

**FACTSET** › SEE THE ADVANTAGE

TRAINING MANUAL 2022

# SOLUTIONS FOR THE INVESTMENT BANK



## Navigating FactSet

FactSet allows you to analyze companies, view market data in real time, generate investment ideas, and manage your portfolios in a single, powerful platform. Your FactSet workspace consists of several tabs that feature the most relevant displays, reports, and applications based on your workflow. The following shows you tips for navigating your workspace.

Click the **Search** button to easily discover reports and applications without prior knowledge of where to find them on FactSet.

Access shortcuts to your favorite FactSet components. Customize them using the **Shortcut Manager**. For more details, see [Online Assistant page 16162](#).

Click the **Add Tab** button to add new FactSet, template, or custom tabs, which allow you to personalize your workspace.

The screenshot displays the FactSet workspace with several key components:
 

- Top Navigation:** Includes a search bar, a toolbar with icons for FQ, N, C, IC, GP, BOOK, T&S, OPT, and AM, and a navigation menu with tabs like 'Today's Top News', 'Watchlist', 'Company/Security', 'Markets', 'Economics', 'Industry', 'Filings', 'Ownership', 'Portfolio Analysis', 'Screening', 'Activism/Governance', 'FactSet Learning', and 'Custom Help'.
- MARKETS OVERVIEW:** Shows S&P 500 (2,878.71, -0.59%), NASDAQ (7,917.44, +0.46%), and Russell 2000 (0.74%).
- MARKET SYNOPSIS:** Provides a summary of market movements, such as 'US equities lower in Tuesday afternoon trading' and 'EU's Tusk proposed flexible one-year Brexit extension'.
- ECONOMIC CALENDAR:** Lists upcoming events like 'NFIB Small Business Index' and 'JOLTS Job Openings'.
- Interactive Charting:** Displays price/volume charts for Apple Inc. (AAPL) and other companies.
- News Feed:** Features articles like 'White House threatens new tariffs on EU goods' and 'IMF cuts global growth forecast to slowest pace since financial crisis'.

## Using the FactSet Toolbar

- Download a report in various formats (e.g., Excel, PDF) based on the selected report.
- Save revisions to your current workspace.
- Read about the latest enhancements in Notify.
- Click to access help, eLearning, exchange entitlements, and more. Select "About FactSet" to view your FactSet username, serial number, and version.

## Using FactSet Keyboard Shortcuts

- Activate FactSet search: **CTRL+SHIFT+F**
- Find text within a component: **CTRL+F**
- Activate channel audit: **ALT+I**
- Revert to the last saved version of a tab: **CTRL+R**
- Save a workspace and document (i.e., settings): **CTRL+S**
- Toggle up/down through the tab layers: **CTRL+Up Arrow** or **CTRL+Down Arrow**
- Move the cursor to the left or right in a tab layer: **CTRL+Left Arrow** or **CTRL+Right Arrow**
- Navigate to the lowest tab layer: **ALT+[1-9]**

For a complete list, see [Online Assistant page 15797](#).

## FactSet Search Tips

- Pair concepts with identifiers (e.g., "apple chart ntm eps", "france gdp", "alibaba ipo") to find the most relevant application/report to conduct your research and analysis
- Find answers to common financial data questions by entering a search term with an identifier or company to return data directly in FactSet Search (e.g., "fitbit ipo date")
- Navigate to any component in FactSet using a shortcut (e.g., "@PA" to launch Portfolio Analysis) or pair an identifier with the shortcut (e.g., "IBM @PS" to launch the Price Summary with ticker IBM)
- Push just the identifier from your selected search result to your active tab by pressing **CTRL+ENTER**

For more information on search, see [Online Assistant page 16233](#).

The search result for "fitbit ipo date" displays the following information:
 

- Equities:** IPO of Fitbit, Inc. Class A (FIT-US)
- Date:** June 17, 2015 IPO Date
- Details:** Fitbit, Inc. Class A's initial public offering took place on June 17, 2015. A total of 42.1 Million shares were offered at a price of \$20.00 per share.
- Navigation:** Includes a link to 'Company/Security - Security Overview' and an 'Advanced ID Search' option.

**ONLINE ASSISTANT PAGE ID 17817**

## Performing Company Analysis on FactSet

The Company/Security tab provides a consistent, streamlined solution for finding everything you need to perform company analysis on FactSet within a single tab. It incorporates both public and private company data, as well as PE/VC investor and fund data. The reports are organized in the left pane by category and change based on your active identifier to provide only the information relevant to your research. For a demo featuring the Company/Security tab's key functionality, go to Online Assistant page 17450.

Use the Back/Forward buttons to navigate through any reports you've previously selected within the Company/Security tab.

Automatically view any new company reports as they are created. Each is marked with a "New" indicator to easily identify the latest releases.

Access common features throughout the company reports, including the ability to click a report value to view additional details and launch related reports.

**Business Description**

Adobe, Inc. engages in the provision of digital marketing and media solutions. It operates through the following segments: Digital Media, Digital Experience, and Publishing. The Digital Media segment offers creative cloud services, which allow members to download and install the latest versions of products, such as Adobe Photoshop, Adobe Illustrator, Adobe Premiere Pro, Adobe Photoshop Light room and Adobe InDesign, as well as utilize other tools, such as Adobe Acrobat. The Digital Experience segment provides solutions, including analytics, social marketing, targeting, media optimization, digital experience management, and cross-channel campaign management, as well as premium video delivery and monetization. The Publishing segment includes legacy products and services for eLearning solutions, technical document publishing, web application development, and high-end printing. The company was founded by Charles M. Geschke and John E. Warnock in December 1982 and is headquartered in San Jose, CA. Source: FactSet Fundamentals

**Corporate Information**

345 Park Avenue  
San Jose, California 95110-2704  
United States

+1 408 536 6000  
<http://www.adobe.com>

Source: FactSet Fundamentals

**Financial Valuation Ratios**

	Nov '18A	Feb '19LTM	Nov '19E	Nov '20E
EV/Sales	14.87	14.07	11.96	10.16
EV/EBITDA	42.57	41.86	27.15	22.48
EV/EBIT	47.85	48.12	29.93	24.25
EBITDA/Interest Expense	35.17	29.03	31.29	37.82
EBIT/Interest Expense	31.28	25.25	28.38	35.06
EBITDA-CapEx/Interest Expense	31.97	26.09	29.49	35.69
Total Debt/EBITDA	1.31	1.29	-	-
Total Debt/EV	0.03	0.03	-	-
PE	52.34	50.50	34.80	28.12

**Current Capitalization**

Price (29 Mar '19) Basic Shs Out (M) Basic Mkt Cap  
266.49 487.95 130.03

Fully Diluted Market Capitalization 132.69

+ Total Debt 4.13

- Cash & Equivalents 3.23

+ Total Preferred Equity -

- In-the-Money Conv Debt and Prefs -

- Investments in Unconsolidated Subs 0.00

+ Non-Controlling Interest 0.00

+ Pension Liabilities 0.00

= Enterprise Value (EV) 133.59

Weighted Avg Cost of Capital 16.5%

Shares Outstanding Methodology

Source: FactSet, USD as of 29 Mar '19, Millions

**Financial Summary**

	Feb '19Q	Feb '19LTM	Nov '17A	Nov '18A	Nov '19E	Nov '20E
Revenue	2,592.45	9,495.68	7,268.65	8,981.36	11,167.60	13,116.60
Growth (%)	24.8	23.6	24.6	23.6	23.7	23.7
Gross Income	2,148.59	8,041.98	6,181.60	7,695.26	9,728.17	11,167.60
Margin (%)	82.9	84.7	85.0	85.7	87.1	87.1
EBITDA	831.23	3,191.21	2,461.24	3,138.21	4,921.14	5,621.14
Margin (%)	32.1	33.6	33.9	34.9	44.1	44.1
EBIT	686.33	2,776.34	2,135.24	2,791.72	4,464.05	5,064.05
Margin (%)	26.5	29.2	29.4	31.1	40.0	40.0
Net Income	674.24	2,681.94	1,693.95	2,590.77	3,858.00	4,458.00
Margin (%)	26.0	28.2	23.3	28.8	34.5	34.5

**Price Volume**

Price: \$270.65 +1.66 (0.6%)

Volume: 1,011,953

52 Week Range: 266.49 - 272.16

Short Int (% of Float): 1.0%

Trading Since: 13 Aug '96

**Return Analysis vs. S&P 500**

	ADBE	SP500	ADBE	SP500
Price Change (%)	9.62	9.09	9.62	9.09
Total Return (%)	1.30	0.50	1.20	-0.47
Today	1.56	1.56	1.56	1.61
Week To Date	1.56	1.55	1.56	1.61
Month To Date	19.63	14.81	19.63	15.47
Quarter To Date	6.23	4.93	6.25	5.19
Year To Date	13.83	10.84	13.83	11.41
3 Month	13.76	3.32	13.76	4.40
6 Month	8.86	3.02	8.86	4.59
9 Month	20.54	8.33	20.54	10.52
1 Year	44.20	16.00	44.20	12.71
2 Year CAGR	42.23	13.02	42.23	14.52
3 Year CAGR	34.50	9.44	34.50	11.72
5 Year CAGR	26.90	12.89	26.90	15.27
10 Year CAGR	20.81	3.86	20.81	5.87
20 Year CAGR	19.26	7.88	19.54	10.21
From IPO CAGR	-	-	-	-

**Price Summary**

Price: \$270.65 +1.66 (0.6%)

Volume: 1,011,953

52 Week Range: 266.49 - 272.16

Short Int (% of Float): 1.0%

Trading Since: 13 Aug '96

**Volume**

	Today	5 Day	30 Day	90 Day
Average Trading Volume	55.25	24.44	24.44	24.44
Shares	1,011,953	2,150,896	3,110,232	3,537,153
Values (Millions USD)	273.6	578.4	817.2	978.3
Today's Volume as % of Avg	47.0	32.5	28.8	

**Dividends**

	ADBE-US	SP500	Ev. Date	Am't
Indicated Ann Dividend	0.00	0.00	24-Mar-2005	0.006
Dividend Yield	0.0%	2.0%	23-Sep-2004	0.006
1 Yr Div Growth	-	7.7%	24-Sep-2004	0.006
3 Yr Div Growth	-	-	25-Jun-2004	0.006
5 Yr Div Growth	-	-	26-Jun-2004	0.006
Div Increases in 5 Yrs	-	-	07-Jan-2004	0.006
Payout Ratio	0.0%	33.8%	19-Sep-2003	0.006
Coverage	-	-	19-Jun-2003	0.006

**Special Dividends**

10/23/97 (0.01167) Adobe Systems Inc00724F10 ADBE; distributes Special Dividend of \$0.01167 per share to all holders of record as of 10/23/97. Shareholders of record holding less than 1000 shares receive cash in lieu of stock.

7/23/97 (0.04675) Adobe Systems Inc (00724F10 ADBE); distributes Special Dividend of \$0.04675 per share to all holders of record as of 7/23/97. Shareholders of record holding less than 1000 ADBE shares will receive cash payment proportional to 7/23/97 NSCP closing price.

### Summary of key Company/Security tab features:

- Allows you to easily discover existing reports within an intuitive, cleanly organized interface that follows your company analysis workflow
- Automatically includes new reports that were previously unavailable and eliminates the need to manually find and add each to your workspace
- Displays only relevant reports and data based on your active identifier
- Provides improved navigation, allowing you to seamlessly jump from one report to the next

TO LAUNCH: COMPANY/SECURITY TAB

ONLINE ASSISTANT PAGE ID 17450

## Screening for Ideas

Idea Screening provides a workflow-driven, customizable application that allows you to screen for potential investment opportunities, find potential buyers, track trends, and identify precedent transactions. For a guided tour of Idea Screening, launch the eLearning series on Online Assistant page 17315.

Click the **Adjust Logic** button to edit the logic for your screening items and dynamically update counts based on your changes.

View the number of transactions passing your screen, which automatically updates based on the parameters you specify.

Click the **View** button to analyze results based on your screen's criteria.

Search for keywords or filter results based on favorites or recommended items.

Select to save the screen, the report results, or the list of identifiers that passed your screen in order to use them in other applications.

Drag parameters from the left pane to add them to your report. Hover over the **?** icon to view the definition. For more information on working with your screen parameters, see Online Assistant page 16697.

Search to view a link directly to any passing results. If a company/transaction doesn't pass, click the "Why?" link to find which of the parameters were not met.

Select to "Include undisclosed values" for relevant items.

The screenshot shows the Idea Screening application interface. On the left, there is a 'Search Items' pane with categories like Company Details, Size Metrics, Price, Financials, Ratios, and Profitability. A tooltip for 'Enterprise Value to EBITDA' is displayed, showing its definition and additional information. The main area shows a configuration for 'Enterprise Value to EBITDA' with a value of 75% and an option to 'Include undisclosed values'. Below this is a 'Business Description (Keyword)' field. At the top right, it shows '161 Companies' and a 'View' button. A dropdown menu is open, showing options: 'View', 'Save Screen', 'Save Report', and 'Save Identifier'. At the bottom, a table of results is shown with columns for Name, Company Type, FactSet Industry, Ultimate Parent Name, and Country. A 'Why?' link is visible above the table.

Name	Company Type	FactSet Industry	Ultimate Parent Name	Country
AIMS Property Securities Fund	Public Company	Investment Trusts/Mutual Funds	AIMS Property Securities Fund	Australia
Altilia Partners LLP	Subsidiary	Investment Managers	Altilia Services UK Ltd.	United Kingdom
ANZ Wealth Australia Ltd	Subsidiary	Investment Managers	Australia and New Zealand Bank...	Australia
Apeiron Securities & Investme...	Public Company	Investment Managers	Apeiron Securities & Investme...	United Kingdom
Ardevora Asset Management ...	Private Company	Investment Managers	Ardevora Asset Management LLP	United Kingdom
Arsagera Asset Management	Public Company	Investment Managers	Arsagera Asset Management	Russian Federation
ARTS Asset Management Gm...	Private Company	Investment Managers	ARTS Asset Management GmbH	Austria
Australian Masters Yield Fund...	Public Company	Investment Trusts/Mutual Funds	Australian Masters Yield Fund N...	Australia
Avitah Capital LLP	Private Company	Investment Managers	Avitah Capital LLP	United Kingdom
Badaro No. 19 Ship Investme...	Public Company	Steel	Badaro No. 19 Ship Investment Co.	South Korea
Bajaj Allianz Life Insurance C...	Joint Venture	Investment Managers	Bajaj Allianz Life Insurance Co. Ltd	India
Baltic Financial Agency Bank ...	Subsidiary	Investment Managers	PJSC BANK URALSIB	Russian Federation
Benelong Australian Equity ...	Joint Venture	Investment Managers	Benelong Australian Equity Part...	Australia
Bevignon SA	Private Company	Investment Managers	Bevignon SA	France
Blackhawk Resources Corp.	Public Company	Oil & Gas Production	Blackhawk Resources Corp.	Canada
Blue Sky Alternatives Access ...	Public Company	Investment Trusts/Mutual Funds	Blue Sky Alternatives Access Fu...	Australia
BlueCrest Capital Manage...	Subsidiary	Investment Managers	Bluecrest Capital Management Ltd.	United Kingdom
Boronia Capital Pty Ltd.	Private Company	Investment Managers	Boronia Capital Pty Ltd.	Australia
BP Prudhoe Bay Royalty Trust	Public Company	Oil & Gas Production	BP Prudhoe Bay Royalty Trust	United States
Canon Finance New Zealand ...	Subsidiary	Investment Managers	Canon Inc.	New Zealand
Carhae Capital LLP	Subsidiary	Investment Managers	-	United Kingdom
Carve Capital AB	Private Company	Investment Managers	Carve Capital AB	Sweden

**TIPS >** After running a screen, you can click a name and then select any of the next step reports to learn more about the company (e.g., Guide, Snapshot).

Also, click on any row and select "Add to Comps" to begin creating your own custom comps list. For more information, see Online Assistant page 16699.

**TIP >** Read about the latest updates to Idea Screening in the "Screening" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

TO LAUNCH: @ISC

ONLINE ASSISTANT PAGE ID 16590



## Viewing Company Financials

You can research and audit company data for a given identifier with the financial reports on FactSet. This page highlights the Key Items and Income Statement reports, but you can access additional financial reports, including the Balance Sheet, Cash Flow, Industry Metrics, Ratio Analysis, Use of Cash, and more.

Click the various subtabs within the selected Financials report to view the data organized in different ways.

View growth and ratio data alongside actual data values for a company or compare company data to a related benchmark with the FactSet Fundamentals and FactSet Market Aggregates databases. See Online Assistant page 16770 for more details.

**NOTE >** Look for the "Preliminary" column to view intraday preliminary data available in FactSet Fundamentals. See Online Assistant page 16545 for more information.

