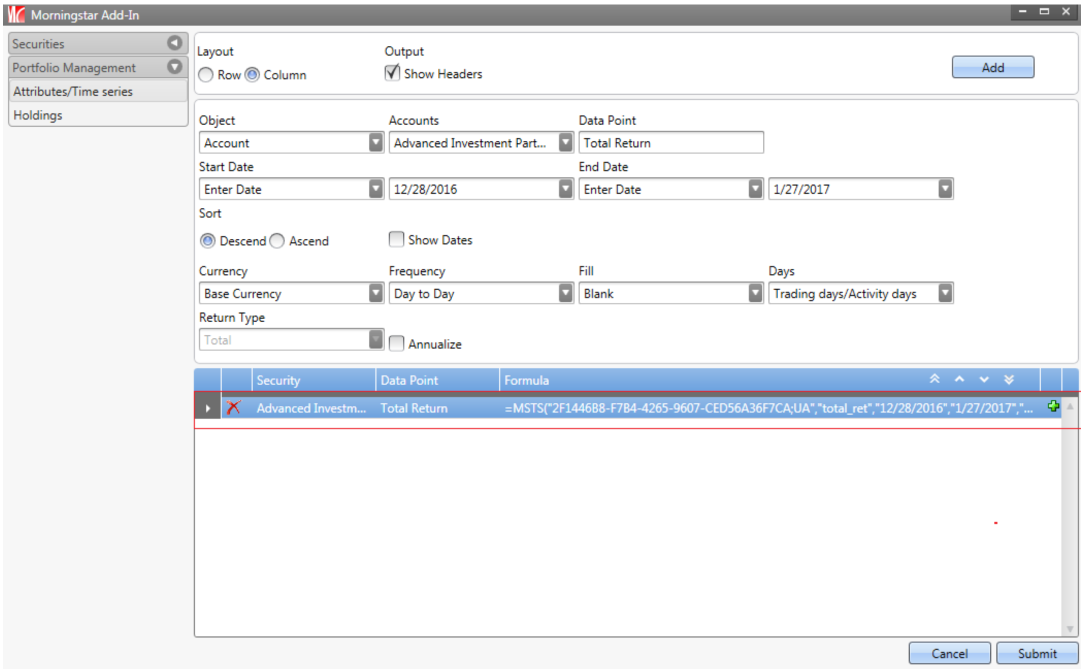


After selecting the data point, click on add to add it to the basket and submit to see the result.

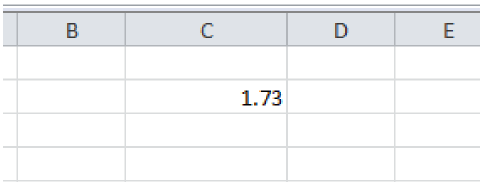
Results in Excel:

A	B	C	D
		US Dollar	

Example 2: get trailing return with MSDP for accounts

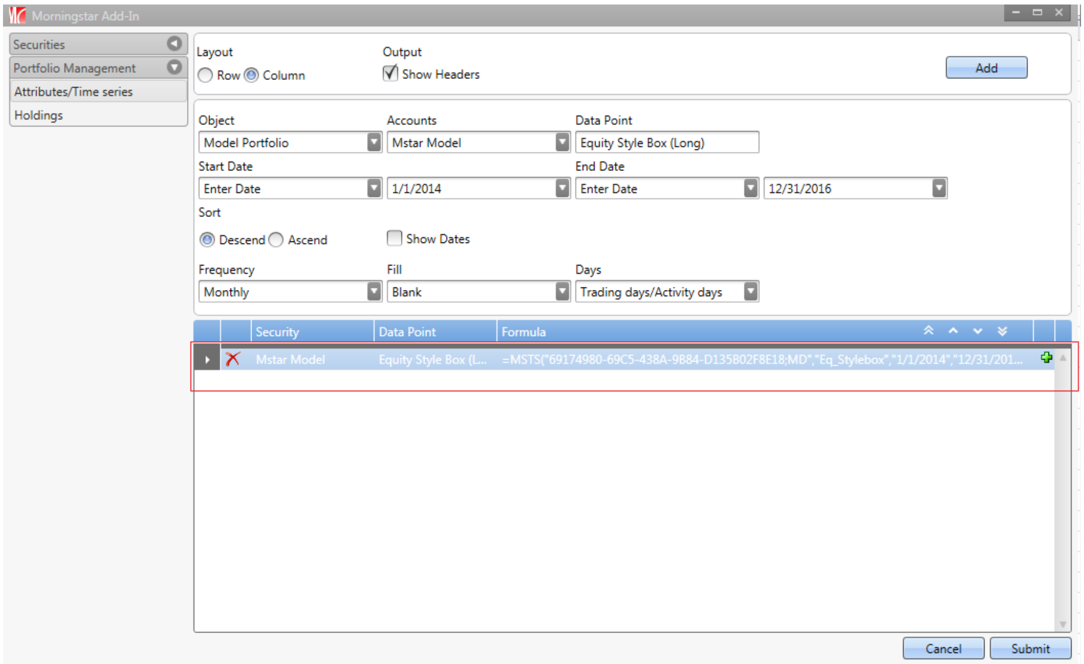


Results in Excel:

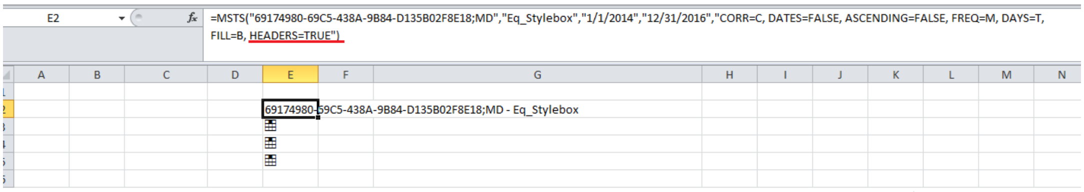


Example 3: get equity style box with MSDP for models

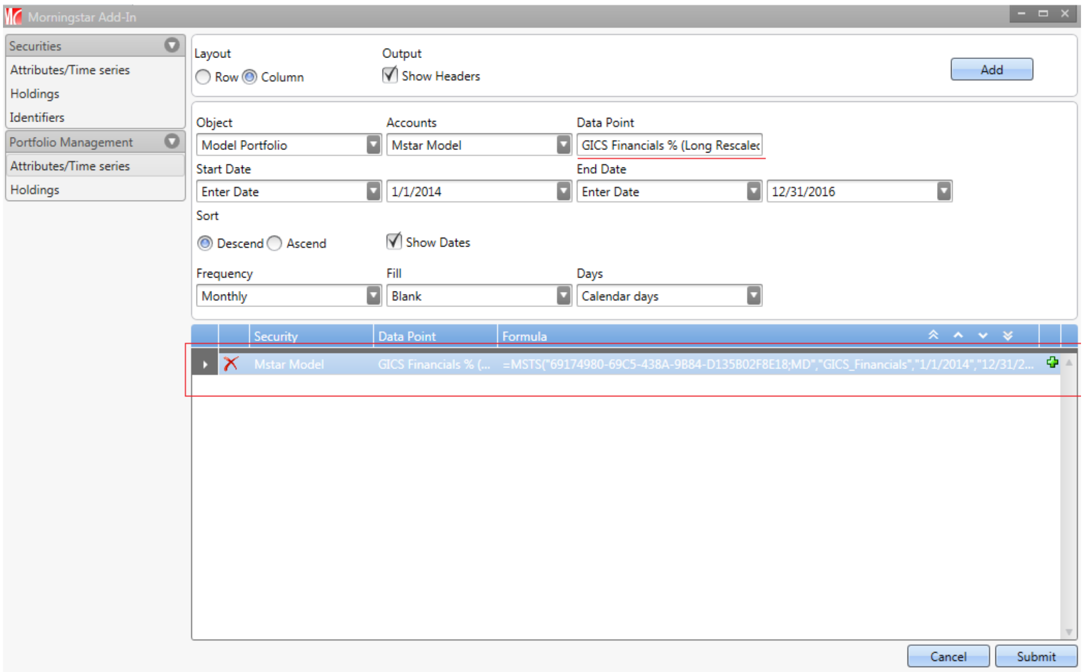
You can also get time series style box for models, if you set start date and end date in the dialog.



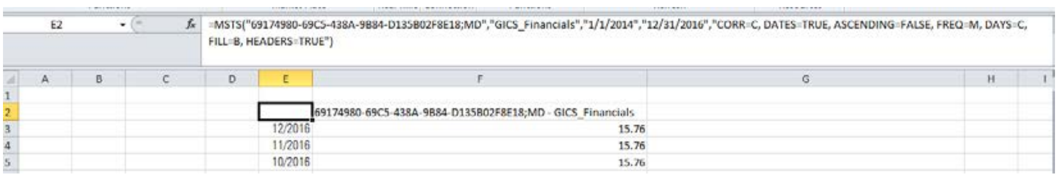
Results in Excel:



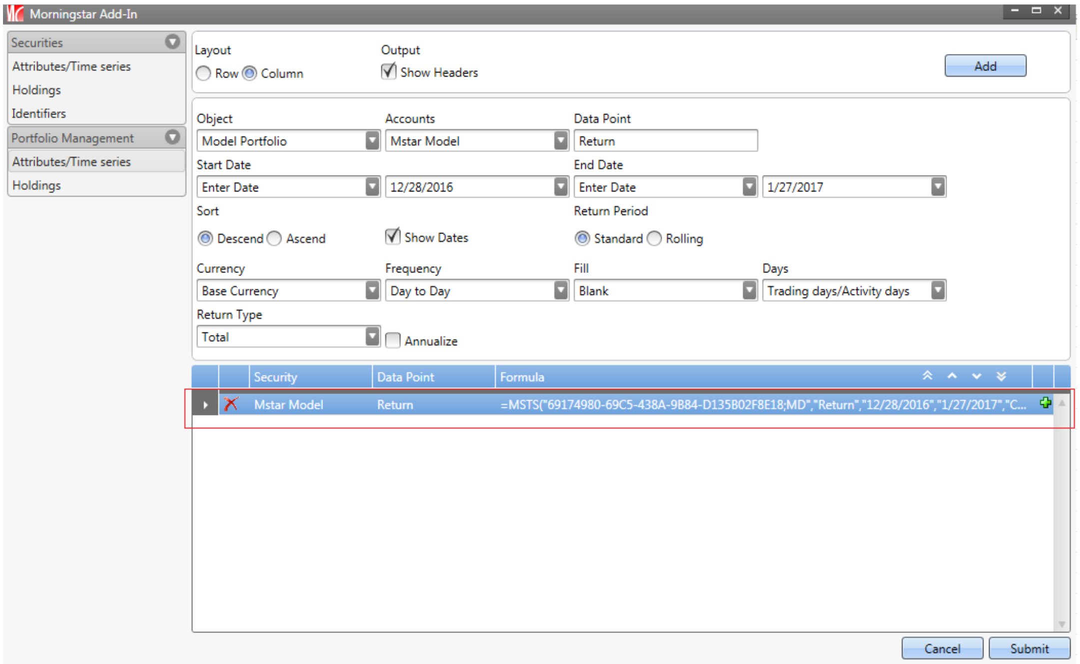
Example 4: get equity sector (GICS) data with MSTS for models



Results in Excel:



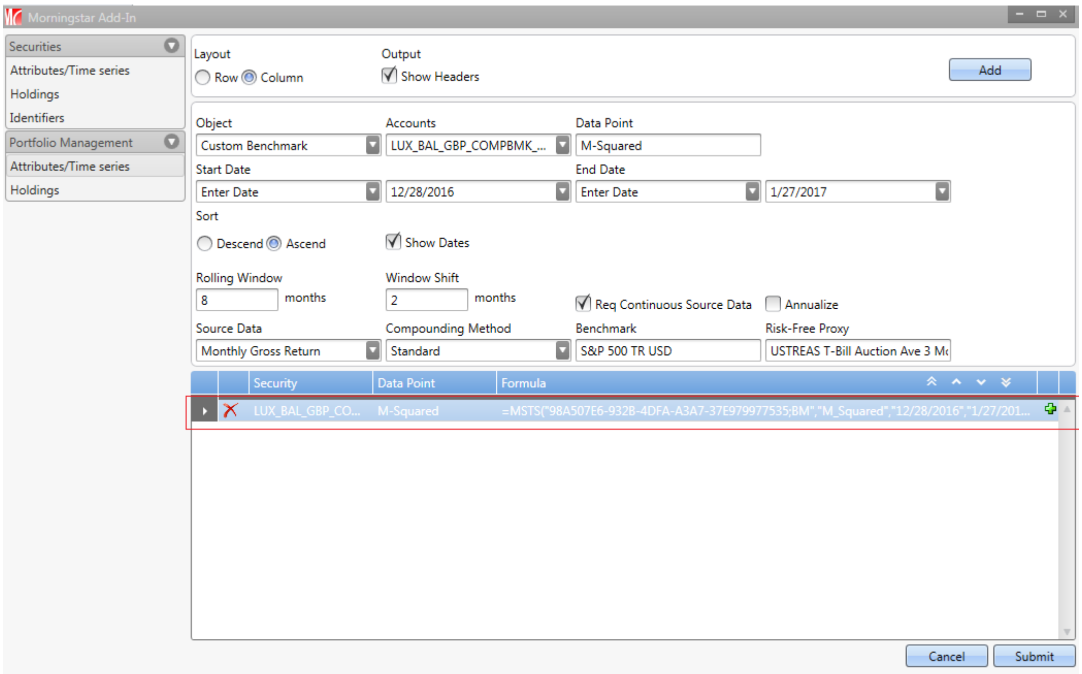
Example 5: get return (day to day) for models



Results in Excel:

2016-12-28 to 2017-01-27	2.15

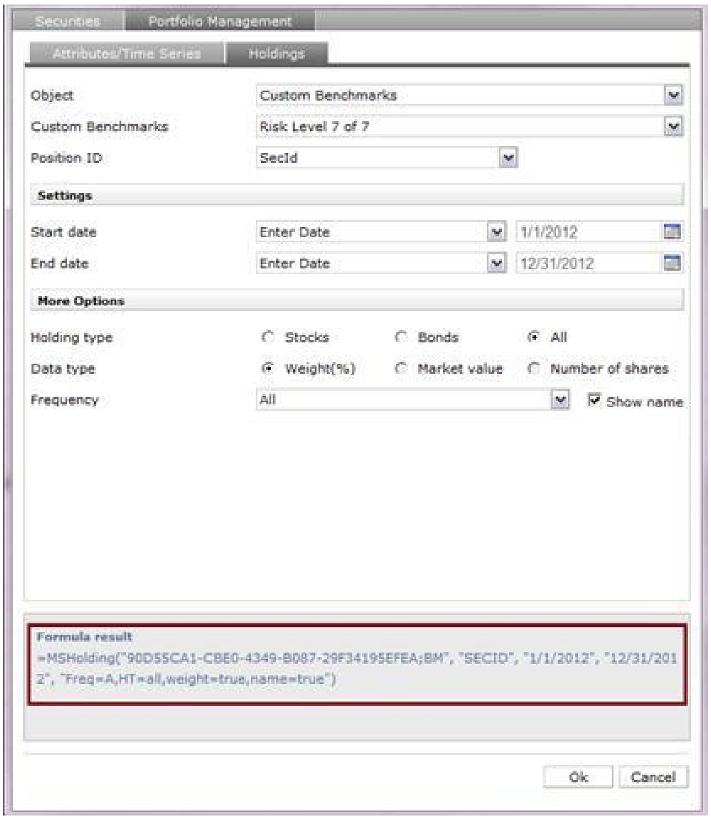
Example 6: calculate custom calculation data, M-Square for custom benchmarks



Results in Excel:

2010-01-01 to 2010-08-31	7.81
2010-03-01 to 2010-10-31	19.78
2010-05-01 to 2010-12-31	16.24
2010-07-01 to 2011-02-28	22.46
2010-09-01 to 2011-04-30	17.38
2010-11-01 to 2011-06-30	8.57
2011-01-01 to 2011-08-31	-9.57
2011-03-01 to 2011-10-31	-6.63
2011-05-01 to 2011-12-31	-11.58
2011-07-01 to 2012-02-29	-0.19
2011-09-01 to 2012-04-30	4.76
2011-11-01 to 2012-06-30	3.30
2012-01-01 to 2012-08-31	4.28
2012-03-01 to 2012-10-31	-1.48
2012-05-01 to 2012-12-31	

Example 7: get holding of custom benchmark

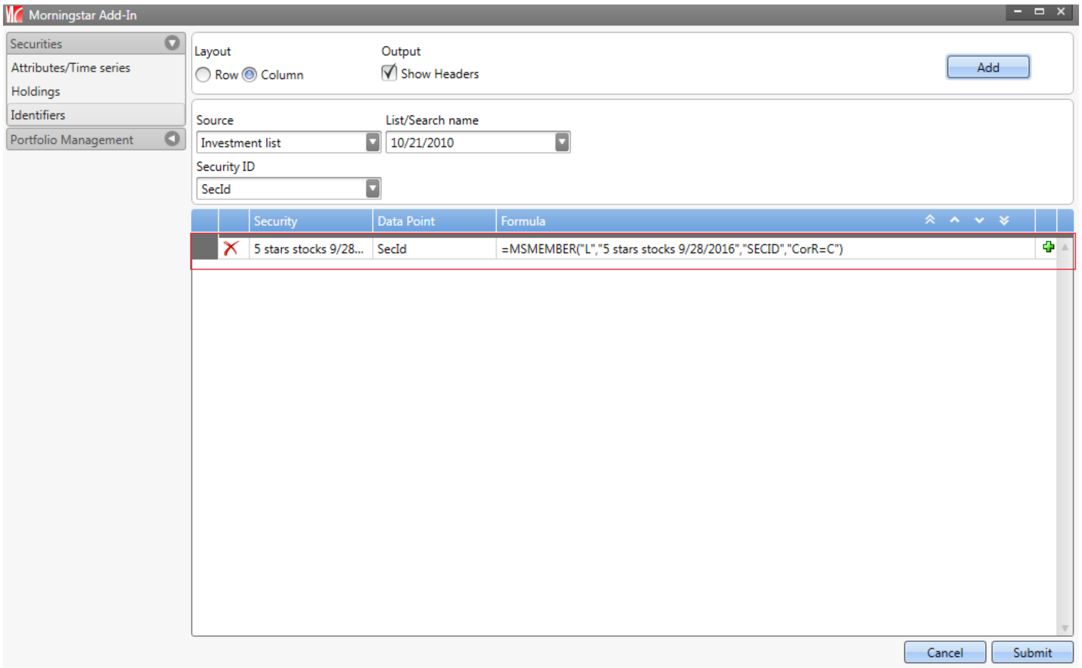


Results in Excel:

A	B	C	D	E	F
SecID	Name	1/31/2012	2/29/2012	3/31/2012	4/30/2012
FOUSA06VV3	FTSE Emerging TR GBP	36.00	36.00	36.00	36.00
XIUSA04CGI	FTSE AllSh TR GBP	23.00	23.00	23.00	23.00
XIUSA000RZ	MSCI Pacific Ex Japan GR USD	17.00	17.00	17.00	17.00
FOUSA08O6O	IPD UK All Property TR GBP	10.00	10.00	10.00	10.00
XIUSA04CHO	FTSE AW Dv Europe Ex UK TR USD	9.00	9.00	9.00	9.00
FOUSA06CMD	FTSE Japan TR GBP	5.00	5.00	5.00	5.00
XIUSA04C72	Citi UK GBI GBP	0.00	0.00	0.00	0.00
XIUSA000TO	Citi G7 USD				
FOUSA06JD2	BBA Libor 3 Month GBP				
XIUSA04CX5	Barclays Pan Euro HY Euro TR EUR				
FOUSA05PL3	IBOXX GBP NonGilts TR				

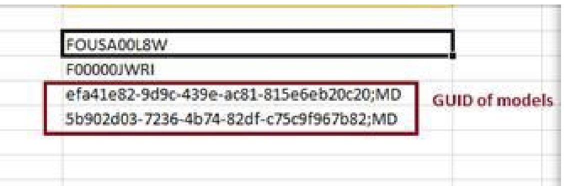
Comment [MC1]: ??? what is this? Example

Example 8: get SecID for investment list which includes both funds and accounts



A user can also pull a list from Morningstar Direct Cloud and those are denoted with a little "diamond" like below: "5stars5globes◊"

Results in Excel:



Data points available for accounts/models

Please go to the data dictionary part of the following link for data points available for accounts/models: https://aduatl62.morningstar.com/ExcelAddInServer/

Troubleshooting

Morningstar Add-In
Troubleshooting

Multiple Office versions

Morningstar Add-In
Multiple Office versions

Can two version of Microsoft Office® be installed?

