Package 'insiderTrades'

<div align="center">October 4, 2021</div>

Title Tools to Download Insider Transactions and Holdings

Version 0.0.1

Description Download insider trading transactions and insider holdings
from a public NoSQL SEC database
(<<https://www.sec.gov/Archives/edgar/full-index/>>) using
keyword criteria and generate a relational dataframe.

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URL <https://github.com/US-Department-of-the-Treasury/insiderTrades>

BugReports <https://github.com/US-Department-of-the-Treasury/insiderTrades/issues>

Encoding UTF-8

RoxygenNote 7.1.1

Imports stringr (>= 1.4.0), magrittr (>= 2.0.1), RCurl (>= 1.98-1.3)

Suggests knitr, rmarkdown, devtools

VignetteBuilder knitr

NeedsCompilation no

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Repository CRAN

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R topics documented:

Index **19**

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derivativeHoldingsPullAndScrape
derivativeTransactionsPullAndScrape

Description

The function takes the specifieid quarter (1-4), year (2004- 2021), and form type (4 or 5) and returns a dataframe of all the derivative holdings that meet the keyword crtiera from the specified financial quarter. If no criteria is set, all holdings from the financial quarter are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a holding has only one of the footnoteKeywords and none of the issuerKeywords, the holding will still be scraped.

Usage

```
derivativeHoldingsPullAndScrape(
  quarter,
  year,
  form,
  name,
  email,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

quarter   Specify the financial reporting quarter. Options are 1, 2, 3, and 4.

year   Specify the calendar year. Options range from 2004 to present.

form   Specify the form type. Options are 4 or 5.

name   Specify your name. This is required by the SEC.

email   Specify your email. This is required by the SEC.

footnoteKeywords
               The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.

issuerKeywords The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.

issuerTradingSymbol

> The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.

rptOwnerKeywords

> The character vector containing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a derivative holding The holding observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- derivativeHoldingsPullAndScrape(quarter = 3, year = 2012, form = 4,
name = "Your Name", email = "yourEmail@yourEmail.com",
footnoteKeywords = c("gift", "charity"))
```

---

derivativeHoldingsScrape

derivativeHoldingsScrape

Description

The function takes the dataframe returned by [secUrlDownload](#) and scrapes and compiles a dataframe of all the derivative holdings that meet the keyword crtiera. If no criteria is set, all holdings from the dataframe returned by [secUrlDownload](#) are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a holding has only one of the footnoteKeywords and none of the issuerKeywords, the holding will still be scraped.

Usage

```
derivativeHoldingsScrape(
  index,
  form,
  name,
  email,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

index	A local object that was returned by utilizing the `secUrlDownload`. It contains the URLs necessary to grab each text version of the filed Form 4 or 5.
form	Define if the form is a Form 4 or Form 5. Must match the type used in `secUrlDownload`.
name	Specify your name. This is required by the SEC.
email	Specify your email. This is required by the SEC.
footnoteKeywords	
	The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.
issuerKeywords	The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.
issuerTradingSymbol	
	The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.
rptOwnerKeywords	
	The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a derivative holding The holding observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- derivativeHoldingsScrape(index = tempIndex, form = 4,
name = "Your Name", email = "yourEmail@yourEmail.com",
issuerKeywords = c("AMAZON", "MICROSOFT"))
```

---

derivativeTransactionsPullAndScrape
                              derivativeTransactionsPullAndScrape

---

Description

The function takes the specifieid quarter (1-4), year (2004- 2021), and form type (4 or 5) and returns a dataframe of all the derivative transactions that meet the keyword crtiera from the specified financial quarter. If no criteria is set, all transactions from the financial quarter are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a transaction has only one of the footnoteKeywords and none of the issuerKeywords, the transaction will still be scraped.