**TIP >** Read about the latest updates to financial reports in the "Company Analytics" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

Delta Air Lines, Inc. (DAL-US) \$ 42.78 Next Rpt Date: 14 Jul '22 Key Statistics Activism Campaign FactSet Fundamentals

Standardized Search for an item

Summary

	MAR '22	DEC '21	SEP '21	JUN '21	MAR '21	DEC '20	SEP '20	JUN '20	MAR '20	DEC '19
PRASM (cents)	13.33	13.99	13.30	11.00	6.85	7.38	6.85	6.40	12.85	15.65
Growth (%)	94.6	89.7	94.1	71.9	-46.7	-52.9	-54.5	-59.6	-13.3	1.4
ASM	51,810	51,744	54,083	48,529	40,118	36,568	28,290	10,596	58,885	65,468
Growth (%)	29.1	41.5	91.2	358.0	-31.9	-44.1	-62.6	-85.2	-5.7	4.7
Revenue passenger miles (in millions)	38,700	40,402	43,057	33,285	17,948	15,183	11,545	3,621	43,062	56,028
Growth (%)	115.6	166.1	272.9	111.0	50.0	50.0	50.0	50.0	-16.6	5.2
Load Factor (%)	75.0	78.0	80.0	80.0	80.0	80.0	80.0	80.0	73.1	85.6
Growth (%)	66.7	85.7	95.1	95.1	95.1	95.1	95.1	95.1	-11.6	0.5
Yield (cents)	17.85	17.92	16.70	16.70	16.70	16.70	16.70	16.70	17.58	18.29
Growth (%)	16.6	0.9	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-2.0	0.9
RASM (cents)	18.04	18.30	16.93	16.93	16.93	16.93	16.93	16.93	14.59	17.47
Growth (%)	74.5	68.5	56.5	56.5	56.5	56.5	56.5	56.5	-13.1	1.7
CASM (cents)	19.56	17.79	12.85	12.85	12.85	12.85	12.85	12.85	15.30	15.34
Growth (%)	41.4	34.7	-61.5	-61.5	-61.5	-61.5	-61.5	-61.5	1.1	-0.6
Jet Fuel Market Price (\$/gal)	3.84	2.16	2.20	2.20	2.20	2.20	2.20	2.20	0.70	1.94
Cargo ATM (mil)	-	-	-	-	-	-	-	-	-	-
Growth (%)	-	-	-	-	-	-	-	-	-	-
Cargo Yield (cents)	-	-	-	-	-	-	-	-	-	-
Growth (%)	-	-	-	-	-	-	-	-	-	-
Sales	9,348	9,470	9,154	7,126	4,150	3,973	3,062	1,468	8,592	11,438
Growth (%)	125.3	138.4	199.0	385.4	-51.7	-65.3	-75.6	-88.3	-18.0	6.5
Gross Income	-88	1,067	1,081	-128	-2,196	-1,444	-2,002	-3,332	243	2,377
Growth (%)	96.9	-	-	96.2	-1,003.7	-160.7	-165.5	-208.9	-87.4	20.2
Gross Margin	-0.7	11.3	11.8	-1.8	-52.9	-36.3	-65.4	-227.0	2.8	20.8

Delta Air Lines, Inc. All Values as of 31-Dec-2020

Revenue passenger miles (in millions) 73,412.00

- Revenue passenger miles (in millions) 58,229.00

Revenue Passenger kms/miles - Total 15,183.00

Source: FactSet Fundamentals

Use the options in the toolbar to launch another instance of the tab, download the report (including options to download as =FDS or Data Downloading codes), print, or launch help for the selected report in Online Assistant.

Using the FactSet Fundamentals database, click on data items to view a breakdown of the calculations and source link the value back to the filing. See Online Assistant page 15775 for more information.

In the Income Statement, Balance Sheet, and Cash Flow reports, you can view both standardized and as-reported data from FactSet Fundamentals. See Online Assistant page 14859 for more details on how to access as-reported data.

Delta Air Lines, Inc. (DAL-US) \$ 42.69 Next Rpt Date: 14 Jul '22 Key Statistics Activism Campaign FactSet Fundamentals

Standardized As-Reported Search for an item

GAAP/IFRS Non-GAAP Supplemental Growth Common Size

GAAP/IFRS Income Statement

	MAR '22	DEC '21	SEP '21	JUN '21	MAR '21	DEC '20	SEP '20	JUN '20	MAR '20	DEC '19
Sales	9,348	9,470	9,154	7,126	4,150	3,973	3,062	1,468	8,592	11,438
Cost of Goods Sold (COGS) incl. ...	8,416	8,403	8,073	7,254	6,346	5,417	5,064	4,800	8,349	9,061
Gross Income	-88	1,067	1,081	-128	-2,196	-1,444	-2,002	-3,332	243	2,377
SIGMA Expense	312	421	308	222	110	84	94	45	358	488
Other Operating Expense	408	399	357	330	322	218	238	196	511	455
EBIT (Operating Income)	-788	247	416	-680	-2,628	-1,746	-2,334	-3,573	-626	1,434
Nonoperating Income - Net	29	90	96	113	36	126	-47	60	-137	86
Interest Expense	274	265	314	338	361	365	291	194	79	72
Unusual Expense - Net	187	467	-1,334	-1,681	-1,438	-877	4,187	3,307	-235	51
Pretax Income	-1,200	-395	1,532	776	-1,515	-1,108	-6,859	-7,014	-607	1,397
Income Taxes	-260	13	320	124	-338	-353	-1,480	-1,297	-73	298
Equity in Earnings of Affiliates	0	-	-	-	-	-	-	-	-	0
Other After Tax Adjustments	0	0	0	0	0	0	0	0	0	0
Consolidated Net Income	-940	-408	1,212	652	-1,177	-755	-5,379	-5,717	-534	1,099
Minority Interest	0	0	0	0	0	0	0	0	0	0
Net Income	-940	-408	1,212	652	-1,177	-755	-5,379	-5,717	-534	1,099
Discontinued Operations	0	0	0	0	0	0	0	0	0	0
Preferred Dividends	0	0	0	0	0	0	0	0	0	0
Net Income available to Common	-940	-408	1,212	652	-1,177	-755	-5,379	-5,717	-534	1,099

All figures in millions of U.S. dollar except per share items.

**TIP >** Click the More Options button at the top of the report for advanced report options, such as changing units, specifying LTM methodology, enabling/disabling data auditing, showing sparklines, and enabling/disabling growth and ratio data in the report.

TO LAUNCH: @KEY

ONLINE ASSISTANT PAGE ID 14859

## Accessing All Estimates and Broker Outlook

The All Estimates report displays all consensus estimates, actuals, and guidance figures available on a variety of report periods for a given company. The Broker Outlook report provides an overview of broker research through an interactive chart with broker estimates; consensus and pricing history; and data containing broker information, estimates, guidance, sharp consensus, and more. For a guided tour of the All Estimates report, launch the eLearning demo on Online Assistant page 14898.

Select report options from the toolbar, including the active identifier, display and period options, brokers (include/exclude), currency, and more.

Click the "Next Report Date" link to view additional details, including consensus data and links to other FactSet Estimates reports.

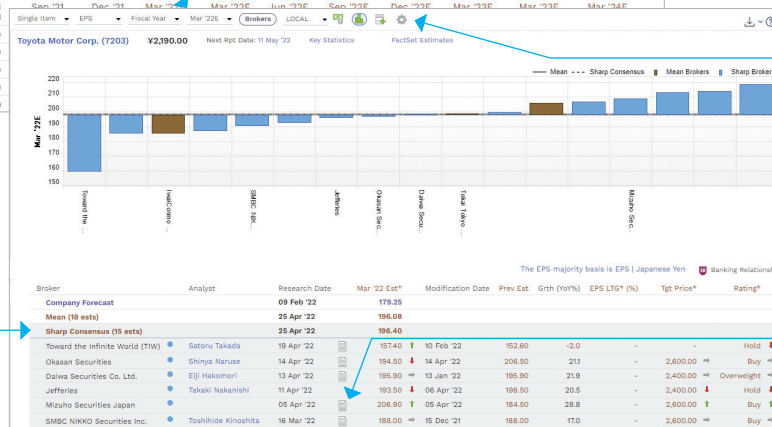
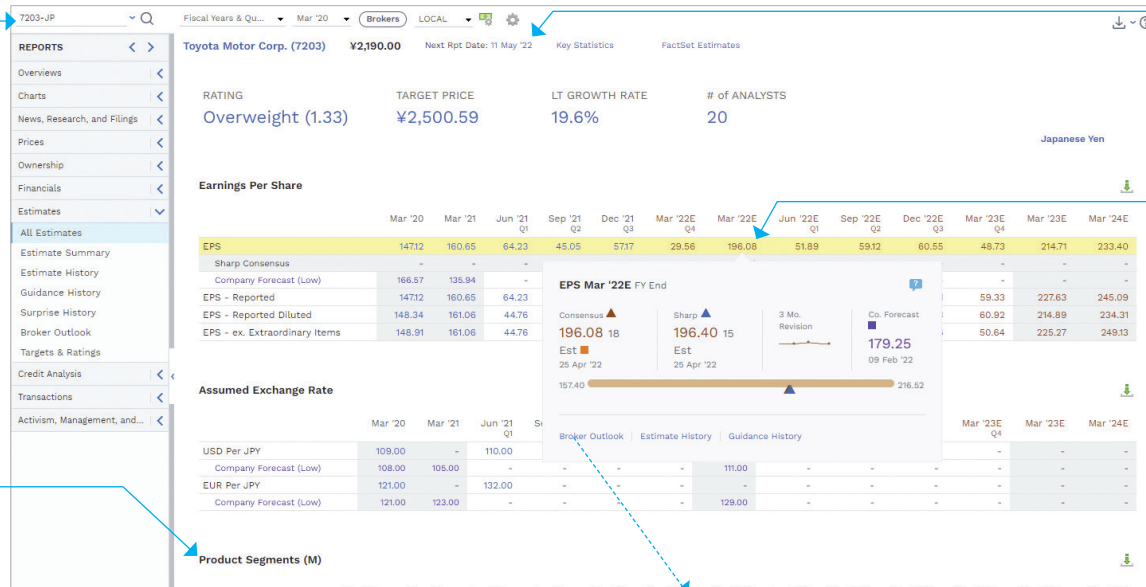
Click a report value and then select the "Broker Outlook" link to view the underlying broker estimates. Depending on the value selected, you can launch additional reports including Surprise History, Estimate History, Consensus Trend, and more.

View segment data, such as products or geographic segments generating sales and industry metrics (scroll) based on the company you've selected. For more information on each, see Online Assistant pages 16932 and 16038.

View Sharp Consensus data for additional insight on default consensus estimates.

Click the **More Options** button to access additional options, such as the type of estimate and estimate window.

Click the **Research Report** icon to audit the data back to the source document.



NOTE > This image was modified to remove restricted brokers.

**TIP >** You can access FactSet Market Aggregates data in your estimate reports. See Online Assistant page 15316 for more details.

TO LAUNCH: @EST,@BO

ONLINE ASSISTANT PAGE ID 14898, 15175

# Viewing Credit Analysis Reports

The Debt Capital Structure (DCS) Overview report provides a broad and comprehensive overview of debt associated with an issuer. It includes current credit ratings, credit spreads, a price and CDS history chart, historical credit analysis, debt capital structure summary, liquidity summary, and data for long-term debt by maturity and debt seniority.

View a DCS summary or click the section link to launch the DCS Detail report, which provides a break down of instruments and line items that reconcile to the balance sheet debt values. Within DCS Detail, you can click the **Interim Activity** button to view material changes since the last filing.

View the current credit rating and click a rating link (e.g., Ba1) to access a detailed long-term rating history for the issuer and related issuer ratings.

Navigate to the other Credit Analysis reports using the tab's left pane.

Hover over the Prices & CDS History chart to view the one-year and five-year CDS points, as well as the equity price of the issuer.

The screenshot displays the FactSet Debt Capital Structure report for Hess Corporation (HES). The interface includes a navigation pane on the left with sections like 'REPORTS', 'Credit Analysis', and 'DCS Overview'. The main content area is divided into several sections:

- Current Credit Ratings:** Shows ratings from Moody's (Ba1), S&P (BBB-), and Fitch (BBB-).
- CDS Spreads:** A table showing spread data for various maturities (6 Months to 30 Year).
- Prices & CDS Spreads History:** A line chart showing Equity Price, 1 YR CDS, and 5 YR CDS from Nov to Apr.
- Debt Capital Structure Summary:** A table showing Short-term Debt, Long-term Debt, and Total Debt.
- Liquidity Summary:** A table showing Cash & ST Investments and LT Revolvers Available.
- LT Debt by Maturity Summary:** A bar chart showing debt maturity from 2022 to >2032.
- Table of Debt Instruments:** A detailed table listing instruments like FDS02SU21, FDS018EC2, etc., with columns for Description, Balance, Current Amt Out, Coupon Rate, Maturity Date, and Issue Date.

Track a company's maturity schedule and use the Maturity Type drop-down menu to select either an Aggregate, Issuer Breakdown, or As-Reported schedule. You can also toggle between a table or chart view. Scroll to view additional charts and data.

Click a hyperlinked description to launch additional details with a link directly to the Security Overview report. To learn more about the report, see Online Assistant page 15588.

**TIP >** View an aggregate liquidity summary or click the "Liquidity Summary" section title to launch the Liquidity Detail report, which provides a detailed breakdown of individual revolving credit facilities. It includes a proprietary Liquidity Outlook indicator that provides a liquidity status (e.g., Stable, Positive, Negative) for an issuer. For more information on the report, see Online Assistant page 15233.

TO LAUNCH: @DCS

ONLINE ASSISTANT PAGE ID 16102

## Analyzing Corporate Activism

Use the Corporate Activism report to access a thorough, all-inclusive picture of activism activity from the company perspective. Quickly view proxy fights, shareholder proxy proposals, and other activism campaign history. Identify current activist holders in the shareholder base, governance strengths and weaknesses, and the relevant timing/deadlines for future activism threats. Powered by the FactSet SharkWatch database, the report also provides one-click navigation to key activist and campaign profiles.

Hover over each chart plot for a basic overview, then click an annotation for more details on how each campaign impacted stock performance.

Click activist investor names to view position history and mutual fund ownership details. If subscribed, you can also quickly navigate to the Ownership 3.0 application. Click links in the Activism Level column to launch a snapshot of current and historical activism.

Click the tile header links or **View More Data** buttons to access additional information, such as specific holders and the change in number of shares held by each institution.

Apple Inc. (AAPL) \$133.50
Next Rpt Date: 28 Apr '21
Key Statistics
Pending Mgt. Change
FactSet Ownership

Activism Campaign History
Screen with Custom Columns

Announcement Date	Activist Investor	Activism Level	Status	Campaign Type	Objective	Outcome
18 Feb '21	James McRitchie	Medium	Closed	Exempt Solicitation	Vote For a Stockholder Proposal	Mr. McRitchie filed a notice of exempt solicitation urging the Co.'s shareholders to vote for his proposal regarding the proxy access amendment of the Co., at the 2021 annual meeting. Later, the shareholder proposal was not approved at the AGM.
27 Jan '20	Zevin Asset Management LLC	High	Closed	Exempt Solicitation	Vote For a Stockholder Proposal	Zevin's notice of exempt solicitation urging Co.'s shareholders to vote for the proposal regarding sustainability metrics integration into executive compensation at the 2020 AGM, receiving only 12.06% of the total votes cast.
22 Jan '20	SumOfUs	High	Closed	Exempt Solicitation	Vote For a Stockholder Proposal	SumOfUs' notice of exempt solicitation urging Co.'s shareholders to vote for the proposal regarding policies on freedom of expression was defeated at the 2020 AGM, receiving only 40.64% of the total votes cast.
05 Feb '19	James McRitchie	Medium	Closed	Exempt Solicitation	Vote For a Stockholder Proposal	Mr. McRitchie filed a notice of exempt solicitation urging the Co.'s shareholders to vote for his proposal regarding the amendment to the Co.'s proxy access bylaws, at the 2019 AGM. Later, such proposal was not approved at the said

**Current Activist Investors**

**Shareholder Proxy Proposals**

Proposal Category	# of Proposals
Total	48
Corporate Governance	26
Social/Environmental Issues	22

**Activism Summary**

THREAT LEVEL  
**HIGH**

Zevin Asset Management LLC is designated a known activist and has been involved in 18 activist campaigns against 11 different companies.

History	
Campaigns	18
First / Latest	2017 / 2021
14a-8 Shareholder Proposals	14
Preferred Campaign Tactic	Exempt Solicitation
Potential Allies	Dana Invest...

**Current**

Total Positions	80
Open Campaigns	3
Closed Campaigns	5

**Company**

Campaign ▲

Advance Notice Window: Between 26 Oct '21 and 25 Nov '21.

[Activist Profile](#)

Adjust your perspective and switch between viewing a chart or table version of the activism data.

Scroll up and down the report to identify state takeover laws, governance vulnerabilities, ISS QuickScores, and more.

Select an item from the drop-down menu to reveal each proposal topic or the pass/fail rates of proposals initiated by shareholders.

**TIP >** To learn more about all of the activism and governance reports available in the Activism/ Governance tab, start from Online Assistant page 20249.

TO LAUNCH: @ACT

ONLINE ASSISTANT PAGE ID 15760



## Analyzing Ownership Data

The Ownership tab provides institutional, mutual fund, and insider/stakeholder ownership information. It allows you to easily answer your basic Ownership questions and quickly dive into more detailed analysis.

**Click **Company** to view consolidated ownership across multiple share classes and stock issues at a company level.**

**Add a watch list to your report by clicking the **Watchlist** button. Select your existing watch list(s) or create a new one.**

**Change the report type to see only institutions, institution/insiders, mutual funds/ETFs or insiders for the selected equity.**

**Select the charted item, view the data table, or click the button to see more data.**

**Click the "Short Interest" or "Float" links to view additional historical details.**

**Click the "Combined %OS" link to see what securities make up the company-level aggregate.**

**Click the link(s) in the Activism column (Medium and above) to view current and historical campaign activity. Launch the Activist Profile report, which allows you to objectively evaluate the activism history and investment tactics of institutional investors. For more details, see Online Assistant page 17828.**

**Click holder links to view position history or mutual fund ownership details. You can also navigate to the Holder Summary report to view additional details.**

**Choose from a variety of company and holder reports in the left pane.**

**Click **Company** to view consolidated ownership across multiple share classes and stock issues at a company level.**

**Click holder links to view position history or mutual fund ownership details. You can also navigate to the Holder Summary report to view additional details.**

**TIP >** Read about the latest Ownership updates in the "Company Analytics" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

**TIP >** You can also view three key ownership reports directly within the Company/Security tab. For more information on the reports, see Online Assistant page 17451.

**TO LAUNCH: OWNERSHIP TAB > COMPANY SUMMARY**

**ONLINE ASSISTANT PAGE ID 17615**



## Navigating the Deals Tab

The Deals tab provides a comprehensive set of reports for analyzing deal terms, participants, and financials for M&A transactions. The Deals subtab includes reports on pending and closed transactions, while the Simulator subtab provides reports that allow you to view hypothetical deals between two public companies covered by FactSet Revere.

Select a recent M&A market transaction from the initial starter screen or search for a specific deal to get started. To search for a deal, enter a deal identifier in the Identifier box or begin typing the companies involved, and then select the desired identifier to begin your analysis.

