Web Scrapping using BeautifulSoup and its Equivalent in rvest

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Motivation

While there may be multiple separate tutorials on using BeautifulSoup and rvest, it is sometimes challenging to convert code (with different functions in different languages), for instance, in Python to R and vice versa. Since most of our classmates have more experience in Python than R, which implies that they have performed web scraping in Pyhton rather than in R, this tutorial could help them directly relate between the two. This project can hopefully help our classmates understand a direct translation (so to say) of web scraping from BeautifulSoup to rvest.

Introduction to Web Scrapping

Web scraping is the process of collecting unstructured web data in an automated fashion. It's also called web data extraction. Some of the main use cases of web scraping include price monitoring, price intelligence, news monitoring, lead generation, market research etc.

In general, web data extraction is used by people and businesses who want to make use of the vast amount of publicly available web data to analyze data and make smarter decisions.

There are mainly two ways to extract data from a website:

- Using the API of the website (if it exists). For example, Facebook has the Facebook Graph API which allows retrieval of data posted on Facebook or Google Maps API which allows us to retrieve results from that application.
- Accessing the HTML of the webpage and extract useful information from it. This technique is called web scraping or web harvesting or web data extraction

Steps involved in web scraping:

1. Finding the URL of the webpage that we want to scrape
2. Selecting the particular elements by inspecting
3. Writing the code to get the content of the selected elements
4. Storing the data in the required format

Introduction to BeautifulSoup

Beautiful Soup is a python package which allows us to pull data out of HTML and XML documents.It creates data parse trees in order to get data easily. It is popular because of the myriad functions it provides to extract data from HTML.

Few Popular Functions in Beautiful Soup

1. get()

This function is very essential because with it we will get to the certain web page we desire. The first needed to scrape a web page is to download the page. We download the pages using the Python requests library. The requests will make a GET request to the desired URL with defined headers, which will download the HTML contents of a given web page.

After that we create an object instance using BeautifulSoup(,) which creates a data structure representing a parsed HTML or XML document.

2. get_text()

The get_text() function helps us to extract the text part of the newly found elements from the HTML document.

Example :

```
soup.get_text()
```

3. find_all()
The find_all method is one of the most common methods in BeautifulSoup with which we are able to search for anything in our web page. It looks through a tag's descendants and retrieves all descendants that match your filters.

The find_all() method takes an HTML tag as a string argument and returns the list of elements that matches with the provided tag. For example, if we want all p tags in doc.html

Examples:

```
soup.find_all("title")
soup.find_all("p", "title")
soup.find_all("a")
```

'find_all()' also accepts a regular expression instead of a string.

4. strip()
The strip() method returns a copy of the string with both leading and trailing characters removed. It is generally used to trim empty spaces. This is very handy while extracting data from HTML Document.

5. split()
The split() method splits the string into different parts and we can use the parts that we desire. It works with a combination of separator and a string. Hence is a specific part of the HTML has to be divided into 1 or more parts or text arrays we use this function. This Split function is very similar to general purpose python.

Example:

```
filename = BeautifulSoup(tag).findAll("img")[0]['src']
filetype = filename.split(".")[1]
```

Introduction to rvest

rvest is a package used in R programming for extracting or harvesting data from webpages. Inspired by BeautifulSoup, rvest assists in common webscraping tasks.

Scraping a webpage with R

The first needed to scrape a web page is to read the page. That can happen with the help of two request functions in rvest - 'read_html()' and 'session()'.

'read_html()' can parse a HTML file or an url into xml document.

'session()' creates a session and accept httr methods.

Example :

url <- "https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml" results_page <- read_html(url)

OR

url <- "https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=25" response <- session(url) results_page <- httr::content(response$response, as = "text")

Extracting with rvest Examples: rvest div class and beyond

The html_nodes() function in rvest is analogous to the find() function in Python. The function is obiously very essential because with it we will get to the content we desire. When scraping a document, look for nodes, attributes and/or texts.

Let's look at the following target element examples:

- **Target by Class ID appears as**

  ```
  \<div class='target'>\</div>
  ```

  You target this as:

  ```
  html_nodes("div.target")
  ```

  Since it is div node by default, one could even write it as

  ```
  html_nodes(".target")
  ```

  Note: There are multiple ways to access target class but the above two are some of the more commonnly used methods. We can also have nested statements as:

  ```
  html_nodes("#titleCast .itemprop span")
  ```

- **Target by Element ID appears as**

  ```
  \<div id='target'>\</div>
  ```

  You target this as:

  ```
  html_nodes("#target")
  ```

- **Target by HTML tag type appears as**

  ```
  <table></table>
  ```

You target this as:

```
html_nodes("table")
```

- **Target child of another tag appears as**

  ```
  <ol class='sources'><li></li></ol>
  ```

You target this as

```
html_child("sources li")
```

To further extracts the contents of a page, one could use 'html_text()' or 'html_text2()'.

The main difference is how they handle white space. Since in HTML, white space is largely ignored, it also forms the structure of the elements that defines how text is laid out. 'html_text2()' does its best to follow the same rules, giving you something similar to what you'd see in the browser (and what you would like to see). 'html_text()' is faster than 'html_text2()' so it is useful for simple applications where performance is important.

Example : Scraping Fidelity.com

In this example, we will scrape data from fidelity.com. The goal of the project is to get the latest sector performance data from the US markets, and to get the total market capitalization for each sector. Here, while we write all code in python, we also show what the near equivalent snippets in r would look like.

In [14]:

```python
import requests
import pandas as pd
from bs4 import BeautifulSoup
```

Extracting the HTML

Step 1

We can get the HTML content from this page using requests

We have to first import the requests library, and then download the page using the requests.get method

In [4]:

```
url = "https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml"
response=requests.get(url)
response
```

Out[4]:

```
<Response [200]>
```

R equivalent

```
   url <- "https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml
   "
   results_page <- read_html(url)
```

OR

```
   url <- "https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml
   "
   response <- session(url)
```

Step 2

Extracting content from the HTML To extract our data from the HTML received in data, we'll need to identify which tags have what we need.

If you skim through the HTML, you'll find this section for all sectors

In [5]:

```
results_page = BeautifulSoup(response.content,'lxml')
sectors = results_page.find_all('div',class_="heading")
print(sectors)
```

```
[<div class="heading">
<h2>U.S. Markets Performance <a href="https://www.fidelity.com//webcontent/ap010098-etf-c
ontent/21.01.0/help/research/learn_er_markets_sectors_news_analysis.shtml#whatusfuturesma
rketsdataisavailable" onclick="javascript:openPopup('https://www.fidelity.com//webcontent
/ap010098-etf-content/21.01.0/help/research/learn_er_markets_sectors_news_analysis.shtml#
canigetcurrentandhistoricalmarketperformanceinformationforfutures',420,450);return false;
"><img alt="Help for U.S. Futures Markets" border="0" src="https://www.fidelity.com/webco
ntent/ap101883-markets_sectors-content/21.01.0/images/question_mark.png" title="Help for
U.S. Markets Performance"/></a></h2>
<br/>
<div class="usMarketAnchor" id="usMarketAnchor"><span class="byline" id="futureMarketDate
time"></span></div>
</div>, <div class="heading"><a class="heading1" href="/eresearch/markets_sectors/sectors
/sectors_in_market.jhtml?tab=learn&amp;sector=50" id="50"><strong>Communication Services<
/strong></a></div>, <div class="heading"><a class="heading1" href="/eresearch/markets_sec
tors/sectors/sectors_in_market.jhtml?tab=learn&amp;sector=25" id="25"><strong>Consumer Di
scretionary</strong></a></div>, <div class="heading"><a class="heading1" href="/eresearch
/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&amp;sector=30" id="30"><strong
>Consumer Staples</strong></a></div>, <div class="heading"><a class="heading1" href="/ere
search/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&amp;sector=10" id="10"><
strong>Energy</strong></a></div>, <div class="heading"><a class="heading1" href="/eresear
ch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&amp;sector=40" id="40"><stro
ng>Financials</strong></a></div>, <div class="heading"><a class="heading1" href="/eresear
ch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&amp;sector=35" id="35"><stro
```

ng>Health Care</div>, <div class="heading"><a class="heading1" href="/eresea
rch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=20" id="20"><str
ong>Industrials</div>, <div class="heading"><a class="heading1" href="/erese
arch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=45" id="45"><st
rong>Information Technology</div>, <div class="heading"><a class="heading1"
href="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=15"
id="15">Materials</div>, <div class="heading"><a class="heading1" hr
ef="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=60" i
d="60">Real Estate</div>, <div class="heading"><a class="heading1" h
ref="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=learn&sector=55"
id="55">Utilities</div>]

R Equivalent

```
results_page <- httr::content(response$response, as = "text")
results_page <- results_page %>% html_nodes("div.heading") %>%  html_text2()
```

Step 3

We Loop through the list and call the function get_sector_change_and_market_cap(sector_page_link) for each sector

It returns the name, the change, the capitalization, the weight and the link for each sector

In [6]:

```
sector_page_link = "https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/sect
ors_in_market.jhtml?tab=learn&sector=25"
response = requests.get(sector_page_link)
results_page = BeautifulSoup(response.content,'lxml')
results_page
```

Out[6]:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtm
l1/DTD/xhtml1-transitional.dtd">
<!--[if lt IE 7 ]><html class="ie6" xml:lang="en" lang="en"> <![endif]--><!--[if IE 7 ]><
html class="ie7" xml:lang="en" lang="en"> <![endif]--><!--[if IE 8 ]><html class="ie8" xm
l:lang="en" lang="en"> <![endif]--><!--[if (gte IE 9)|!(IE)]><html xmlns="http://www.w3.o
rg/1999/xhtml" xml:lang="en" lang="en"><![endif]--><html><head>
<script type="text/javascript">
    if (top.location != location) {
        top.location.href = document.location.href;
    }
 </script>
<meta content="text/html; charset=utf-8" http-equiv="Content-Type"/>
<meta content="" name="keywords"/>
<meta content="Research the performance of U.S. Consumer Discretionary sector." name="des
cription"/>
<meta content="639042" name="ereview"/>
<link href="https://www.fidelity.com/sector-investing/consumer-discretionary/overview" re
l="canonical"/>
<link href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/
css/sectors-industries.css" media="screen, print" rel="stylesheet" type="text/css"/>
<link href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/
css/footer.css" media="screen, print" rel="stylesheet" type="text/css"/>
<link href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/
css/jquery.mCustomScrollbar.css" media="screen, print" rel="stylesheet" type="text/css"/>
<link href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/
css/jquery-ui-1.9.1.css" media="screen, print" rel="stylesheet" type="text/css"/>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/jquery-1.11.1.min.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/jquery-migrate-1.2.1.min.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/jquery-ui-1.8.23.custom.min.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/jquery.mCustomScrollbar.js" type="text/javascript"></script>
```

```
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/site-si.js" type="text/javascript"></script>
<script type="text/javascript">
   var isAuthorized = false;
</script>
<script type="text/javascript">
    var personal_server = "https://www.fidelity.com";
    var pl_domain = "https://www.fidelity.com";
    var ac_domain = "https://www.fidelity.com";
    var symbolTextBoxClicked = false;
    var embeddedQuotesConfig = {};
    var fmrProductid="eresearch";



    function popupHelpMS(url, width, height)
    {
     openPopup(personal_server+url,width,height);
    };
</script>
<script djconfig="parseOnLoad: true, isDebug:false" src="https://www.fidelity.com/rct/2.0
.0/dojo/dojo/dojo.xd.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/rct/2.0.0/rct-ui/rct-ui.js" type="text/javascript">
</script>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/eresearch3.js" type="text/javascript"></script>
<script language="JavaScript" src="https://www.fidelity.com/research/equity/js/research.j
s" type="text/javascript"></script>
<title>Consumer Discretionary Snapshot - Fidelity</title>
<script type="text/javascript">
 $(document).ready(function() {
  $("img").each(function(){
        $(this).attr("title",$(this).attr("alt"));
    });
 });

