

Morningstar DirectSM Key Product Enhancements



Q3 2021

We are Committed to Delivering Solutions to Empower Investor Success

1.

**Capitalize on Industry
Trends**

- ESG Commitment Level Data now available for Morningstar Strategies

We are Committed to Delivering Solutions to Empower Investor Success

2.

Commit and Deliver Value Today

- Morningstar Strategies now available
- Risk Model Components additions and upgrades
- Group Attribution Analysis Reports by ESG Data Points
- New ESG Groupings Added to Asset Flows Module
- Gender Diversity Data Points now available
- Firm Diversity Data Report available in Analytics Lab
- Next Call and Current Yield Data Points Added for Fixed-Income Funds
- New data points for Munis, Securitized, and Corporates
- Historic Supplementary Data Points now automatically Added
- Change Time Periods more Easily

We are Committed to Delivering Solutions to Empower Investor Success *Contd.*

2.

Commit and Deliver Value Today

- Preview Icon now Available in Presentation Studio
- New Risk Model Components in Presentation Studio
- New Option for Model Portfolio Dates in Presentation Studio
- Report Portal list order Enhancement in Presentation Studio
- Version history available in Presentation Studio
- Switch component settings from one component to another in Presentation Studio
- New Chart Menu and Features in Workspace
- New Risk View available in Workspace
- Stock Ownership Analysis notebook available in Analytics Lab
- Firm Diversity Data Report available in Analytics Lab
- Portfolio Manager Performance History notebook available in Analytics Lab

We are Committed to Delivering Solutions to Empower Investor Success *Contd.*

2.

Commit and Deliver Value Today

- Time Series Factor Regression Analysis notebook available in Analytics Lab
- Investment Product Launches notebook available in Analytics Lab
- Historical Credit Quality notebook available in Analytics Lab
- Asset Flows Forecast added to Asset Flow module
- New ESG Groupings Added to Asset Flow module
- New Groupings for Canadian Markets in the Asset Flow module

We are Committed to Delivering Solutions to Empower Investor Success

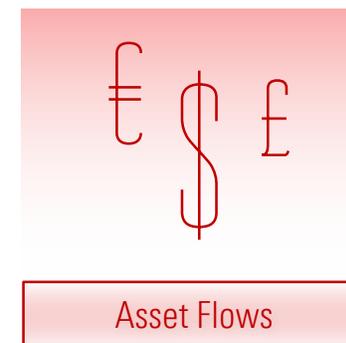
3.

Evolve to Meet Customer's Needs

- New Currencies available in Risk Model charts and components
- Credit Rating Updates
- New Managed Investment Report in Report Portal
- U.S. Sustainable Indexes Performance Summary in Report Portal

This Commitment Drives Ongoing Product Development

The following areas in Morningstar Direct feature multiple enhancements; click an icon to jump to that location:



Risk Model

| Development Highlights | Summary | Resources |
|--|---|--|
| Morningstar Strategies now available | Risk Model data is now available for strategies covered by Morningstar. This content can be seen via the Risk Model data set, Risk Model charts, and in Presentation Studio. This capability offers a new perspective on individual strategies and allows for a comparison among similar strategies as well as underlying investment vehicles. | Video |
| Risk Model Components additions and upgrades | New table components are available in Presentation Studio for Scenario Metrics and Scenario Trends. These new components allow you to present the same content in a variety of ways and make it easier for your audience to consume your insights. | Video Sample Template |
| New Currencies available | The Risk Model charts and components in Presentation Studio now allow for values to be expressed in Japanese Yen. This allows subscribers in those regions to present information in the base currency of the investments being shown in the components. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Sustainability

| Development Highlights | Summary | Resources |
|---|--|-----------------------|
| Group Attribution Analysis Reports by ESG Data Points | Single portfolio equity attribution reports can now be grouped by a number of ESG data points. This offers a unique analysis of how a manager has positioned a fund relative to such metrics as High ESG Risk vs Low ESG Risk, Carbon metrics , and more. This means manager researchers can review how a fund's manager allocated assets from this consideration, and what its impact was to a fund's return . The same data can also be shown in the Attribution components in Presentation Studio, ensuring your discoveries can be shared with others. | Video |
| New ESG Groupings Added to Asset Flows Module | EU SFDR Fund Type groupings are now available in the Asset Flows module. Flows and assets indicated in Asset Flows historically are based on today's EU SFDR Fund Types, even though the information didn't exist or apply to the funds prior to today. | Video |
| ESG Commitment Level Data now available for Morningstar Strategies | Some strategies covered by Morningstar now offer ESG Commitment Level Data, a qualitative value assigned by a Morningstar Analyst. This availability means clients can now use vehicle level data to see this information, and it offers a new way to compare strategies . | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Sustainability *(contd.)*