The Deals tab includes the following reports:

- **Snapshot:** Provides a high-level overview of the deal participants, key dates, financials, deal values/multiples, deal characteristics, advisors, and key documents. Learn more from Online Assistant page 20759.
- **Supply Chain Overlap:** Exhibits overlapping relationships between an acquirer and a target company for a current deal. Learn more from Online Assistant page 20761.
- **RBICS Overlap:** Allows you to visualize the revenue exposure of a newly formed entity by sector and industry. Learn more from Online Assistant page 20762.
- **GeoRev Overlap:** Allows you to see where in the world an acquirer and target company realize revenue.
- **Price History:** Provides key information for merger arbitrage and historical premium analysis, including participant stock price, offer price, arbitrage spread, and premiums. Learn more from Online Assistant page 20763.

**Deals Tab - AstraZeneca Plc offers to acquire Alexion Pharmaceuticals, Inc.**

**Target:** Alexion Pharmaceuticals, Inc. (ALXN-US) | **Industry:** Biotechnology

**Acquirer:** AstraZeneca Plc (AZN-GB) | **Industry:** Pharmaceuticals: Major

**Announce Date:** 12 Dec '20 | **Pending Expected:** 30 Sep '21 | **Deal Type:** Acquisition / Merger

**Transaction Value (M):** \$38,961.5 | **Base Equity (M):** \$38,551.1 | **Offer Price/Share:** \$174.50

**Method of Payment:** Combo | **Purpose:** Strategic | **1 Day Premium:** -

**Quick Screen:** Similar Deals

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**Simulator Tab - Apple, Inc. Simulated Acquisition of Netflix, Inc.**

**Combined Revenue Exposure by Sector / Industry**

Sector / Industry	Exposure (%)
Consumer Cyclical	0.08%
Consumer Retail	0.08%
Electronics and Entertainment Retail	0.08%
Entertainment Retail	0.08%
Integrated Books, Movies and Music Retail	0.08%
Mixed Books, Movies and Music Stores	0.08%
Hardware	73.69%
Computer Hardware and Storage	17.48%
Computer Systems	17.48%
Communications Equipment	46.00%
Wireless Mobile Equipment	46.00%
Smart Phone Manufacturing	46.00%
Smart Phone Manufacturing	46.00%
Multi-Type Business and Personal Systems	9.56%
Multi-Type Business and Personal Systems	9.56%
Portable Computer Systems	7.07%
Portable Computer Systems	7.07%

**Top 5 by Revenue in Smart Phone Manufacturing**

Company	% of Revenue	Revenue	Market Value (M)	1 Yr Pr Trend
Combined Entry	46.00	137,698	-	-
Samsung Electronics Co., Ltd.	38.25	76,760	496,018	↑
Xiaomi Corp.	59.32	21,129	85,875	↑
LG Electronics, Inc.	9.57	5,130	25,477	↑
Lenovo Group Ltd.	10.00	5,072	16,814	↑
Shenzhen Transsion Holding Co., Ltd.	69.68	3,812	19,682	↑

**Revenue Share in Smart Phone Manufacturing**

- Total Size: \$262B
- 52.56% AAPL-US (Acquirer)
- 0% NFLX-US (Target)
- 52.56% Combined Entry
- 47.44% Rest of Industry

Choose the Simulator tab to help analyze target fit, new markets and shared customers, suppliers, and partners as a result of a hypothetical merger.

**TIP >** Read about the latest updates to the Deals tab in the "Company Analytics" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

TO LAUNCH: @MAD

ONLINE ASSISTANT PAGE ID 17262

## Monitoring Market Data

Monitor market data for securities, such as companies, indices, treasuries, currencies, futures, and commodities in the Market Watch display. You can manually enter identifiers, open an existing ticker list, or view Universal Screening results. To learn more about managing identifiers in Market Watch, see Online Assistant page 15884.

Click the drop-down arrow adjacent to the Lookup button and select "Open Screen Results" to access securities that pass a screen saved in Universal Screening.

**TIP >** To manage real-time alerts that notify you if specific criteria are met for an identifier(s), use Alert Manager (@AM). For more information, see Online Assistant page 15873.

Click the **Lookup** button to select an identifier or type an identifier directly into the desired location.

Right-click an identifier and select a report or market data display from the customized list to open and dynamically apply the identifier.

Double-click the **N** icon to view news for the identifier in the News display.

Double-click an identifier to apply the identifier to all the company-specific displays in the tab.

N	#	Ticker	Se	Chg	%Chg	WTD %Chg	1Mo %Chg	MTD %Chg	3Mo %Chg	YTD %Chg
	6	AFL	Aflac Inco	04	0.13	0.20%	0.20%	2.84%	1.43%	6.91%
Sa	75	VZ	Verizon Co	51	-0.57	-1.09%	-1.09%	-1.75%	-4.57%	14.46%
N	28	T	AT&T Inc.	39	-0.11	-0.29%	-0.29%	0.08%	-1.99%	13.08%
	17	APD	Air Products and Chemicals, Inc	143.36	0.84	0.59%	0.59%	5.05%	-0.48%	19.98%
Sa	125	AA	Alcoa Inc.	9.74	0.37	3.95%	3.95%	2.31%	1.67%	-1.32%
Sa	4	MO	Altria Group, Inc.	63.31	-0.49	-0.77%	-0.77%	2.10%	1.04%	6.47%
N	19	AEP	American Electric Power Compa	65.68	-0.33	-0.50%	-0.50%	2.26%	-1.08%	11.76%
N	12	D	Dominion Resources, Inc.	72.87	-0.17	-0.23%	-0.23%	0.90%	-3.00%	4.98%
N	19	SO	Southern Company	50.47	-0.26	-0.51%	-0.51%	1.37%	-2.44%	7.75%
N	15	NEE	NextEra Energy, Inc.	116.23	-0.58	-0.50%	-0.50%	0.35%	-1.78%	10.09%
Sa	26	EXC	Exelon Corporation	34.54	-0.16	-0.46%	-0.46%	-0.55%	-3.68%	23.09%
N	20	ETR	Entergy Corporation	76.82	-0.14	-0.18%	-0.18%	1.19%	-3.10%	13.72%
N	17	ATG	American International Group, I	53.41	0.25	0.47%	0.47%	0.98%	-1.18%	-7.42%
Sa	76	JPM	JPMorgan Chase & Co.	58.20	0.46	0.80%	0.80%	-1.92%	-1.72%	-1.07%
Sa	7	AXP	American Express Company	59.80	0.30	0.50%	0.50%	0.57%	-2.61%	-6.64%
N	16	AMGN	Amgen Inc.	156.39	-0.07	-0.04%	-0.04%	8.18%	4.31%	5.89%

Save your column layout and access it from the Layout drop-down menu.

Right-click and select "Options" to customize your columns using data from your FactSet subscription or your proprietary data.

Press the **INSERT** key to insert a row. Press the **DELETE** key to remove an identifier, group, or row.

Right-click and select Options > Groupings to apply groupings. To create custom group headings, select a row and enter G:group\_name for your securities.

**TIP >** Read about the latest updates to the Market Watch display in the "Real-Time Data and Displays" category in FactSet Notify. Click the category's envelope icon to receive email alerts.

TO LAUNCH: @MW

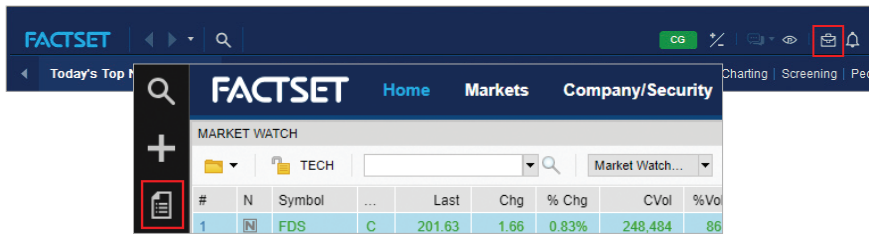
ONLINE ASSISTANT PAGE ID 15883

## Managing Watchlists

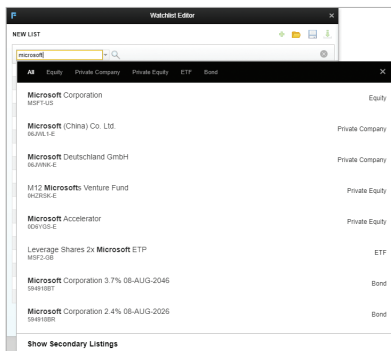
A watchlist is a group of identifiers that you want to monitor. The Watchlist Editor lets you create these lists so you can quickly access the identifiers you're interested in within other applications, such as News and Calendar, without needing to re-enter the identifiers each time.

### Creating Watchlists

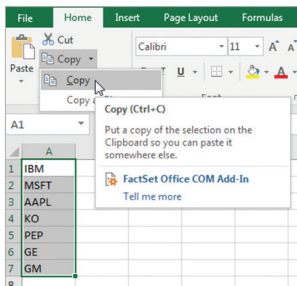
1. In FactSet Workstation, click the **Watchlist Editor** icon in the toolbar or enter the shortcut @WLE in FactSet Search. In FactSet Web, click the **Create/Edit Watchlist** button in the left pane to launch Watchlist Editor.



2. Type ticker, CUSIP, SEDOL, or security name into the Enter Symbols field.

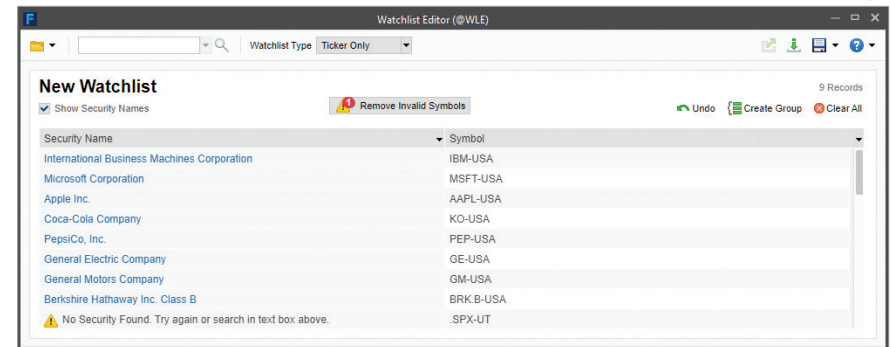



(Optional) In addition to typing in tickers, you can copy identifiers from Microsoft Excel (.xls, .xlsx) or flat files (.txt, .csv) and then press CTRL+V to paste them into the application.




TO LAUNCH: @WLE

3. Select the type of watchlist you want to create from the Watchlist Type drop-down menu. You can choose to save as a list with Ticker Only, Ticker + Shares, or Ticker+Weight.
4. (Optional) Fix unrecognized identifier(s). If the identifiers were exported from another program, it may differ from the symbology in FactSet. Watchlist Editor will detect if there are unrecognized symbols and then you can fix the unrecognized identifiers, click the **Remove Invalid Symbols** button to remove them or choose to keep them when saving.

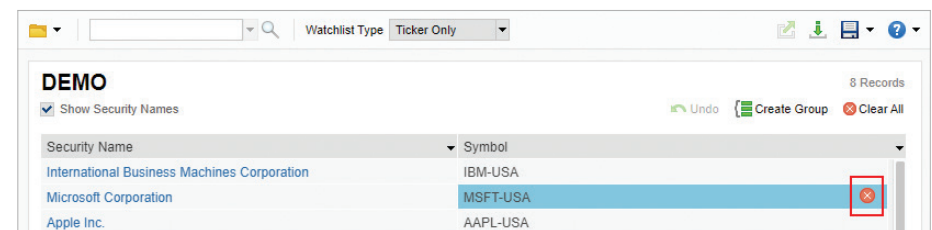


5. Click the **Save** button  to save your watchlist. Select the directory to save the watchlist in and give it a name. The name cannot contain spaces or special characters. Your personal directory is accessible to only you while the client directory is used to share files with your colleagues.

### Managing Watchlists

Click  and select "Open" to open an existing watchlist.

To delete an identifier in your watchlist, hover your cursor over the symbol, and then click the **Remove Row (X)** button in the Watchlist Editor.



ONLINE ASSISTANT PAGE ID 20747

## Accessing FactSet StreetAccount News

With real time, distilled market-moving information, FactSet StreetAccount gives you instant access to crucial intelligence for the companies and markets you care about. Stay on top of market developments with stories and summaries written by industry professionals and pulled from all possible sources for corporate news.

StreetAccount features the following content:

- Weekly and Week Ahead Summaries
- M&A Summaries
- Earnings Focus (Preview, Recap, and Street Takeaways)
- Regulatory and Litigation Details
- Corporate Actions and Key Developments

Easily filter your results to StreetAccount news for an individual company (as shown here) and find timely and informative news summaries.

Headlines	Identifier	Source	Time	Date
Follow-up: Additional details on DOE inventory data	APC-U	SA	10:47am	10/31/2018
Market update: Dec WTI crude oil trading off session lows following DOE inventory data	APC-U	SA	10:32am	10/31/2018
DOE reports crude oil inventories +3.22M barrels vs consensus +3.2M barrels	APC-U	SA	10:30am	10/31/2018
StreetAccount reminder: DOE crude oil inventories expected at 10:30 ET	APC-U	SA	10:17am	10/31/2018
ConocoPhillips upgraded to buy from neutral at Bank of America Merrill Lynch	COP-U	SA	8:23am	10/29/2018
StreetAccount Metrics Recap - Conoco Phillips Q3 Earnings	COP-U	SA	7:19am	10/25/2018
ConocoPhillips reports Q3 EPS \$1.36 ex-items vs FactSet \$1.19	COP-U	SA	7:07am	10/25/2018
Endeavor Energy Resources LP exploring a sale - WSJ	APC-U	SA	6:20pm	10/23/2018
StreetAccount Consensus Metrics Preview - ConocoPhillips Q3 Earnings	COP-U	SA	3:33pm	10/23/2018
Simmons & Company/Piper Jaffray assumes BP, COP, CVX, others	BP-GB, SA		6:28am	10/23/2018
Aker BP completes the drilling of appraisal wells 25/4-13 S and 25/4-13 A on PL 203 - NPD	AKERB	SA	3:20am	10/19/2018
Equinor agrees to sell its non-operated interests in the Tommeliten discovery to PGNiG for Stocks mentioned on CNBC's Mad Money with Jim Cramer - The Street	COP-U	SA	5:29am	10/18/2018
ConocoPhillips increases quarterly dividend by 7.0% to \$0.305 from \$0.285	APC-U	SA	10:30pm	10/15/2018
Government of Canada announces next steps on future Arctic offshore oil and gas develop	COP-U	SA	1:46pm	10/05/2018
Marathon Oil begins process to dispose of its UK North Sea assets - Reuters	BP-GB, SA		9:27am	10/04/2018
ConocoPhillips downgraded to neutral from buy at Goldman Sachs	AKERB	SA	5:58am	10/03/2018
	COP-U	SA	7:26am	10/02/2018

Double-click on a headline to view the selected StreetAccount article, which provides the key points in a timely, succinct, and easy-to-read format.

View macro recaps around the clock for the U.S., European and Asian markets, including intraday market updates as shown below.

Market update: Dec WTI crude oil trading off session lows following DOE inventory data  
Wednesday, October 31, 2018 02:52 PM (GMT)

- Looking inside the data:
  - Total inventories were 426.004Mmbbl vs 422.787Mmbbl w/w
  - Refinery utilization +0.2% w/w
  - Dec WTI last quoted \$66.07, (\$0.11) or (0.17%)

Industries: Unspecified, Oil & Gas Exploration & Production, Oil & Gas Integrated, Oil & Gas Operations  
 Related Identifiers: APC-US, BP-GB, COP-US, CVX-US, HES-US, MRO-US, MUR-US, OXY-US, SUN-US, VLO-US, XOM-US  
 Subjects: Commodity Market Summaries, Commodities Weekly DOE Data  
 Related Stories:
 

- DOE reports crude oil inventories +3.22M barrels vs consensus +3.2M barrels

Access an earnings preview that provides the key consensus metrics an analyst should focus on when earnings are released.

StreetAccount Consensus Metrics Preview - ConocoPhillips Q3 Earnings  
Tuesday, October 23, 2018 07:33:46 PM (GMT)

- Scheduled to report Q3 earnings on 25-Oct before the open
  - FactSet (19 estimates for EPS 6-8 estimate for production and cash and capex):
    - Q3
      - Production 1,243 Mboe/d vs guidance 1,215-1,255 Mboe/d
      - Cash from operations \$3.12B
      - Capex \$1.43B
      - EPS \$1.19
    - Q4
      - Production 1,282 Mboe/d
      - EPS \$1.33
    - FY 2018
      - Production 1,256 Mboe/d
      - Capex \$6.21B
      - EPS \$4.57
    - Current FY Guidance (Dec 2018):
      - 1,225 to 1,255 MBOED
      - Capex \$6.0B
    - Pricing history for Q3 (Since 25-Jul close):
      - COP (2.5%)
      - S&P 500 (2.48%)

TO LAUNCH: @N

ONLINE ASSISTANT PAGE ID 16924



## Searching Corporate Events and Transcripts

Event Calendar allows you to view information for upcoming corporate events, economic releases, and IPOs. The application includes transcripts, audio, presentation slides, IR contacts, and EPS/Sales consensus and actual figures for companies.

Type-ahead or enter a ticker to find events for a specific company. You can also click the **Lookup** button to search for companies, portfolios, or indices.

Easily narrow your search -- click a specific day or the arrows to view a full week or month. Click the **Today**, **Next 7**, or **Next 14** day buttons, or input a custom date range. The calendar saves the settings from your current work session.

Limit results by event type, region, and industry. You can also include market holidays and your firm's meetings.

**TIP >** Read about the latest updates to Event Calendar in the "Company Analytics" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

Choose the **Economic** tab for timely event details, real-time data for the indicator and period covered in the release, forecasted or actual figures, the market median forecast, and more.

Click the **Tools** button to select your preferred file format, calendar notification options, time zone, and more.