 </script>
</head>
<body class="mkt-sec-landing">
<script type="text/javascript">
try{
if (typeof Bootstrapper !== "object"){
document.writeln('<scr'+'ipt type="text/javascript" src="https://dmt.fidelity.com/prod/me
as/"></sc'+'ript>');
}
}catch(e){
 console.log('no load bs');
}
</script>
<!-- begin_nav -->
<link href="https://www.fidelity.com/bin-public/060_www_fidelity_com/css/nav-07.18.min.cs
s" rel="stylesheet" type="text/css"/>
<div class="mboxDefault">
<!--[if lte IE 7 ]>
<div id="pgnb" class="pgnb ie ie7" data-nav-ver="12" data-tmsId="526-79240-64">
<![endif]-->
<!--[if IE 8 ]>
<div id="pgnb" class="pgnb ie ie8  bm" data-nav-ver="12" data-tmsId="526-79240-64">
<![endif]-->
<!--[if IE 9 ]>
<div id="pgnb" class="pgnb ie ie9  bm" data-nav-ver="12" data-tmsId="526-79240-64">
<![endif]-->
<!--[if (gt IE 9)|!(IE)]><!-->
<div class="pgnb bm" data-nav-ver="12" data-tmsid="526-79240-64" id="pgnb">
<!--<![endif]-->
<div class="pbn" role="banner">
<div class="pnsn"><a class="pnsl" href="#piNavSkipToContent" id="pnsl">Skip to Main Conte
nt.</a></div>
<a class="pnt" href="javascript:void(0)" id="pnt"><span class="pntstrp"><span class="off-
screen">Site navigation</span></span></a>
<div class="pnld"><a href="https://www.fidelity.com/?bar=p" target="_top"><span class="sc
```

```html
reen-reader-only">Fidelity.com Home</span></a></div>
<div class="pntlt">
<ul class="pntl pnlogout">
<li class="static">
<a href="https://www.fidelity.com/customer-service/overview" target="_top">Customer Servi
ce</a>
</li>
<li class="static">
<a href="https://digital.fidelity.com/ftgw/digital/profile" target="_top">Profile</a>
</li>
<li class="static">
<a href="https://www.fidelity.com/open-account/overview" target="_top">Open an Account</a
>
</li>
<li class="static"><a href="https://www.fidelity.com/customer-service/ask-us?ccsource=VA_
NAV" target="_blank">Virtual Assistant<span class="screen-reader-only"> Opens in a new wi
ndow</span></a></li>
<li class="pnls last-child">
<a href="https://digital.fidelity.com/prgw/digital/login/full-page?AuthRedUrl=https://olt
x.fidelity.com/ftgw/fbc/ofsummary/defaultPage" target="_top">Log In</a>
</li>
</ul><ul class="pntl pnlogin">
<li class="static">
<a href="https://www.fidelity.com/customer-service/overview" target="_top">Customer Servi
ce</a>
</li>
<li class="static">
<a href="https://digital.fidelity.com/ftgw/digital/profile" target="_top">Profile</a>
</li>
<li class="static">
<a href="https://www.fidelity.com/open-account/overview" target="_top">Open an Account</a
>
</li>
<li class="static"><a href="https://www.fidelity.com/customer-service/ask-us?ccsource=VA_
NAV" target="_blank">Virtual Assistant<span class="screen-reader-only"> Opens in a new wi
ndow</span></a></li>
<li class="pnls last-child">
<a href="https://login.fidelity.com/ftgw/Fidelity/RtlCust/Logout/Init?AuthRedUrl=https://
www.fidelity.com/customer-service/customer-logout" target="_top">Log Out</a>
</li>
</ul> </div>
<div class="pns" id="pns" role="search">
<form action="https://digital.fidelity.com/search/main?q=" class="pnsm" method="get">
<label class="screen-reader-only" for="nav-search-mobile">Search fidelity.com or get a qu
ote</label>
<div class="pnst-container">
<input class="pnst search-autocomplete" id="nav-search-mobile" maxlength="64" name="quest
ion" placeholder="Search or get a quote" type="text"/>
</div>
<input class="pnss" type="submit" value="Search Site"/>
</form> </div>
</div>
<div class="pnacr-wrapper"> <div class="pnacr"></div></div>
<div aria-label="Site Navigation" class="pnmm" id="pnmm" role="navigation">
<ul class="pnl1 pns-5">
<li class="pnhs">
<div class="pnsh"><a aria-expanded="false" aria-haspopup="true" class="pnshl" href="#">Ac
counts &amp; Trade</a></div>
<div class="pnl2">
<ul>
<li class="pnlogout" tms="navLink">
<a href="https://scs.fidelity.com/customeronly/portfolio.shtml" target="_top">Portfolio<s
pan class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/oftop/portfolio#summary" target="_top">Portfo
lio</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://scs.fidelity.com/customeronly/accountposition.shtml" target="_top">Accou
```

```
nt<span class="pi-nav-nowrap" style="padding-left:6px">Positions<span class="pnlock pnlog
out">
<span class="screen-reader-only">Log In Required</span>
</span></span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/oftop/portfolio#positions" target="_top">Acco
unt<span class="pi-nav-nowrap" style="padding-left:6px">Positions</span></a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://scs.fidelity.com/customeronly/trade.shtml" target="_top">Trade<span clas
s="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/oftrade/EntrOrder?FRAME_LOADED=Y&amp;NAVBAR=Y
" target="_top">Trade</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/trading/advanced-trading-tools/active-trader-pro/overvi
ew" target="_top">Active Trader Pro</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/customer-service/money-movement" target="_top">Transfer
s</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/ofcashmgmt/cashMgmtApp" target="_top">Cash Ma
nagement<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/ofcashmgmt/cashMgmtApp" target="_top">Cash Ma
nagement</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/billpay/home" target="_top">Bill Pay<s
pan class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/billpay/home" target="_top">Bill Pay</
a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://wealth.emaplan.com/fidelity/framein?fromOrigin=https://digital.fidelity.
com&amp;destination=https://digital.fidelity.com/ftgw/digital/emoney/home" target="_top">
Full View<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://wealth.emaplan.com/fidelity/framein?fromOrigin=https://digital.fidelity.
com&amp;destination=https://digital.fidelity.com/ftgw/digital/emoney/home" target="_top">
Full View</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/security/dashboard/view" target="_top"
>Security Settings<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/security/dashboard/view" target="_top"
>Security Settings</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://scs.fidelity.com/customeronly/update-features.shtml" target="_top">Accou
nt Features<span class="pnlock pnlogout">
```

```html
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://oltx.fidelity.com/ftgw/fbc/oftop/portfolio#Feature" target="_top">Account Features</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://statements.fidelity.com/ftgw/fbc/ofstatements/getStatementsList" target="_top">Statements<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://statements.fidelity.com/ftgw/fbc/ofstatements/getStatementsList" target="_top">Statements</a>
</li>
<li class="dynamic-act-prof" data-dynamic-act-prof="D5066=C" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/alts/ai/home" target="_top">Fidelity Alternative Investments Program <span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/tax-information/overview" target="_top">Tax Forms &amp; Information</a>
</li>
<li class="dynamic-act-prof" data-dynamic-act-prof="D1026~Y" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/guide-to-required-minimum-distribution/" target="_top">Retirement Distributions<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="dynamic-act-prof" data-dynamic-act-prof="D2677=C" tms="navLink"><a href="https://digital.fidelity.com/ftgw/digital/fidelityrewards/rewards/status" target="_top">Fidelity Rewards+<img alt="registered trademark" src="https://www.fidelity.com/bin-public/060_www_fidelity_com/images/icon/registration-symbol.png" style="padding:0!important"/> <span class="pnlock pnlogout"><span class="screen-reader-only">Log In Required</span></span></a></li>
<li class="dynamic-act-prof" data-dynamic-act-prof="D2678=C" tms="navLink"><a href="https://digital.fidelity.com/ftgw/digital/fidelityrewards/rewards/eligibility" target="_top">Fidelity Rewards+<img alt="registered trademark" src="https://www.fidelity.com/bin-public/060_www_fidelity_com/images/icon/registration-symbol.png" style="padding:0!important"/> <span class="pnlock pnlogout"><span class="screen-reader-only">Log In Required</span></span></a></li>
<li class="dynamic-act-prof" data-dynamic-act-prof="T30=T30A" tms="navLink">
<a href="https://digital.fidelity.com/ftgw/digital/new-account-tasks/tasks" target="_top">New Account Checklist<span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/customer-service/friendsandfamily3a" target="_top">Refer a Friend</a>
</li>
</ul>
</div>
</li><li class="pnhs">
<div class="pnsh"><a aria-expanded="false" aria-haspopup="true" class="pnshl" href="#">Planning &amp; Advice</a></div>
<div class="pnl2">
<ul>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/what-we-offer/overview">What We Offer</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/what-we-offer/planning">Create Your Financial Plan</a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://myguidance.fidelity.com/ftgw/pna/customer/pgc/hub/">My Goals</a>
</li>
<li class="" tms="navLink">
```

```html
<a href="https://www.fidelity.com/financial-basics/overview">Financial Basics</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/building-savings/overview">Building Savings</a>
</li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/digital-investing-and-advice
/simple-investing-overview">Robo Investing Plus Financial Advice</a></li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/wealth-management/overview">Wealth Management</a>
</li>
<li class="" tms="navLink">
<a href="https://digital.fidelity.com/prgw/digital/faa/0/connect-with-an-advisor">Find an
advisor</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/retirement-planning/overview">Retirement</a>
</li>
<li class="" tms="navLink">
<a href="https://myguidance.fidelity.com/ftgw/pna/public/lifeevents/content/uncertain-tim
es-guidance">Life Events</a>
</li>
</ul>
</div>
</li><li class="pnhs">
<div class="pnsh"><a aria-expanded="false" aria-haspopup="true" class="pnshl" href="#">Ne
ws &amp; Research</a></div>
<div class="pnl2">
<ul>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/news/overview">News</a>
</li>
<li class="" tms="navLink">
<a href="https://watchlists.fidelity.com/ftgw/watchlists/goto/retail/getWatchlist" target
="_top">Watch List <span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://quotes.fidelity.com/ftgw/fbc/ofquotes/webxpress/get_quote">Quotes</a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://digital.fidelity.com/prgw/digital/research/">Quotes</a>
</li>
<li class="" tms="navLink">
<a href="https://alertable.fidelity.com/ftgw/alerts/GetAlertsSummary" target="_top">Alert
s <span class="pnlock pnlogout">
<span class="screen-reader-only">Log In Required</span>
</span></a>
</li>
<li class="" tms="navLink">
<a href="https://fundresearch.fidelity.com/fund-screener">Mutual Funds</a>
</li>
<li class="" tms="navLink">
<a href="https://eresearch.fidelity.com/eresearch/landing.jhtml" target="_top">Stocks</a>
</li>
<li class="" tms="navLink">
<a href="https://fixedincome.fidelity.com/ftgw/fi/FILanding" target="_top">Fixed Income,
Bonds &amp; CDs</a>
</li>
<li class="" tms="navLink">
<a href="https://screener.fidelity.com/ftgw/etf/evaluator/goto/landing" target="_top">ETF
s</a>
</li>
<li class="" tms="navLink">
<a href="https://researchtools.fidelity.com/ftgw/mloptions/goto/optionChain" target="_top
">Options</a>
</li>
<li class="" tms="navLink">
<a href="https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml" tar
get="_top">Markets &amp; Sectors</a>
</li>
<li class="" tms="navLink">
```

