Package ‘rMorningStar’

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Title Mutual Funds Performance Metrics
Version 1.0.7
Description Collection of functions to calculate performance metrics of mutual funds/exchange traded funds. This package aids investors in researching mutual funds/exchange traded funds for their investment decision. Also, this package contains tools to manage a portfolio of different mutual fund/exchange traded funds. For more information see Bruce J. Feibel [2003, ISBN:978-0471445630].
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Description

Exports the portfolio into a csv file

Usage

```r
export.portfolio(portfolio, path)
```

Arguments

- **portfolio**: Portfolio as created by Portfolio.Manager
- **path**: Location on the disk where the portfolio should be saved
**Details**

Export your portfolio

**Value**

Export portfolio into a csv file

---

**Description**

Provides the Category Return of the Security

**Usage**

```python
ms.10yCategoryReturn(ticker)
```

**Arguments**

- `ticker` Enter the TICKER

**Details**

Gives the category return for the input TICKER (Fund)

**Value**

The output gives the category return of the funds

**Examples**

```python
ms.10yCategoryReturn('FXAIX')
```
**Description**
Provides the Excess Category Return of the Security

**Usage**

```python
ms.10yExcessCategoryReturn(ticker)
```

**Arguments**

- `ticker` Enter the TICKER

**Details**

Gives the Excess category return for the input TICKER (Fund)

**Value**

The output gives the Excess category return of the funds

**Examples**

```python
ms.10yExcessCategoryReturn('FXAIX')
```

---

**Description**
Provides the Total Return of the Security

**Usage**

```python
ms.10yReturn(ticker)
```

**Arguments**

- `ticker` Enter the TICKER

**Details**

Gives the stated return for the input TICKER (Fund)
**Value**

The output gives the stated return of the funs

**Examples**

```python
ms.1mCategoryReturn('FXAIX')
```
**ms.3yAlpha**

**Description**

Provides the Total Return of the Security

**Usage**

```
ms.3yAlpha(ticker)
```

**Arguments**

- `ticker`: Enter the TICKER

**Details**

Gives the 3-Year Alpha for the input TICKER (Fund)

**Value**

The output gives the 3-Year Alpha of the fund

**Examples**

```
ms.3yAlpha('FXAIX')
```

---

**ms.3yCategoryReturn**

**Description**

Provides the Category Return of the Security

**Usage**

```
ms.3yCategoryReturn(ticker)
```

**Arguments**

- `ticker`: Enter the TICKER

**Details**

Gives the category return for the input TICKER (Fund)
Value

The output gives the category return of the funds

Examples

\texttt{ms.3yCategoryReturn('FXAIX')}
ms.3yRank

Description
Provides the 3y Rank of the Security
Provides the 5y Rank of the Security

Usage
ms.3yRank(ticker)
ms.5yRank(ticker)

Arguments
ticker Enter the TICKER

Details
Gives the stated rank for the input TICKER (Fund)
Gives the stated rank for the input TICKER (Fund)

Value
The output gives the stated rank in category of the funds
The output gives the stated rank in category of the funds

Examples
ms.3yRank('FXAIX')
ms.3yRank('FXAIX')

ms.3yReturn

Description
Provides the 3y Return of the Security

Usage
ms.3yReturn(ticker)
Arguments

ticker Enter the TICKER

Details

Gives the stated return for the input TICKER (Fund)

Value

The output gives the stated return of the funds

Examples

ms.3yReturn('FXAIX')

ms.5yBeta(ticker)

Arguments

ticker Ticker of the Fund

Details

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

Value

The output provides the Input Performance Metric as given by MorningStar.

Examples

ms.5yBeta('FXAIX')
ms.5yCategoryReturn

Description

Provides the Category Return of the Security

Usage

ms.5yCategoryReturn(ticker)

Arguments

ticker Enter the TICKER

Details

Gives the category return for the input TICKER (Fund)

Value

The output gives the category return of the funds

Examples

ms.5yCategoryReturn('FXAIX')

ms.5yExcessCategoryReturn

Description

Provides the Excess Category Return of the Security

Usage

ms.5yExcessCategoryReturn(ticker)

Arguments

ticker Enter the TICKER

Details

Gives the Excess category return for the input TICKER (Fund)
**ms.5yReturn**

**Value**

The output gives the Excess category return of the funds.

**Examples**

```s
ms.5yExcessCategoryReturn('FXAIX')
```

---

**Description**

Provides the Total Return of the Security.

**Usage**

```s
ms.5yReturn(ticker)
```

**Arguments**

- `ticker`: Enter the TICKER.

**Details**

Gives the stated return for the input TICKER (Fund).

**Value**

The output gives the stated return of the funds.