Date	Time	Ticker	Company	Type	Event	Act	Mean	Surp %	Act	Mean	Surp %
01-Apr-2018	Unspecified	KEY-CA	Keyera Corp.	Conference	Scotia CAPP Conference						
02-Apr-2018	4:00 AM	8069-TW	E Ink Holdings, Inc.	Earnings Call	Q4 2017 Earnings Call	-0.04	0.63	-106.4	3.505	3.628	-3.4
02-Apr-2018	5:00 AM	MTMY-GB	E Ink Holdings, Inc. GR: 8069-TW	Earnings Call	Q4 2017 Earnings Call				175	-	-
02-Apr-2018	8:00 AM	SORL-US		Earnings Call	Monday, April 2, 2018 4:00 AM				123	104	18.7
02-Apr-2018	8:00 AM	WCST-US									
02-Apr-2018	8:30 AM	0FPKB3-E							0.00	-	-
02-Apr-2018	8:30 AM	SSKN-US							31.4	30.8	2.1
02-Apr-2018	8:30 AM	SWKH-US									
02-Apr-2018	9:00 AM	HCAP-US							4.14	4.25	-2.6
02-Apr-2018	9:00 AM	NXTD-US							4.45	4.79	-7.1
02-Apr-2018	10:00 AM	AMRH-US	Ameri Holdings, Inc.	Earnings Call	Q4 2017 Earnings Call	-0.09	-0.20	55.0	11.5	11.0	4.0
02-Apr-2018	10:00 AM	HPJ-US	Highpower International, Inc.	Earnings Call	Q4 2017 Earnings Call						
02-Apr-2018	10:00 AM	PDGR3-BR	PDG Realty SA Empreendimentos e Participacoes	Earnings Call	Q4 2017 Earnings Call	3.52	-28.3				
02-Apr-2018	10:00 AM	RRTS-US	Roadrunner Transportation Systems, Inc.	Earnings Call	Q3 2017 Earnings Call						
02-Apr-2018	10:00 AM	STAF-US	Staffing 360 Solutions, Inc.	Earnings Call	Q4 2017 Earnings Call						
02-Apr-2018	10:30 AM	BCE-MA	Banque Marocaine du Commerce Extérieur SA	Earnings Call	Q4 2017 Earnings Call			13.0			
02-Apr-2018	10:30 AM	RIPLEY-CL	Ripley Corp. SA	Earnings Call	Q4 2017 Earnings Call			32.5			
02-Apr-2018	11:00 AM	BDMS-US	Birner Dental Management Services, Inc.	Earnings Call	Q4 2017 Earnings Call						

Click the event link to view event and company information, with links to additional documents when available.

Launch an audio file or download a transcript for an event by clicking the appropriate icon.

Click an identifier to open the Single Company view, which provides transcripts for the company's past events and details about future events.

**TIP >** You can easily add upcoming events to your calendar by clicking the export icon next to a future event.

**Participants**  
**CORPORATE PARTICIPANTS**  
 Sanjay M. Hurry  
 Vice President, LHA Investor Relations  
 Jeffrey Edward Eberwein  
 Chairman of the Board, Ameri Holdings, Inc.  
 Brent V. Kelton  
 Chief Executive Officer, Ameri Holdings, Inc.  
 Viraj J. Patel  
 Chief Financial Officer, Ameri Holdings, Inc.

**OTHER PARTICIPANTS**  
 Robert Breza  
 Managing Director, Senior Research Analyst, Northland Capital Markets  
 Joshua Golly  
 Equity Research Associate, Software and IT Services, Maxim Group, LLC

**Management Discussion Section**  
 Operator

TO LAUNCH: @EC

ONLINE ASSISTANT PAGE ID 15308



# Performing Market Analysis

The Markets tab offers an intuitive, streamlined solution for performing all of your market research within a single tab. It includes a variety of reports on global markets, across multiple asset classes, including Equities, Fixed Income, Commodities, ETFs, and FX.


Quickly switch between the various reports in the left pane, grouped by asset class. The reports available may vary based on subscription.

Access common features throughout the Market reports, including the ability to single-click a linked item to view additional details and launch related reports.

**TIP >** Read about the latest updates to the Markets tab in the "Market Analytics" category in FactSet Notify. Click the category's envelope icon to receive email alerts.

Use the report toolbar throughout the Markets tab to select a variety of options. Based on the selected report, choose region, benchmarks, type of data to view, currency, dates and more.

Choose from the available output options, including the ability to print and download your report to Excel or PDF.

View performance and valuation metrics from FactSet Market Aggregates throughout various reports. Click the  button in the toolbar to adjust the columns included.

The screenshot displays the FactSet Markets tab interface. On the left is a navigation pane with categories like 'Equities', 'Fixed Income', 'Commodities', 'Policy Rate Tracker', 'Yield Curve', 'Currency Matrix', 'Spots', 'Futures', 'Estimates', 'Commitments of Traders', 'ETFs', 'Fund Flows', and 'FX'. The main content area is divided into several sections:

- World Indices:** A row of index values including S&P 500 (2878.2), DJ Industrial Average (26150.6), NASDAQ Composite (7909.28), Russell 1000 (1594.42), Russell 2000 (3876.21), Canada S&P/TSX (16336.5), S&P/TSX 60 (974.431), and S&P/BMV IPC (45151.6).
- Commodities:** A table listing various commodities such as Energy (Crude Oil WTI, Brent Crude), Metals (Gold, Silver), and Grains (Corn, Oats, Wheat, Soybeans) with their respective prices and changes.
- Fixed Income:** A table showing interest rates for various currencies (USD, GBP, EUR, JPY) across different maturities (1 Month, 3 Month, 6 Month, 12 Month, 1 Year, 3 Year, 5 Year, 10 Year, 30 Year).
- Policy Rate Tracker:** A bar chart titled 'Target Rate Probabilities for 01 May 2019 Fed Meeting' showing the probability of target rates ranging from 200-225 to 225-250 BPS.
- Yield Curve:** A line chart showing the yield curve for the United States, comparing 'Now' with 'One Week Ago', 'One Month Ago', and 'One Year Ago'.
- Currency Matrix:** A table showing exchange rates for USD, EUR, GBP, CNY, and CHF.
- FactSet Global Indices:** A large table listing global indices from various regions (Asia Pacific, Europe, Americas) with columns for index name, trend, tick, local currency, date, last price, change, and performance metrics.

Annotations with arrows point to specific features: the left navigation pane, the report toolbar at the top right, the 'Indices' section in the left pane, a sparkline for the Germany DAX index, and the performance icon in the FactSet Global Indices toolbar.

Select "Indices" within the Equity section in the left pane to see how different equity markets are performing around the world.

View sparklines to see a quick trend analysis and click it to see a larger version that includes the option to launch as an interactive chart.

TO LAUNCH: MARKETS TAB

ONLINE ASSISTANT PAGE ID 17454

## Navigating the Economics Tab

Analyze global economic data within a single tab that features an intraday economic events calendar, as well as detailed reports for countries and regions.

Choose a subtab to focus your analysis:

- **Calendar:** recent and upcoming releases of global key indicators
- **Country/Region:** detailed reports for a specified country or region
- **Comparison:** comparable data for key economic concepts across a large number of countries
- **Estimates:** annual estimates for key economic concepts for a country
- **Policy Rates:** current central bank monetary policy rates from countries around the world, including both recent and upcoming rate changes

Use the left pane to specify the date/period for the report and to limit the calendar by specific economic indicators, regions, importance, or perform a keyword search for events.

Click links within the calendar to access more detailed information. For example, from the Event Info dialog box, you can jump to the Economic Synopsis report for that country, view the data in chart or report format, and launch the website.

**TIP >** Read about the latest updates for the Economics tab in the "Market Analytics" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

The screenshot displays the FactSet Economics interface. The top navigation bar includes tabs for Calendar, Country/Region, Comparison, Estimates, Policy Rates, and Regression Analysis. The main content area is divided into several sections:

- Calendar:** A calendar view for March 2020, with a dropdown for the month and year. Below it, a list of events for 25 Mar '20 (24 EVENTS) is shown, including dates from Sunday to Saturday with event counts.
- Event Table:** A table listing events with columns for Date, Time (UTC), Country, Event, Importance (star rating), Period, Actual, Consensus, Surprise, and Prior. Events include CPI NSA Y/Y, Real GDP Y/Y (Final), and National Accounts - GDP.
- Event Info Dialog:** A pop-up window for the event "Wednesday, March 25, 2020 1:30 AM" for "Indicator: National Accounts - GDP". It shows event details and a table of historical data.
- Country/Region Tab:** A sidebar on the left lists various reports for the United Kingdom, such as Overview, Economic Synopsis, Market Synopsis, Key Indicators (highlighted), Entity Structure, Corporate Finance, Estimates, Government Finance, Balance of Payments, Flow of Funds, Foreign Trade, Housing & Construction, Industry, Inflation, Labor Market, Leading Indicators & Survey D., Money, Banking & Credit, National Accounts, and Retail Sales.
- Key Indicators - United Kingdom:** A detailed report for the United Kingdom showing weekly, monthly, and quarterly indicators. It includes a line chart for "RSI, All Retailers Incl. Fuel, All Business, Volume, 2016=100, SA, Index - United Kingdom" and a table of data points.

Choose the Country/Region tab to view a variety of economic reports for a specific country or region (e.g., debt issuance, national accounts, inflation). Select the Key Indicators report for an overview of major indicators.

Click on an indicator to view a quick chart, key dates, and launch additional reports for that series.

TO LAUNCH: @ECON

ONLINE ASSISTANT PAGE ID 17688

## Configuring and Installing FactSet's Mobile Solutions

Use FactSet's mobile solutions to access the same global market information and company intelligence that you receive on your desktop. View news, charts, and other detailed company reports for a saved portfolio, watch list, or company.

### The latest FactSet mobile app allows you to:

- Access global markets and company intelligence with real-time market pricing, news, company reports, and charts
- View performance of your portfolios
- Maintain watchlists that seamlessly sync in real time
- Read market synopsis' and top news stories
- Receive alerts to stay informed on market and company events



### Using the App

See the following Online Assistant pages for more details on using the app:

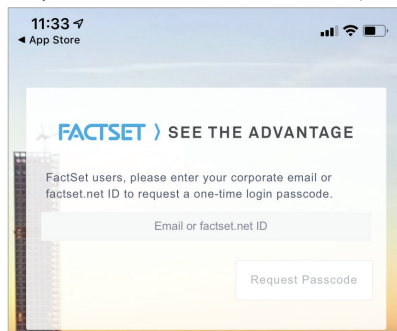
- FactSet for Android and iOS phones - start on page 20015
- FactSet for iPad - start on page 20691

### Installing and Logging Into the FactSet App

1. Go to the Apple App or Google Play store and search for "factset."
2. Tap the **FactSet** or **FactSet 3.0** (latest version) icon from the results, and then tap **Get**.



3. Double-click or tap **Install** to confirm the download, and then open the app.
4. After opening, enter your corporate email address or factset.net account and tap **Request Passcode** to receive a temporary six-digit passcode.



5. Enter the passcode to log into the app.

TO LAUNCH: @WIR

FACTSET SEE THE ADVANTAGE

### Enabling Portfolios and Watchlists on an iPad

For iPhone and Android users, you can manage portfolios/watchlists directly on your mobile device. For iPad users, you must first enable them by following the steps below.

1. Launch the Wireless Configuration utility in FactSet workstation using the shortcut @WIR.
2. Click the **Add Portfolio/Watchlist/Benchmark** button at the bottom of the listed files.

File name	Currency	Benchmark	Grouping	
SAMPLE_PORT SAMPLE_PORT.OFDB	USD	SPN SP50	-	+
DEMO_LARGECAP DEMO_LARGECAP.OFDB	USD	RUSSELL-1000	-	+
FAVORITES FAVORITES.MO.OFDB	LOCAL	-	-	+
DEMO_FUND CLIENT-DEMO_FUND.OFDB	USD	Select benchmark	-	+
<div style="border: 1px solid gray; padding: 5px; display: inline-block;"> <span style="color: green;">+</span> Add Portfolio/Watchlist/Benchmark                 </div>				
View Portfolios as Watchlists				

3. Select the portfolios, watch lists, or index that you want to enable, and then double-click on it or click the **Add as Composite** button. When finished, click the **OK** button.
  - For portfolios, you can select a standard currency, benchmark, and grouping. For watchlists, you can select a currency.

For more information on enabling data on your iPad, see Online Assistant page 14889.

ONLINE ASSISTANT PAGE ID 15637

## Building =FDS Codes

=FDS is a Microsoft Excel function that dynamically pulls data stored on FactSet servers, allowing you to automatically update your spreadsheet data. For a guided tour about building =FDS codes, launch the eLearning series on Online Assistant page 16644.

### Benefits to building models with =FDS codes include:

- Allows FactSet data to be dynamically incorporated into an Excel model
- Uses Excel functionality, such as cell referencing
- Allows you to combine FactSet formulas with other Excel functions

### Basic Syntax

=FDS("IDENTIFIER","DATA\_ITEM(START\_DATE,END\_DATE,FREQUENCY)")

- Each code has two distinct parts: the security or index identifier and the formula of the item being retrieved. Both items are enclosed in quotation marks.
- You can write the identifier as an exchange ticker, such as XOM-US for Exxon Mobil Corp., or a SEDOL, such as 0798059 for BP PLC.
- This syntax is the basic syntax for =FDS codes, but the arguments will vary based on the formula you select.

Examples	
Retrieves Exxon Mobil's latest closing price	=FDS("XOM-US";"P_PRICE(0D)")
Retrieves BP PLC's latest annual sales	=FDS("0798059";"FG_SALES(0)")

Date Frequency Options					
D	Daily	AM	Actual Monthly	Y	Fiscal Yearly
W	Weekly	Q	Fiscal Quarterly	CY	Calendar Yearly
AW	Actual Weekly	CQ	Calendar Quarterly	AY	Actual Yearly
M	Monthly	AQ	Actual Quarterly	RANGE	[Between 2 dates]

### Dates

=FDS codes accept both relative and absolute dates as formula arguments. An absolute date is a specific point in time, while a relative date represents a date relative to the most recently updated period.

Absolute Date Examples	Relative Date Examples
Day (MM/DD/YYYY or DD/MM/YYYY): 7/11/2020, 11/7/2020	Most recent trading day: 0D
Month-end: 6/2019, 4/2020, 1/2021	One trading day before the most recent trading day: -1D
Fiscal quarter-end: 20/1F, 2020/3F	Seven days before the most recent trading day: -1AW
Calendar quarter-end: 2021/1C, 2020/3C	Last trading day of the most recent week: 0W
Semi-annual period-end: 2020/1S, 2019/2S	Last trading day three weeks ago: -2W
Fiscal year-end: 2020, 2019, 18	One actual month from most recent trading day: -1AM
	Last trading day twelve months ago: -11M
	Last trading day of the most recent fiscal year: 0Y

**TIP >** You can also mix absolute and relative dates using FactSet formulas. For example, entering 12/31/2020-2AW returns data as of two actual weeks (14 days) before the end of 2020.



## Using FactSet Sidebar

FactSet Sidebar adds context and transparency to your data by allowing you to easily view a breakdown of values in a calculation, identify the data source, and access the full-text definition behind a formula using =FDS codes in the Detail tab. Use Sidebar to create and edit =FDS codes and FQL (^=) or Screening (^%) Data Downloading formulas in the Insert and Edit tabs. For a guided tour of Sidebar, launch the eLearning series on Online Assistant page 16786.

Launch FactSet Sidebar in Microsoft Excel by clicking the **Insert Formula** button or toggling the **Show/Hide** button in the FactSet ribbon.

### Positioning Sidebar in Excel

You can dock Sidebar on the left or the right side of Excel, undock the utility so it "floats" on top of Excel, or position Sidebar on a second monitor. To undock/dock, double-click Sidebar's title bar or simply drag the title bar.

View the full-text definition for the item you've selected.

**TIP >** You can also use Sidebar in PowerPoint and Outlook. For more information, see Online Assistant pages 17544 and 17466.

**TIP >** Read about the latest FactSet Sidebar updates in the "Office Integration" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

The screenshot shows the Microsoft Excel interface with the FactSet ribbon active. The FactSet Sidebar is docked on the left side of the window. The sidebar has three tabs: Detail, Insert, and Edit. The 'Detail' tab is selected, showing the 'Data Item' section for 'Alphabet Inc. Class A' and the 'Definition' section for the selected formula. The main spreadsheet displays an 'Income Statement (Industrial) Alphabet Inc. Class A' with columns for 'Dec '17', 'Dec '16', 'Dec '15', and 'Dec '14'. The 'EBIT (Operating Income)' row is highlighted in green, and its value for Dec '17 is 29,051.00.

FactSet Sidebar is context-sensitive and displays information for the formulas you've selected in Excel in the Detail tab. To edit an existing formula, select the data item and choose the Edit tab in Sidebar.

### Using Shortcuts in Sidebar:

- Show or hide Sidebar: **CTRL+M**
- Switch focus between Excel and Sidebar: **CTRL+J**
- Activate the Detail tab from Excel: **CTRL+T**
- Activate the Detail tab within Sidebar: **ALT+D**
- Activate the Insert tab within Sidebar: **ALT+I**
- Activate the Edit tab within Sidebar: **ALT+E**
- Insert a formula from the Insert tab: **ALT+N**
- Modify a formula in the Edit tab: **ALT+M**
- Cycle through the tabs in Sidebar: **CTRL+PAGE UP/DOWN**

Click the **Settings** button to manage hot keys in Sidebar, restore Sidebar to its default size and position, specify how you want to retrieve data on FactSet (using =FDS codes, or FQL or Screening Data Downloading), change your database order, and much more.

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > INSERT FORMULA BUTTON

ONLINE ASSISTANT PAGE ID 16664





## Inserting Formulas

Sidebar's Insert tab streamlines the process of creating =FDS and FQL (^=) or Screening (^%) Data Downloading codes in Excel. The Insert tab features more targeted search results, type-ahead search functionality for identifiers, the ability to cell reference across Excel workbooks and worksheets, a real-time preview of your data in Excel, function-building capability, and much more. To insert a formula, choose the Insert tab in Sidebar or select "Insert Formula" from the Insert Formula drop-down menu within the FactSet ribbon in Excel.