```html
<a href="https://brokerage.fidelity.com/ftgw/brkg/ipo/calendar" target="_top">IPOs</a>
</li>
<li class="" tms="navLink">
<a href="https://fundresearch.fidelity.com/fund-screener/annuities/" target="_top">Annuit
ies</a>
</li>
<li class="" tms="navLink">
<a href="https://www.fidelity.com/learning-center/overview">Learning Center</a>
</li>
<li class="pnlogout" tms="navLink">
<a href="https://www.fidelity.com/go/notebook">Notebook</a>
</li>
<li class="pnlogin" tms="navLink">
<a href="https://dpcs.fidelity.com/ftgw/dpcs/notebook/#?channel=nav" target="_top">Notebo
ok</a>
</li>
</ul>
</div>
</li><li class="pnhs">
<div class="pnsh"><a aria-expanded="false" aria-haspopup="true" class="pnshl" href="#">In
vestment Products</a></div>
<div class="pnl2">
<ul>
<li class="" tms="navLink"><a href="https://www.fidelity.com/mutual-funds/overview" id="4
MutualFunds" name="4MutualFunds" target="_top">Mutual Funds</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/retirement-ira/overview" id=
"4RetirementAndIRAs" name="4RetirementAndIRAs" target="_top">Retirement &amp; IRAs</a></l
i>
<li class="" tms="navLink"><a href="https://www.fidelity.com/trading/overview" id="4Tradi
ng" name="4Trading">Trading</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/stock-trading/overview" id="
4Stocks" name="4Stocks">Stocks</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/fixed-income-bonds/overview"
id="4FixedIncome" name="4FixedIncome">Fixed Income, Bonds &amp; CDs</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/etfs/overview" id="4ETFs" na
me="4ETFs" target="_top">ETFs</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/options-trading/overview" id
="4Options" name="4Options" target="_top">Options</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/mutual-funds/sustainable" id
="4SectorInvesting" name="4SectorInvesting" target="_top">Sustainable Investing</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/cash-management/overview" id
="4CashManagement" name="4CashManagement" target="_top">Cash Management &amp; Credit Card
s</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/managed-accounts/overview" i
d="4ManagedAccounts" name="4ManagedAccounts" target="_top">Managed Accounts</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/529-plans/overview" id="4529
CollegeSavings" name="4529CollegeSavings" target="_top">529 College Savings</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/go/hsa/why-hsa" target="_top
">Health Savings Accounts</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/annuities/overview" id="4Ann
uities" name="4Annuities" target="_top">Annuities</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/life-insurance/overview" id=
"4LifeInsurance" name="4LifeInsurance" target="_top">Life Insurance &amp; Long Term Care<
/a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/building-savings/charitable-
giving" id="4CharitableGiving" name="4CharitableGiving" target="_top">Charitable Giving</
a></li>
</ul>
</div>
</li><li class="pnhs">
<div class="pnsh"><a aria-expanded="false" aria-haspopup="true" class="pnshl" href="#">Wh
y Fidelity</a></div>
<div class="pnl2">
<ul>
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/overview">The F
idelity Advantage</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/planning-advice
" target="_top">Planning &amp; Advice</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/trading" target
="_top">Trading</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/pricing-fees" t
arget="_top">Straightforward Pricing</a></li>
```

```html
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/insights-tools"
target="_top">Insights &amp; Tools</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/why-fidelity/security-protec
tion" target="_top">Security &amp; Protection</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/go/marketplace/overview" tar
get="_top">Marketplace Solutions</a></li>
<li class="" tms="navLink"><a href="https://www.fidelity.com/about-fidelity/our-company"
target="_top">About Fidelity</a></li>
<li class="" tms="navLink"><a href="https://jobs.fidelity.com" target="_top">Careers</a><
/li>
</ul>
</div>
</li> </ul><!-- pnl1 -->
<div class="pntlb">
<ul class="pntl pnlogout">
<li class="static">
<a href="https://www.fidelity.com/customer-service/overview" target="_top">Customer Servi
ce</a>
</li>
<li class="static">
<a href="https://digital.fidelity.com/ftgw/digital/profile" target="_top">Profile</a>
</li>
<li class="static">
<a href="https://www.fidelity.com/open-account/overview" target="_top">Open an Account</a
>
</li>
<li class="static"><a href="https://www.fidelity.com/customer-service/ask-us?ccsource=VA_
NAV" target="_blank">Virtual Assistant<span class="screen-reader-only"> Opens in a new wi
ndow</span></a></li>
<li class="pnls last-child">
<a href="https://digital.fidelity.com/prgw/digital/login/full-page?AuthRedUrl=https://olt
x.fidelity.com/ftgw/fbc/ofsummary/defaultPage" target="_top">Log In</a>
</li>
</ul><ul class="pntl pnlogin">
<li class="static">
<a href="https://www.fidelity.com/customer-service/overview" target="_top">Customer Servi
ce</a>
</li>
<li class="static">
<a href="https://digital.fidelity.com/ftgw/digital/profile" target="_top">Profile</a>
</li>
<li class="static">
<a href="https://www.fidelity.com/open-account/overview" target="_top">Open an Account</a
>
</li>
<li class="static"><a href="https://www.fidelity.com/customer-service/ask-us?ccsource=VA_
NAV" target="_blank">Virtual Assistant<span class="screen-reader-only"> Opens in a new wi
ndow</span></a></li>
<li class="pnls last-child">
<a href="https://login.fidelity.com/ftgw/Fidelity/RtlCust/Logout/Init?AuthRedUrl=https://
www.fidelity.com/customer-service/customer-logout" target="_top">Log Out</a>
</li>
</ul> </div>
</div>
<a class="off-screen" id="piNavSkipToContent" name="piNavSkipToContent" tabindex="-1"></a
>
</div>
</div>
<script type="text/javascript">
              window.mboxCreate = window.mboxCreate || function (){};
              mboxCreate("PI_Navbar");
            </script>
<script type="text/javascript">
var PIGlobalNav_WWWHOST = "https://www.fidelity.com";
var PIGlobalNav_ACTIVEQUOTE_HOST = "https://quotes.fidelity.com";
var PIGlobalNav_ERESEARCH_HOST = "https://eresearch.fidelity.com";
var PIGlobalNav_RESEARCHTOOLS_HOST ="https://researchtools.fidelity.com";
var PGNBProperties = {
fadeInTime : 4000 ,
menuDelayTime : 400
}
</script>
```

```
<script src="https://www.fidelity.com/bin-public/060_www_fidelity_com/js/nav-07.18.min.js
" type="text/javascript"></script>
<!-- end_nav -->
<style>


 #main-page {
     display: block;
 }
 #print-page {
     display: none;
 }


</style>
<script type="text/javascript">
 var newwindow;
 function openWin(url){
  var width = 810;
  var height = 795;
  var left = 80;
  var top = 80;
  var scrollbar = 'scrollbars=yes';
  if(openWin.arguments.length > 1){
   width = openWin.arguments[1];
   height = openWin.arguments[2];
  }
  if(openWin.arguments.length > 3){
   left = openWin.arguments[3];
   top = openWin.arguments[4];
   scrollbar = 'scrollbars=no';
   if (screen.width <= 800){
    top=19;
    left=309;
   }
  }
  if(!newwindow || newwindow.closed){
   newwindow = window.open(url,'newwindow','resizable=no,' + scrollbar + ',menubar=no,too
lbar=no,width=' + width + ',height=' + height + ',left=' + left + ',top=' + top + ',scree
nX=20,screenY=20');
  }
  else{
   newwindow.location.replace(url);
  }
  if (newwindow != null) {
   newwindow.focus();
  }
 }

 function printPage(){
  var printUrl = window.location + (window.location.search.length > 0 ?  '&output=print'
: '?&output=print');
  openWin(printUrl);
 }
</script>
<div class="layout-breadcrumb-region">
<div class="breadcrumb-section">
<div class="left-col">
<section>
<div class="breadcrumb"> <span class="off-screen">You are here: </span>
<ul>
<li class="bold"><a href="https://www.fidelity.com">Home</a></li>
<li><span class="research">Research </span></li>
<li class="last-item"><a href="/eresearch/markets_sectors/landing.jhtml">Markets &amp; Se
ctors</a></li>
</ul>
</div>
</section>
</div>
<div class="right-col">
<section>
```

```html
<div class="page-control-bar" id="main-page">
<ul>
<li>Content and data provided by various third parties and Fidelity – <a class="first" href="https://www.fidelity.com/terms-of-use#third" target="_top">Terms of Use</a></li>
<li><a class="print" href="javascript:printPage();">Print</a></li>
<li class="active txt0" id="txt0"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt0', 'contentContainer', '13');" title="Default text size"><span class="hidden">Default text size</span>A</a></li>
<li class="txt1" id="txt1"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt1', 'contentContainer', '16');" title="Larger text size"><span class="hidden">Larger text size</span>A</a></li>
<li class="txt2" id="txt2"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt2', 'contentContainer', '19');" title="Largest text size"><span class="hidden">Largest text size</span>A</a></li>
</ul>
</div>
<div class="page-control-bar" id="print-page">
<ul>
<li>Content and data provided by various third parties and Fidelity – <a class="first" href="https://www.fidelity.com&gt;/terms-of-use#third" target="_top">Terms of Use</a></li>
<li><a class="print" href="javascript:window.print();">Print</a></li>
<li class="active txt0" id="txt0"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt0', 'contentContainer', '13');" title="Default text size"><span class="hidden">Default text size</span>A</a></li>
<li class="txt1" id="txt1"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt1', 'contentContainer', '16');" title="Larger text size"><span class="hidden">Larger text size</span>A</a></li>
<li class="txt2" id="txt2"><a href="javascript:void(0);" onclick="fontControl.adjustFont('txt2', 'contentContainer', '19');" title="Largest text size"><span class="hidden">Largest text size</span>A</a></li>
</ul>
</div>
</section>
</div>
</div>
</div>
<div class="layout-content-region">
<div class="maincontent" id="contentContainer">
<div class="left-content" id="toc_div">
<div class="toc-wrapper">
<link href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/css/toc.css" media="screen, print" rel="stylesheet" type="text/css"/>
<script>
var newwindow;
function openWinTOC(url){
 var width = 810;
 var height = 795;
 var left = 80;
 var top = 80;
 var scrollbar = 'scrollbars=yes';
 if(openWinTOC.arguments.length > 1){
  width = openWinTOC.arguments[1];
  height = openWinTOC.arguments[2];
 }
 if(openWinTOC.arguments.length > 3){
  left = openWinTOC.arguments[3];
  top = openWinTOC.arguments[4];
  scrollbar = 'scrollbars=no';
  if (screen.width <= 800){
   top=19;
   left=309;
  }
 }
 if(!newwindow || newwindow.closed){
  newwindow = window.open(url,'newwindow','resizable=yes,' + scrollbar + ',menubar=no,toolbar=no,width=' + width + ',height=' + height + ',left=' + left + ',top=' + top + ',screenX=20,screenY=20');
 }
 else{
  newwindow.location.replace(url);
 }
 newwindow.focus();
```