**Examples**

```s
ms.5yReturn('FXAIX')
```
Description

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

Usage

\texttt{ms.AvgForCategory(ticker)}

Arguments

ticker Ticker of the Fund

Details

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

Value

The output provides the Input Performance Metric as given by MorningStar.

Examples

\texttt{ms.AvgForCategory('FXAIX')}

Description

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

Usage

\texttt{ms.ExpenseRatio(ticker)}

Arguments

ticker Ticker of the Fund

Details

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.
**ms.FundCat**

**Value**

The output provides the Input Performance Metric as given by MorningStar.

**Examples**

```python
ms.ExpenseRatio('FXAIX')
```

---

**Description**

Gives the output of input Performance Metric as provided by the MorningStar Performance Results.

**Usage**

```python
ms.FundCat(ticker)
```

**Arguments**

- `ticker` : Ticker of the Fund

**Details**

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

**Value**

The output provides the Input Performance Metric as given by MorningStar.

**Examples**

```python
ms.FundCat('FXAIX')
```
**Description**

Provides the Fund Name

**Usage**

`ms.FundName(ticker)`

**Arguments**

- **ticker**
  - Enter the TICKER

**Details**

Gives the stated TICKER Fund Name

**Value**

The output gives the Fund Name

**Examples**

`ms.FundName('FXAIX')`

---

**ms.GrowthTrack**

**Description**

Plots the growth of input amount in a fund

**Usage**

```r
ms.GrowthTrack(
  ticker,
  growth_amount = 10000,
  benchmark = "^GSPC",
  time_period = c("1m", "3m", "6m", "YTD", "1y", "3y", "5y", "max")
)
```
Arguments

ticker Fund TICKER
growth_amount Amount invested in the fund, Default: 10000
benchmark Benchmark to compare the fund with, Default: '^GSPC'
time_period Investment Horizon: c("1m", "3m", "6m", "YTD", "1y", "3y", "5y", "max")

Details
Plots the cumulative growth of the fund in a mutual fund/ETFs and compares it with the input benchmark.

Value
Plots the growth of the investment (Mutual Fund/ETFs) and compares it with provided benchmark.

Examples
ms.GrowthTrack('FXAIX', time_period = '3y')

Description
Gives the output of input Performance Metric as provided by the MorningStar Performance Results.

Usage
ms.HoldingsTurnover(ticker)

Arguments
ticker Ticker of the Fund

Details
Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

Value
The output provides the Input Performance Metric as given by MorningStar.

Examples
ms.HoldingsTurnover('FXAIX')
**Description**

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

**Usage**

`ms.LastClose(ticker)`

**Arguments**

`ticker` Ticker of the Fund

**Details**

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

**Value**

The output provides the Input Performance Metric as given by MorningStar.

**Examples**

`ms.LastClose('FXAIX')`

---

**Description**

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

**Usage**

`ms.LastDividend(ticker)`

**Arguments**

`ticker` Ticker of the Fund

**Details**

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.
Value

The output provides the Input Performance Metric as given by MorningStar.

Examples

ms.LastDividend('FXAIX')

Description

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

Usage

ms.NetAsset(ticker)

Arguments

ticker Ticker of the Fund

Details

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

Value

The output provides the Input Performance Metric as given by MorningStar.

Examples

ms.NetAsset('FXAIX')
**ms.PercentChange**

**Description**
Gives the percent change of the fund

**Usage**
```
ms.PercentChange(ticker)
```

**Arguments**
- `ticker` Enter the TICKER of the fund

**Details**
Percent Change of the funds from previous Close.

**Value**
Provides the percent change of the fund

**Examples**
```
ms.PercentChange('FXAIX')
```

---

**ms.Rating**

**Description**
Provides the Morningstar Rating of the Security

**Usage**
```
ms.Rating(ticker)
```

**Arguments**
- `ticker` Enter the TICKER

**Details**
Gives the stated Morningstar Rating for the input TICKER (Fund)
**ms.ReturnRating**

**Value**

The output gives the Morningstar Rating of the funds

**Examples**

```python
ms.Rating('FXAIX')
```

---

**Description**

Provides the Morningstar Return Rating of the Security

**Usage**

```python
ms.ReturnRating(ticker)
```

**Arguments**

- ticker: Enter the TICKER

**Details**

Gives the stated Morningstar Return Rating for the input TICKER (Fund)

**Value**

The output gives the Morningstar Return Rating of the funds

**Examples**

```python
ms.ReturnRating('FXAIX')
```
**Description**

Gives the output of input Performance Metric as provided by the MorningStar Performance Results

**Usage**

```r
ms.RiskCategory(ticker)
```

**Arguments**

- `ticker` Ticker of the Fund

**Details**

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

**Value**

The output provides the Input Performance Metric as given by MorningStar.