Yes, the Morningstar Add-In is capable of running multiple versions of Office®/Excel®.

Received Interop Assemblies Error

Morningstar Add-In
Received Interop Assemblies Error

I recieved a Primary Interop Assemblies error during installation, how do I fix this?

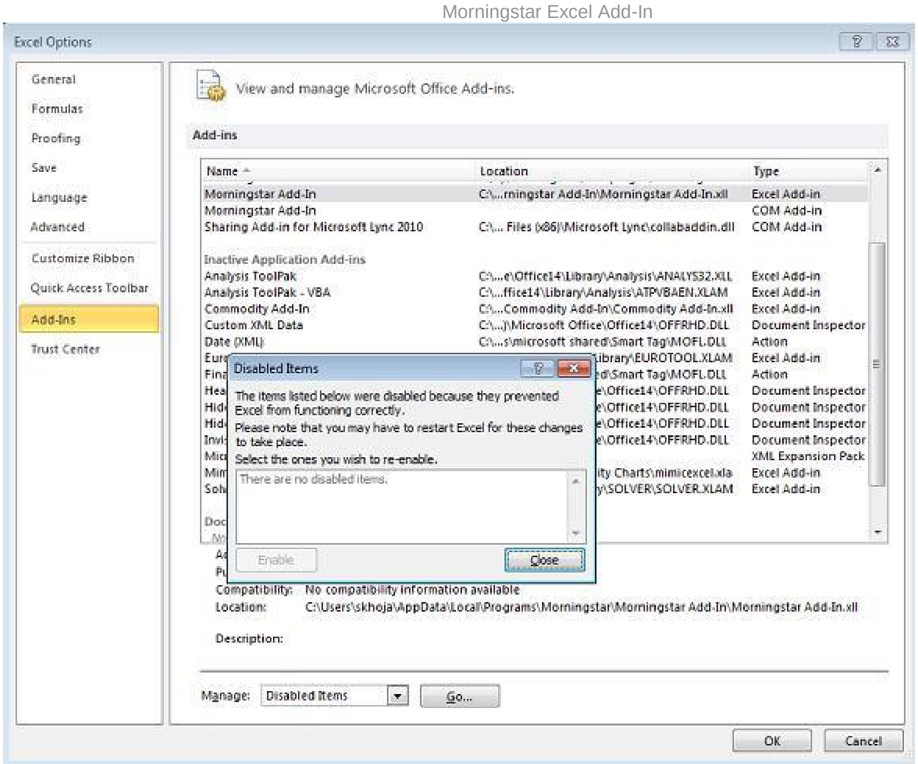
During the installation process the Setup Wizard will automatically install a Primary Interop Assemblies (PIAs) if it is not found (for more information on PIAs see: http://msdn.microsoft.com/en-us/library/aa302338.aspx). In some cases users might receive an error message about the PIAs installation and the Setup Wizard will stop installation. This is most likely caused by Admin rights on a user's computer. If this occurs, log off and log back into the computer as an Admin and re-install the Morningstar Add-In. Once installation is complete, Admin rights are NOT needed to run the add-in.

The Morningstar Add-In disappeared

Morningstar Add-In
The Morningstar Add-In disappeared

The Morningstar Add-In disappeared from my Excel® ribbon, how can I get it back?

In some instances the Morningstar Add-In might be auto-disabled if Excel® crashes in the process of retrieving data. In order to re-enable the add-in navigate to Add-Ins in Excel® Options. In the 'Manage:' drop-down list select 'Disabled Items' then press 'Go...' Select 'Morningstar add-in (ribbon helper) ()', 'Enable', and then 'Close'. Then select 'OK' in the Excel Options window. Next, close all Excel® instances and re-open Excel®. The tab or list should appear.



~~Last Updated: 08/24/15 | © Morningstar, Inc., 2015~~

Empty parser list in Upload Interface

Comment [MC2]: What is this?

Morningstar Add-In

Empty parser list in Upload Interface

How come my parsers drop-down list is empty in the Upload user interface?

Parsers are located at the server level. If your parser list is blank, or does not include the parser you are looking for, it most likely is not set up on that server. This can also be caused if a user is not able to connect to a server. If this is the case, please contact your internal IT or MorningstarDirectFeedback@morningstar.com.

~~Last Updated: 09/02/15 | © Morningstar, Inc., 2015~~

Greyed out Icons

Comment [MC3]: Does this apply to the Dire side?

Morningstar Add-In

Greyed out Icons

How come some of my icons are greyed out?

The icons and features are entitled based on username basis. If a particular username is not entitled to certain features they will be greyed out. In addition, when the active cell contains a function, all other function icons will be greyed out.

~~Last Updated: 08/24/15 | © Morningstar, Inc., 2015~~

Unable to update all Functions

Morningstar Add-In
Unable to update all Functions

How come I am not able to update all the functions on a spreadsheet?

Comment [MC4]: Does this apply to Direct?

The icons and features are entitled on username basis. If a particular username is not entitled to certain features they will be greyed out. If a spreadsheet has functions a username is not entitled to, they will not update when refreshing.

Cell references are being overwritten

Morningstar Add-In
Cell references are being overwritten

Comment [MC5]: Does this apply to Direct –

Why are my cell references being overwritten when I refresh my spreadsheet?

Upon refresh, the add-in targets a block of cells that will be refreshed/overwritten once the data has returned from the server. These are located in adjacent columns to the right of the function (cells on the same row but different columns). The width of the refresh range depends on the number of symbols/queries being refreshed.

Contact Client Support

Morningstar Add-In
Contact Client Support

How can I contact client support if I have further questions?

Client support can be reached via email at MorningstarDirectFeedback@morningstar.com or phone support at the following numbers.

Phone

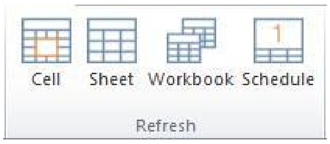
Asia (excluding mainland China)	+852 2973 4680
Australia and New Zealand	+61 2 9276 4420
Canada	+1 866 229 0216
China	+86 755 3311 0088
United Kingdom	+44 20 3107 0020
United States	+1 866 229 0216

For other countries, click here

Refresh Methods

Morningstar Add-In
Refresh Methods

Refresh Options



Once worksheets are set up they can be saved and later retrieved and refreshed to pull in any updates to the data since the last run.