If =FDS mode is selected in the Settings button of Sidebar, the Identifier section is displayed. Enter a company's identifier or use type-ahead search to find it. You can also click the **Lookup** button to search for an identifier. You can enter multiple identifiers at once.

You can limit your search results using the following buttons:

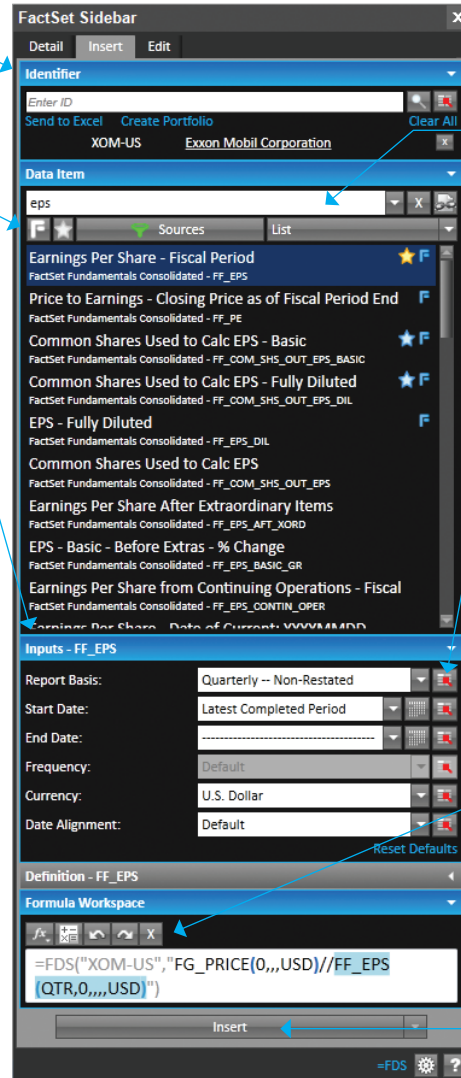
- **FactSet Recommended** : click to view FactSet Recommended formulas
- **Favorites** : click to view formulas tagged as favorites
- **Sources**: click to specify the formula libraries to search through

In this example, a keyword search for EPS returns all EPS formulas from the FactSet Fundamentals formula library.

You can specify the report basis, date, frequency, currency, and other formula arguments that are specific to the data item you've selected using the drop-down menus or cell references.


### Common Formula Messages in Excel


Message	Possible Issue	Solution
#CALC	Appears when an =FDS code is recognized by FactSet and is ready to be calculated	Recalculate the =FDS request code(s)
#NUM	Appears when an =FDS code is missing arguments or has a syntax error	Double check the code for correct syntax
#VALUE	Appears when you have an Excel calculation waiting for an =FDS code to be recalculated	Recalculate the =FDS request code(s)
#NAME	Appears when Excel does not recognize the function	Check and correct spelling in =FDS request code(s)
#REF	Appears when a cell reference is deleted	Relink all appropriate cell references used in =FDS request code(s)

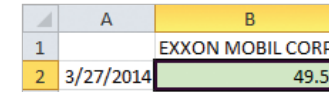


The screenshot shows the FactSet Sidebar interface with the 'Insert' tab selected. The 'Identifier' field contains 'XOM-US' and the 'Data Item' is 'eps'. The 'Formula Workspace' shows the formula: `=FDS("XOM-US", "FG_PRICE(0,,USD)//FF_EPS(QTR,0,,,"USD")`. The 'Inputs - FF\_EPS' section shows settings for Report Basis (Quarterly -- Non-Restated), Start Date (Latest Completed Period), End Date, Frequency (Default), Currency (U.S. Dollar), and Date Alignment (Default). The 'Insert' button is highlighted at the bottom.

Search for a formula using the Enter Keyword field. By default, you'll see a list of formula matches from all of the databases you subscribe to. You can organize your search results by selecting an option from the List drop-down menu.

To cell reference an identifier or formula argument across Excel workbooks and worksheets, click the **Select a Cell Reference** button .

After selecting an identifier and data item, the real-time preview in Excel shows you where the data will be outputted once you click the **Insert** button. To disable this feature, click the **Settings** button  and make your selection in the "Show data preview in Excel" drop-down menu.



	A	B
1		EXXON MOBIL CORP
2	3/27/2014	49.58

Use the toolbar options in the Formula Workspace to help apply a function, build compound codes, undo/redo actions, and clear a code. You can also manually enter text when building your formula. To learn more about applying functions or building compound codes in Sidebar, see Online Assistant pages 16779 and 16880.

Click the **Insert** button to output the data into your Excel spreadsheet.

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > INSERT FORMULA BUTTON > INSERT TAB

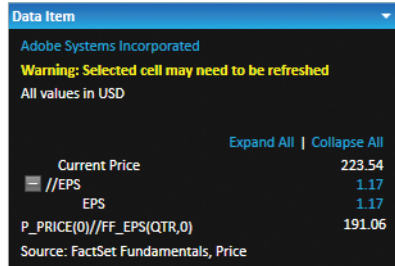
ONLINE ASSISTANT PAGE ID 16772

## Viewing Formula Details

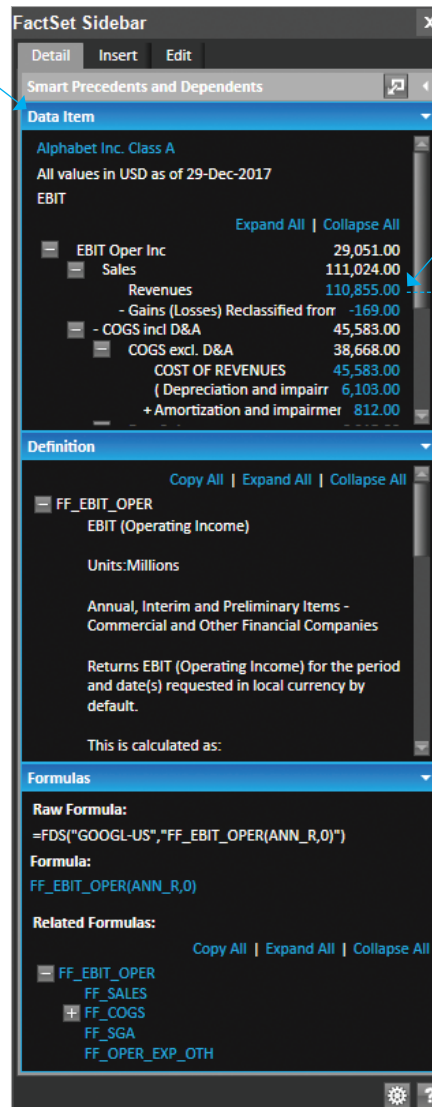
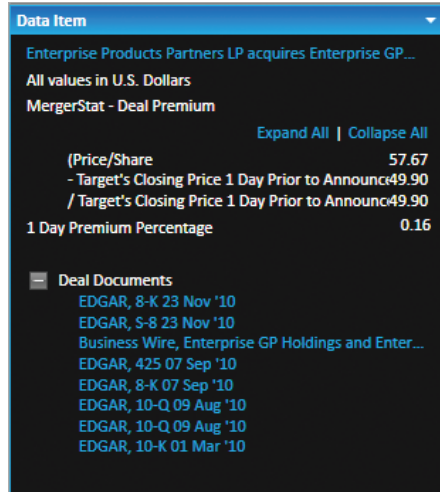
Sidebar's Detail tab helps you analyze data in Excel more efficiently by anticipating the information you need to know about selected =FDS codes. Within the Detail tab, you can quickly audit a FactSet formula back to the source document, understand the breakdown of the calculation, access additional company information, and more.

View a breakdown of the calculation for the formula you've selected in the Data item section.

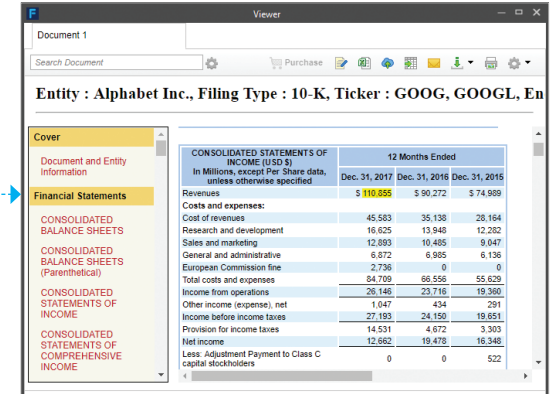
When a cell hasn't been refreshed to reflect the most current value for that formula, Sidebar provides a warning that the cell may need to be refreshed.



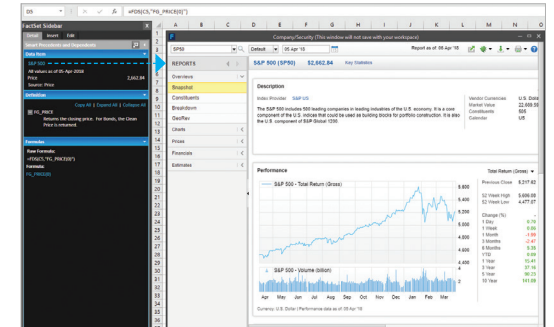
FactSet Mergers subscribers can view key deal information as well as the deal's source documents in Sidebar's Detail tab to continue analysis without leaving Microsoft Excel.



FactSet Fundamentals subscribers can quickly audit data back to the source document to reconcile the values presented for increased transparency.



Launch overview reports for companies, benchmarks, bonds, countries, and many other entity types. This functionality provides a quick and easy way to get more information about a security or deal that you are analyzing in Microsoft Excel.



TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > INSERT FORMULA BUTTON > DETAIL TAB

ONLINE ASSISTANT PAGE ID 16675

## Cell Referencing =FDS Codes

You can use string concatenation to reference dates, which is an Excel feature that combines data or text from multiple cells into one cell. This allows you to do date math and reference different parts of the =FDS code.

### Syntax

Use the following syntax when creating an =FDS code with cell references:

```
=FDS(A1,"DATA_ITEM("&CELLREFERENCE&"))
```

### Example

The price of XOM-US as of the date in cell A1:

```
=FDS("XOM-US","P_PRICE("&A1&"))
```

### Using Concatenation

Replace the date with the "&cellreference&":

```
=FDS("XOM-US","P_PRICE(1/1/2021)")
```

Example:

```
=FDS("XOM-US","P_PRICE("&A1&"))
```


Use string concatenation with date math:

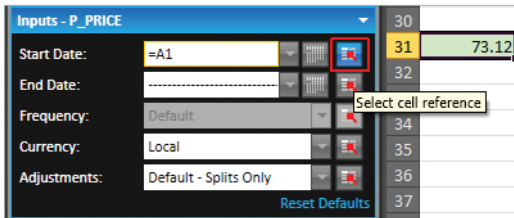
```
=FDS("XOM-US","P_PRICE(1/1/2016+10D)")
```

Example:

```
=FDS("XOM-US","P_PRICE("&A1&"+10D)")
```

### Using Concatenation in Sidebar

Use string concatenation in Sidebar to easily add cell references to your =FDS codes. Click the **Select Cell Reference** button  or type the cell reference (e.g., =A1) for the identifier or formula arguments. See Online Assistant page 16772 for more information on inserting formulas using Sidebar.



## Retrieving Time Series Data

You can use =FDS codes to calculate a time series of data in Excel. To use an =FDS code to retrieve multiple points in time, you need to build an array. An array tells Excel where in the report to place the data. To calculate a time series, you need to select a start date, end date, and frequency.

### To create an array in Sidebar:

1. Select the cell where you want your time series of data to begin.
2. Choose the Insert tab in Sidebar and search for or enter the cell reference for your identifier in the Identifier section.
3. Search for and select your formula in the Data Item section.
4. Enter the start date, end date, and frequency for your array within the Inputs section.

Dates	Prices
03/27/2020	36.95
03/20/2020	32.74
03/13/2020	38.12
03/06/2020	47.69
02/28/2020	51.44
02/21/2020	59.13
02/14/2020	60.65
02/07/2020	61.47
01/31/2020	62.12
01/24/2020	66.32
01/17/2020	68.56
01/10/2020	69.14
01/03/2020	70.33
12/27/2019	69.89
12/20/2019	69.94
12/13/2019	69.23
12/06/2019	69.51
11/29/2019	68.13
11/22/2019	69.37
11/15/2019	69.19
11/08/2019	70.77
11/01/2019	69.60
10/25/2019	69.25
10/18/2019	67.61
10/11/2019	68.98
10/04/2019	68.97

### To manually modify an array:

1. Highlight the number of cells in your new array. You can highlight either across the row or down the column.
2. Press the F2 key to activate the cell with the range still highlighted and edit the =FDS code.
3. Press the following keys simultaneously: CTRL+SHIFT+ENTER.

	A	B
1	Building Arrays Using Sidebar	
2	=FDS("identifier", "formula(start_date, end_date, frequency)")	
3		
4	XOM	Six Months of Weekly Prices
5		
6	03/31/2020	=FDS(A4,"P_PRICE(0M,-11M,M)")
7	02/28/2020	
8	01/31/2020	
9	12/31/2019	
10	11/29/2019	
11	10/31/2019	
12	09/30/2019	
13	08/30/2019	
14	07/31/2019	
15	06/28/2019	
16	05/31/2019	
17	04/30/2019	
18		

**TIP >** You can also easily edit an array of data using Sidebar. To edit, select any part of the array, and then choose the Edit tab in Sidebar. Adjust the arguments as desired and click the Modify button.

## Editing Formulas in Sidebar

Sidebar's Edit tab allows you to edit existing =FDS codes and FQL (^=) or Screening (^%) Data Downloading formulas, including compound codes. You can shorten or lengthen a time series, change the selected data item, modify formula arguments, or add a function. For a guided tour on editing a formula or applying a function in Sidebar, launch the eLearning demo on Online Assistant page 16786.

2. Within the Data Item section, you can change the formula by typing a keyword or phrase in the Enter Keywords box and pressing **ENTER**. To learn more about the formula, expand the Definition section to view the formula name, data source, and definition.

3. If you're editing an =FDS code, you can change the company identifier(s) in the Identifier section.


4. Modify formula arguments you previously specified in the Inputs section. For example, you can shorten or lengthen a time series, or change the currency, date alignment, and units.

6. Click the **Modify** button to apply the changes you've made to the formula in Excel.

**TIP >** You can create and edit custom screening (%) formulas in Sidebar. To learn more about working with custom formulas, see Online Assistant page 17318.

	A	B	C
1		Starbucks Corporation	
2		Cost of Goods Sold (COGS)	
3	12/31/2017	4633.2	
4	10/01/2017	4379.2	
5	07/02/2017	4276.8	
6	04/02/2017	4118	
7	01/01/2017	4330.7	
8			
9			
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1. Select the data item you'd like to edit in Excel and choose the Edit tab in Sidebar. If Sidebar isn't already launched, right-click on the data item and select FactSet > Edit Formula.

5. Once you've modified the data item, you can apply or remove a function in the Formula Workspace section by clicking the **Function** button .

**TIP >** Edit all of the common inputs of a compound code at once in Sidebar's Edit tab. Any changes are applied to all portions of the code. For example, when you change the frequency and currency arguments, the updates are applied to both formulas in the compound code.

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > INSERT FORMULA BUTTON > EDIT TAB

ONLINE ASSISTANT PAGE ID 16773



## Applying Functions and Performing Calculations

### Statistical Functions

Statistical functions calculate statistics on groups of numbers. All statistical functions ignore non-available data.

#### Example

The following code returns the average exchange rate between U.S. dollars and euros for the last year.

```
=FDS("XOM-US";"AVG(P_EXCH_RATE(USD,EUR,-1AY,0D,D))")
```

### Logical Functions

Logical functions let you test various conditions before including a value in a report and are useful for dealing with non-available data. An IF statement is a common logical function that returns a designated value if the test condition is true and returns a different value if the test condition is false.

#### Example

The following code returns the word UP if the one-day price change is greater than zero and returns the word DOWN if the one-day price change is less than or equal to zero.

```
=FDS(A1, "IF(P_PRICE_CHANGE(0D,-1D)>0, ""UP"", ""DOWN"")")
```

### Performing Calculations

You can use =FDS codes to produce ratios on the fly by dividing one FactSet formula by another (e.g., Enterprise Value divided by Sales).

#### Example

The following code calculates Enterprise Value to Sales for BP PLC as of the latest completed fiscal year.

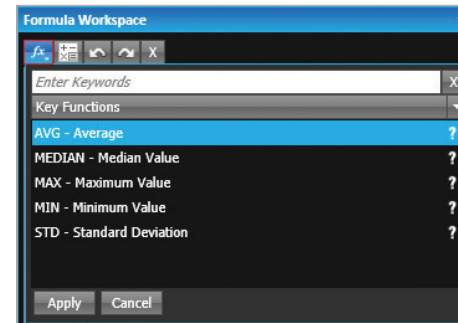
```
=FDS("BP-GB";"FF_ENTRPR_VAL(ANN,0Y,,RF)/FF_SALES(ANN,0Y,,RF)")
```

### Functions and Sidebar

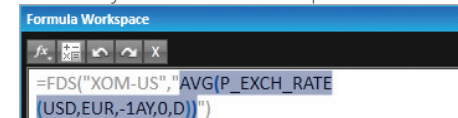
You can use Sidebar to easily add functions to formulas in your templates. The following walks you through an example of how to add a function using Sidebar.

**To build the average exchange rate formula using Sidebar:**

1. Select the cell where you want to add your code.
2. Search and select the desired exchange rate formula in the Data Item section.
3. Enter your formula arguments.
4. Expand the Formula Workspace section.
5. Click the **Function** button to launch the Functions Search dialog, which lists the most commonly used functions.