**Examples**

```r
ms.RiskCategory('FXAIX')
```

---

**Description**

Provides the Morningstar Risk Rating of the Security

**Usage**

```r
ms.RiskRating(ticker)
```

**Arguments**

- `ticker` Enter the TICKER

**Details**

Gives the stated Morningstar Risk Rating for the input TICKER (Fund)
Value

The output gives the Morningstar Risk Rating of the funds.

Examples

ms.RiskRating('FXAIX')

Description

MorningStar 3-yr Standard Deviation

Usage

ms.stdev(ticker)

Arguments

ticker Enter the TICKER for the security

Details

Morningstar's reported standard deviation of fund returns uses both the monthly standard deviation and monthly mean return to compute an annualized value, assuming compounding of the monthly returns and zero serial correlation.

Value

Returns the Standard Deviation of the Security as Calculated by MorningStar.

Examples

ms.stdev('AAPL')
## ms.summary

**Description**

Summary of the Fund Risk and Returns

**Usage**

```python
ms.summary(ticker)
```

**Arguments**

- **ticker**: Enter the TICKER for the security

**Details**

Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. This function can be used to get a DataFrame of the summary of the risk and return of the input fund.

**Value**

Returns the Summary of the Security’s Risk and Return as Calculated by MorningStar.

**Examples**

```python
ms.summary('FXAIX')
```

## ms.Top10Holding

**Description**

Gives the MorningStar Top 10 Holding of the fund

Gives the MorningStar Top 10 Holding Total of the fund

**Usage**

```python
ms.Top10Holding(ticker)

ms.Top10HoldingTotal(ticker)
```

**Arguments**

- **ticker**: Enter the TICKER of the Fund
Details

Gives the fund’s top 10 Holdings as computed by MorningStar.
Gives the fund’s top 10 Holdings Total as computed by MorningStar.

Value

Gives the Morningstar Top 10 Holding of the Fund
Gives the Morningstar Top 10 Holding Total of the Fund

Examples

ms.Top10Holding('FXAIX')
ms.Top10HoldingTotal('FXAIX')

Description

Gives the MorningStar Top 10 Holding Plot of the fund

Usage

ms.Top10HoldingPlot(ticker)

Arguments

ticker Enter the TICKER of the Fund

Details

Gives the fund’s top 10 Holdings Plot as computed by MorningStar.

Value

Gives the Morningstar Top 10 Holding Plot of the Fund

Examples

ms.Top10HoldingPlot('FXAIX')
### Description
Gives the output of input Performance Metric as provided by the MorningStar Performance Results

### Usage
ms.Yield(ticker)

### Arguments
- **ticker**: Ticker of the Fund

### Details
Morningstar provides a great deal of useful information in its print publications and in its Principia Plus CD-ROM data service. Use this function for performance metric calculations.

### Value
The output provides the Input Performance Metric as given by MorningStar.

### Examples
ms.Yield('FXAIX')

---

### Description
Provides the Category Return of the Security

### Usage
ms.YTDCategoryReturn(ticker)

### Arguments
- **ticker**: Enter the TICKER

### Details
Gives the category return for the input TICKER (Fund)
Value

The output gives the category return of the funds

Examples

ms.YTDCategoryReturn('FXAIX')

ms.YTDExcessCategoryReturn

Description

Provides the Excess Category Return of the Security

Usage

ms.YTDExcessCategoryReturn(ticker)

Arguments

ticker Enter the TICKER

Details

Gives the Excess category return for the input TICKER (Fund)

Value

The output gives the Excess category return of the funds

Examples

ms.YTDExcessCategoryReturn('FXAIX')
**ms.YtdRank**

**Description**

Provides the YTD Rank of the Security

**Usage**

ms.YtdRank(ticker)

**Arguments**

ticker Enter the TICKER

**Details**

Gives the stated rank for the input TICKER (Fund)

**Value**

The output gives the stated rank in category of the funds

**Examples**

ms.YtdRank('FXAIX')

---

**ms.ytdreturn**

**Description**

MorningStar YTD Return

**Usage**

ms.ytdreturn(ticker)

**Arguments**

ticker Enter the TICKER for the security

**Details**

A traditional measure of performance in the mutual fund industry is the cumulative value of $1 compounded over a specified number of periods. Morningstar uses such measures on both before-load and after-load fee bases. The value relative at the end of T periods not taking any load charges into account is:
Value

Returns the MorningStar YTD Return of the Security as Calculated by MorningStar.

Examples

ms.ytdreturn('AAPL')

Description

Gives the detailed Risk-Reward Metrics as Computed by MorningStar

Usage

PortfolioManager(ticker, view = c("overview", "detailed"))

Arguments

ticker Enter the Fund TICKER
view Choose a View of the Portfolio, Default: c("overview", "detailed")

Details

This function can be used to examine and assess your holdings in different funds

Value

The output is a tibble that gives the overview of the risk and reward metrics of different holdings in a portfolio.
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