| Development Highlights | Summary | Resources |
|---|--|--|
| Gender Diversity Data Points now available | Company- and fund-level gender diversity data is now available via new data sets. This filing-based data reveals the representation of women among a company’s executives, directors, and overall AUM for a fund. Use this data to determine whether a firm or fund meets the standards required by clients concerned with this perspective when investing. | Video Toolkit |
| Firm Diversity Data Report available | Separately, Morningstar recently began collecting surveyed data from asset managers about the diversity within their firms, their outside accreditations in this regard, and the extent to which they exhibit a diverse approach to the vendors they use. This unique content is available in the new Firm Diversity Data Notebook and offers an instant and detailed look at how an asset management firm approaches this important topic. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Fixed Income

| Development Highlights | Summary | Resources |
|--|--|-----------------------|
| Next Call and Current Yield Data Points Added | New calculated fixed income statistics for Next Call and Current Yield are available for fixed-income funds. This detailed breakdown data further broadens the statistics available to Morningstar Direct clients and makes working with these funds easier and more comprehensive. | Video |
| Credit Rating Updates | An updated Fixd-Inc Credit Ratings view offers a new look at calculated credit ratings information. Data now shows for broad, intermediate, and a detailed breakdown. This breadth of offerings means clients can consume the information at the level needed, while making it easy to find the content being sought. | Video |
| New data points for Munis, Securitized, and Corporates | New calculated fixed income data points are now available for fixed-income funds. The data offers a different level of granularity than previously available within the Fixd-Inc Core Attributes view, Fixd-Inc Sector Corp Credit view, Fixd-Inc Sector Securtzd view, and the Fixd-Inc Sector US Muni view. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Performance Reporting

| Development Highlights | Summary | Resources |
|---|---|-----------------------|
| Time Periods now automatically Added | When creating a performance report with an open-ended End Date (such as Last Month End), Morningstar Direct will automatically add new time periods to the report as time passes. Clients no longer need to manually update the report to add these new time periods, saving a significant amount of effort across multiple performance reports during each reporting period. | Video |
| Change Time Periods more Easily | Clients needing to change time periods on a performance report can now easily do so via a series of controls on the toolbar above the grid view. This convenience saves clients the trouble of needing to manually update each time period individually and does not require the use of a dialog box, further reducing the number of clicks required to see the output desired. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Presentation Studio

| Development Highlights | Summary | Resources |
|---|---|--|
| Preview Icon now Available | A preview column with a PDF icon is now available next to each Morningstar template. The preview option helps clients easily see what a template looks like and the data it contains, | Video |
| New Risk Model Components | New table components are available in Presentation Studio for Scenario Metrics and Scenario Trends. These new components allow you to present the same content in a variety of ways and make it easier for your audience to consume your insights. | Video Sample Template |
| New Option for Model Portfolio Dates | When saving a model portfolio in the Portfolio Management module, clients can now enter any date they like, not necessarily a month-end or quarter-end date. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Presentation Studio *(contd.)*

| Development Highlights | Summary | Resources |
|--|--|-----------------------|
| Report Portal list order Enhancement | When creating or editing a factsheet batch in Report Portal, the Advanced Settings dialog box now offers a <i>Keep Original Order</i> field to allow clients to preserve the order of items saved in the Workspace module. For example, if the investments in the list for the batch are sorted in alphabetical order in Workspace, then they will also appear in alphabetical order in the Report Portal batch. | Video |
| Version history available | Version history is now available and allows clients to revert to one of the past 15 versions of a template or report by clicking the Versions icon on the toolbar. This makes Presentation Studio templates and reports easier to use and efficient. | Video |
| Switch component settings from one component to another | In a workbook template, clients can now easily switch from one component to another while retaining all the settings from the original component via a new Convert to option from the right-click menu. For example, you can switch a component from a chart to a table, or a table to a chart. This applies to components from one of the following groupings where tables and charts have similar settings to one another: Performance, Asset Allocation, and Snapshot. This functionality is similar to a feature found in Microsoft Excel® and makes Presentation Studio easier to use. For instance, rather than needing to duplicate settings manually, a component can simply be copied, pasted, and converted. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Morningstar Research

| Development Highlights | Summary | Resources |
|---|--|--------------------------------|
| New Managed Investment Report | The Managed Investment Report replaced the Global Fund Report (for open-end funds) and the ETF Report. The Managed Investment Report packages the best-in-class managed investment research from Morningstar with the data driving the evaluation of those investments into a single PDF report. | Video |
| U.S. Sustainable Indexes Performance Summary | A new quarterly report, U.S. Sustainable Indexes Performance Summary, is now available. The report displays performance data for the U.S. Sustainable Indexes. | Q3 2021 Report |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Workspace