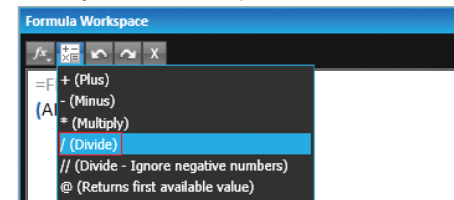
6. Select "AVG - Average" from the list and click the **Apply** button. The function is then added to your Formula Workspace.



7. Click the **Insert** button to add the formula to your template.

### Calculations and Sidebar

Within the Formula Workspace section, select the part of the formula where you want to add an operator. Click the **Operator** button  and choose the operator. (You can also type directly into the workspace.)



ONLINE ASSISTANT PAGE ID 16779

## Using Spreadsheet and Modeling Tools

FactSet's Spreadsheet Tools help reduce the amount of time needed to create, format, and audit Microsoft Excel spreadsheets. For a guided tour on using any of the Productivity Suite tools, launch the eLearning series on Online Assistant page 16170.

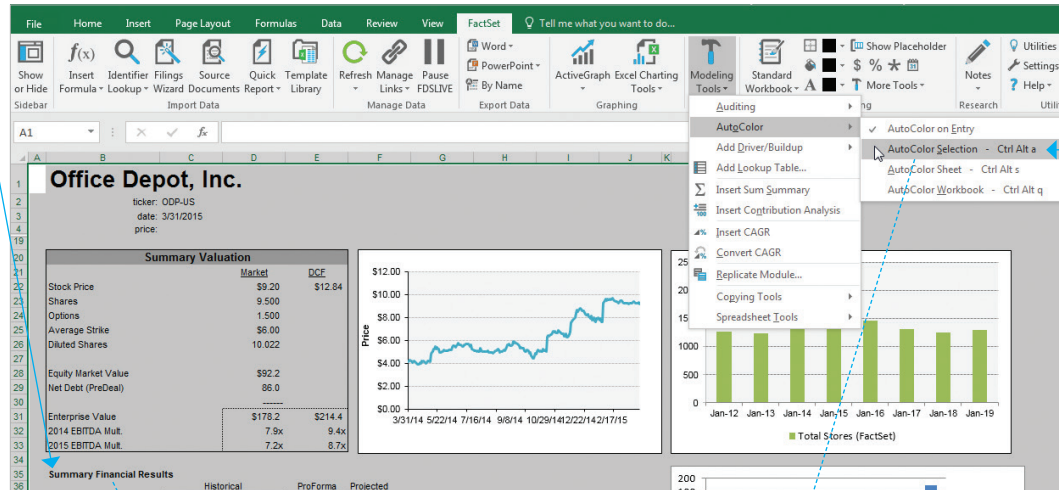
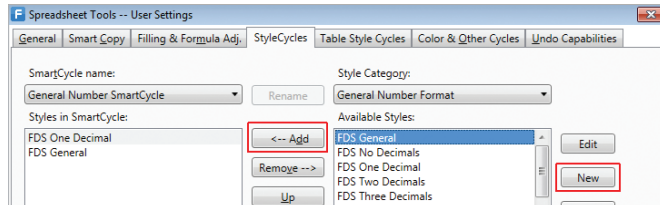
Use StyleCycles to apply formatting options based on your firm's branding (e.g., font color, decimal format, currency, borders). For tables, you can define the interior style, top row, bottom row, and more.

### Example StyleCycles:

Currency	CTRL+SHIFT+\$
Date	CTRL+SHIFT+@
Percent	CTRL+SHIFT+%
Multiple	CTRL+SHIFT+*
Font Color	CTRL+ALT+Z
Underline	CTRL+SHIFT+U
Centering	CTRL+SHIFT+C
Borders	CTRL+SHIFT+B
Row Height	ALT+SHIFT+ PageUp
Cell Color	ALT+SHIFT+K

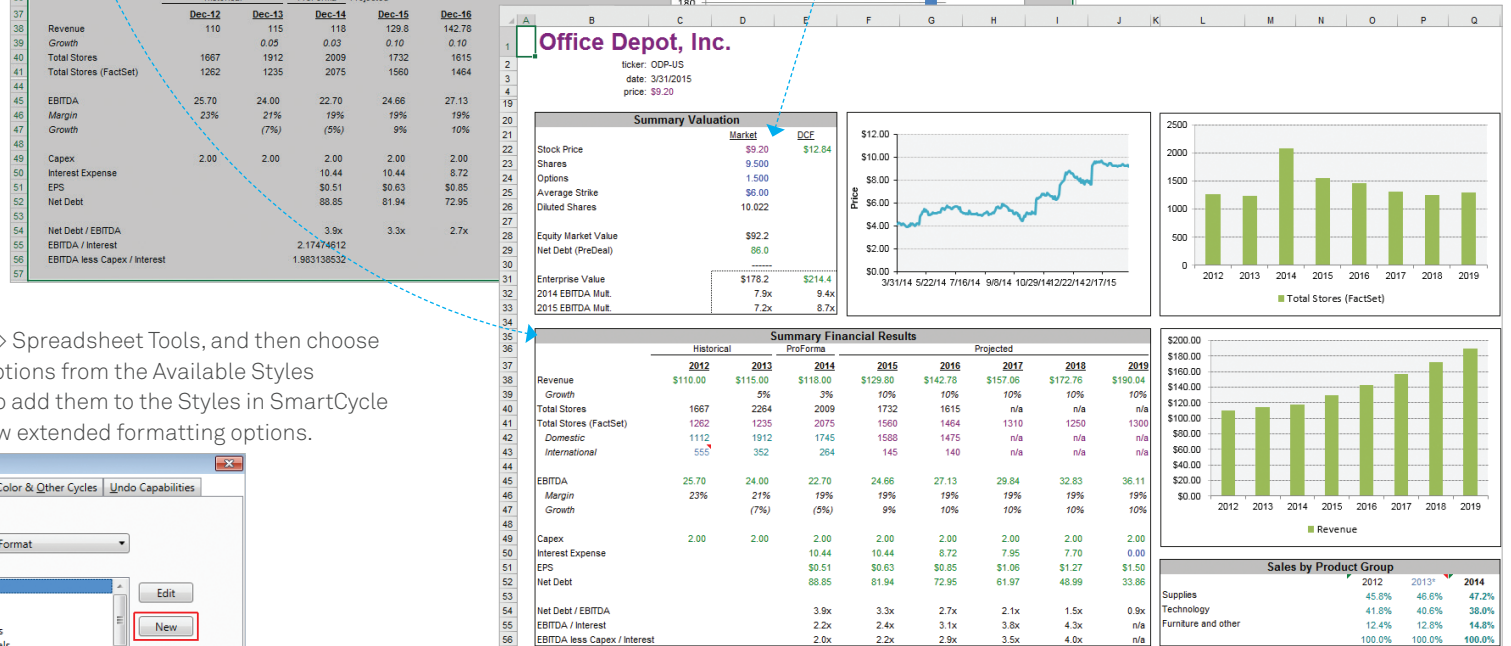
### Customizing StyleCycles

To customize StyleCycles, go to Settings > Spreadsheet Tools, and then choose the StyleCycles tab. Select formatting options from the Available Styles section (right) and click the **Add** button to add them to the Styles in SmartCycle section (left). Click the **New** button to view extended formatting options.



Quickly apply your company's chosen styles from the drop-down menu or with single a keystroke. You can apply colors to inputs, formulas, links, and more.

For example, highlighting the area, and then selecting AutoColor Selection or pressing CTRL+ALT+A adds the proper color and formatting to the tables and charts selected in the spreadsheet as shown below.



TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON

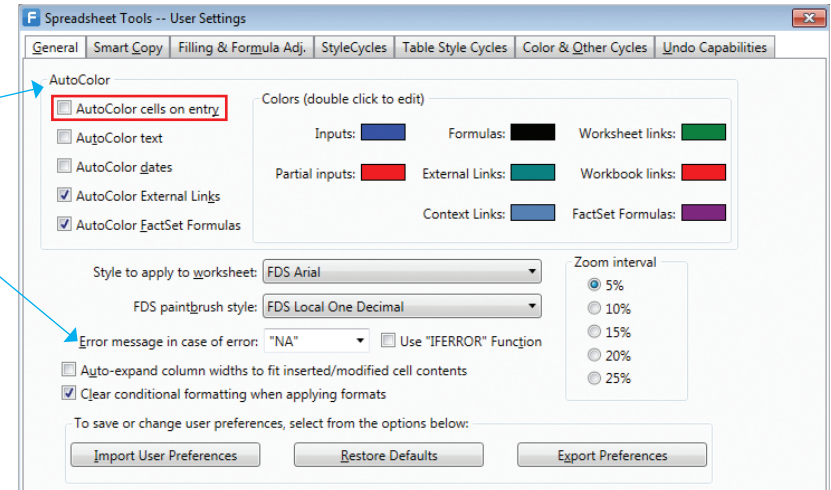
ONLINE ASSISTANT PAGE ID 15415

## Using Spreadsheet and Modeling Tools

FactSet's Spreadsheet Tools provide over 160 hot keys. The following key combinations allow you to save time by skipping multiple mouse clicks to perform common actions in Excel. You can also set additional options for select hot keys in the General tab of the Spreadsheet Tools - User Settings dialog box as described below. Additionally, you can use the Hot Key Manager (FactSet ribbon > Settings > Manage Hotkeys) to view, reassign, or customize preferred key combinations.

### Essential Hot Keys

Smart Precedents	CTRL + SHIFT + {
Smart Dependents	CTRL + SHIFT + }
AutoColor: Automatically color-code cells either on entry or by using the below key stroke	
AutoColor a selection	CTRL + ALT + A
AutoColor a whole worksheet	CTRL + ALT + S
AutoColor an entire workbook	CTRL + ALT + Q
Error Checking: Toggle a custom =IF(ISERROR message in case of NAs	
Check for Errors	CTRL + SHIFT + E
Increase Decimal	CTRL + .
Decrease Decimal	CTRL + ,
Smart Copy: Copy inputs and formulas across a range using a single keystroke. Smart Copy determines the appropriate range and adjusts formulas automatically if there are irregularly spaced columns	
Smart Copy Right	CTRL + SHIFT + R
Smart Copy Down	CTRL + SHIFT + D



You can use a variety of hot keys to more efficiently manage spreadsheets and models. For example, you can use hot keys to quickly audit cells and view either precedents for, or cells that are dependent on, the cell you've selected by using the hot key combination CTRL+SHIFT+{ as shown in the table above.

**TIP** > You can practice by opening the Spreadsheet Tools Examples Workbook and use all of the Hot Key and StyleCycle combinations available in Excel.

From the FactSet ribbon, select Help > Spreadsheet Tools Example Workbook.

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON

ONLINE ASSISTANT PAGE ID 15415

# Viewing Filings in the Company/Security Tab

The Filings report accessible from the Company/Security tab, allows you to quickly find and analyze filings and exhibits for a company or security. Filings and exhibits display in groups or tiles of like documents for easy navigation.

Add a company or security identifier. View filings grouped by document in easy-to-navigate tiles.

Click **Filings Wizard** to download financials to Excel for multiple identifiers and fiscal periods.

Click the **Chronological View** icon to view documents in a list. Click the **Exhibits** icon to view exhibits.

Click the **Key Filings** icon to turn off the filter for key filings and view all documents from all sources.

Perform a text search using Boolean syntax. Click the **Info** icon to find examples of operators for making your queries easy and precise.

Click an **Excel** icon to download tables of a particular period into Microsoft Excel.

Click **More** to display additional headlines.

Email, print, or send multiple documents to Drive. You can also download documents to Microsoft Word, PDF, and HTML.

Select any two EDGAR filings, and click **Blackline Now** to create a comparison report that highlights text changes. For more information, see Online Assistant page 14503.

Click on any headline to launch the filing in Viewer. Alternatively, hover your cursor over a headline to view a full document title.



## Viewing Historical Tables in Filings

The Filings report in the Company/Security tab also allows you to quickly view and download historical versions of a table from any EDGAR filing. View any current financial table in an EDGAR filing and compare it to a prior historical version of the table side by side. Copy a table or selected text and create shareable links to audit back to the source document.

Click the **Historical Tables** button above a given table to view historical versions of that same table side-by-side.

Create a link to any table to share with a colleague or copy an entire table to paste into Microsoft Excel.

Export any or all tables to Excel by clicking the **Download** and **Download All** buttons.

**Table of Contents**

**Commitments**

We have entered into non-cancellable operating and finance leases and financing obligations for equipment and office, fulfillment, sortation, delivery, data center, physical store, and renewable energy facilities.

The following summarizes our principal contractual commitments, excluding open orders for purchases that support normal operations and are generally cancellable, as of March 31, 2020 (in millions):

	Nine Months Ended December 31,		Year Ended December 31,					Total
	2020	2021	2022	2023	2024	Thereafter		
Debt principal and interest	\$ 1,881	\$ 2,016	\$ 2,605	\$ 2,294	\$ 4,100	\$ 26,020	\$ 38,916	
Operating lease liabilities	2,922	3,913	3,499	3,156	2,855	17,309	33,654	
Finance lease liabilities, including interest	7,461	8,217	4,652	1,564	1,046	5,207	28,147	
Financing obligations, including interest	108	145	148	150	152	2,451	3,154	
Unconditional purchase obligations (1)	2,960	3,801	3,352	3,125	3,002	2,370	18,610	
Other commitments (2) (3)	3,179	2,639	2,107	1,812	1,761	16,658	28,156	
<b>Total commitments</b>	<b>\$ 18,511</b>	<b>\$20,731</b>	<b>\$16,363</b>	<b>\$12,101</b>	<b>\$12,916</b>	<b>\$ 70,015</b>	<b>\$150,637</b>	

(1) Includes unconditional purchase obligations related to certain products offered in our Whole Foods Market stores and long-term agreements to acquire and license digital media content that are not reflected on the consolidated balance sheets. For those digital media content agreements with variable terms, we do not estimate the total obligation beyond any minimum quantities and/or pricing as of the reporting date. Purchase obligations associated with renewal provisions solely at the option of the content provider are included to the extent such commitments are fixed or a minimum amount is specified.

(2) Includes the estimated timing and amounts of payments for rent and tenant improvements associated with build-to-suit lease arrangements and lease arrangements prior to the lease commencement date and digital media content liabilities associated with long-term digital media content assets with initial terms greater than one year.

(3) Excludes approximately \$3.8 billion of accrued tax contingencies for which we cannot make a reasonably reliable estimate of the amount and period of payment, if any.

**Historical Tables**

Filler Periods...

- 10-K - FY 2020
- 10-Q - Q3 2020
- 10-Q - Q2 2020
- 10-Q - Q1 2020
- 10-K - FY 2019**
- 10-Q - Q3 2019
- 10-Q - Q2 2019
- 10-Q - Q1 2019
- 10-K - FY 2018
- 10-Q - Q3 2018
- 10-Q - Q2 2018
- 10-Q - Q1 2018
- 10-K - FY 2017
- 10-K - FY 2016

**10-K for period ended 31-Dec-2019**

	Year Ended December 31,						Total
	2020	2021	2022	2023	2024	Thereafter	
Debt principal and interest	\$ 2,202	\$ 2,009	\$ 2,603	\$ 2,273	\$ 4,084	\$ 26,019	\$ 39,190
Operating lease liabilities	3,757	3,630	3,226	2,900	2,605	15,845	31,963
Finance lease liabilities, including interest	9,878	7,655	4,060	1,332	989	4,961	28,875
Financing obligations, including interest	142	146	148	150	152	2,452	3,190
Unconditional purchase obligations (1)	4,593	3,641	3,293	3,103	3,000	2,358	19,988
Other commitments (2)(3)	3,837	2,274	1,770	1,439	1,389	12,186	22,895
<b>Total commitments</b>	<b>\$24,409</b>	<b>\$19,355</b>	<b>\$15,100</b>	<b>\$11,197</b>	<b>\$12,219</b>	<b>\$ 63,821</b>	<b>\$146,101</b>

Unconditional purchase obligations (1) 2,960 3,801 3,352 3,125 3,002 2,370 18,610

Other commitments (2) (3) 3,179 2,639 2,107 1,812 1,761 16,658 28,156

**Total commitments \$ 18,511 \$20,731 \$ 70,015 \$150,637**

Context menu options: Add Comment, Create URL, Copy with link, Create Research Note, Share via Email, Print, Search in Smart Search

Share data by highlighting specific content in a filing and clicking the "Create URL" option to create a hyperlink that leads directly to the text you selected in the filing.

## Using Source Document Manager

The Source Document Manager is a fully functioning, standalone Internet browser that links data between Microsoft Excel and either PDF or HTML files with audit trails back to source filings. Once open, navigate to a PDF or a static HTML page (e.g., Edgar filings), use the Getting Started page to find or search for a filing, or click the **Open** button to access files you have stored locally. For a guided tour on linking items using the Source Document Manager, launch the eLearning demo on Online Assistant pages 16170.

Click the **Open** button to open and link to a local HTML or text file.

Export individual pieces of data, whole tables (shown), or paragraphs using the sections in the sidebar.

Quickly navigate through the document using your keyboard arrows or the Previous and Next buttons. Then, export the data to Excel by pressing **ENTER** or clicking **Send to Excel**.

Filter your export items by keyword, table size, number format, and more.

The screenshot shows the Source Document Manager browser window displaying a PDF of Amazon's financial data. The left sidebar contains an 'EXPORT TO EXCEL' section with options for 'Text / Number' and 'Table', along with 'EXPORT SETTINGS' and 'ACCESS BOOKMARKS'. A 'FactSet Sidebar' is open over the Excel spreadsheet, showing a 'Data Item' dropdown and 'Cell Contents' for 'Operating income 2020' with a value of \$22,899.00. The Excel spreadsheet contains financial data for Amazon, including Statements of Operations and Statements of Cash Flows for the years 2016 through 2020.