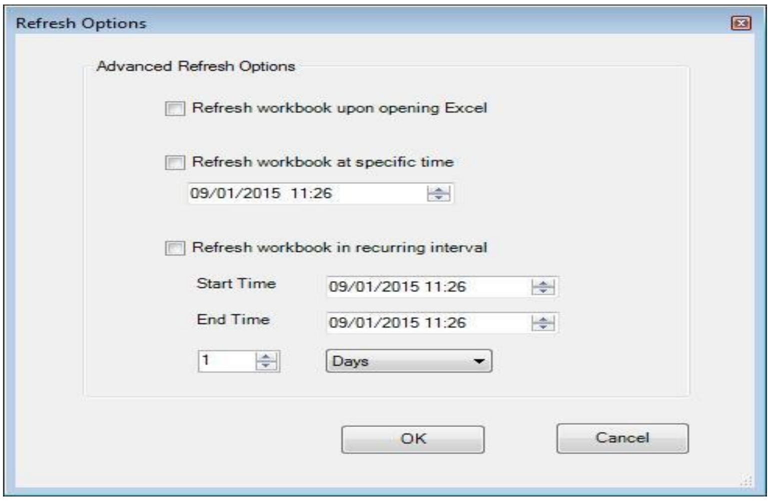
Cell - refresh a single sell that contains the function string

Sheet- refresh the current sheet within the workbook

Workbook - refresh the entire workbook including all sheets

Schedule - schedule a specific time or range to refresh

Schedule



Refresh workbook upon opening Excel will automatically refresh the entire workbook when the file is opened

Refresh workbook at a specific time will allow a user to update the file one the specified date and time

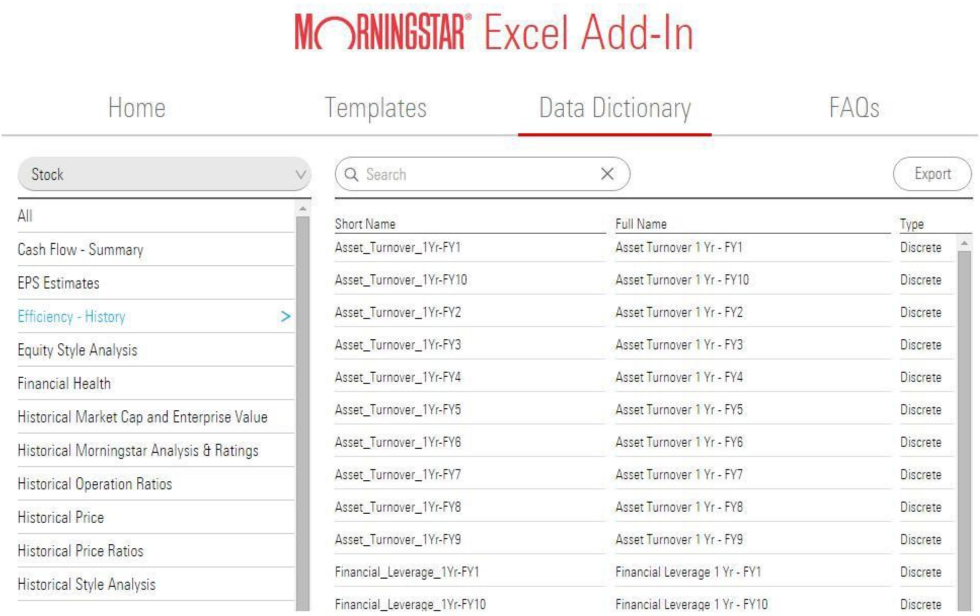
Refresh workbook in recurring interval will allow a user to update in various increments (minutes, hours, days)

References

Morningstar Add-In
References

References

There are many tools to help you maximize the value of Morningstar Add-In. In addition to this user guide and the video provided on the first page, you have access to live sessions located in Morningstar Direct's training page as well as the data dictionary, templates, and FAQs located on the Add-In landing page. Also, from the Morningstar Add-In, you get easily get access to most of this information in addition to sending us feedback should you have any questions, concerns, or suggestions.



Templates

Morningstar Add-In
Templates

Asset Class Winners & Losers

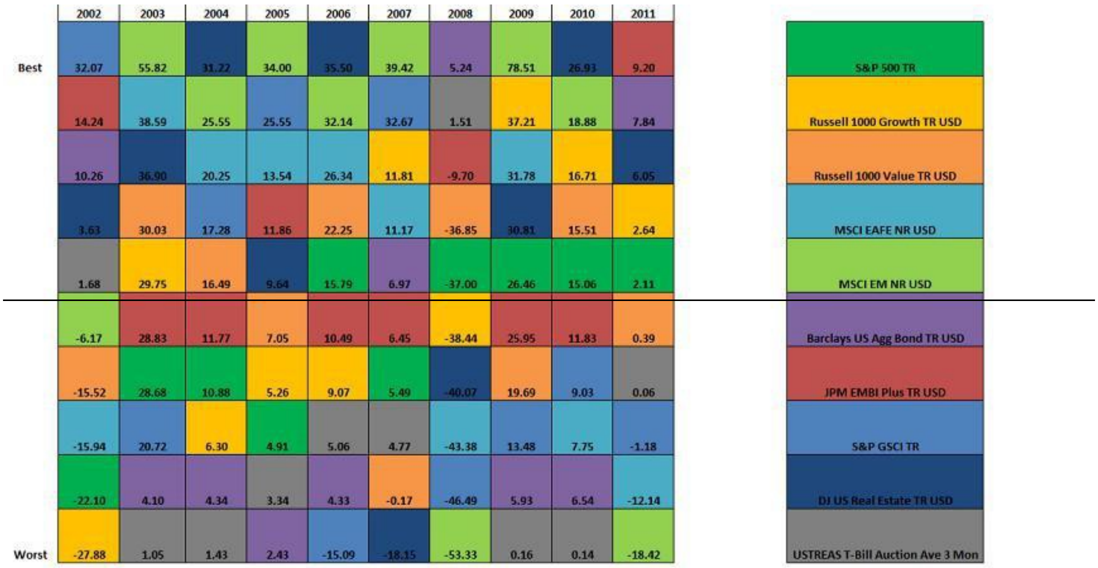
Morningstar Add-In
Asset Class Winners & Losers

Asset Class Winners & Losers Template

Click Here to Access the Template

Retrieve annual returns on 10 investments to visualize asset class fluctuations over time.

1. Be sure to install the latest version of Excel API (1.01.023), enable all macros, and open the attached file.
2. Log in with your Morningstar Direct credentials. "Ctrl + Alt + F9" will refresh the spreadsheet.
3. Enter your investments in the "Inputs" worksheet by entering a SecID, Ticker, or CUSIP into the cells in column B.
4. Once these investments have been entered, go back to the "Winners & Losers" worksheet.
5. Now press "Ctrl + Shift + R" to run a macro to sort the spreadsheet according to the investments entered.



Correlation Matrix

Morningstar Add-In
Correlation Matrix

Correlation Matrix Template

[Click Here to Access the Template]

Retrieve 3 years of monthly returns on 20 investments to automatically create a correlation matrix containing conditional formatting. A red cell indicates high correlation and a blue cell indicates low correlation. Just enter tickers, SecIDs, or CUSIPs into the cells in column A.

