

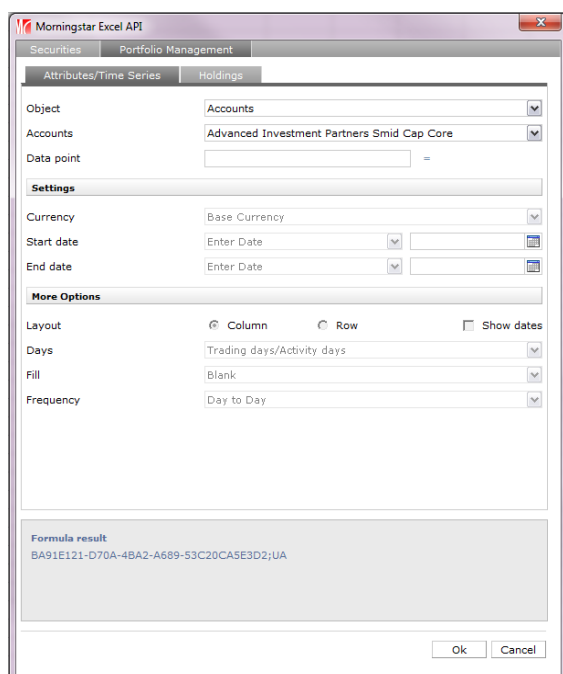
Morningstar® DirectSM Excel API

Accounts/Model Portfolios/Custom Benchmarks

- For accounts, Excel API supports discrete data with MSDP function, time series data with MSTs function, holding data with MSHOLDING function;
- Trailing return, trailing risk, return, return index, portfolio stats, custom cal and holding data enabled for accounts in Excel API;
- Getting data for accounts is similar as getting data for Funds/Stocks in Excel API, 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.



Object: dropdown list, three options--accounts, model portfolios and custom benchmarks; accounts is the default option.

Accounts: the name of this box change according to the selected options of Object box;

When users click Portfolio Management tab-> Attributes/Time Series sub-tab, as the default option of Object box is Accounts, the default name of this box is Accounts. API 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. API reads all model portfolios the users saved in Direct. The same logic is applied to custom benchmark option.

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

Morningstar® DirectSM Excel API

Examples

Example 1: get base currency with MSDP for accounts

The screenshot shows the 'Morningstar Excel API' dialog box with the following configuration:

- Object: Accounts
- Accounts: sco_acc_100
- Data point: Base Currency = Base_CUR
- Settings: Currency: Base Currency
- Start date: Enter Date
- End date: Enter Date
- More Options: Layout: Column, Days: Trading days/Activity days, Fill: Blank, Frequency: Day to Day
- Formula result: =MSDP("ACCAEB76-CEDD-4C91-823A-70E429FC8083;UA","Base_CUR")

Results in Excel:

	C	D	
	Swiss Franc		

Morningstar® DirectSM Excel API

Example 2: get trailing return with MSDP for accounts

Morningstar Excel API

Securities | Portfolio Management

Attributes/Time Series | Holdings

Object: Accounts

Accounts: sco_acc_100

Data point: Total Ret 1 Mo (Mo-End) = Total Ret 1Mo ME

Settings

Currency: Base Currency

Start date: Enter Date

End date: Enter Date

More Options

Layout: Column Row Show dates

Days: Trading days/Activity days

Fill: Blank

Frequency: Day to Day

Return type: Annualize

Formula result

```
=MSDP("ACCAEB76-CEDD-4C91-823A-70E429FC8083;UA", "Total_Ret_1Mo_ME", "Curr=BASE,Ann=False")
```

Ok Cancel

Results in Excel:

	C	D	E
	-1.61		

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Example 3: get equity sector (GICS) data with MSTs for models

Morningstar Excel API

Securities | Portfolio Management

Attributes/Time Series | Holdings

Object: Model Portfolios

Model Portfolios: Growth Portfolio

Data point: GICS Financials % (Long Rescaled) = [GICS FINANCIAL S](#)

Settings

Currency: Base Currency

Start date: Enter Date 1/1/2010

End date: Enter Date 12/31/2012

More Options

Layout: Column Row Show dates

Days: Calendar days

Fill: Blank

Frequency: Monthly

Formula result

=MSTS("FF6FBD93-43C5-4AB8-BA42-2E915073DD6B;MD", "GICS_FINANCIALS", "1/1/2010", "12/31/2012", "CorR=C,Dates=True,Freq=M,Days=C,Fill=B")

Ok Cancel

Results in Excel:

1/2010	16.90	
2/2010	17.60	
3/2010	18.00	
4/2010	17.50	
5/2010	17.10	
6/2010	17.50	
7/2010	18.44	
8/2010	18.85	
9/2010	19.31	
10/2010	18.88	
11/2010	17.86	
12/2010	17.46	
1/2011	21.68	

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Example 4: get return (day to day) for models

The screenshot shows the 'Morningstar Excel API' dialog box with the following settings:

- Object: Model Portfolios
- Model Portfolios: KBC Medium Term Portfolio
- Data point: Return = RETURN
- Settings:
 - Currency: Base Currency
 - Start date: 10/9/2012
 - End date: 1/8/2013
- More Options:
 - Layout: Column (selected), Row
 - Days: Trading days/Activity days
 - Fill: Blank
 - Frequency: Day to Day
 - Return type: Total
 - Annualize:

Formula result
=MSTS("DDD49C2D-E41D-40A4-95FC-BC5600B8C2CA;MD","RETURN", "10/9/2012", "1/8/2013", "CorR=C,Dates=True,Freq=1,Days=T,Fill=B,Curr=BASE,RType=Total,Ann=False")

Buttons: Ok, Cancel

Results in Excel:

2012-10-09 to 2013-01-08	2.16
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Example 5: calculate custom calculation data, M-Square for custom benchmarks

The screenshot shows the 'Morningstar Excel API' dialog box with the following settings:

- Object:** Custom Benchmarks
- Custom Benchmarks:** Risk Level 7 of 7
- Data point:** M-Squared = M_SQUARED
- Settings:**
 - Currency:** Base Currency
 - Start date:** Enter Date, 1/1/2010
 - End date:** Enter Date, 12/31/2012
- More Options:**
 - Layout:** Column (selected), Row, Show dates (checked)
 - Source data:** Monthly Return
 - Benchmark:** S&P 500 TR = XIUSA04G92
 - Risk-free proxy:** USTREAS T-Bill Auction Ave 3 Mon = XIUSA000OC
 - Compounding method:** Standard
 - Rolling window:** 8 months
 - Window shift:** 2 months
 - Annualize
- Formula result:**

```
=MSTS("90D55CA1-CBE0-4349-B087-29F34195EFEA;BM","M_SQUARED", "1/1/2010", "12/31/2012", "CorR=C,Dates=True,Source=HP010,Benchmark=XIUSA04G92,RFP=XIUSA000OC,Win=8,Shift=2,Ann=True,Fill=B,Curr=BASE")
```

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			

Morningstar® DirectSM Excel API

Example 6: get holding of custom benchmark;

Morningstar Excel API

Securities | Portfolio Management

Attributes/Time Series | Holdings

Object: Custom Benchmarks

Custom Benchmarks: Risk Level 7 of 7

Position ID: SecId

Settings

Start date: Enter Date | 1/1/2012

End date: Enter Date | 12/31/2012

More Options

Holding type: Stocks Bonds All

Data type: Weight(%) Market value Number of shares

Frequency: All Show name

Formula result

```
=MSHolding("90D55CA1-CBE0-4349-B087-29F34195EFEA;BM", "SECID", "1/1/2012", "12/31/2012", "Freq=A,HT=all,weight=true,name=true")
```

Ok Cancel

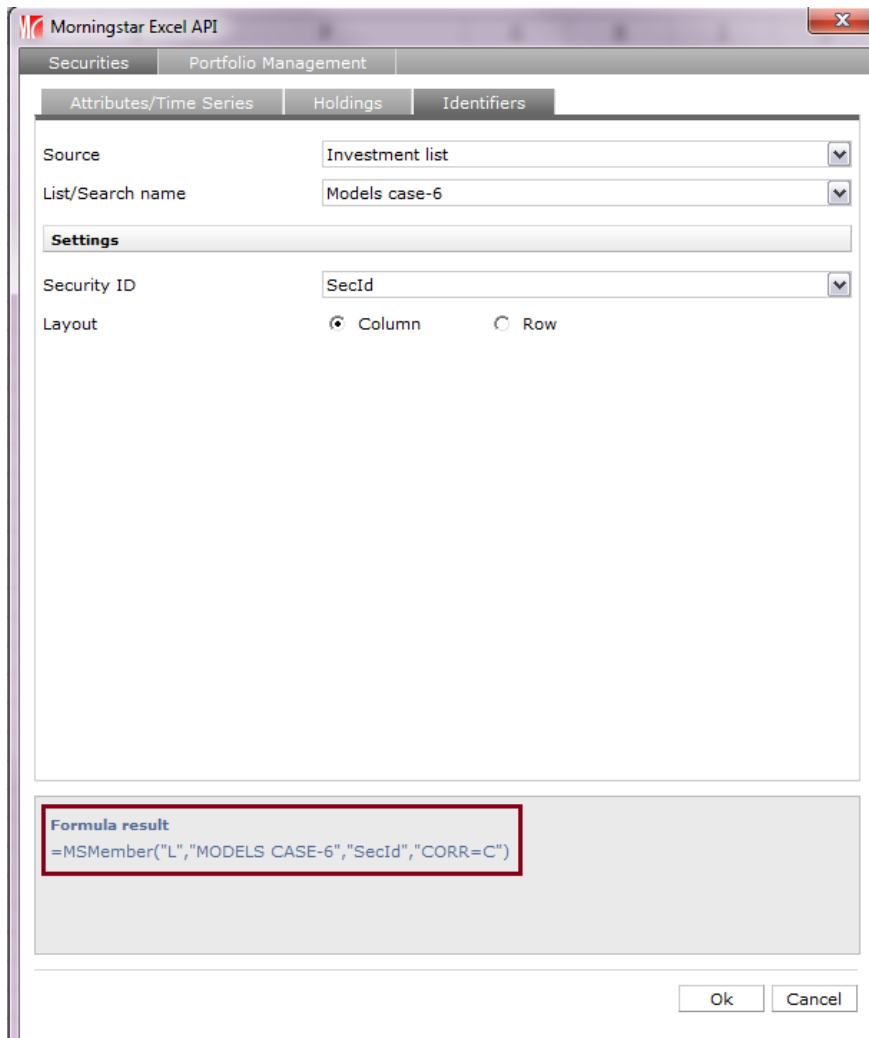
Results in Excel:

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				

Morningstar® DirectSM Excel API

Example 7: get SecID for investment list which includes both funds and accounts

When an investment list contains funds/stocks and accounts and users get SecID of the investment list with MSMEMBER, Excel will retrieve SecID for funds/stocks and GUID for accounts.



Results in Excel:

FOUSA00L8W	
F00000JWRI	
efa41e82-9d9c-439e-ac81-815e6eb20c20;MD	GUID of models
5b902d03-7236-4b74-82df-c75c9f967b82;MD	

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Data points available for accounts/models

Please go to data dictionary part of the following link for data points available for accounts/models:

<https://aduatl62.morningstar.com/ExcelAddInServer/>