	Year Ended December 31,				
	2016	2017 (1)	2018	2019	2020
(in millions, except per share data)					
<b>Statements of Operations:</b>					
Net sales	\$ 135,987	\$ 177,866	\$ 232,887	\$ 280,522	\$ 386,064
Operating income	\$ 4,186	\$ 4,106	\$ 12,421	\$ 14,541	\$ 22,899
Net income (loss)	\$ 2,371	\$ 3,033	\$ 10,073	\$ 11,588	\$ 21,331
Basic earnings per share (2)	\$ 5.01	\$ 6.32	\$ 20.68	\$ 23.46	\$ 42.64
Diluted earnings per share (2)	\$ 4.90	\$ 6.15	\$ 20.14	\$ 23.01	\$ 41.83
Weighted-average shares used in computation of earnings per share:					
Basic	474	480	487	494	500
Diluted	484	493	500	504	510
<b>Statements of Cash Flows:</b>					
Net cash provided by (used in) operating activities (3)	\$ 17,203	\$ 18,365	\$ 30,723	\$ 38,514	\$ 66,064

Find standard browser features like tabs and favorites in the toolbar.

Create context links for specific text or numbers by clicking on a value. The Export to Excel section in the left pane will change to the "Text/Number" option and provide the available export settings.

**TIP >** Read about the latest Source Document Manager updates in the "Office Integration" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

After downloading to Excel, click on a linked value in Sidebar to open Source Document Manager and return directly to the original source file.

Quickly link to a different value by clicking the **Edit** button.

**TIP >** If a link breaks, the Edit button will be replaced with a Restore button in Sidebar for easy link repair.

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > SOURCE DOCUMENTS BUTTON

ONLINE ASSISTANT PAGE ID 17511

## Using Filings Wizard

Use the Filings Wizard to search for and download financial tables across companies and periods. Comprehensive coverage of all EDGAR filers plus over 30,000 companies is available for searching and downloading. You can quickly insert EDGAR 10K and 10Q tables into Microsoft Excel and audit back to those tables/filings in FactSet Workstation and Web. You can access the Filings Wizard in Excel (FactSet ribbon > Filings Wizard button), as well as FactSet Workstation and Web (@FW and Company/Security tab > Filings > Filings Wizard button).

Enter a company's identifier to get started. You can choose to select a primary company, multiple comps, or a portfolio/watchlist. Click the drop-down menu to select which companies to include.

Select the periods and types of statements to include in your search.

Select which of the filings you want to download and view key details, including the fiscal period and date for each report.

Choose the desired layout and download options, as well as the display order for your table.

Preview the tables available for the selected period. You can then search the table and navigate to specific tables in the preview pane.

Once the table(s) are downloaded to Excel, you can click the links to view the complete filing in FactSet Workstation or Web.

The screenshot shows the Filings Wizard interface. At the top, the company identifier '7203-JP' is entered. Below this, there are filters for 'Latest Five Fiscal Years' (set to 15), 'Periods' (All, Interims, Annuals), and 'Statements' (Income Statement, Balance Sheet, Statement of Cash Flows). A table of search results is displayed with columns for Identifier, Form, Fiscal Pd, and Date. The selected row is 7203, 6-K, Q3 2021, 26 Feb '21. Below the table, there are 'Layout Options' (One Statement per Worksheet) and 'Download Options' (New Spreadsheet). A 'Download' button is visible at the bottom right of the interface.

The screenshot shows the downloaded financial table in Microsoft Excel. The table is titled 'TOYOTA MOTOR CORPORATION Condensed Quarterly Consolidated Statement of Income'. It includes a search bar and tabs for 'IS', 'BS', and 'CF'. The table data is as follows:

		For the first nine months ended December 31, 2019	For the first nine months ended December 31, 2020
Notes			
Yen in millions			
Sales revenues			
Sales of products	IX	21,338,170	17,922,573
Financial services	IX	1,629,038	1,602,683
<b>Total sales revenues</b>	<b>IX</b>	<b>22,967,208</b>	<b>19,525,255</b>
Costs and expenses			
Cost of products sold		17,767,373	15,289,445
Cost of financial services		1,013,940	881,533
Selling, general and administrative		2,146,579	1,846,356
<b>Total costs and expenses</b>		<b>20,927,893</b>	<b>18,017,334</b>
Operating income		2,039,315	1,507,921

The Excel screenshot also shows the FactSet Filings Wizard ribbon and a preview of the table data in columns A, B, C, and D. The table data in Excel is as follows:

		FY2018 first half (Six months ended September 30, 2017)	FY2019 first half (Six months ended September 30, 2018)	Increase (Decrease)
13	Net revenues:			
14	Sales of products	13,233,974	13,638,830	404,856
15	Financing operations	897,233	1,035,176	17,343
16	<b>Total net revenues</b>	<b>14,131,207</b>	<b>14,674,006</b>	<b>482,799</b>
17				
18	Costs and expenses:			
19	Cost of products sold	10,989,823	11,290,626	300,803
20	Cost of financing operations	626,259	493,531	67,272
21	Selling, general and administrative	1,478,584	1,428,004	50,580
22	<b>Total costs and expenses</b>	<b>13,094,666</b>	<b>13,412,161</b>	<b>317,495</b>
23				
24	Operating income	1,096,541	1,261,845	165,304
25	Other income (expense):	92,762	124,778	32,016
26	Interest and dividend income	-13,541	-11,603	1,938
27	Interest expense	53,819	64,784	10,965
28	Foreign exchange gain, net	147,849	147,849	
29	Unrealized gains (losses) on equity securities	22,592	-8,844	31,436
30	Other income (loss), net	155,632	286,964	131,332
31	<b>Total other income (expense)</b>			
32				
33	Income before income taxes and equity in earnings of affiliated companies	1,252,173	1,548,809	296,636
34	Provision for income taxes	374,247	473,891	99,344

TO LAUNCH: MICROSOFT EXCEL > FACTSET RIBBON > FILINGS WIZARD BUTTON

ONLINE ASSISTANT PAGE ID 14237

## Using Presentation Linking and Formatting

Presentation Linking and Formatting helps you quickly assemble presentation-quality documents and slideshows by sending updateable tables, text, pictures, and charts from Excel to PowerPoint and Word. The following shows you some of the key FactSet functionality available within PowerPoint. For a guided tour on using any of the Productivity Suite tools, launch the eLearning series on Online Assistant page 16170.

To link items and import data from Excel to PowerPoint, highlight the region in Excel that you want to include in your presentation. Right-click in Excel, and then select "Export to PowerPoint" and your desired export option. For example, select Export to PowerPoint > Table as Picture.

The screenshot displays a PowerPoint slide titled "Pfizer Inc. (\$34.28)". The slide content is organized into several sections:

- {Company Overview}**: A table with key metrics for Pfizer Inc. (PFE-US), including price, 52-week range, volume, and market value.
- {Price Volume}**: A line chart showing Pfizer Inc. volume and price from March to February.
- {Business Description}**: A paragraph describing Pfizer Inc. as a research-based, global biopharmaceutical company.
- {Current Capitalization}**: A table showing financial metrics such as price, shares outstanding, market value, debt, and equity.

The FactSet sidebar on the right shows a list of linked items with formulas like "Formula: P\_PRICE(NOW)" and "Formula: P\_PRICE(0)". The "Linked Item Information" tab is active, showing details for a linked picture from a PowerPoint presentation.

A context menu is open over the table in the "Company Overview" section, with the path "Export to PowerPoint" > "Table as Picture" highlighted. The "Show or Hide" button in the FactSet ribbon is also indicated by a blue arrow.

You can quickly identify any items that are linked from Excel using Sidebar in PowerPoint. For example, selecting "Linked Picture" highlights the table that was linked as a picture from Excel.

Additionally, you can see the FactSet formulas and ActiveGraphs included in your presentation by clicking the links in the Detail tab.

Click the **Show or Hide** button in the FactSet ribbon to display Sidebar. To learn more about Sidebar in PowerPoint, start from Online Assistant page 17544.

## Managing Links and Switching Source Files

Use the Linked Items Wizard to update, edit, or view the source of linked items, even if the data comes from different Excel files. The following shows how to access the Linked Items Wizard from PowerPoint (Manage Links > Manage Excel Links).

**TIP >** If you make changes or refresh the data in your Excel file, you can update individual items in PowerPoint by right-clicking and selecting "Refresh Excel Links." To refresh all items, click the Refresh button in the FactSet ribbon and select "Refresh all Excel Links."

The screenshot shows the "Manage Excel Links" context menu with "Manage Excel Links..." selected. Below it, the "Linked Items Wizard" dialog box is open, displaying a table of linked items:

ID	Link Type	First Name	Last Name	Filename	Source Path	Status	Last Updated
01	Embedded ...	_bdm.868...		Presentation...	C:\Documents	Not loaded	2015.04.21:11:3...
02	Office Chart	_bdm.0d4...		Presentation...	C:\Documents	Not loaded	2015.04.21:11:4...

The wizard also shows the source file path "C:\Documents\PresentationLinking\_Example.xlsx" and buttons for "Select All", "Load Data", "Edit Source", "View Source", "Update", "Remove Link", and "Close".

**TIP >** Click the Edit Source button in the Linked Items Wizard to save a version of a linked file with a different name.

TO LAUNCH: MICROSOFT POWERPOINT > FACTSET RIBBON

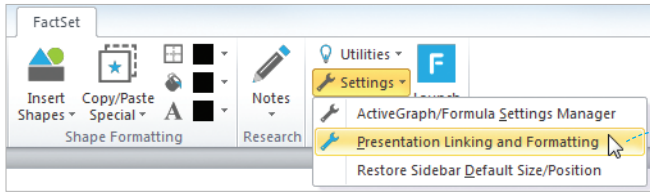
ONLINE ASSISTANT PAGE ID 15418



## Using Presentation Linking and Formatting

### Changing the Settings for Linked Items or Imported Data

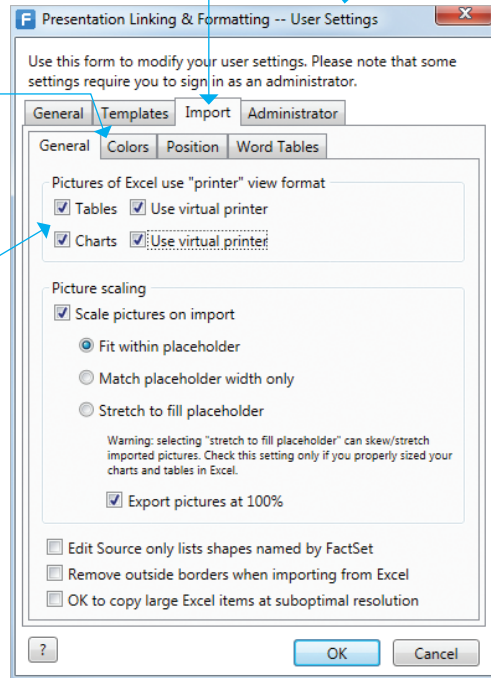
In PowerPoint, choose the FactSet ribbon > Settings > Presentation Linking and Formatting.



Choose the Import tab to modify the scaling, position, and other settings that display linked items within PowerPoint.

Assign a specific color to all imported cells for easy identification using the Colors tab.

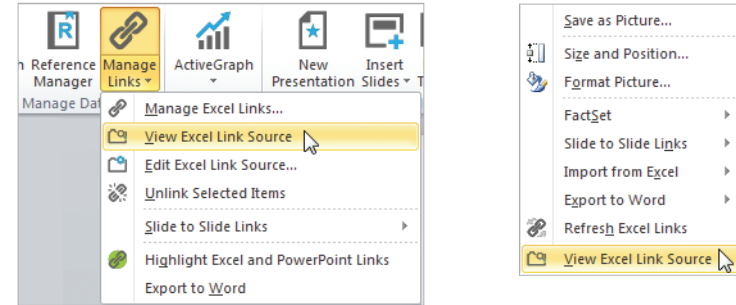
For higher quality images, FactSet recommends selecting "printer" view format for both tables and charts when importing as pictures from Excel.



**TIP >** Read about the latest updates to Presentation Linking and Formatting in the "Office Integration" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

### Viewing Linked Items in PowerPoint

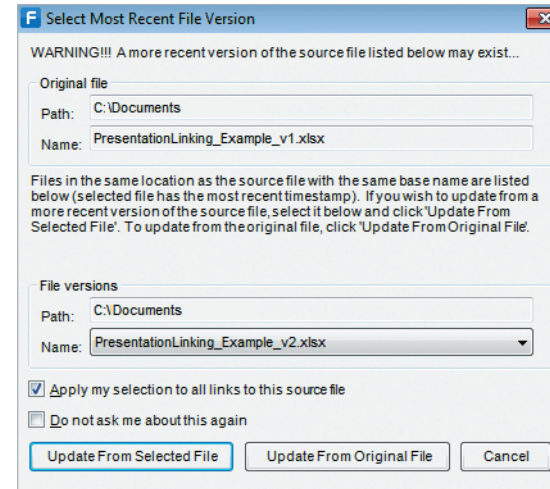
To access a linked item or imported data from PowerPoint, choose the FactSet ribbon > Manage Links > View Excel Link Source. You can also right-click the item and select "View Excel Link Source." This will open the Excel file if not open already and will highlight the cell/table/chart to show exactly where the linked/imported data originates.



**NOTE >** Linked items keep files small and stable. You control when to update the exported items.

### Managing the Excel Model Versions

When you save Excel files with the same root name and in the same file path, PowerPoint will recognize if a newer version of the model exists. Choose to update the data from the selected file or from the original file.



TO LAUNCH: MICROSOFT POWERPOINT > FACTSET RIBBON

ONLINE ASSISTANT PAGE ID 15418

## Inserting Company Logos

You can search, verify, and insert company logos sourced from Clearbit directly in Microsoft PowerPoint. To learn more about the company logo functionality, see Online Assistant page 22062.

Click **Insert Logos** from the Shape Formatting section in the FactSet ribbon or press **ALT+C+K** to launch the Insert Company Logos dialog box.

Use the type-ahead search in the Identifier box to search by company name or ticker to select the appropriate identifier, and then verify the accuracy of the logo by visiting the company's website.

Click the **Insert** button to add the logo to the selected PowerPoint slide.

**TIP >** Company logos are best used in conjunction with FactSet's Shape Tools in PowerPoint to help save time formatting and aligning logos.

TO LAUNCH: MICROSOFT POWERPOINT > FACTSET RIBBON > INSERT LOGOS

ONLINE ASSISTANT PAGE ID 22062

## Using Shape Tools in PowerPoint

Additionally, you can save time formatting and aligning shapes using FactSet's shape tools. For more information on the shape tools available, see Online Assistant page 21984.

**Step 1:** After adding logos and other shapes in PowerPoint, you can easily organize them by aligning each or adding them to a table. To align to a table, select Shape Tools > Align to PowerPoint Table Row/Column.

In addition to aligning to tables, you can automatically format and rearrange shapes in PowerPoint in a variety of ways, including rearranging shapes in a group and automatically formatting shapes to a grid. After adding shapes, you can use the swap options to change the order of the formatted shapes.

**Step 2:** Choose from the available options to align the shapes.

To change where you want to begin the alignment, drag the slider to select the desired row or column.

If there is more than one table in the selected slide, you can click the **Change Table** button to select a different table.

**Step 3:** Click OK to quickly align the logos in the selected table.

TO LAUNCH: MICROSOFT POWERPOINT > FACTSET RIBBON > SHAPE TOOLS

ONLINE ASSISTANT PAGE ID 21984

## Creating an ActiveGraph

Use ActiveGraph to create easy-to-update, pitchbook-ready financial graphs in Microsoft Word, PowerPoint, and Excel. ActiveGraphs are customizable and allow you to use your firm's corporate colors, fonts, and standards. For a guided tour on creating ActiveGraphs, launch the eLearning series on Online Assistant page 14796.

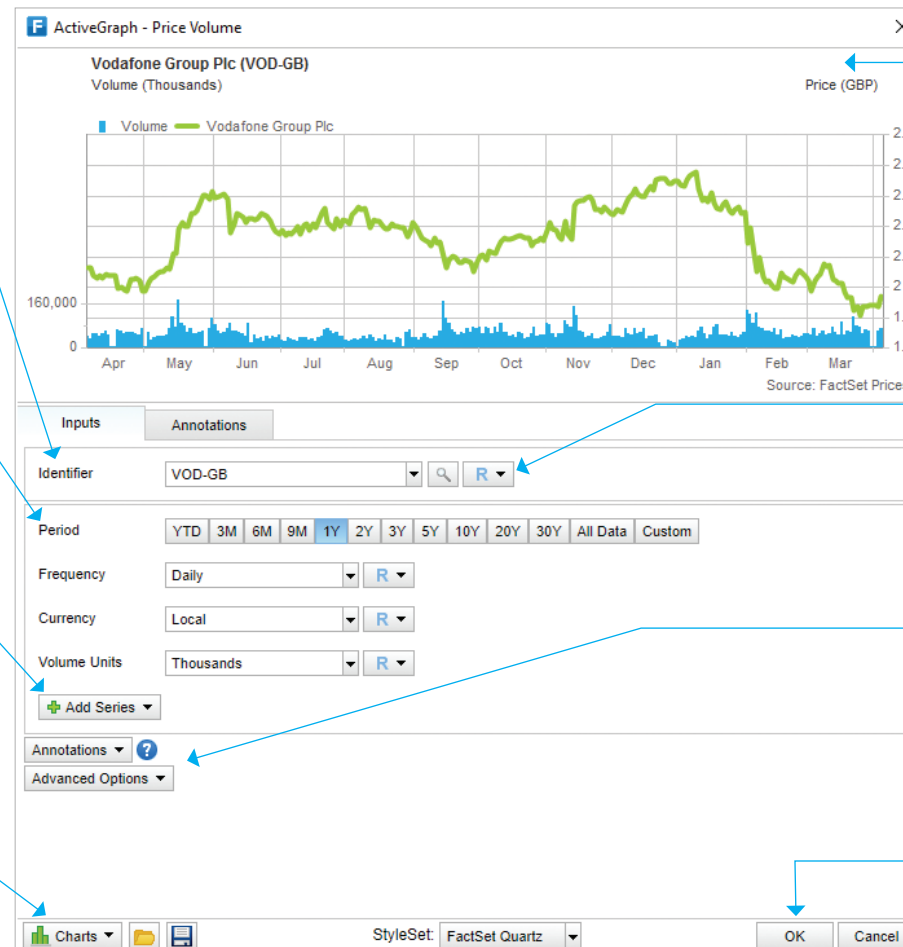
After launching ActiveGraph, choose the type of chart you want to create and click the **Next** button. Then, enter an identifier(s) or use type-ahead searching to search for and select an identifier to get started.