```
}

function openWinCale(url){

 var width = 810;
 var height = 795;
 var left = 80;
 var top = 80;
 var scrollbar = 'scrollbars=yes';
 if(openWinCale.arguments.length > 1){
  width = openWinCale.arguments[1];
  height = openWinCale.arguments[2];
 }
 if(openWinCale.arguments.length > 3){
  left = openWinCale.arguments[3];
  top = openWinCale.arguments[4];
  scrollbar = 'scrollbars=no';
  if (screen.width <= 800){
   top=19;
   left=309;
  }
 }
 if(!newwindow || newwindow.closed){
  newwindow = window.open(url,'newwindow','resizable=yes,' + scrollbar + ',menubar=no,too
lbar=no,width=' + width + ',height=' + height + ',left=' + left + ',top=' + top + ',scree
nX=20,screenY=20');
 }
 else{
  newwindow.location.replace(url);
 }
 if (newwindow != null) {
  newwindow.focus();
 }

}
</script>
<div id="Fidelity">
<div class="left-form-box">
<form action="https://eresearch.fidelity.com/eresearch/goto/evaluate/snapshot.jhtml" id="
search" method="post" name="EnterASymbolForm" onsubmit="return onSymbolFormSubmit(this);"
target="_top">
<h3>
<label for="symbol">Enter Name or Symbol</label>
</h3>
<input accesskey="5" autocomplete="OFF" class="ofTextInput ofMultipleInputs" id="symbol"
maxlength="20" name="symbols" onfocus="symbolTextBoxClicked=true" onkeypress="symbolTextB
oxClicked=true" size="5" title="Enter a Symbol" type="text" value=""/>
<input class="go-button" id="rRDG" type="submit" value="Go"/><br/>
<div class="acResults" id="resultPane"></div>
<div class="acError" id="errorPane"></div>
<a href="javascript:openPopup('https://quotes.fidelity.com/webxpress/popup_lookup.phtml',
454, 491, 478, 133)" id="rRC">Find Symbol</a>
</form>
</div>
<div class="toc">
<div class="navhead"><h2>Markets &amp; Sectors</h2> </div>
<div class="navcontent">
<ul>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/la
nding.jhtml">Overview</a></li>
</ul>
<h3>Markets</h3>
<ul class="ul_usMarket">
<li class="toc-item" id="li_usMarkets"><a href="https://eresearch.fidelity.com/eresearch/
markets_sectors/landing.jhtml?linkpage=usmarkets#usMarketAnchor" onclick="">U.S. Markets<
/a></li>
<li><a href="javascript:openWinUSEconomicCal('https://fidelity-fcm.econoday.com/byweek.as
p?cust=fidelity');">U.S. Economic Calendar</a></li>
</ul>
<ul class="market-list"></ul>
<ul>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/gl
```

```
obal/landing.jhtml?viewType=map">Global Markets</a></li>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/gl
obal/landing.jhtml?overviewType=Americas&amp;viewType=map&amp;mapType=NorthAmerica">Ameri
cas</a></li>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/gl
obal/landing.jhtml?overviewType=EMEA&amp;viewType=map&amp;mapType=Europe">EMEA</a></li>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/gl
obal/landing.jhtml?overviewType=AsiaPacific&amp;viewType=map&amp;mapType=Asia">Asia-Pacif
ic</a></li>
<li><a href="javascript:openWinCale('https://fidelity-fcm.econoday.com/byweek.asp?cust=fi
delity-global');">Global Economic Calendar</a></li>
</ul>
<h3>U.S. Sectors &amp; Industries</h3>
<ul>
<li class="selected"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/se
ctors/sectors_in_market.jhtml">Sectors &amp; Industries Overview</a></li>
</ul>
<h3>News &amp; Reports</h3>
<ul class="last">
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/ne
ws/overview.jhtml">U.S. Markets</a></li>
<li class="toc-item"><a href="https://eresearch.fidelity.com/eresearch/markets_sectors/ne
ws/global_overview.jhtml">Global Markets</a></li>
<li class="toc-item"><a href="https://research2.fidelity.com/fidelity/markets_sectors/sea
rch.asp">Reports Search</a></li>
</ul>
</div>
</div>
</div>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/autocomplete.js" type="text/javascript"></script>
</div>
</div>
<div class="right-content">
<div class="stock-ticker stock-ticker-layout stock-ticker-margin">
<span fmr-attach-component="fmr.qnr.components.MarketBar"></span>
</div>
<div class="page-title">
<h1>Consumer Discretionary</h1>
</div>
<div class="intro-sec">
<p class="text">The Consumer Discretionary Sector encompasses those industries that tend
to be the most sensitive to economic cycles. Its manufacturing segment includes automotiv
e, household durable goods, textiles &amp; apparel and leisure equipment. The services se
gment includes hotels, restaurants and other leisure facilities, media production and ser
vices, and consumer retailing and services.</p>
<div class="nav_box">
<h3>View a Specific Sector or Industry:</h3>
<label class="off-screen">Choose Specific Sector or Industry:</label>
<a class="multi-select-input" href="#" id="selectsi" title="Menu closed, click to open">S
elect</a>
<div class="multi-select-dropdown" id="select_si_dropdown">
<div class="nav-dropdown" id="select_industries_scroll">
<ul class="selectall-link">
<li><a href="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?display=sector">A
ll Sectors</a></li>
<li><a href="/eresearch/markets_sectors/sectors/industries.jhtml">All Industries</a></li>
</ul>
<table class="data-tbl" summary="">
<colgroup class="col1"></colgroup>
<colgroup class="col2"></colgroup>
<thead>
<tr>
<th scope="col">Sector</th>
<th scope="col">Industry</th>
</tr>
</thead>
<tbody id="sAndI_tbody">
</tbody>
</table>
</div>
</div>
```

```
<input id="hidSelectsi" name="hidSelectsi" type="hidden" value=""/>
</div>
<script type="text/javascript">
var nav_box = {};

nav_box.getSectorAndIndustry = function () {
 $.ajax({
        url : "/eresearch/markets_sectors/SectorAndIndustry.jhtml",
        context : "document.body",
        cache: false,
        success : function(data) {
         $('#sAndI_tbody').html(data);
         var code = "25";
         if (code != "") {
          $('#selectsi').html($("#overlay_"+code).attr('name'));
             $("#overlay_"+code).html($("#overlay_"+code).attr('name'));

             $('.nav_box .multi-select-dropdown .nav-dropdown a').click(function(){
              document.getElementById('select_si_dropdown').style.display = 'none';
             });

          }
        },
        error : function(jqXHR, textStatus, errorThrown) {
         $('#sAndI_tbody').html("This feature is temporarily unavailable.");
        }
    });
};

nav_box.getSectorAndIndustry();
</script>
</div>
<div class="tab-section">
<nav>
<ul>
<li class="first-child selected"><a href="/eresearch/markets_sectors/sectors/sectors_in_m
arket.jhtml?tab=learn&amp;sector=25">Snapshot</a></li>
<li class="null"><a href="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=
industries&amp;sector=25">Industries</a></li>
<li class="null"><a href="/eresearch/markets_sectors/sectors/sectors_in_market.jhtml?tab=
investments&amp;sector=25">Find Investments</a></li>
</ul>
</nav>
</div>
<script type="text/javascript">
        $('.tab-section .selected a').attr('href','javascript:void(0);');
        var selected =  $('.tab-section .selected');
        setShadow(selected);
        </script>
<div class="tab-content-wrapper">
<div class="left-content">
<section>
<table class="snapshot-data-tbl" summary="">
<colgroup>
<col class="col1"/>
<col class="col2"/>
<col class="col3"/>
<col class="col4" span="2"/>
</colgroup>
<thead>
<tr>
<th rowspan="2" scope="col">Last % Change</th>
<th rowspan="2" scope="col">Market Cap</th>
<th class="left-spcng" rowspan="2" scope="col">Market Weight</th>
<th class="align-left border-btm-none" colspan="2" scope="col"><a alt="Weighting Recommen
dations" href="javascript:void(0);" id="weighting_recommendations" modalid="#help-overlay
">Weighting Recommendations</a></th>
</tr>
<tr>
<th class="align-left sp-capital" scope="col">CFRA</th>
</tr>
</thead>
```

```html
<tbody>
<tr>
<td>
<span class="negative">-0.02%</span>
<span class="timestamp"><time>05:03 PM ET 10/29/2021</time></span>
</td>
<td>
<span>$9.59T</span>
<span class="timestamp"><time>10/28/2021</time></span>
</td>
<td class="left-spcng">
<span>12.49%</span>
<span class="timestamp"><time>10/22/2021</time></span>
</td>
<td class="align-left">
<span>Marketweight +1.00%</span>
<span class="timestamp"><time>10/22/2021</time></span>
</td>
</tr>
</tbody>
</table>
<div class="si-popup1" id="help-overlay" style="top: 202px; left: 416.5px; display: hidde
n; z-index: 10002; width:430px;">
<div class="si-heading">
<div class="left">
<h2>Understanding Weighting Recommendations</h2>
</div>
<div class="right">
<a class="close-btn" href="javascript:void(0);"> <img alt="close" src="https://www.fideli
ty.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/closex_blk_sm.gif" titl
e="close"/>
</a>
</div>
</div>
<div>
<p>Sector weighting recommendations are provided by independent, third-party research fir
ms to help further refine your analysis.</p>
<p>Some sectors get "over," "market," or "under" weighted, which means that the research
firm recommends that more, the same, or less of the sector should be held in your portfol
io than is held in the market.</p>
<p>Learn more about the average recommendation holding period and methodology of the rese
arch firms:</p>
<ul>
<li><a class="bold" href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-co
ntent/21.01.0/pdfs/CFRA_Sector_Methodology.pdf" target="_blank">CFRA (PDF)</a></li>
<li><a class="bold" href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-co
ntent/21.01.0/pdfs/Argus_Sector_Methodology.pdf" target="_blank">Argus Research (PDF)</a>
</li>
</ul>
<a href="/eresearch/markets_sectors/sectors/si_weighting_recommendations.jhtml?tab=sireco
mmendations">View weighting recommendations for all sectors</a>
</div>
</div>
<div class="perf-data">
<h2>Performance</h2>
<ul class="perf-mini-nav">
<li class="selected">View as Chart</li>
<li class="pipe-none">
<a href="javascript:void(0)" onclick="popupWin('/eresearch/markets_sectors/PerformanceInd
ustriesPopup.jhtml?tab=sector&amp;selectedCode=25', 840, 476, 130, 80)">View Sector vs. B
enchmark as Table<img alt="Opens in New Window" src="https://www.fidelity.com/webcontent/
ap101883-markets_sectors-content/21.01.0/images/popup.gif"/></a>
</li>
</ul>
<div class="data-container" id="view-chart">
<style>
.fmr_pwi_comaprisonchart_mainStyle {
 height: 280px !important;
 width: 515px !important;
}
</style>
<link href="https://www.fidelity.com/webcontent/ap105863-comparisonchart/css/sectindustri
```