Usage

```
derivativeTransactionsPullAndScrape(
  quarter,
  year,
  form,
  name,
  email,
  transactionType = NA,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

`quarter`	Specify the financial reporting quarter. Options are 1, 2, 3, and 4.
`year`	Specify the calendar year. Options range from 2004 to present.
`form`	Specify the form type. Options are 4 or 5.
`name`	Specify your name. This is required by the SEC.
`email`	Specify your email. This is required by the SEC.
`transactionType`	
	The character vector containing any specified transaction codes. Values must be captilized to match against SEC values. Detailed information about the transaction type can be found here: https://www.sec.gov/files/forms-3-4-5.pdf. Default value is NA.
`footnoteKeywords`	
	The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.
`issuerKeywords`	The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.
`issuerTradingSymbol`	
	The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.
`rptOwnerKeywords`	
	The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a derivative transaction. The transaction observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- derivativeTransactionsPullAndScrape(quarter = 3, year = 2012,
form = 4, name = "Your Name", email = "yourEmail@yourEmail.com",
issuerKeywords = c("AMAZON", "MICROSOFT"))
```

---

derivativeTransactionsScrape
                    derivativeTransactionsScrape

Description

The function takes the dataframe returned by [secUrlDownload](#) and scrapes and compiles a dataframe
of all the derivative transactions that meet the keyword crtiera. If no criteria is set, all transactions
from the dataframe returned by [secUrlDownload](#) are scraped.Note that the logic for the keywords
is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a
transaction has only one of the footnoteKeywords and none of the issuerKeywords, the transaction
will still be scraped.

Usage

```
derivativeTransactionsScrape(
  index,
  form,
  name,
  email,
  transactionType = NA,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

index	A local object that was returned by utilizing the [secUrlDownload](#). It contains the URLs necessary to grab each text version of the filed Form 4 or 5.
form	Define if the form is a Form 4 or Form 5. Must match the type used in [secUrlDownload](#).
name	Specify your name. This is required by the SEC.
email	Specify your email. This is required by the SEC.
transactionType	
	The character vector containing any specified transaction codes. Values must be captilized to match against SEC values. Detailed information about the transaction type can be found here: https://www.sec.gov/files/forms-3-4-5.pdf. Default value is NA.

footnoteKeywords

> The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.

issuerKeywords   The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.

issuerTradingSymbol

> The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.

rptOwnerKeywords

> The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a derivative transaction. The transaction observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- derivativeTransactionsScrape(index = tempIndex, form = 4,
name = "Your Name", email = "yourEmail@yourEmail.com",
issuerKeywords = c("AMAZON", "MICROSOFT"))
```

---

formFilters   *formFilters*

Description

formFilters

Usage

```
formFilterNonderivativeTransactions(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords,
  transactionType
)
```

```
formFilterDerivativeTransactions(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords,
  transactionType
)

formFilterNonderivativeHoldings(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords
)

formFilterDerivativeHoldings(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords
)
```

Arguments

filing   The object containing the Form 4 text

footnoteKeywords

        The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.

issuerKeywords   The character vector containing any specified key words to be searched within the issuer block. Default is NA.

issuerTradingSymbol

        The character vector containing any specified stock tickers. Default is NA.

rptOwnerKeywords

        The character vector contianing any specified key words to be searched within the rptOwner block. Default is NA.

transactionType

        The character vector containing any specified transaction codes. Default is NA.

Value

An integer value that if greater than 0, reflects that at the one of the criteria parameters listed above has been met. The form will then be parsed further. Otherwise, if the integer value is 0, the function pulls in the next Form 4 to evaluate.

Note

formFilterNonderivativeTransactions parses the form and returns an integer value greater than 0 if one of the key word criteras is met. This function is specifically for the nonderivativeTransactionsScrape and nonderivativeTransactionsPullAndScrape functions.

formFilterDerivativeTransactions parses the form and returns an integer value greater than 0 if one of the key word criteras is met. This function is specifically for the derivativeTransactionsScrape and derivativeTransactionsPullAndScrape functions. The function shares the same paramters as formFilterNonderivativeTransactions (filing, footnoteKeywords, issuerKeywords, issuer-TradingSymbol, rptOwnerKeywords, transactionType). The only difference is within the parsing commands which use the key word derivative rather than nonderivative.