Select a time period, frequency, and other common inputs for your graph. The options available will vary based on the type of chart selected.

Click the **Add Series** button to add another series to your chart, including statistical lines (e.g., an average or median), financial items, or ratios (e.g., broker ratings, P/E ratio).

Click the **Charts** button to select a different graph category and type (e.g., Price, Valuation, Estimates, Profitability). Additionally, you can open an existing chart or save your current chart.

**TIP >** You can use Sidebar's Detail tab within Excel and PowerPoint to load contextual information about a selected ActiveGraph. This includes auditing back to the source document and a range of links to FactSet reports for further research.



While entering inputs, view a real-time preview of your graph in the top pane. Right-click and select "Format" to change the graph's colors, titles, legend, or axes.

Click the **Reference Manager** button **R** throughout ActiveGraph to reference identifiers, formulas, dates, and frequencies. To learn more about Reference Manager, see Online Assistant page 12169.

Click the **Annotations** button to quickly add dynamic annotations to your graph. Learn more about custom annotations on the following page. Additionally, click **Advanced Options** to select spinoff, split, and calendar settings.

Click **OK** to insert the graph in Word, PowerPoint, or Excel.

Select a StyleSet to change the style of your charts. StyleSets are document templates and can be created to your company's specifications, allowing you to use your corporate identity in ActiveGraph. For more information on setting up custom StyleSets, contact your FactSet representatives.

TO LAUNCH: MICROSOFT WORD/EXCEL/PPT > FACTSET RIBBON > ACTIVEGRAPH

ONLINE ASSISTANT PAGE ID 14514



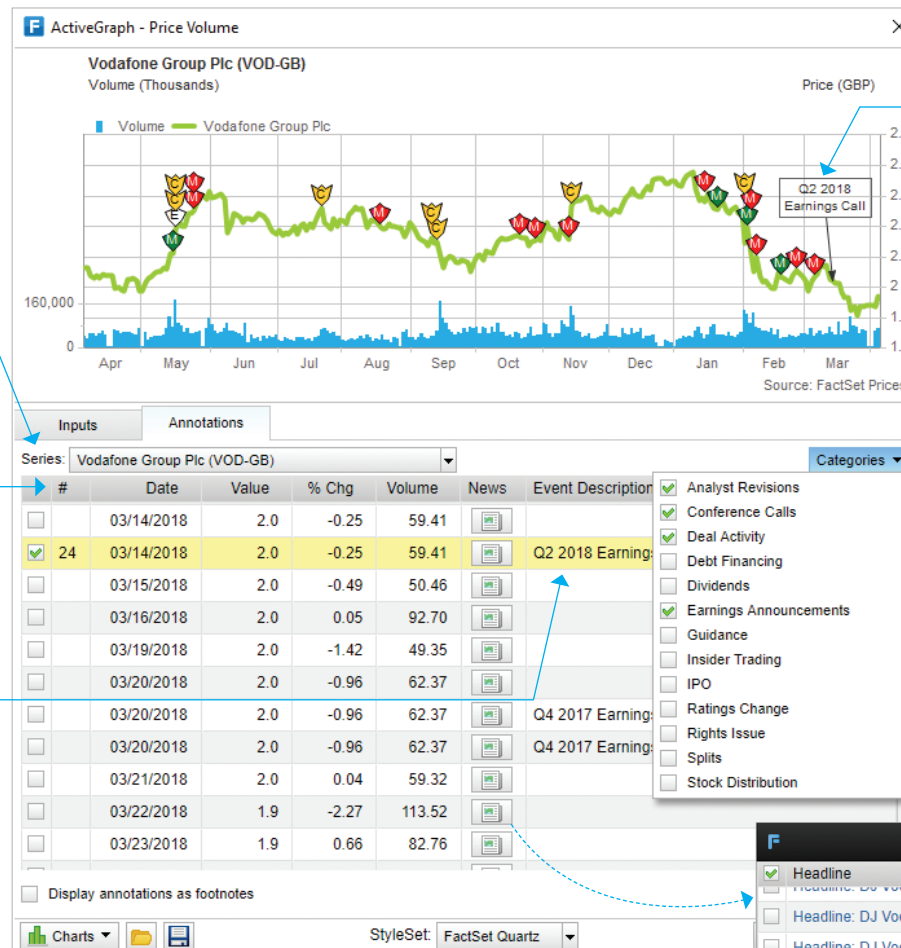
## Customizing Data in ActiveGraph

You can add custom annotations to price graphs, indexed price graphs, and any line graphs within the ActiveGraph wizard. Custom annotations are useful for highlighting notable company events or news stories.

If your graph contains more than one series, select the appropriate series from the drop-down menu to add custom annotations.

Double-click a column heading to sort the data in ascending or descending order.

Click within the "Event Descriptions" field to edit the annotation text.



After adding annotation headlines to your chart, you can edit the annotation, move, or format it further from the interactive preview.

Click the **Categories** button to choose one or more annotation categories from the drop-down menu. To display any desired annotations on the graph, select the corresponding check box.

Click the **News** button to find all related news headlines for a specific event. Click a headline link to launch the article within Viewer. Select a headline's corresponding check box to display that annotation in the chart.

News for VOD-GB on 3/22/2018

Headline	Source
<input checked="" type="checkbox"/> Headline: DJ Vodafone: Balesh Sharma To Be CEO of Merged Vodafone In...	DJBT
<input type="checkbox"/> Headline: DJ Vodafone: Balesh Sharma To Be CEO of Merged Vodafone In...	DJBT
<input type="checkbox"/> Headline: DJ Vodafone: Merged Company is Vodafone India and Idea Cellu...	DJBT
<input checked="" type="checkbox"/> Vodafone and Aditya Birla announce the proposed new leadership team of ...	SA
<input type="checkbox"/> Headline: DJ Vodafone: Kumar Mangalam Birla To Be Non-Executive Chm...	DJUK
<input type="checkbox"/> Headline: DJ Vodafone: Kumar Mangalam Birla To Be Non-Executive Chm...	DJGQ
<input type="checkbox"/> Headline: DJ Vodafone: Kumar Mangalam Birla To Be Non-Executive Chm...	DJUK

OK Cancel

**TIP** > Read the latest ActiveGraph updates in the "Office Integration" category of FactSet Notify. Click the category's envelope icon to receive email alerts.

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## Popular FactSet Formulas

The following table provides some of the most common FactSet formulas. To see a full list of formulas in Microsoft Excel, go to the FactSet ribbon > Insert Formula button and then search for the desired formula in FactSet Sidebar.

Company Info	
FG_COMPANY_NAME	Company name
FG_FACTSET_SECTOR   FG_FACTSET_IND	FactSet sector   Industry
FG_PRICE	Daily price
P_PRICE_RETURNS	Price change, simple, or compound return
FG_INDEXED_PRICE	Indexed values for price/change/returns for custom composites
P_VOLUME_FRQ	Daily composite volume
XP_VOLUME	Daily exchange-specific trading volume
FREE_SHARES_COMPANY	Shares aggregated across all share classes
FREE_MARKETVALUE_COMPANY	Market value aggregated across all share classes
P_DATE	Date from the pricing database

FactSet Fundamentals (Historical/Reported)	
FF_FISCAL_DATE	Company's fiscal year end date
FF_SALES	Gross sales and other operating revenue
FF_EBIT_OPER   FF_EBITDA_OPER	Operating income   Operating income plus D&A
FF_EPS_DIL	Fully diluted fiscal period earnings
FF_ENTRPR_VAL_DAILY	Daily enterprise value

FactSet Estimates (Forecast)	
FE_ESTIMATE	Consensus estimates
FE_ESTIMATE_DATE	Consensus, report, and publication dates
FE_VALUATION	Estimated valuation metrics
FE_RATING	Buy, hold, sell recommendations

Ownership (Shareholdings)	
OS_TOP_HLDR_NAME	Names of holders of the security
OS_TOP_HLDR_POS   OS_TOP_HLDR_PCTOS	Positions held   %OS of holders
OS_SINGLE_HLDG_POS	One holder's position in a specified security

Activism	
SR_CMPN_DETAIL_C	Campaign details, such as company/dissident names, status, outcome, tactic, and announcement date for a campaign identifier
SR_CORP_ACTIVSM_C	Corporate activism details, such as number of open/closed campaigns, company fight tactics, and defense changes for a campaign identifier
SR_ACTIVST_DETAIL_C	Activist details, such as dissident name, number of open/closed campaigns, dissident/management stake for a campaign identifier

## FactSet Workflow Solutions

Use the following FactSet solutions to streamline the Investment Banking workflow and save valuable time for analyzing data.

Task	FactSet Solution	Value
Identify peer comps	Idea Screening > All Companies	Create comps lists based on select criteria
Generate a list of precedent deals	Idea Screening > M&A	Identify precedent transactions based on select criteria to help value deals
Upload custom portfolios to FactSet	Watchlist Editor	Create custom portfolios with proprietary data that you can access in various applications
Track and listen to earnings calls	Event Calendar	Analyze call transcripts and audio, as well as research details about future corporate events
Monitor important news stories as they're released	Alert Manager	Receive notifications when a headline matches your news search criteria
Find the differences between two similar filings from different periods	Filings > Blackline Reports	View delta reports for comparison purposes across multiple filing periods for similar document types
Combine standardized market data and proprietary data in the same Microsoft Excel template	=FDS Codes	Generate dynamic models that you can update for different time periods and companies; incorporate cell referencing and functions for further flexibility
Build and audit =FDS codes	Sidebar	Create formulas while adding context and transparency to your data by viewing the breakdown of values and the data source
Incorporate as-reported data in models	Source Document Manager	Extract data directly from any PDF or HTML site into Excel with auditable links back to the source
Export financial statements to Excel	Filings Wizard	Download the main financial statements for multiple companies and multiple periods at one time
Create a pitchbook with corporate branding specifications	Templating Tools	Integrate preloaded slides and shapes in your company's corporate branding standards directly into your PowerPoint presentations
Refresh presentations with stale data	Presentation Linking	Link information between Excel and PowerPoint to automate the update process
Update charts with new data	ActiveGraph	Create fully customizable and refreshable charts
Format charts with corporate branding	ActiveGraph StyleSet	Use a premade chart template created to your company's specifications in ActiveGraph
Stay up to date on the companies you care about while on the go	Mobile Solutions	Access news, research, and market information for your portfolios while you are away from your desk

## Spreadsheet Tools - Hot Key Guide

The Hot Key Manager in Excel (FactSet ribbon > Settings > Manage Hot Keys) displays Spreadsheet Tool functions and hot keys, function name, priority, or application. You can reassign hot keys and share your settings with co-workers.

Tool	Hot Key	Function Description
<b>Auditing</b>		
Smart Auditing - Precedents	CTRL+SHIFT+{	Identifies all cells and workbooks that the selected cell references
Smart Auditing - Dependents	CTRL+SHIFT+}	Identifies all cells and workbooks that are dependent on the selected cell
Return to Audited Cell	CTRL+SHIFT+I	Returns to cell from which you had run Smart Auditing
<b>Formatting</b>		
Increase Decimal	CTRL+.	Increases the # of decimal places in numeric format for the selected range
Decrease Decimal	CTRL+.	Decreases the # of decimal places in numeric format for the selected range
Currency SmartCycle	CTRL+SHIFT+\$	Cycles through customized currency styles
Date SmartCycle	CTRL+SHIFT+@	Cycles through customized date styles
Percent SmartCycle	CTRL+SHIFT+%	Cycles through customized percent styles
Multiple SmartCycle	CTRL+SHIFT+*	Cycles through customized multiple styles
Underline SmartCycle	CTRL+SHIFT+U	Cycles through customized underline styles
Center SmartCycle	CTRL+SHIFT+C	Cycles through customized centering styles
General Number SmartCycle	CTRL+SHIFT+!	Cycles through customized general styles
AutoColor Colors	CTRL+ALT+E	Cycles through customized font colors
AutoColor Sheet	CTRL+ALT+S	Automatically colors all inputs and formulas based on your settings
AutoColor Selection	CTRL+ALT+A	AutoColors the current selection according to your AutoColor settings
Border SmartCycle	CTRL+SHIFT+B	Cycles through customized border styles
Binary SmartCycle	CTRL+SHIFT+Y	Cycles through customized binary styles
Horizontal Alignment SmartCycle	CTRL+SHIFT+H	Cycles through customized horizontal alignment styles
Vertical Alignment SmartCycle	CTRL+SHIFT+V	Cycles through customized vertical alignment styles
Indent SmartCycle	CTRL+SHIFT+I	Cycles through customized indentational levels
Increase Font Size	CTRL+SHIFT+F	Increases font size of the selected range
Decrease Font Size	CTRL+SHIFT+G	Decreases font size of the selected range
Row Height SmartCycle	ALT+SHIFT+PageUp	Cycles through customized row heights
Column Width SmartCycle	CTRL+ALT+SHIFT+PageUp	Cycles through customized column widths
Auto Row Height	ALT+SHIFT+PageDown	Automatically adjusts row height of selected rows to fit contents
Auto Column Width	CTRL+ALT+SHIFT+PageDown	Automatically adjusts column width of selected columns to fit contents
No AutoColor	CTRL+ALT+Z	Cycles through customizable font colors
Header SmartCycle	ALT+SHIFT+!	Cycles through customizable formatting styles
Column Header SmartCycle	ALT+SHIFT+@	Cycles through customized formatting styles
<b>Copy/Paste</b>		
Smart Copy Right	CTRL+SHIFT+R	Copies a cell formula to the right intelligently according to your preferences
Smart Copy Down	CTRL+SHIFT+D	Copies a cell formula down intelligently according to your preferences
Smart Formula Transpose	CTRL+ALT+T	Copies a cell formula transposing references
Smart Formula Column Spacing	CTRL+ALT+L	Copies a cell formula adjusting column spacing according to your preferences
Smart Formula Row Spacing	CTRL+ALT+R	Copies a cell formula adjusting row spacing according to your preferences
<b>Formulas</b>		
Check for Errors	CTRL+SHIFT+E	Inserts/removes formula adjustment to replace errors with a custom message
Leader Dots	CTRL+L	Inserts/removes leader dots in the selected cells
Sum Bar	CTRL+SHIFT+S	Inserts/removes sum bars in the selected cells
<b>Auto Filling</b>		
Smart Fill Dates	CTRL+ALT+D	Fills in a series of dates by day, month or year according to your preferences
Smart Fill Numbers	CTRL+ALT+F	Fills in a series of numbers according to your preferences
<b>Hiding</b>		
Smart Hide	CTRL+ALT+H	Automatically replaces hidden rows/columns with grouped rows/columns in the active sheet
<b>Navigation</b>		
Add Bookmark	CTRL+ALT+B	Adds a Spreadsheet Tools bookmark to the active cell
Next Bookmark	CTRL+ALT+N	Navigates to the next Spreadsheet Tools bookmark in sequence
Previous Bookmark	CTRL+ALT+P	Navigates to the previous Spreadsheet Tools bookmark in sequence
Clear Bookmarks	CTRL+ALT+X	Clears all Spreadsheet Tools bookmarks
First Worksheet	CTRL+ALT+HOME	Jumps to first worksheet of the active workbook
Last Worksheet	CTRL+ALT+END	Jumps to last worksheet of the active workbook
<b>View</b>		
Increase Zoom	CTRL+ALT+=	Increases magnification by specified increments
Decrease Zoom	CTRL+ALT+-	Decreases magnification by specified increments
<b>FactSet</b>		
Refresh All =FDS	ALT+SHIFT+A	Refreshes all cells that contain =FDS functions
Refresh Selected =FDS	ALT+SHIFT+S	Refreshes the currently selected cells that containing =FDS functions
Insert ActiveGraph	ALT+SHIFT+G	Adds refreshable ActiveGraphs to a model
Data Downloading	ALT+SHIFT+N	Refreshes All cells with ^= % code prefixes
Formula Lookup	ALT+SHIFT+P	Builds Data Downloading formulas that begin with ^=
Filings Wizard	ALT+SHIFT+Z	Downloads financial statements and notes
Launch Factset	ALT+SHIFT+F	Launches FactSet
Export to PPT as Text	ALT+SHIFT+L	Exports cell contents to PowerPoint as text
Export Table to PPT as Picture	ALT+SHIFT+B	Exports Excel table to PowerPoint as a picture
Export Chart to PPT as Picture	ALT+SHIFT+H	Exports Excel chart as a picture
Export to PPT as Word Table	ALT+SHIFT+W	Exports the table as a Word table
Export to Word as Text	CTRL+ALT+SHIFT+L	Exports the cell contents to Word as text
Export Table to Word as Picture	CTRL+ALT+SHIFT+B	Exports the table to Word as a picture
Export to Word as Word Table	CTRL+ALT+SHIFT+W	Exports the table to Word as a Word table



### North and South America

United States and Canada +1.877.FACTSET (+1.877.322.8738)

Brazil +0800.8917850

Mexico +1.888.542.9899

### EMEA

United Kingdom +0800.169.5954

Austria +0800.070.6173

Belgium +0800.94108

Denmark +8060.1698

France +0800.484.414

Germany +0800.200.0320

Ireland, Republic of +1800.409.937

Italy +800.510.858

Luxembourg +800.85206

Netherlands +0800.228.8024

Norway +800.30365

South Africa +0800.166.509

Spain +900.811.921

Sweden +0200.110.263

Switzerland +0800.881.720

United Arab Emirates +800.0444.0014

Middle Eastern and Other European Countries +44.(0)20.7374.4445

### Asia Pacific

Australia +1800.33.28.33

China +10800.852.1969 (China Netcom) +10800.152.1969 (China Telecom)

Hong Kong +852.3011.4888

India +000.800.440.1703

Japan +0120.779.465

New Zealand +0508938045

Singapore +800.61.61.724

South Korea +080.411.0880

Other Asian Countries +852.3011.4888