```html
es.css" rel="stylesneet"/>
<link href="https://www.fidelity.com/webcontent/ap105863-comparisonchart/css/comparison.m
ultiselect.css" rel="stylesheet"/>
<script id="fmr_pwi_comparisonchart_wartermark" type="text/html">
    <div class="wartermark" position="relative" text-align="left">
        <div class="wartermark_title" text-align="center" color="#D1D1D1" font-family="He
lvetica, Arial, sans-serif" font-size="60px"></div>
        <div class="wartermark_description" text-align="left" color="#D1D1D1" font-family
="Helvetica, Arial, sans-serif" font-size="15px"></div>
    </div>
</script>
<div class="fmr_pwi_comaprisonchart_mainStyle" id="fmr_pwi_comaprisonchart_main_container
">
<div class="b_sectIndMainCont" id="fmr_pwi_comaprisonchart_layoutroot" style="visibility:
hidden;">
<div class="b_topLink" id="fmr_pwi_comaprisonchart_topMenu" style="height: 17px">
<span class="m_firstTopLink"><a class="commonLink" id="fmr_pwi_comaprisonchart_reset" tab
index="121">Reset Chart</a></span>
<span style="display: none"><a class="commonLink">Export</a></span>
</div>
<div class="b_sectIndMainContInner">
<div id="fmr_pwi_comaprisonchart_tabs" style="z-index: 10000; height: 30px">
<ul>
<li style="border: none; margin-top: 0px; border-right: solid; border-right-width: 1px; b
order-right-color: #cccccc">
<a href="#tabs-1" style="outline: none;" tabindex="101">Compare
                                <img border="0" height="4" src="https://www.fidelity.com/web
content/ap105863-comparisonchart/images/menuarrow_two.png" style="vertical-align: middle;
" width="7"/>
</a>
</li>
</ul>
<div id="tabs-1" style="outline: none; height: 93px;">
<div class="b_common_Div">
<div class="b_addSectorBox">
<div class="b_common_Div"><span class="m_boldText">Add Sectors</span></div>
<div class="b_common_Div">
<select id="fmr_pwi_comaprisonchart_slt_sector" style="width: 100px;" tabindex="102">
<option value="1">Consumer Discretionary</option>
</select>
</div>
</div>
<div class="b_addIndustriesBox">
<div class="b_common_Div"><span class="m_boldText">Add Industries</span></div>
<div class="b_common_Div">
<select id="fmr_pwi_comaprisonchart_slt_industry" style="width: 100px;" tabindex="103">
</select>
</div>
</div>
</div>
<div class="b_common_Div m_marginTop11px m_marginBottom14px">
<div class="b_common_Div">
<div class="b_addSectorBox">
<div class="b_common_Div"><span class="m_boldText">Enter Symbols</span></div>
<div class="b_common_Div">
<input id="fmr_pwi_comaprisonchart_EnterSymbol" style="width: 98%;" tabindex="104" type="
text"/>
</div>
</div>
<div class="b_addBenchmarks">
<div class="b_common_Div"><span class="m_boldText">Add Benchmarks</span></div>
<div style="width: 250px; float: left; line-height: 22px;">
<span><a class="benchmarkNormal" id="fmr_pwi_comaprisonchart_benchmark_SP500" tabindex="1
05">S&amp;P 500</a></span>
<span><a class="benchmarkNormal" id="fmr_pwi_comaprisonchart_benchmark_Russell3000" tabin
dex="106">Russell 3000</a></span>
<span><a class="benchmarkNormal" id="fmr_pwi_comaprisonchart_benchmark_NASDAQ" tabindex="
107">NASDAQ</a></span>
</div>
</div>
</div>
<div class="b_common_Div">
```

```html
<span class="entrySymbolErrorSpan" id="fmr_pwi_comaprisonchart_EnterSymbol_Error_Span">Er
ror:
                                    <label class="entrySymbolErrorSpan" id="fmr_pwi_coma
prisonchart_EnterSymbol_Error"></label>
</span>
</div>
</div>
</div>
</div>
<div class="b_chartContainer" id="fmr_pwi_comaprisonchart_chartContainer">
<div id="fmr_pwi_comaprisonchart_corechartContainer" style="height: 260px">
<div class="b_mainMenu" id="fmr_pwi_comaprisonchart_mainMenu"></div>
<div class="b_container" id="fmr_pwi_comaprisonchart_Container"></div>
</div>
<div class="b_rangeSelCont" id="fmr_pwi_comaprisonchart_rangeSel">
<div class="rangeButtons">
<span id="fmr_pwi_comaprisonchart_r1d" tabindex="108">TODAY</span>
<span id="fmr_pwi_comaprisonchart_r5d" tabindex="109">5D</span>
<span id="fmr_pwi_comaprisonchart_r1m" tabindex="110">1M</span>
<span id="fmr_pwi_comaprisonchart_r3m" tabindex="111">3M</span>
<span id="fmr_pwi_comaprisonchart_rytd" tabindex="112">YTD</span>
<span id="fmr_pwi_comaprisonchart_r1y" tabindex="113">1Y</span>
<span id="fmr_pwi_comaprisonchart_r3y" tabindex="114">3Y</span>
<span id="fmr_pwi_comaprisonchart_r5y" tabindex="115">5Y</span>
<span id="fmr_pwi_comaprisonchart_r10y" tabindex="116">10Y</span>Frequency:<label class="
frequency" id="fmr_pwi_comaprisonchart_freq">DAILY</label>
</div>
</div>
</div>
</div>
<div id="fmr_pwi_comaprisonchart_errorMessageBox">
<a class="popupClose" href="#" id="fmr_pwi_comaprisonchart_btn_close" onclick="ChartPopup
.DisablePopup();" tabindex="117">
<img align="absmiddlemiddle" border="0" height="16" hspace="0" src="https://www.fidelity.
com/webcontent/ap105863-comparisonchart/images/closeWin.png" vspace="0" width="16"/></a>
<div class="b_common_Div" style="width: 268px; margin-left: 16px; margin-top: 15px; paddi
ng-bottom: 16px; font-size: 12px;">
<div style="height: 15px; float: none; display: normal">
<p><strong>Limit Reached</strong> </p>
</div>
<div class="b_common_Div" style="margin-top: 10px; margin-bottom: 15px;">
<p id="fmr_pwi_comaprisonchart_p_message" style="margin-top: 0px; margin-bottom: 0px;"></
p>
</div>
<div class="b_common_Div" style="height: 20px; text-align: center;">
<input id="fmr_pwi_comaprisonchart_notShowAgain" tabindex="118" type="checkbox"/>
<label for="notShowAgain">Do not show this message again</label>
</div>
<div class="b_common_Div" style="text-align: center; margin-top: 10px;">
<span style="margin-right: 15px"><a class="commonLink" href="#" onclick="ChartPopup.Disab
lePopup();" tabindex="119">Cancel</a></span>
<input id="fmr_pwi_comaprisonchart_btn_ok" style="padding-left: 5px; padding-right: 5px"
tabindex="120" type="button" value="OK"/>
</div>
</div>
</div>
</div>
<div class="Chart-loading" id="fmr_pwi_comaprisonchart_layoutLoading"></div>
<!--global config veriables-->
<script>
      window.comaprisonchart_package_serverURl =  "/webcontent/ap105863-comparisonchart
";
      window.comaprisonchart_activequoteURL = "https://fastquote.fidelity.com";
      window.comaprisonchart_uuid = "";
   </script>
<script src="https://www.fidelity.com/webcontent/ap105863-comparisonchart/scripts/compari
son.multiselect.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap105863-comparisonchart/scripts/highsto
ck.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap105863-comparisonchart/scripts/fmr.com
parisonchart.js" type="text/javascript"></script>
<script src="https://www.fidelity.com/webcontent/ap105863-comparisonchart/scripts/compari
```

```
sonchart.js" type="text/javascript"></script>
</div>
</div>
</div>
</section>
<section>
<div class="sec-fundamentals">
<h2>


   Sector Fundamentals

  <span>AS OF 10/28/2021</span>
</h2>
<table class="data-tbl" summary="">
<colgroup>
<col class="col1"/>
<col class="col2"/>
</colgroup>
<thead>
<tr>
<th scope="col"></th>
<th scope="col"></th>
</tr>
</thead>
<tbody>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_3.shtml#priceearningsratio',420,450);return false;">P/E (Last Year GAAP A
ctual)</a></th>
<td>


          34.45


          </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_3.shtml#priceearningsratio',420,450);return false;">P/E (This Year's Esti
mate)</a></th>
<td>


          28.18


          </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_1.shtml#enterprisevalue',420,450);return false;">Enterprise Value</a></th
>
<td>

          $572.46B



          </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_1.shtml#earningspershare',420,450);return false;">EPS (TTM)</a></th>
```

```
<td>

            $14.68

        </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_1.shtml#earningspersharegrowth',420,450);return false;">EPS Growth (TTM v
s. Prior TTM)</a></th>
<td>

            125.75%

        </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_3.shtml#revenuegrowth',420,450);return false;">Revenue Growth (TTM vs. Pr
ior TTM)</a></th>
<td>

            37.82%

        </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_3.shtml#returnonequity',420,450);return false;">Return on Equity (TTM)</a
></th>
<td>

            71.27%

        </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_3.shtml#returnoninvestment',420,450);return false;">Return on Investment
(TTM)</a></th>
<td>

            151.56%

        </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_4.shtml#totaldebttoequityratio',420,450);return false;">Total Debt/Equity
(TTM)</a></th>
<td>
```

```
                252.42

            </td>
</tr>
<tr>
<th class="align-left" scope="row"><a href="javascript:void(0);" onclick="javascript:open
Popup('https://www.fidelity.com//webcontent/ap010098-etf-content/21.01.0/help/research/le
arn_er_glossary_1.shtml#dividendyield',420,450);return false;">Dividend Yield</a></th>
<td>


            1.46%



            </td>
</tr>
<tr>
<td colspan="2" style="border-bottom: none;text-align: left">
<a class="link" href="javascript:void(0);" id="detailSnapshotOverlay_anchor" modalid="#de
tailSnapshotOverlay" style="font-size: 100%;">How are performance, market cap,<span class
="sectoronly"> market weight,</span> and fundamentals calculated?</a>
</td>
</tr>
</tbody>
</table>
</div>
<div class="si-popup1" id="detailSnapshotOverlay" style="width:630px;">
<!-- Sector Details and Industry Details -->
<div class="si-heading">
<div class="left">
<h3></h3>
</div>
<div class="right">
<a class="close-btn" href="javascript:void(0);"> <img alt="close" src="https://www.fideli
ty.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/closex_blk_sm.gif" titl
e="close"/>
</a>
</div>
</div>
<div>
<p>U.S. Sectors &amp; Industries Performance is represented by the S&amp;P 500 GICS® (Glo
bal Industry Classification Standard) indices. Last % change is the nominal change in the
price of the index from the previous trading day's close expressed as a percentage as of
the index value at the time noted in the Date &amp; Time field.  All dates and times are
reported in ET.</p>
<p>Chart Performance enables you to chart and change performance timeframe of daily perce
nt change for the indices as well as the ability to add a user-entered symbol. Chart Perf
ormance figures may vary slightly from 1 Year % Change due to different timeframes used i
n chart calculations.</p>
<p>GICS is an industry classification system developed by Standard &amp; Poor's in collab
oration with Morgan Stanley Capital International (MSCI). S&amp;P uses GICS to determine
the market segment to which a company is assigned. A company is assigned to a single GICS
industry according to the definition of its principal business activity as determined by
Standard &amp; Poor's and MSCI. Revenues are a significant factor in defining principal b
usiness activity; however, earnings analysis and market perception are also important cri
teria for classification. There are currently 10 sectors and 68 industries.  Three of the
68 industries do not have companies represented in the S&amp;P 500 Index; therefore, perf
ormance is not available for Marine, Transportation and Infrastructure, and Water Utiliti
es.</p>
<p>Standard &amp; Poor's 500 (S&amp;P 500) Index is an unmanaged market-weighted index of
500 of the nation's largest stocks from a broad variety of industries. The S&amp;P 500 re
presents about 80% of the total market value of all stocks on the New York Stock Exchange
. Market-weighted means that component stocks are weighted according to the total value o
f their outstanding shares.</p>
<p>Indexes are unmanaged, statistical composites and their returns do not include payment
of any sales charges or fees an investor would pay to purchase the securities they repres
ent. Such costs would lower performance. It is not possible to invest directly in an inde
x.</p>
```