formFilterNonderivativeHoldings parses the form and returns an integer value greater than 0 if one of the key word criteras is met. This function is specifically for the nonderivativeHoldingsScrape and nonderivativeHoldingsPullAndScrape functions. The function shares the same paramters as formFilterNonderivativeTransactions (filing, footnoteKeywords, issuerKeywords, issuer-TradingSymbol, rptOwnerKeywords) except for transactionType since that isn't a criteria for a non-derivative holdings. Additionally, parsing criteria is different due to targeting holding information rather than transaction information.

formFilterDerivativeHoldings parses the form and returns an integer value greater than 0 if one of the key word criteras is met. This function is specifically for the derivativeHoldingsScrape and derivativeHoldingsPullAndScrape functions. The function shares the same paramters as formFilterNonderivativeHoldings (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, rptOwnerKeywords) except for transactionType since that isn't a criteria for a derivative holdings. The only difference is within the parsing commands which use the key word derivative rather than nonderivative.

---

nonderivativeHoldingsPullAndScrape

nonderivativeHoldingsPullAndScrape

Description

The function takes the specifieid quarter (1-4), year (2004- 2021), and form type (4 or 5) and returns a dataframe of all the nonderivative holdings that meet the keyword crtiera from the specified financial quarter. If no criteria is set, all holdings from the financial quarter are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a holding has only one of the footnoteKeywords and none of the issuerKeywords, the holding will still be scraped.

Usage

```
nonderivativeHoldingsPullAndScrape(
  quarter,
  year,
  form,
  name,
```

```
    email,
    footnoteKeywords = NA,
    issuerKeywords = NA,
    issuerTradingSymbol = NA,
    rptOwnerKeywords = NA
)
```

Arguments

quarter   Specify the financial reporting quarter. Options are 1, 2, 3, and 4.

year   Specify the calendar year. Options range from 2004 to present.

form   Specify the form type. Options are 4 or 5.

name   Specify your name. This is required by the SEC.

email   Specify your email. This is required by the SEC.

footnoteKeywords

               The character vector containing any specified key words to be searched in the
               form's footnotes. Default is NA.

issuerKeywords The character vector containing any specified key words to be searched within
               the issuer block. Criteria can include the firms CIK or name. Values must be
               captilized to match against SEC values. Default value is NA.

issuerTradingSymbol

               The character vector containing any specified stock tickers. Values must be
               captilized to match against SEC values. Default value is NA.

rptOwnerKeywords

               The character vector contianing any specified key words to be searched within
               the rptOwner block. Values must be captilized to match against SEC values. Ad-
               ditionally, the format is LAST NAME, FIRST NAME. The criteria can include
               the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a nonderiva-
tive holding. The holding observations can be grouped by form through the URL variable within
the dataframe.

Examples

```
dat <- nonderivativeHoldingsPullAndScrape(quarter = 1, year = 2018,
form = 4, name = "Your Name", email = "yourEmail@yourEmail.com",
issuerKeywords = c("AMAZON", "MICROSOFT"))
```

nonderivativeHoldingsScrape

nonderivativeHoldingsScrape

Description

The function takes the dataframe returned by secUrlDownload and scrapes and compiles a dataframe of all the nonderivative holdings that meet the keyword crtiera. If no criteria is set, all holdings from the dataframe returned by secUrlDownload are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a holding has only one of the footnoteKeywords and none of the issuerKeywords, the holding will still be scraped.

Usage

```
nonderivativeHoldingsScrape(
  index,
  form,
  name,
  email,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

index	A local object that was returned by utilizing the secUrlDownload. It contains the URLs necessary to grab each text version of the filed Form 4 or 5.
form	Define if the form is a Form 4 or Form 5. Must match the type used in secUrlDownload.
name	Specify your name. This is required by the SEC.
email	Specify your email. This is required by the SEC.
footnoteKeywords	
	The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.
issuerKeywords	The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.
issuerTradingSymbol	
	The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.
rptOwnerKeywords	
	The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a nonderivative holding. The holding observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- nonderivativeHoldingsScrape(index = tempIndex, form = 4,
name = "Your Name", email = "yourEmail@yourEmail.com",
rptOwnerKeywords = c("SMITH JOHN"))
```

---

nonderivativeTransactionsPullAndScrape
nonderivativeTransactionsPullAndScrape

Description

The function takes the specifieid quarter (1-4), year (2004- 2021), and form type (4 or 5) and returns a dataframe of all the nonderivative transactions that meet the keyword crtiera from the specified financial quarter. If no criteria is set, all transactions from the financial quarter are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a transaction has only one of the footnoteKeywords and none of the issuerKeywords, the transaction will still be scraped.