Correlation Matrix
Start Date: 5/31/2009
End Date: 5/31/2012

		Fidelity New Markets Income	PIMCO Emerging Markets Bond A	BlackRock World Income Inv A	Dodge & Cox Income	Calamos Market Neutral Income A	Artisan Small Cap Value Investor	T. Rowe Price Small-Cap Stock	Permanent Portfolio	Sequoia	Tweedy, Browne Global Value	Yacktman	Wasatch Small Cap Growth	Wells Fargo Advantage Growth A	Loomis Sayles Bond Admin	Oppenheimer Developing Markets A	Vanguard Emerging Mkts Stock Idx Adm	Goldman Sachs Commodity Strategy A	Harbor Commodity Real Return ST Adm	PIMCO Commodity Real Ret Strat A	Natixis ASG Global Alternatives A
FNMIX	Fidelity New Markets Income	1.000																			
PAEMX	PIMCO Emerging Markets Bond A	0.939	1.000																		
MDWIX	BlackRock World Income Inv A	0.659	0.690	1.000																	
DODIX	Dodge & Cox Income	0.695	0.939	0.815	1.000																
CVSIX	Calamos Market Neutral Income A	0.669	0.670	0.277	0.507	1.000															
ARTVX	Artisan Small Cap Value Investor	0.549	0.575	0.089	0.366	0.903	1.000														
OTCFX	T. Rowe Price Small-Cap Stock	0.531	0.547	0.078	0.343	0.892	0.976	1.000													
PRPFX	Permanent Portfolio	0.597	0.706	0.354	0.463	0.750	0.735	0.726	1.000												
SEQUX	Sequoia	0.582	0.601	0.133	0.383	0.873	0.920	0.898	0.712	1.000											
TBGVX	Tweedy, Browne Global Value	0.678	0.669	0.281	0.504	0.885	0.845	0.845	0.656	0.829	1.000										
YACKX	Yacktman	0.618	0.628	0.293	0.445	0.923	0.896	0.878	0.712	0.855	0.888	1.000									
WAAEX	Wasatch Small Cap Growth	0.539	0.545	0.053	0.323	0.885	0.930	0.966	0.683	0.857	0.834	0.832	1.000								
SGRAX	Wells Fargo Advantage Growth A	0.540	0.551	0.068	0.325	0.915	0.930	0.943	0.740	0.892	0.845	0.860	0.957	1.000							
LBFAX	Loomis Sayles Bond Admin	0.821	0.820	0.571	0.808	0.870	0.777	0.762	0.741	0.768	0.848	0.815	0.738	0.762	1.000						
ODMAX	Oppenheimer Developing Markets A	0.736	0.776	0.311	0.516	0.884	0.863	0.866	0.820	0.813	0.872	0.822	0.892	0.877	0.855	1.000					
VEMAX	Vanguard Emerging Mkts Stock Idx Adm	0.739	0.785	0.325	0.540	0.884	0.867	0.864	0.833	0.824	0.865	0.810	0.879	0.865	0.863	0.988	1.000				
GSCAX	Goldman Sachs Commodity Strategy A	0.496	0.518	0.093	0.240	0.793	0.728	0.701	0.723	0.768	0.701	0.688	0.710	0.774	0.660	0.746	0.758	1.000			
HCMRX	Harbor Commodity Real Return ST Adm	0.574	0.651	0.265	0.379	0.768	0.700	0.667	0.853	0.692	0.683	0.687	0.664	0.698	0.728	0.806	0.813	0.899	1.000		
PCRAX	PIMCO Commodity Real Ret Strat A	0.586	0.661	0.275	0.394	0.775	0.708	0.672	0.857	0.695	0.689	0.696	0.668	0.703	0.739	0.812	0.819	0.895	0.999	1.000	
GAFAX	Natixis ASG Global Alternatives A	0.585	0.602	0.314	0.548	0.843	0.716	0.711	0.745	0.743	0.793	0.712	0.702	0.764	0.817	0.812	0.823	0.779	0.766	0.767	1.000

Best Month / Worst Month Heatmap

Morningstar Add-In

Best Month / Worst Month Heatmap

Best Month Worst Month Heatmap Template

Click Here to Access the Template

Retrieve historical monthly returns to visualize seasonal market trends. Just enter a ticker, SecID, or CUSIP in cell A1. Quickly identify best and worst months dating back over 20 years.

XIUSA04G92
S&P 500 TR

	January	February	March	April	May	June	July	August	September	October	November	December
2012	4.48	4.32	3.29	-0.63	-6.01							
2011	2.37	3.43	0.04	2.96	-1.13	-1.67	-2.03	-5.43	-7.03	10.93	-0.22	1.02
2010	-3.60	3.10	6.03	1.58	-7.99	-5.23	7.01	-4.51	8.92	3.80	0.01	6.68
2009	-8.43	-10.65	8.76	9.57	5.59	0.20	7.56	3.61	3.73	-1.86	6.00	1.93
2008	-6.00	-3.25	-0.43	4.87	1.30	-8.43	-0.84	1.45	-8.91	-16.79	-7.18	1.06
2007	1.51	-1.96	1.12	4.43	3.49	-1.66	-3.10	1.50	3.74	1.59	-4.18	-0.69
2006	2.65	0.27	1.24	1.34	-2.88	0.14	0.62	2.38	2.58	3.26	1.90	1.40
2005	-2.44	2.10	-1.77	-1.90	3.18	0.14	3.72	-0.91	0.81	-1.67	3.78	0.03
2004	1.84	1.39	-1.51	-1.57	1.37	1.94	-3.31	0.40	1.08	1.53	4.05	3.40
2003	-2.62	-1.50	0.97	8.24	5.27	1.28	1.76	1.95	-1.06	5.66	0.88	5.24
2002	-1.46	-1.93	3.76	-6.06	-0.74	-7.12	-7.80	0.66	-10.87	8.80	5.89	-5.87
2001	3.55	-9.12	-6.34	7.77	0.67	-2.43	-0.98	-6.26	-8.08	1.91	7.67	0.88
2000	-5.02	-1.89	9.78	-3.01	-2.05	2.47	-1.56	6.21	-5.28	-0.42	-7.88	0.49
1999	4.18	-3.11	4.00	3.87	-2.36	5.55	-3.12	-0.49	-2.74	6.33	2.03	5.89
1998	1.11	7.21	5.12	1.01	-1.72	4.06	-1.06	-14.46	6.41	8.13	6.06	5.76
1997	6.25	0.78	-4.11	5.97	6.09	4.48	7.96	-5.60	5.48	-3.34	4.63	1.72
1996	3.40	0.93	0.96	1.47	2.58	0.38	-4.42	2.11	5.63	2.76	7.56	-1.98
1995	2.59	3.90	2.95	2.94	4.00	2.32	3.32	0.25	4.22	-0.36	4.39	1.93
1994	3.40	-2.71	-4.36	1.28	1.64	-2.45	3.28	4.10	-2.45	2.25	-3.64	1.48
1993	0.84	1.36	2.11	-2.42	2.67	0.29	-0.40	3.79	-0.77	2.07	-0.95	1.21
1992	-1.86	1.30	-1.94	2.94	0.49	-1.49	4.09	-2.05	1.18	0.35	3.41	1.23
1991	4.36	7.15	2.42	0.24	4.31	-4.58	4.66	2.37	-1.67	1.34	-4.03	11.44
1990	-6.71	1.29	2.65	-2.49	9.75	-0.67	-0.32	-9.04	-4.87	-0.43	6.46	2.79
1989	7.32	-2.49	2.33	5.19	4.05	-0.57	9.03	1.95	-0.41	-2.32	2.04	2.40
1988	-1.86	1.30	-1.94	2.94	0.49	-1.49	4.09	-2.05	1.18	0.35	3.41	1.23
1987	13.47	3.95	2.89	-0.89	0.87	5.05	5.07	3.73	-2.19	-21.54	-8.24	7.61
1986	0.56	7.47	5.58	-1.13	5.32	1.69	-5.59	7.42	-8.27	5.77	2.43	-2.55
1985	7.79	1.22	0.07	-0.09	5.78	1.57	-0.15	-0.85	-3.13	4.62	6.86	4.84
1984	-0.56	-3.52	1.73	0.95	-5.54	2.17	-1.24	11.04	0.02	0.39	-1.12	2.63
1983	3.72	2.29	3.69	7.88	-0.87	3.89	-2.95	1.50	1.38	-1.16	2.11	-0.52
1982	-1.31	-5.59	-0.52	4.52	-3.41	-1.50	-1.78	12.14	1.25	11.51	4.04	1.93
1981	-4.18	1.74	4.00	-1.93	0.26	-0.63	0.21	-5.77	-4.93	5.40	4.13	-2.56
1980	6.22	-0.01	-9.72	4.62	5.15	3.16	6.96	1.01	2.94	2.02	10.65	-3.02
	January	February	March	April	May	June	July	August	September	October	November	December
Average	0.97	0.14	1.24	2.03	1.43	0.03	0.90	0.38	-0.69	1.28	1.97	1.84
Min	-8.43	-10.65	-9.72	-6.06	-7.99	-8.43	-7.80	-14.46	-10.87	-21.54	-8.24	-5.87
Max	13.47	7.47	9.78	9.57	9.75	5.55	9.03	12.14	8.92	11.51	10.65	11.44