```
<p>Chart Performance enables you to chart and change performance timeframe or daily perce
nt change for the indices as well as the ability to add a user-entered symbol.</p>
<p>Market Cap is the sum of the market value of each company assigned to the applicable G
ICS sector or industry. Market value or capitalization is calculated by multiplying the n
umber of common shares outstanding by the market price per share at the end of each tradi
ng day.</p>
<p class="sectoronly">Market Weight is updated weekly from CFRA and represents the sum of
the market cap of the companies in the applicable S&amp;P 500 GIC sector index as a perce
ntage of the total S&amp;P 500 Index market capitalization.</p>
<p>Fundamental data is the cap weighted average (or industry standard method) of the most
current value available at the end of each trading day for each company assigned to the a
pplicable GICS sector or industry.</p>
</div>
</div>
<div class="news-reports-wrapper">
<div class="nr-blk nr-left" id="sectorNews_div">
<h2>
    Consumer Discretionary News
  </h2>
<ul>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110291800RTRSNEWSCOMB
INED_KBN2HJ2MF-OUSBS_1&amp;provider=RTRSNEWS&amp;product=COMBINED&amp;category=sectorNews
&amp;gic=25">12 automakers urge California senators to oppose union EV tax credit</a>
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=RA">Reuters</a></li>
<li class="timestamp">


06:00 PM ET 10/29/2021</li>
</ul></li>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110291753RTRSNEWSCOMB
INED_L1N2RP39L_1&amp;provider=RTRSNEWS&amp;product=COMBINED&amp;category=sectorNews&amp;g
ic=25">12 automakers urge California senators to oppose union EV tax credit</a>
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=RA">Reuters</a></li>
<li class="timestamp">


05:53 PM ET 10/29/2021</li>
</ul></li>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110281411RTRSNEWSCOMB
INED_L1N2RO2ID_1&amp;provider=RTRSNEWS&amp;product=COMBINED&amp;category=sectorNews&amp;g
ic=25">Saudi Arabia in talks with automakers on plant plans, minister says</a>
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=RA">Reuters</a></li>
<li class="timestamp">


02:11 PM ET 10/28/2021</li>
</ul></li>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110280700PRIMZONEFULL
FEED8381700&amp;provider=PRIMZONE&amp;product=FULLFEED&amp;category=sectorNews&amp;gic=25
">SIG Grows Its Membership Network with the Addition of 48 New Companies</a>
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=PZ">GlobeNewswire</a></li>
<li class="timestamp">


07:00 AM ET 10/28/2021</li>
</ul></li>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110280618RTRSNEWSCOMB
INED_KBN2HI1CA-OUSBS_1&amp;provider=RTRSNEWS&amp;product=COMBINED&amp;category=sectorNews
&amp;gic=25">Ethiopian textile industry at risk if U.S. suspends trade deal over Tigray w
ar</a>
```

```html
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=RA">Reuters</a></li>
<li class="timestamp">




06:18 AM ET 10/28/2021</li>
</ul></li>
<li><a href="/eresearch/markets_sectors/news/story.jhtml?storyid=202110260930PRIMZONEFULL
FEED8380139&amp;provider=PRIMZONE&amp;product=FULLFEED&amp;category=sectorNews&amp;gic=25
">Sprout Social Analyzes Emerging Trends Impacting Retailers this Holiday Shopping Season
</a>
<ul class="info-list">
<li><a href="/eresearch/markets_sectors/news/news.jhtml?source=PZ">GlobeNewswire</a></li>
<li class="timestamp">




09:30 AM ET 10/26/2021</li>
</ul></li>
</ul>
<ul class="more-link">
<li class="arrow"><a href="/eresearch/gotoBL/markets_sectors/sectors/sectors_in_market.jh
tml?tab=learn&amp;sector=25" target="_top"> Log in for additional news sources.</a></li>
<li class="remove-spacing"><a href="/eresearch/markets_sectors/news/news.jhtml?topic=sect
orNews&amp;gic=25">View more Consumer Discretionary news.</a></li>
</ul>
</div>
<div class="nr-blk nr-right">
<div id="SPCapitalIQ_div">
<h2>CFRA Industry Surveys</h2>
<p class="para-btm-spcng">These reports provide deep analysis of
   industry dynamics, and the environment facing participating
   companies.</p>
<ul class="more-link-sq btm-spcng">
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelity.com/fidelit
y/research/reports/pdf/getreport.asp?feedid=17412&amp;doctag=apf&amp;versiontag=0921');">
<strong>Textiles, Apparel &amp; Luxury Goods (PDF)</strong>
<span><img alt="Log in required." complete="complete" height="10" src="https://www.fideli
ty.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddin
g-left:6px;" title="Log in required." width="8"/></span>
</a>
<div class="date">09/2021</div>
</li>
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelity.com/fidelit
y/research/reports/pdf/getreport.asp?feedid=17412&amp;doctag=lng&amp;versiontag=0821');">
<strong>Hotels, Gaming &amp; Leisure (PDF)</strong>
<span><img alt="Log in required." complete="complete" height="10" src="https://www.fideli
ty.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddin
g-left:6px;" title="Log in required." width="8"/></span>
</a>
<div class="date">08/2021</div>
</li>
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelity.com/fidelit
y/research/reports/pdf/getreport.asp?feedid=17412&amp;doctag=hnd&amp;versiontag=0821');">
<strong>Household Products &amp; Providers (PDF)</strong>
<span><img alt="Log in required." complete="complete" height="10" src="https://www.fideli
ty.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddin
g-left:6px;" title="Log in required." width="8"/></span>
</a>
<div class="date">08/2021</div>
</li>
</ul>
<ul class="more-link">
<li><a href="https://research2.fidelity.com/fidelity/markets_sectors/search.asp#market=Ma
rketsAll&amp;marketChecked=false&amp;sectorChecked=true&amp;sector=Consumer%20Discretiona
ry&amp;industry=IndustryAll&amp;industryChecked=true&amp;economic=Economic&amp;economicCh
```

```
ecked=false&amp;firm=STDPOOR&amp;timeframe=365&amp;searchType=Domestic">View more Industr
y reports.</a></li>
</ul>
</div>
<div id="researchReport_div">
<h2>
  Research Reports
 </h2>
<ul>
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelit
y/research/reports/pdf/getreport.asp?feedid=576&amp;doctag=20211029t0&amp;versiontag=6234
mbsnue4jg255f97b2jkkc1');">Zacks Industry Outlook (PDF)
```

```
  <span><img alt="Log in required." complete="complete" height="10" src="https://www.fidel
ity.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddi
ng-left:6px;" title="Log in required." width="8"/></span>
</a>
<ul class="info-list">
<li><a href="https://research2.fidelity.com/fidelity/markets_sectors/search.asp#market=Ma
rketsAll&amp;marketChecked=false&amp;sectorChecked=true&amp;sector=SectorEverything&amp;i
ndustry=IndustryAll&amp;industryChecked=true&amp;economic=Economic&amp;economicChecked=fa
lse&amp;firm=Zacks&amp;timeframe=365&amp;searchType=Domestic">Zacks Investment Research</
a></li>
<li class="timestamp">12:51 PM ET 10/29/2021</li>
</ul></li>
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelit
y/research/reports/pdf/getreport.asp?feedid=576&amp;doctag=20211028t0&amp;versiontag=28v2
nd43er8sd62rg4cbb756qi');">Zacks Industry Outlook (PDF)
```

```
 <span><img alt="Log in required." complete="complete" height="10" src="https://www.fidel
ity.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddi
ng-left:6px;" title="Log in required." width="8"/></span>
</a>
<ul class="info-list">
<li><a href="https://research2.fidelity.com/fidelity/markets_sectors/search.asp#market=Ma
rketsAll&amp;marketChecked=false&amp;sectorChecked=true&amp;sector=SectorEverything&amp;i
ndustry=IndustryAll&amp;industryChecked=true&amp;economic=Economic&amp;economicChecked=fa
lse&amp;firm=Zacks&amp;timeframe=365&amp;searchType=Domestic">Zacks Investment Research</
a></li>
<li class="timestamp">01:15 PM ET 10/28/2021</li>
</ul></li>
<li>
<a href="javascript:void(0);" onclick="window.open('http://research2.fidelity.com/fidelit
y/research/reports/pdf/getreport.asp?feedid=576&amp;doctag=20211027t1&amp;versiontag=70lt
2li2m34uf1evrqjv8q6mna');">Zacks Industry Outlook (PDF)
```

```html
 <span><img alt="Log in required." complete="complete" height="10" src="https://www.fidel
ity.com/webcontent/ap101883-markets_sectors-content/21.01.0/images/lock.gif" style="paddi
ng-left:6px;" title="Log in required." width="8"/></span>
</a>
<ul class="info-list">
<li><a href="https://research2.fidelity.com/fidelity/markets_sectors/search.asp#market=Ma
rketsAll&amp;marketChecked=false&amp;sectorChecked=true&amp;sector=SectorEverything&amp;i
ndustry=IndustryAll&amp;industryChecked=true&amp;economic=Economic&amp;economicChecked=fa
lse&amp;firm=Zacks&amp;timeframe=365&amp;searchType=Domestic">Zacks Investment Research</
a></li>
<li class="timestamp">02:27 PM ET 10/27/2021</li>
</ul></li>
</ul>
<ul class="more-link">
<li><a href="https://research2.fidelity.com/fidelity/markets_sectors/search.asp#market=Ma
rketsAll&amp;marketChecked=false&amp;sectorChecked=true&amp;sector=Consumer%20Discretiona
ry&amp;industry=IndustryAll&amp;industryChecked=true&amp;economic=Economic&amp;economicCh
ecked=false&amp;firm=All Firms&amp;timeframe=365&amp;searchType=Domestic">View more resea
rch reports.</a></li>
</ul>
</div>
</div>
</div>
</section>
</div>
<div class="right-rail">
<aside>
<div class="bricklet-k">
<a href="javascript:void(0);" onclick="window.open('https://www.fidelity.com/learning-cen
ter/platforms-tools/researching-markets-sectors-industries-video');"><strong>Take a guide
d tour of Fidelity's sector and industry research.</strong> <img alt="Video opens in new
window. (52 min: 36 sec)" src="https://www.fidelity.com/webcontent/ap101883-markets_secto
rs-content/21.01.0/images/video2.png" title="Video opens in new window. (52 min: 36 sec)"
/></a>
</div>
</aside>
<aside>
<div class="bricklet-h" id="fidelityInsight_div">
<h2>Fidelity Insights</h2>
<p>
 We're sorry. No data available at this time.
</p>
</div>
</aside>
<aside>
```

```html
<div class="bricklet-a" id="understandingSector_div">
<h2>Understanding Sectors</h2>
<p><a href="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0/
business_cycle/Business_Cycle_Sector_Approach_2020.pdf" target="_blank"><strong>The Busin
ess Cycle Approach to Sector Investing (PDF)</strong></a> provides details on how you can
potentially take advantage of opportunities that arise due to the relative performance of
sectors in each phase. <span>FIDELITY INVESTMENTS</span></p>
<p class="twentypx-spcng">Learn more about sector investing in the <a href="https://www.f
idelity.com/learning-center/sectors/overview"><strong>Fidelity Learning Center</strong></
a>.</p>
</div>
</aside>
</div>
</div>
</div>
</div>
</div>
<div class="layout-footnote-region">
<div class="layout-spacer-1"></div>
<div class="footnote">
<p>News, commentary, market data and research reports are from third-party sources unaffi
liated with Fidelity, unless otherwise noted, and are provided for informational purposes
only. Fidelity does not endorse or adopt third party content. Fidelity makes no guarantee
s that information supplied is accurate, complete, or timely, and does not provide any wa
rranties regarding results obtained from their use.</p><p style="font-weight: bold;">Past
performance is no guarantee of future results.</p>
</div>
</div>
<script src="https://www.fidelity.com/webcontent/ap101883-markets_sectors-content/21.01.0
/js/embeddedquotes-config.js" type="text/javascript"></script>
<script src="https://www.fidelity.com//products/embeddedquotes/js/embeddedquotes.js.shtml
" type="text/javascript"></script>
<div class="layout-footer-region">
<script language="javascript" type="text/javascript">
 var tradeUrl = 'https://oltx.fidelity.com/ftgw/fbc/oftrade/snippet/quickTradeStandAlone'
;