Usage

```
nonderivativeTransactionsPullAndScrape(
  quarter,
  year,
  form,
  name,
  email,
  transactionType = NA,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

quarter	Specify the financial reporting quarter. Options are 1, 2, 3, and 4.
year	Specify the calendar year. Options range from 2004 to present.
form	Specify the form type. Options are 4 or 5.

name   Specify your name. This is required by the SEC.

email   Specify your email. This is required by the SEC.

transactionType

                 The character vector containing any specified transaction codes. Values must be captilized to match against SEC values. Detailed information about the transaction type can be found here: https://www.sec.gov/files/forms-3-4-5.pdf. Default value is NA.

footnoteKeywords

                 The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.

issuerKeywords   The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.

issuerTradingSymbol

                 The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.

rptOwnerKeywords

                 The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a nonderivative transaction. The transaction observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- nonderivativeHoldingsPullAndScrape(quarter = 1, year = 2018,
form = 4, name = ”Your Name”, email = ”yourEmail@yourEmail.com”,
rptOwnerKeywords = c(”10165”, ”10166”))
```

---

nonderivativeTransactionsScrape

                          nonderivativeTransactionsScrape

Description

The function takes the dataframe returned by `secUrlDownload` and scrapes and compiles a dataframe of all the nonderivative transactions that meet the keyword crtiera. If no criteria is set, all transactions from the dataframe returned by `secUrlDownload` are scraped. Note that the logic for the keywords is "OR." Thus if a user sets multiple footnoteKeywords and a keyword for issuerKeywords, if a transaction has only one of the footnoteKeywords and none of the issuerKeywords, the transaction will still be scraped.

Usage

```
nonderivativeTransactionsScrape(
  index,
  form,
  name,
  email,
  transactionType = NA,
  footnoteKeywords = NA,
  issuerKeywords = NA,
  issuerTradingSymbol = NA,
  rptOwnerKeywords = NA
)
```

Arguments

index
: A local object that was returned by utilizing the [secUrlDownload](). It contains the URLs necessary to grab each text version of the filed Form 4 or 5.

form
: Define if the form is a Form 4 or Form 5. Must match the type used in [secUrlDownload]().

name
: Specify your name. This is required by the SEC.

email
: Specify your email. This is required by the SEC.

transactionType
: The character vector containing any specified transaction codes. Values must be captilized to match against SEC values. Detailed information about the transaction type can be found here: https://www.sec.gov/files/forms-3-4-5.pdf. Default value is NA.

footnoteKeywords
: The character vector containing any specified key words to be searched in the form's footnotes. Default is NA.

issuerKeywords
: The character vector containing any specified key words to be searched within the issuer block. Criteria can include the firms CIK or name. Values must be captilized to match against SEC values. Default value is NA.

issuerTradingSymbol
: The character vector containing any specified stock tickers. Values must be captilized to match against SEC values. Default value is NA.

rptOwnerKeywords
: The character vector contianing any specified key words to be searched within the rptOwner block. Values must be captilized to match against SEC values. Additionally, the format is LAST NAME, FIRST NAME. The criteria can include the individuals CIK, address, or name. Default value is NA.

Value

A dataframe containing containing the scraped information where each row represents a nonderivative transaction. The transaction observations can be grouped by form through the URL variable within the dataframe.

Examples

```
dat <- nonderivativeTransactionsScrape(index = tempIndex, form = 4,
name = "Your Name", email = "yourEmail@yourEmail.com",
rptOwnerKeywords = c("SMITH JOHN"))
```

---

secUrlDownload   *secUrlDownload*

Description

The function takes the specifieid quarter (1-4), year (2004- 2021), and form type (4 or 5) and returns a dataframe of URLs to each form filed during the specified quarter.

Usage

```
secUrlDownload(quarter, year, form, name, email)
```

Arguments

quarter	Specify the financial reporting quarter. Options are 1, 2, 3, and 4.
year	Specify the calendar year. Options range from 2004 to present.
form	Specify the form type. Options are 4 or 5.
name	Specify your name. This is required by the SEC.
email	Specify your email. This is required by the SEC.

Value

A dataframe consisting of the URLs to the Form 4 or 5 text filings for the specified quarter and year.

Examples

```
tempIndex <- secUrlDownload(quarter = 1, year = 2018, form = 4,
form = 4, name = "Your Name", email = "yourEmail@yourEmail.com")
```

transactionFilters   *transactionFilters*

Description

transactionFilters

Usage

```
transactionFilterNonderivative(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords,
  transactionType
)

transactionFilterDerivative(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords,
  transactionType
)

transactionFilterNonderivativeHoldings(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords
)

transactionFilterDerivativeHoldings(
  filing,
  footnoteKeywords,
  issuerKeywords,
  issuerTradingSymbol,
  rptOwnerKeywords
)
```

Arguments

filing   The object containing a single transaction from a Form 4 filing in text format

footnoteKeywords

> The character vector containing any specified key words to be searched in the transaction's footnotes. Default is NA.

issuerKeywords The character vector containing any specified key words to be searched within the issuer block. Default is NA.

issuerTradingSymbol

> The character vector containing any specified stock tickers. Default is NA.

rptOwnerKeywords

> The character vector contianing any specified key words to be searched within the rptOwner block. Default is NA.

transactionType

> The character vector containing any specified transaction codes. Default is NA.

Value

An integer value that if greater than 0, reflects that at the one of the criteria parameters listed above has been met. The form will then be parsed further. Otherwise, if the integer value is 0, the function pulls in the next Form 4 to evaluate.

Note

transactionFilterNonderivative parses a transaction contained in the filing and returns an integer value greater than 0 if one of the transaction specific key word criteras or form specific key word criteras is met.This function is specifically for the nonderivativeTransactionsScrape and nonderivativeTransactionsPullAndScrape functions.

transactionFilterDerivative parses a transaction contained in the filing and returns an integer value greater than 0 if the transaction contains one of the specific key word criteras or if the key word criteria cannot be applied at the transaction level (rptOwnerKeywords or issuerKeywords for example), but the form contains form specific key word critera. This function is specifically for the derivativeTransactionsScrape and derivativeTransactionsPullAndScrape functions. The function shares the same paramters as formFilterNonderivativeTransactions (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, rptOwnerKeywords, transactionType). The only difference is within the parsing commands which use the key word derivative rather than non-derivative.

transactionFilterNonderivativeHoldings parses a transaction contained in the filing and returns an integer value greater than 0 if the transaction contains one of the specific key word criteras or if the key word criteria cannot be applied at the transaction level (rptOwnerKeywords or issuerKeywords for example), but the form contains form specific key word critera. This function is specifically for the nonderivativeHoldingsScrape and nonderivativeHoldingsPullAndScrape functions. The function shares the same paramters as transactionFilterNonderivative (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, rptOwnerKeywords) except for transactionType since that isn't a criteria for a nonderivative holdings. Additionally, parsing criteria is different due to targeting holding information rather than transaction information.

transactionFilterDerivativeHoldings parses a transaction contained in the filing and returns an integer value greater than 0 if the transaction contains one of the specific key word criteras or if the key word criteria cannot be applied at the transaction level (rptOwnerKeywords or issuerKeywords for example), but the form contains form specific key word critera. This function is

specifically for the `derivativeHoldingsScrape` and `derivativeHoldingsPullAndScrape` functions. The function shares the same paramters as `transactionFilterNonderivative` (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, rptOwnerKeywords) except for transactionType since that isn't a criteria for a derivative holdings. The only difference is within the parsing commands which use the key word derivative rather than nonderivative.

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