Package ‘insiderTrades’

October 4, 2021

**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.

**License**  CC0

**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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**derivativeHoldingsPullAndScrape**

The function takes the specified 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 criteria 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**

```r
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 firm’s CIK or name. Values must be captialized to match against SEC values. Default value is NA.
issuerTradingSymbol

The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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 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"))

Description

The function takes the dataframe returned by secUrlDownload and scrapes and compiles a dataframe of all the derivative holdings that meet the keyword criteria. 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 capitalized to match against SEC values. Default value is NA.

issuerTradingSymbol  The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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

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

Description

The function takes the specified 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 criteria 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 capitalized 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 capitalized to match against SEC values. Default value is NA.
- issuerTradingSymbol: The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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"))

Description

The function takes the dataframe returned by \texttt{secUrlDownload} and scrapes and compiles a dataframe of all the derivative transactions that meet the keyword criteria. If no criteria is set, all transactions from the dataframe returned by \texttt{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

\begin{itemize}
  \item \texttt{index} \hspace{1cm} A local object that was returned by utilizing the \texttt{secUrlDownload}. It contains the URLs necessary to grab each text version of the filed Form 4 or 5.
  \item \texttt{form} \hspace{1cm} Define if the form is a Form 4 or Form 5. Must match the type used in \texttt{secUrlDownload}.
  \item \texttt{name} \hspace{1cm} Specify your name. This is required by the SEC.
  \item \texttt{email} \hspace{1cm} Specify your email. This is required by the SEC.
  \item \texttt{transactionType} \hspace{1cm} The character vector containing any specified transaction codes. Values must be capitalized to match against SEC values. Detailed information about the transaction type can be found here: \url{https://www.sec.gov/files/forms-3-4-5.pdf}. Default value is NA.
\end{itemize}
The character vector containing any specified key words to be searched in the form’s footnotes. Default is NA.

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

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

The character vector containing any specified key words to be searched within the rptOwner block. Values must be capitalized 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.

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.

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

---

### formFilters

<table>
<thead>
<tr>
<th>formFilters</th>
<th>formFilters</th>
</tr>
</thead>
</table>

**Description**

formFilters

**Usage**

```r
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 containing 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 criterias 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 criterias is met. This function is specifically for the derivativeTransactionsScrape and derivativeTransactionsPullAndScrape functions. The function shares the same parameters as formFilterNonderivativeTransactions (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, 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 criterias is met. This function is specifically for the nonderivativeHoldingsScrape and nonderivativeHoldingsPullAndScrape functions. The function shares the same parameters as formFilterNonderivativeTransactions (filing, footnoteKeywords, issuerKeywords, issuerTradingSymbol, 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 criterias is met. This function is specifically for the derivativeHoldingsScrape and derivativeHoldingsPullAndScrape functions. The function shares the same parameters 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**

**Description**

The function takes the specified 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 criteria 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**

```r
nonderivativeHoldingsPullAndScrape(
    quarter,
    year,
    form,
    name,
```
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 capitalized to match against SEC values. Default value is NA.
- **issuerTradingSymbol**: The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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 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

```r
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 criteria. 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

```r
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 capitalized to match against SEC values. Default value is NA.
- **issuerTradingSymbol**: The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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"))

Description

The function takes the specified 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 criteria 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

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quarter</td>
<td>Specify the financial reporting quarter. Options are 1, 2, 3, and 4.</td>
</tr>
<tr>
<td>year</td>
<td>Specify the calendar year. Options range from 2004 to present.</td>
</tr>
<tr>
<td>form</td>
<td>Specify the form type. Options are 4 or 5.</td>
</tr>
</tbody>
</table>
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 capitalized 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 capitalized to match against SEC values. Default value is NA.
issuerTradingSymbol The character vector containing any specified stock tickers. Values must be capitalized 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 capitalized 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"))

Description
The function takes the dataframe returned by secUrlDownload and scrapes and compiles a dataframe of all the nonderivative transactions that meet the keyword criteria. 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 capitilized 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 capitilized to match against SEC values. Default value is NA.
issuerTradingSymbol  The character vector containing any specified stock tickers. Values must be capitilized 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 capitilized 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.
secUrlDownload

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 specified 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

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quarter</td>
<td>Specify the financial reporting quarter. Options are 1, 2, 3, and 4.</td>
</tr>
<tr>
<td>year</td>
<td>Specify the calendar year. Options range from 2004 to present.</td>
</tr>
<tr>
<td>form</td>
<td>Specify the form type. Options are 4 or 5.</td>
</tr>
<tr>
<td>name</td>
<td>Specify your name. This is required by the SEC.</td>
</tr>
<tr>
<td>email</td>
<td>Specify your email. This is required by the SEC.</td>
</tr>
</tbody>
</table>

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

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 containing 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 parameters 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 parameters 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 parameters 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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