 $(document).ready(function () {
  ngttWindowLoad();
 });

 function ngttWindowLoad() {

  var featureToggle = 'on';

  var isBrowserCompatible = false;

  var queryString = 'login=no';
  var loggedIn = getLoggedInParam(queryString);
  var defaultsForTicket = getDefaultParam(queryString);

  // if we recognize the default param passed in as mm, we want to pass this along to
  // trade so that client trade starts with special settings for market monitor
  if (defaultsForTicket === 'mm') {
   tradeUrl = tradeUrl + "?DEFAULT=mm"
  }

  // this is using the comment based html markup on next gen that sets the html class bas
ed on which version
  // of IE the user's current browser is. lt-ie10 stands for less than IE10. So this is a
good check for IE9 and older.
  var ieVersion = getInternetExplorerVersion();

  if (ieVersion == -1 || ieVersion >= 10) {
   isBrowserCompatible = true;
  } else {
   isBrowserCompatible = false;
  }

  $('body').prepend('<div class="docked-top-container" style="display:none;">'
   + '<div class="docked-trade-ticket" id="dockedTicketContainer" role="dialog" aria-labe
l="docked-trade-ticket"></div>'
```

```javascript
  + '<div id="dockedTicketBrowserCompatability"  style="display:none;">' + isBrowserCompa
tible + '</div>'
    + '<div id="dockedTicketEnabledEntitlement"  style="display:none;">true</div>'
    + '<div id="dockedTicketPreference"  style="display:none;">true</div>'
    + '<div id="dockedTicketLoggedInState"  style="display:none;">' + loggedIn + '</div>'
    + '<div id="ticketBootstrapped"  style="display:none;">true</div>'
    + '<div id="featureToggle"  style="display:none;">' + featureToggle + '</div>'
    + '<div class="base-popup base-modal--container base-modal--container-large terms-of-u
se-modal trade-ticket-modal"></div>'
    + '<div class="base-popup base-modal--container base-modal--container-large extended-h
ours-trading-modal trade-ticket-modal"></div>'
    + '<div class="base-popup base-modal--container base-modal--container-large select-a-f
und-i-own-modal trade-ticket-modal" role="dialog" aria-labelledby="select-a-fund-i-own--h
eader"></div>'
    + '<div class="base-popup base-modal--container base-modal--container-large additional
-important-information-modal trade-ticket-modal" role="dialog" aria-labelledby="additiona
l-important-information--header"></div>'
    + '<div class="docked-ticket-remove-popup"></div>'
    + '<div class="docked-additional-important-information"></div>'
    + '<div class="trade-container" id="tradeTicketContainer"></div>'
    + '</div>'
    + '<!-- shtml -->');
  //insert a placeholder for the docked TT

  if (isBrowserCompatible === true && featureToggle == 'on' && loggedIn == 'yes') {
   // fetch the trade ticket
   $("<div id='dockedComponents' style='z-index: 99999997; left: 0; width:100%; position:
absolute; bottom: 0;'></div>").appendTo(".docked-top-container");
   $.ajax({
    type: 'GET',
    url: tradeUrl,
    contentType: 'text/plain',
    xhrFields: {
     withCredentials: true
    },

    headers: {},
    success: function (response) {
     $("#dockedComponents").html(response);
    },
    error: function (xhRequest, ErrorText, thrownError) {
     console.log("CORS Error while importing DOCKED TT: " + xhRequest.responseText)
    }
   });
  }
 }

 function getInternetExplorerVersion() {
  var rv = -1;
  var ua = navigator.userAgent;
  if (navigator.appName === 'Microsoft Internet Explorer') {
   var re = new RegExp("MSIE ([0-9]{1,}[\.0-9]{0,})");
   if (re.exec(ua) != null) {
    rv = parseFloat(RegExp.$1);
   }
  } else if (navigator.appName === 'Netscape') {
   var re = new RegExp("Trident/.*rv:([0-9]{1,}[\.0-9]{0,})");
   if (re.exec(ua) != null) {
    rv = parseFloat(RegExp.$1);
   }
  }
  return rv;
 }

 function seedATicket(jsonInput) {

  //fetch the state variables
  var browserCompatability = false;
  var dockedEntitled = false;
  var dockedPreference = true;
  var loggedInState = false;
  var featureToggle = 'off';
```

```javascript
   var featureToggleDiv = $('#featureToggle');
   if (featureToggleDiv != null || featureToggleDiv != undefined) {
    featureToggle = featureToggleDiv.html();
   }
   var browserCompatabilityDiv = $('#dockedTicketBrowserCompatability');
   if (browserCompatabilityDiv != null || browserCompatabilityDiv != undefined) {
    browserCompatability = browserCompatabilityDiv.html();
   }
   var dockedEntitledDiv = $('#dockedTicketEnabledEntitlement');
   if (dockedEntitledDiv != null || dockedEntitledDiv != undefined) {
    dockedEntitled = dockedEntitledDiv.html();
   }
   var dockedPreferenceDiv = $('#dockedTicketPreference');
   if (dockedPreferenceDiv != null || dockedPreferenceDiv != undefined) {
    dockedPreference = dockedPreferenceDiv.html();
   }
   var loggedInStateDiv = $('#dockedTicketLoggedInState');
   if (loggedInStateDiv != null || loggedInStateDiv != undefined) {
    loggedInState = loggedInStateDiv.html();
   }

   // fetch data to seed from json input
   var seedingParams = fetchParams(jsonInput);

   var securityType = seedingParams.securityType;

   if (browserCompatability == 'false' || ((typeof mmDefault !== 'undefined' && mmDefault
!= "true") && (dockedEntitled == 'false' || dockedPreference == 'false' || featureToggle
!= 'on'))) {
     //if not showing docked, then rebuild link
     var url = rebuildTradeLink(jsonInput);
     window.open(url, "_self");
   } else if (securityType == 'H' || securityType == 'F' || securityType == 'BT' || securit
yType == 'MLO' || securityType == 'CT' || securityType == 'X') {
     //if not showing docked, then rebuild link
     var url = rebuildTradeLink(jsonInput);
     window.open(url, "_self");
   } else if (loggedInState == 'no' || loggedInState == 'member') {
     // [PIATQTR-3635] set flag to open float ticket.
     setSessionStorage("openFloatTicket", true);
     var orderInfo = {
      'SYMBOL': seedingParams.symbol,
      'ORDER_TYPE': seedingParams.securityType,
      'ORDER_ACTION': seedingParams.orderAction,
      'LIMIT_STOP_PRICE': seedingParams.limitStopPrice,
      'ACCOUNT': seedingParams.account,
      'QTY': seedingParams.qty,
      'ACCOUNT_TYPE': seedingParams.accountType
     };
     var tradeInfo = {
      'orderInfo': orderInfo
     };
     setSessionStorage("tradeInfo", JSON.stringify(tradeInfo));

     var redirectUrl = $(location).attr('href');
     $(location).attr('href', 'https://login.fidelity.com/ftgw/Fas/Fidelity/RtlCust/Login/I
nit?AuthRedUrl=' + redirectUrl);
   } else {
     //test for float on page
     var quickTradewrapper = $('.quick-trade-popup-wrapper');
     if (quickTradewrapper == null || quickTradewrapper == undefined || quickTradewrapper.l
ength == 0) {
       //if float is not present, reopen it
       openNewFloat(seedingParams);

     } else {
      //if floating ticket is present, attempt to seed ticket
      populateExistingTicket(seedingParams);
     }
   }
  }
```

```
function fetchParams(jsonInput) {

 var symbol = "symbol";
 var securityType = "securityType";
 var orderAction = "orderAction";
 var limitStopPrice = "limitStopPrice";
 var results = {};

 for (var i = 0; i < jsonInput.length; i++) {
  var obj = jsonInput[i];
  for (var key in obj) {

   switch (key) {
    case 'SECURITY_ID':
     results.symbol = decodeURIComponent(obj[key]);
     break;
    case 'SECURITY_TYPE':
    case 'ORDER_TYPE':
     results.securityType = obj[key];
     break;
    case 'ORDER_ACTION':
     results.orderAction = obj[key];
     break;
    case 'LIMIT_STOP_PRICE':
     results.limitStopPrice = decodeURIComponent(obj[key]);
     break;
    case 'ACCOUNT':
     results.account = decodeURIComponent(obj[key]);
     break;
    case 'QTY':
     results.qty = decodeURIComponent(obj[key]);
     break;
    case 'ACCT_TYPE':
     results.accountType = decodeURIComponent(obj[key]);
     break;
    default:
     break;
   }
  }
 }

 return results;
}

function populateExistingTicket(seedingParams) {

 var closeButton = $(".close-qt");
 if (closeButton != null || closeButton != undefined) {
  closeButton.trigger('click');
  openNewFloat(seedingParams);
 } else {

  var symbolBox = $("#qt-symbol");
  if (symbolBox != null || symbolBox != undefined) {
   symbolBox.val(seedingParams.symbol);
   symbolBox.trigger('blur');
  }
 }
}

function openNewFloat(seedingParams) {
 var orderInfo = {
  'SYMBOL': seedingParams.symbol,
  'ORDER_TYPE': seedingParams.securityType,
  'ORDER_ACTION': seedingParams.orderAction,
  'LIMIT_STOP_PRICE': seedingParams.limitStopPrice,
  'ACCOUNT': seedingParams.account,
  'QTY': seedingParams.qty,
  'ACCOUNT_TYPE': seedingParams.accountType
 };
 var tradeInfo = {
  'orderInfo': orderInfo
```

```
    };

    this.tradeInfo = tradeInfo;

    $(document).trigger("QUICK_TRADE", tradeInfo);
  }

  function rebuildTradeLink(jsonInput) {

    var url = "https://oltx.fidelity.com/ftgw/fbc/oftrade/EntrOrder?";
    var first = true;

    for (var i = 0; i < jsonInput.length; i++) {
     var obj = jsonInput[i];
     for (var key in obj) {
      var attrName = key;
      var attrValue = obj[key];
      if (first) {
       url = url + attrName + "=" + attrValue;
       first = false;
      } else {
       url = url + "&" + attrName + "=" + attrValue;
      }
     }
    }

    return url;
  }

  function setSessionStorage(key, val) {
   if (typeof (Storage) !== "undefined") {
    sessionStorage.setItem(key, val);
   }
  }

  /**
   * Parses the logged in param after app calls this bootstrap file
   * @returns {string}  whether a user is logged in or not
   */
  function getLoggedInParam(queryString) {

   var loggedInParam = "no";

   if (queryString != null && queryString != undefined && queryString != "") {
    var queryParamSplit = queryString.split("&");
    if (queryParamSplit.length > 0) {
     // split the logged in param value out
     var loggedInQuery = queryParamSplit[0].split("=");
     if (loggedInQuery.length > 1 && loggedInQuery[0] === 'login') {
      if (loggedInQuery[1] && (loggedInQuery[1] === 'yes' || loggedInQuery[1] === 'no' ||
loggedInQuery[1] === 'member')) {
       loggedInParam = loggedInQuery[1];
      }
     }
    }
   }

   return loggedInParam;
  }

  /**
   * Parses the default param after app calls this bootstrap file
   * @returns {string}  whether the calling app needs to pass in a default value for use i
n initialization
   */
  function getDefaultParam(queryString) {

   var defaultsForTicketParam = "none";

   if (queryString != null && queryString != undefined && queryString != "") {
    var queryParamSplit = queryString.split("&amp;");
    if (queryParamSplit.length > 1) {
```