Year to Year Heatmap

Morningstar Add-In

Year to Year Heatmap

Year to Year Heatmap Template

[Click Here to Access the Template]

Retrieve a matrix of returns to illustrate multiple holding periods of any investment. Just enter a ticker, SecID, or CUSIP in cell A2.

S&P 500 TR
XIUSA04G92

From the beginning of...

To the end of...

	1/1/1994	1/1/1995	1/1/1996	1/1/1997	1/1/1998	1/1/1999	1/1/2000	1/1/2001	1/1/2002	1/1/2003	1/1/2004	1/1/2005	1/1/2006	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
12/31/2011	7.70	8.09	6.47	5.45	3.70	2.00	0.55	1.48	2.92	6.16	3.63	2.64	2.26	-0.25	-1.64	14.12	8.40	2.11
12/31/2010	8.04	8.47	6.76	5.69	3.82	1.99	0.41	1.41	3.01	6.67	3.85	2.72	2.29	-0.83	-2.85	20.64	15.06	
12/31/2009	7.61	8.04	6.19	5.00	2.93	0.87	-0.95	0.00	1.60	5.52	2.09	0.42	-0.67	-5.63	-10.73	26.46		
12/31/2008	6.46	6.84	4.78	3.39	1.02	-1.38	-3.60	-2.89	-1.53	2.39	-2.19	-5.21	-8.36	-18.46	[illegible]			
12/31/2007	10.53	11.27	9.31	8.15	5.91	3.65	1.66	3.30	6.08	12.83	9.18	8.63	10.53	5.49				
12/31/2006	10.92	11.76	9.67	8.42	5.96	3.42	1.13	2.94	6.19	14.74	10.44	10.23	15.79					
12/31/2005	10.52	11.40	9.07	7.63	4.79	1.77	-1.13	0.54	3.92	14.39	7.85	4.91						
12/31/2004	11.05	12.07	9.55	7.98	4.77	1.25	-2.30	-0.52	3.59	19.44	10.88							
12/31/2003	11.07	12.21	9.36	7.57	3.70	-0.57	-5.34	-4.05	0.12	20.66								
12/31/2002	9.26	10.30	6.07	4.40	-0.53	-6.70	-14.55	-17.16	-22.10									
12/31/2001	13.98	15.92	12.65	10.70	5.66	-1.03	-10.50	-11.89										
12/31/2000	18.25	21.33	18.32	17.20	12.25	4.89	-9.09											
12/31/1999	23.56	28.56	28.39	27.58	24.77	21.04												
12/31/1998	24.07	30.51	28.22	30.97	28.58													
12/31/1997	22.36	31.15	28.03	33.36														
12/31/1996	19.67	30.04	22.96															
12/31/1995	18.08	37.58																
12/31/1994	1.32																	

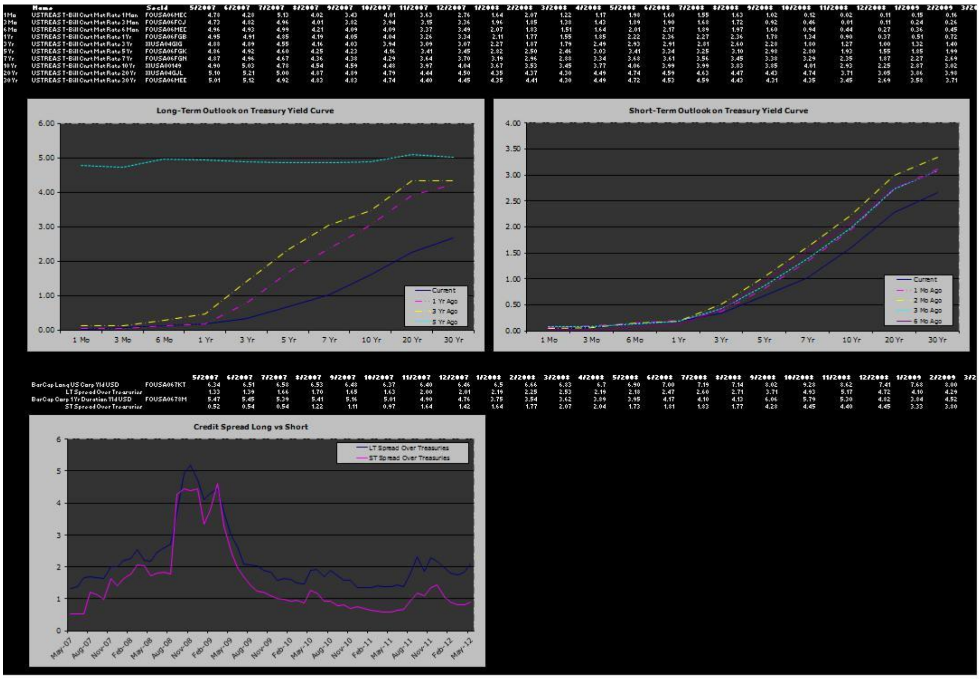
Yield Curve

Morningstar Add-In
Yield Curve

Yield Curve Template

[Click Here to Access the Template]

Retrieve dynamic yield curve and credit spread charts updated on a monthly basis.



Fund Sheet

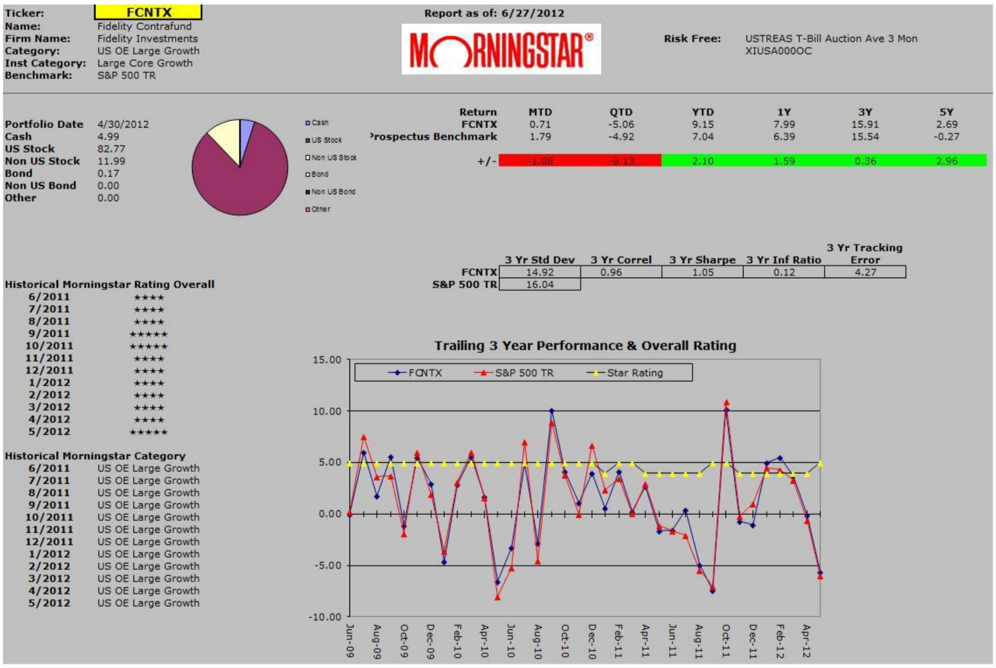
Morningstar Add-In

Fund Sheet

Fund Sheet Template

[Click Here to Access the Template]

Retrieve managed portfolio content such as performance relative to benchmark, allocation, risk statistics, asset flows, and more. Just enter the ticker, SecID, or CUSIP into cell B1.



Stock Sheet

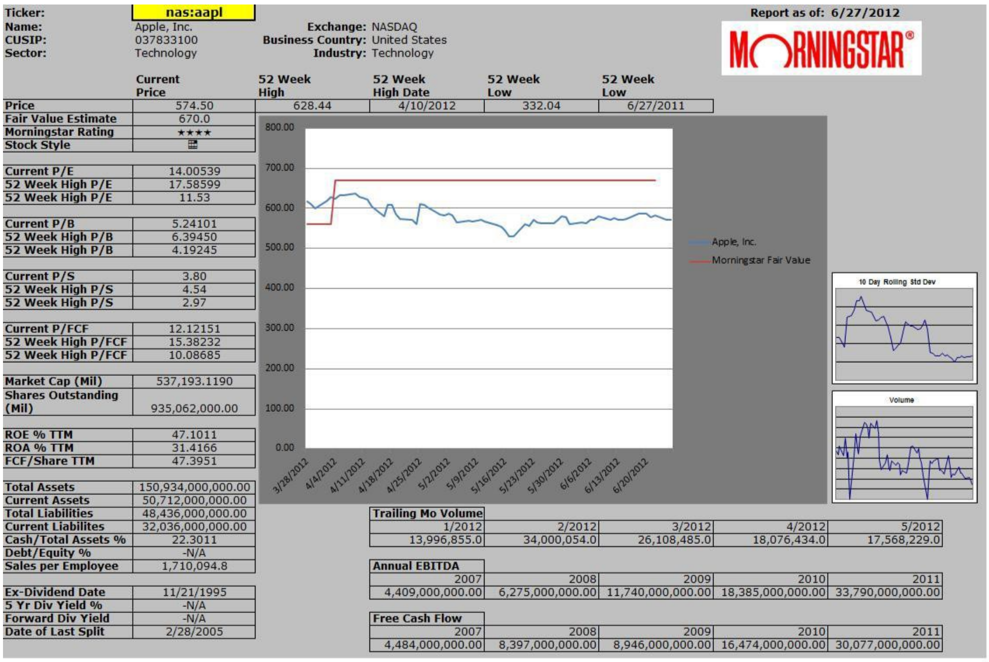
Morningstar Add-In

Stock Sheet

Stock Sheet Template

[Click Here to Access the Template]

Retrieve dynamic equity content including price, performance, balance sheet data, income statement data, cash flow statement data and more. Just enter the ticker, SecID, or CUSIP into cell B1.



Report as of: 6/27/2012

Ticker:	nas:aapl		
Name:	Apple, Inc.	Exchange:	NASDAQ
CUSIP:	037833100	Business Country:	United States
Sector:	Technology	Industry:	Technology

	Current Price	52 Week High	52 Week High Date	52 Week Low	52 Week Low
Price	574.50	628.44	4/10/2012	332.04	6/27/2011

Fair Value Estimate	670.0
Morningstar Rating	★★★★
Stock Style	
Current P/E	14.00539
52 Week High P/E	17.58599
52 Week High P/E	11.53
Current P/B	5.24101
52 Week High P/B	6.39450
52 Week High P/B	4.19245
Current P/S	3.80
52 Week High P/S	4.54
52 Week High P/S	2.97
Current P/FCF	12.12151
52 Week High P/FCF	15.38232
52 Week High P/FCF	10.08685
Market Cap (Mil)	537,193.1190
Shares Outstanding (Mil)	935,062,000.00
ROE % TTM	47.1011
ROA % TTM	31.4166
FCF/Share TTM	47.3951
Total Assets	150,934,000,000.00
Current Assets	50,712,000,000.00
Total Liabilities	48,436,000,000.00
Current Liabilites	32,036,000,000.00
Cash/Total Assets %	22.3011
Debt/Equity %	-N/A
Sales per Employee	1,710,094.8
Ex-Dividend Date	11/21/1995
5 Yr Div Yield %	-N/A
Forward Div Yield	-N/A
Date of Last Split	2/28/2005

Trailing Mo Volume				
1/2012	2/2012	3/2012	4/2012	5/2012
13,996,855.0	34,000,054.0	26,108,485.0	18,076,434.0	17,568,229.0

Annual EBITDA				
2007	2008	2009	2010	2011
4,409,000,000.00	6,275,000,000.00	11,740,000,000.00	18,385,000,000.00	33,790,000,000.00

Free Cash Flow				
2007	2008	2009	2010	2011
4,484,000,000.00	8,397,000,000.00	8,946,000,000.00	16,474,000,000.00	30,077,000,000.00