| Development Highlights | Summary | Resources |
|------------------------------------|---|-----------------------|
| New Chart Menu and Features | New layout for Interactive web charts menu brings the web chart capabilities in line with the existing interactive charts for these items and will allow the current chart to be retired in November without any loss in functionality for clients. | Video |
| New Risk View Available | As a complement to the Risk - Total Return (Quarter End) view, a new view named Risk - Gross Return (Quarter End) is now available. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Morningstar Notebooks

| Development Highlights | Summary | Resources |
|--|---|--|
| Stock Ownership Analysis | This notebook allows a user to specify a set of up to 10 stock(s) and view ownership of that stock for a specific universe of funds that they define either via criteria, list or individual selection. Users can conduct equity ownership analysis on a specific lineup of funds to obtain insight into managers who recently established or divested their position in a selected stock. | Video |
| Firm Diversity Data Report | For a selected asset management company, this notebook shows the firm's diversity makeup within its owners, board members, employees, company policies and hired vendors. For example, how many female portfolio managers does an asset management firm have? Many asset owners and wealth managers review a manager's diversity profile as part of their selection or due diligence process. In turn, asset managers are being asked to supply the information to meet that demand. Generally, this is brand new data that has not previously been available in Morningstar Direct. Specifically for asset owners, previously they had to email each asset manager they work with separately. Now, they can simply login to Direct to view this information. Users can track an asset management firms' diversity makeup to add transparency and make it easier for asset owners to access this information and select firms that meet their diversity needs. | Video FAQ |
| Portfolio Manager Performance History | For a selected portfolio manager, this notebook lists all funds the manager has managed over their career, alongside the performance data of those funds during his/her tenure. It maps the history of a portfolio manager's career and performance data of those funds during their tenure to aid in manager selection. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Morningstar Notebooks (Contd.)

| Development Highlights | Summary | Resources |
|---|--|-----------------------|
| Time Series Factor Regression Analysis | This notebook is a multiple regression tool that decomposes returns into factor exposures, using the Fama-French model, to derive an investment's alpha and beta exposures through time. It breaks down returns into factor exposures to derive an investment's alpha and beta exposures to enable performance analysts at asset management firms to monitor their lineup. | Video |
| Investment Product Launches | This notebook identifies new fund launches within the specified time period and country of sale. The data can be aggregated along several dimensions and shows detailed information about fund groups such as environmental, social, and governance (ESG) funds, exchange-traded funds, and index funds making it easier to keep track of new fund launches. Wealth managers who wish to keep tabs on new fund offerings and analysts producing reports on trends in new fund launches, especially find this notebook valuable. | Video |
| Historical Credit Quality | With this notebook asset owners and wealth managers can review their fund's credit quality compared with other funds. It helps understand whether a fund has been conservative or aggressive in terms of credit risk over time, as compared with other funds in its category. Clients can select a fund and view its historical credit exposure as compared with the category median. This notebook is uses surveyed credit quality data from asset managers. | Video |

*Note: To use or access the items marked with *, please install the latest version of the desktop app.*

Asset Flows

| Development Highlights | Summary | Resources |
|--|---|---|
| Asset Flows Forecast added to Asset Flow module | <p>Clients now have access to a fund flow model that helps decompose the reasons why funds grow (or shrink) and then can use such findings to forecast future growth rates. This new Asset Flows Forecasts capability is now available in the Asset Flow module free of cost and it offers significant value to asset management firms needing simple, intuitive, proven ways to compare funds based on flow data. Asset Flow Forecasts allows Morningstar Direct clients to do the following:</p> <ul style="list-style-type: none">• Gain insights on market trends• Drive asset retention and growth• Identify predictive factors for success• Determine where to focus resources, and• Monitor sales activities and strategies. | <p>Video</p> <p>FAQs</p> <p>Quick-Start Guide</p> |
| New ESG Groupings added to Asset Flow Module | <p>EU SFDR Fund Type groupings are now available in the Asset Flows module. Flows and assets indicated in Asset Flows historically are based on today's EU SFDR Fund Types, even though the information didn't exist or apply to the funds prior to today.</p> | <p>Video</p> |
| New Groupings for Canadian Markets | <p>Several changes are now in place for Canadian open-end funds, both in the Asset Flows module, and the Global Databases module. First, in the Asset Flows module, all Canada open-end fund markets now reflect information at the share class level. Additionally, the following new groupings are available for these markets: Total Return Quartiles, and Volatility Quartiles. Finally, in the Local Databases and Global Databases modules, when the Canada Mutual Funds subuniverse is selected, the funds shown will reflect those investments where Domicile = Canada.</p> | <p>Video</p> |