```
     // split the default param
     var defaultQuery = queryParamSplit[1].split("=");
     if (defaultQuery.length > 1 && defaultQuery[0] === 'default') {
      if (defaultQuery[1] && (defaultQuery[1] === 'mm')) {
       defaultsForTicketParam = defaultQuery[1];
      }
     }
    }
   }

   return defaultsForTicketParam;
 }

</script>
<div class="layout-spacer-1"></div>
<div class="primary-footer">
<a href="https://www.fidelity.com" target="_top" title="Fidelity Logo"><img alt="Fidelity
Investments" border="0" class="fid-logo" src="https://www.fidelity.com/images/FidLogoGray
.gif" title="Fidelity Investments"/></a>
<p class="copyright">© 1998 - 2021 FMR LLC.</p>
<p class="rights">All rights reserved.</p>
<ul>
<li class="first"><a href="https://www.fidelity.com/terms-of-use" target="_top" title="Te
rms of Use">Terms of Use</a></li>
<li><a href="https://www.fidelity.com/privacy-policy" target="_top" title="Privacy">Priva
cy</a></li>
<li><a href="https://www.fidelity.com/security/overview" target="_top" title="Security">S
ecurity</a></li>
<li><a href="https://www.fidelity.com/sitemap/overview" target="_top" title="Site Map">Si
te Map</a></li>
</ul>
</div>
</div>
<script language="JavaScript" type="text/javascript">
    $(document).ready(function() {
    // *********************************************************
    // Sector Detail Overlay Model Begin
    // *********************************************************
    /*    var detailPage = {};
    detailPage.register = function () {
        $('#detailSnapshotOverlay .close-btn').unbind('keydown');
        $('#detailSnapshotOverlay .close-btn').keydown(function(e) {
        // ESCAPE key pressed
        if (e.keyCode == 27) {
            $('#detailSnapshotOverlay').hide();
        }
        });
        $('#detailSnapshotOverlay .close-btn').unbind('click');
        $('#detailSnapshotOverlay .close-btn').click(function(){
        $('#detailSnapshotOverlay').hide();
        return false;
      });
    };

    $('#detailSnapshotOverlay_anchor').click(function(){
        var obj = $(this);
        var topPos = obj.offset().top - 40;
        var leftPos= obj.offset().left - 55;
        $('#detailSnapshotOverlay').show();
        $('#detailSnapshotOverlay').css({'top':topPos, 'left':leftPos});
        detailPage.register();
        $('#detailSnapshotOverlay .close-btn').focus();
        return false;
    }); */

    jQuery('a[name=modal]').click(function(e) {

        e.preventDefault();//Cancel the link behavior

        jQuery('.modal-window').hide();//hide existing model window
        jQuery('.model-window-body').css("height",'auto');// reset height of existing mo
del window div
```

```
jQuery('.model-window-body').css("overflow-y",'inherit')

var id = jQuery(this).attr('href');

var divHeight = jQuery(id).outerHeight();//get height of model div


//Get the window height and width
var winH = jQuery(window).height();
var winW = jQuery(window).width();

if(winH-50>divHeight){  // if div height is larger than available height

    var newHeight = winH - 150;
    //jQuery('.model-window-body').css("height",newHeight);
    //jQuery('.model-window-body').css("overflow-y",'auto')
    jQuery(id).css('top',(winH-$(id).height())/2);

}
else{
    jQuery(id).css('top',20);
    }
jQuery(id).css('left', winW/2-$(id).width()/2);

jQuery('.modal-window').hide();
jQuery(id).show();//show model window
jQuery(id).find('a.close').focus();//focus inside model window
return false;


});

//if close button is clicked
$('.modal-window .close').click(function (e) {
    jQuery('.modal-window').hide();
    return false;
});

$('.modal-window .close').keydown(function(e) {
    // ESCAPE key pressed
    if (e.keyCode == 27)
    {
        $('.modal-window').hide();
         return false;
    }
    });


  /*  jQuery('a[name=overlay]').click(function(e) {

        e.preventDefault();//Cancel the link behavior

        jQuery('.sector-capitalIQ-overlay').hide();//hide existing model window
        jQuery('.sector-capitalIQ-overlay').css("height",'auto');// reset height of e
xisting model window div
        jQuery('.sector-capitalIQ-overlay').css("overflow-y",'inherit');
        jQuery('.sector-capitalIQ-overlay').css("z-index",'10001')

        var id = jQuery(this).attr('href');

        var divHeight = jQuery(id).outerHeight();//get height of model div


        //Get the window height and width
        var winH = jQuery(window).height();
        var winW = jQuery(window).width();

        if(winH-50>divHeight){  // if div height is larger than available height

            var newHeight = winH - 150;
            //jQuery('.model-window-body').css("height",newHeight);
            //jQuery('.model-window-body').css("overflow-y",'auto')
```

```
                jQuery(id).css('top',(winH-$(id).height())/2);

            }
            else{
                jQuery(id).css('top',20);
            }
            jQuery(id).css('left', winW/2-$(id).width()/2);

            jQuery('.sector-capitalIQ-overlay').hide();
            jQuery(id).show();//show model window
            jQuery(id).find('a.close').focus();//focus inside model window
            return false;


        });

        //if close button is clicked
        $('.sector-capitalIQ-overlay .close').click(function (e) {
            jQuery('.sector-capitalIQ-overlay').hide();
            return false;
        });

        $('.sector-capitalIQ-overlay .close').keydown(function(e) {
            // ESCAPE key pressed
            if (e.keyCode == 27)
            {
                $('.sector-capitalIQ-overlay').hide();
                 return false;
            }
            }); */

    // ************************************************************
    // Sector Detail Overlay Model End
    // ************************************************************
    if(typeof window.ComparisonChart != "undefined"){
        window.ComparisonChart.SetDefaultSymbols(['.GSPD'], ['.SPX']);
    }
    });
</script>
<script src="/oedjdZ/7p4-2W/GThOF/3TjDA/EEehE/biaJrmtJiE/VzsYMAE/cCJ/2XlFJEAcC" type="tex
t/javascript"></script></body>
</html>
```

R Equivalent

```
sector_page_link <- "https://eresearch.fidelity.com/eresearch/markets_sectors/secto
rs/sectors_in_market.jhtml?tab=learn&sector=25"
response <- session(sector_page_link)
results_page <- httr::content(response$response, as = "text")
```

Step 4

We see for every sector we have a *table* class "snapshot-data-tbl", under which all the data is contained. *Div* "page-title" contains the sector name. Rest of the information is contained in *span* We use *get_text()* to get all data incrementally inside of span

In [7]:

```python
def get_sector_change_and_market_cap(sector_page_link):
    response = requests.get(sector_page_link)
    sector_change_list = list()
    x = list()
    if not response.status_code == 200:
        return None
    try:
        results_page = BeautifulSoup(response.content,'lxml')
        sector_information = results_page.find('table',class_="snapshot-data-tbl")
```

```
        st = sector_information.find_all('span')
        for s in st:
            x.append(s.get_text())

        sector_change = x[0]
        sector_market_cap = x[2]
        sector_market_weight = x[4].rstrip('%')
        sector_name = results_page.find('div',class_="page-title").get_text().strip()


    except:
        return None

    return sector_name,sector_change,sector_market_cap,sector_market_weight
```

R Equivalent

1. **Checking for status code**

```
if(httr::status_code(response) != 200){
    return(NULL)
}
```

2. **Narrowing down on content**

```
st <- results_page %>% html_nodes("table.snapshot-data-tbl") %>% html_nodes("sp
an") %>%  html_text2()
```

and

```
sector_name <- results_page %>% html_nodes("div.page-title") %>% html_text(trim
= TRUE)
```

Step 6

(Intermediate step)

Output for a particular sector

In [8]:

```
link = "https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/sectors_in_marke
t.jhtml?tab=learn&sector=25"
get_sector_change_and_market_cap(link)
```

Out[8]:

```
('Consumer Discretionary', '-0.02%', '$9.59T', '12.49')
```

R Equivalent

```
link = "https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/sectors_in
_market.jhtml?tab=learn&sector=25"
get_sector_change_and_market_cap(link)
```

Step 7

In this function *get_us_sector_performance()*, we get a list of sectors and the links to the sector detail pages from the url and add it to the output_list

Each tuple corresponds to a sector and contains the following data:

- **the sector name**

- **the amount the sector has moved**

- **the market capitalization of the sector**

- **the market weight of the sector**

- **a link to the fidelity page for that sector**

In [9]:
```python
def get_us_sector_performance():
    output_list = list()
    url = "https://eresearch.fidelity.com/eresearch/goto/markets_sectors/landing.jhtml"
    response=requests.get(url)
    sector_list= list()
    sector_link_list = list()
    if not response.status_code == 200:
        return None

    results_page = BeautifulSoup(response.content,'lxml')
    sectors = results_page.find_all('div',class_="heading")
    for sector in sectors:
        sector_link = "https://eresearch.fidelity.com" + sector.find('a').get('href')
        sector_link_list.append(sector_link)

    sector_link_list.pop(0)
    for link in sector_link_list:


        sector_name,sector_change,sector_market_cap,sector_market_weight = get_sector_ch
ange_and_market_cap(link)
        output_list.append((sector_name, sector_change,sector_market_cap,sector_market_w
eight,link))

    output_list.sort(key=lambda k: float(k[3]), reverse = True)

    return (output_list)
```

R Equivalent

1. **Checking for status code**

```r
if(httr::status_code(response) != 200){
    return(NULL)
}
```

2. **Finding and appending sectors**

```r
results_page <- httr::content(response$response, as = "text")
sectors = results_page %>% html_nodes("div.heading")
for(sector in sectors){
  x <- sector %>%  html_element("a") %>% html_attr('href')
  sector_link <- "https://eresearch.fidelity.com" + x
  append(sector_link_list,sector_link)
}
```

Step 8

Printing the list of necessary content

In [18]:
```python
f = get_us_sector_performance()
df = pd.DataFrame(f, columns =['Industry_Sector', 'Sector_change', 'Sector_market_cap',
'Sector_market_weight', 'URL'])
print(df.head(5))
```

```
        Industry_Sector Sector_change Sector_market_cap  \
0    Information Technology        +0.43%            $16.47T
1            Health Care         +0.95%             $8.42T
2    Consumer Discretionary        -0.02%             $9.59T
3               Financials         -0.43%             $9.25T
4    Communication Services        +0.83%             $6.68T

  Sector_market_weight                                         URL
0               27.76  https://eresearch.fidelity.com/eresearch/marke...
1               12.98  https://eresearch.fidelity.com/eresearch/marke...
2               12.49  https://eresearch.fidelity.com/eresearch/marke...
3               11.67  https://eresearch.fidelity.com/eresearch/marke...
4               10.76  https://eresearch.fidelity.com/eresearch/marke...
```

R equivalent

```
f <- get_us_sector_performance()
df <- as.data.frame(f, col.names = c('Industry_Sector', 'Sector_change', 'Sector_m
arket_cap', 'Sector_market_weight', 'URL'))
```

Step 9

Saving data to Disk

In [20]:

```
df.to_csv('my_data.csv',index=False)
```

R Equivalent

```
write.csv(df,file="my_data.csv")
```

In [ ]: