

# Enhancements in Morningstar Direct<sup>SM</sup> 3.6 and 3.6.1

## Performance Attribution

- ▶ Conduct holdings-based performance attribution analysis on the equity portion of managed investment products
  - ▶ Leverage Morningstar's extensive historical holdings database of more than 30,000 portfolios
  - ▶ Drill-down to underlying securities of global open-end funds, separate accounts, market indexes, variable life/annuity subaccounts, fund of funds, 13Fs, closed-end funds, ETFs and user-created portfolios (Aggregates and Custom Funds)
  - ▶ Available data views and reports for analysis:
    - ▷ Return contribution by individual or groups of securities
    - ▷ Attribution of portfolio's value-added over a selected benchmark
    - ▷ Portfolio weightings over multiple time periods
    - ▷ Performance over trailing time periods
    - ▷ Intra-day price movements of portfolio constituents
    - ▷ Portfolio level characteristics
    - ▷ Valuation metrics
  - ▶ Examine attribution effect by selecting a method that matches the specific investment process using:
    - ▷ Top-down
    - ▷ Bottom-up
    - ▷ Multiple-decision hierarchy
  - ▶ Perform analysis using geometric or arithmetic calculations
  - ▶ Organize data by pre-defined or custom groupings:
    - ▷ Long/Short
    - ▷ Regional and Country
    - ▷ Sector/Industry Classifications
    - ▷ Equity Characteristics (e.g., market cap, P/E ratio, etc.)
  - ▶ Customize start and end date range and frequency of reporting periods
  - ▶ Double-click on underlying holdings to view comprehensive security report
- New in 3.6.1**
- ▶ Change Portfolio Analysis to Performance Attribution in the main left hand navigation
  - ▶ Examine attribution using the Three Factor Model to view the interaction term separate from the weighting and selection effects
  - ▶ Analyze two equity portfolios vs. a benchmark
  - ▶ Filter to exclude benchmark holdings and only display portfolio holdings in report
  - ▶ Perform multi-manager attribution at the asset class level for fund-of-funds
  - ▶ Display return reported by the fund manager vs. calculated from attribution analysis
  - ▶ Determine a cash proxy to perform attribution analysis
  - ▶ Auto-calculate views in report when change parameters
  - ▶ Highlights view provides a summary of calculated attribution reports
  - ▶ Attribution Holdings Data view details portfolio and benchmark holding dates
  - ▶ Export all data views and details to Microsoft Excel with ability to expand and collapse groupings
  - ▶ Coming soon: Charts and reports, batch scheduling, currency attribution, transactions-based attribution

## Performance Reporting

- ▶ Investment Scorecard
    - ▷ Evaluate investment performance based on a user-defined grading system
    - ▷ Select critical performance data points for analysis
    - ▷ Assign custom weights to each selected performance factor
  - ▶ Include investment constituents of user-created portfolios (Aggregates and Custom Funds)
  - ▶ Save and modify Search Criteria used to select report investments
  - ▶ View report Search Criteria on performance reports and in exported output
  - ▶ Generate charts and reports in Performance Reporting
  - ▶ Include a second Display Benchmark
  - ▶ Select pre-defined Display Benchmarks
  - ▶ Enhanced performance for faster report calculation
- New in 3.6.1**
- ▶ Move Performance Reporting out of Workspace in main left hand navigation
  - ▶ Use wizard as a guide to set-up performance reports
  - ▶ Filter a calculated report on available data points and ranks in the report
  - ▶ Include imported user-defined security name, grade, ID, category, and benchmark in report
  - ▶ Apply new user-defined rules-based grading system to score investments and apply weights to the scores to generate a weighted score-based report
  - ▶ Standardize Investment Scorecard based on percentile rank
  - ▶ Add new columns to report by right-clicking on column headings of main report screen

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<p><b>Fund Flows</b> <b>New in 3.6.1</b></p>	<ul style="list-style-type: none"> <li>▶ Provides a comprehensive view of funds total net assets and cash flow data</li> <li>▶ Consolidated market data on a range of investments across multiple geographical markets</li> <li>▶ Get the most timely flow data – U.S. open-end funds by the seventh business day, ETFs by the third business day</li> <li>▶ Point and click to quickly drill-down to analyze data by</li> </ul>	<ul style="list-style-type: none"> <li>fund family, asset class, fund, fund class, and Investment Company Institute (ICI) method of sale</li> <li>▶ Aggregate data based on proprietary Morningstar lenses such as Morningstar Rating<sup>TM</sup>, Morningstar categories, and Morningstar Stewardship Grades<sup>SM</sup></li> <li>▶ Launch Fund Flows with Morningstar Direct from the main left hand navigation</li> </ul>
<p><b>Defined Contribution Module</b> <b>New in 3.6.1</b></p>	<ul style="list-style-type: none"> <li>▶ Perform due diligence for configuring diversified retirement plan lineups</li> <li>▶ Compare fund- and plan-level fees</li> </ul>	<ul style="list-style-type: none"> <li>▶ Conduct detailed analysis to ensure consistency with investment policy statement</li> <li>▶ Profile a single plan or compare plans side-by-side</li> </ul>
<p><b>Morningstar<sup>®</sup> Hypothetical Illustrator<sup>SM</sup></b></p>	<ul style="list-style-type: none"> <li>▶ Analyze past performance of global investments in relation to a benchmark, competing investment, or value-added to overall portfolio</li> <li>▶ Assess an individual investment or a portfolio of securities across multiple investment universes</li> <li>▶ Illustrate investment strategies based upon specified</li> </ul>	<ul style="list-style-type: none"> <li>schedules, fees, cash flows, and rebalancing options</li> <li>▶ Incorporate underlying holdings to show performance with relevant asset allocation, sector weightings, and style diversification</li> <li>▶ Display results in different languages, currencies, and report configurations</li> </ul>
<p><b>Report Builder</b></p>	<ul style="list-style-type: none"> <li>▶ Notes component adds most recent user-defined notes</li> <li>▶ Send and share customized components</li> <li>▶ Click PDF button in Report Builder to generate report</li> </ul>	<p><b>New in 3.6.1</b></p> <ul style="list-style-type: none"> <li>▶ Home page for Report Builder</li> <li>▶ Added Performance Summary as a new report template</li> <li>▶ Select new operations, performance, risk, portfolio, and Morningstar Ratings and analysis components for inclusion in custom reports</li> </ul>
<p><b>Reports</b></p>	<ul style="list-style-type: none"> <li>▶ Institutional ownership report <ul style="list-style-type: none"> <li>▷ Ownership Activity to identify which institutions have new, soldout of, increased, or decreased selected investment positions</li> <li>▷ Ownership Statistics to analyze market cap and country breakdowns of each institutional owner</li> <li>▷ Generate HTML or PDF report</li> </ul> </li> <li>▶ Quicktake reports <ul style="list-style-type: none"> <li>▷ Fair value analysis for ETFs displays valuation rating, fair value prices and returns, portfolio fair value uncertainty with underlying security breakdowns, moat breakdowns, % of assets with fair market value, and # of holdings covered</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▷ Morningstar Style Box<sup>TM</sup> for fixed income funds</li> <li>▷ Gross return for Canada pooled funds</li> <li>▶ Select Morningstar Category in Performance Evaluation report dialog to dynamically populate investment peer groups</li> <li>▶ Choose standardized returns disclosure page and general disclosures separately in reports dialog</li> </ul> <p><b>New in 3.6.1</b></p> <ul style="list-style-type: none"> <li>▶ Select up to four investments to compare against a benchmark in the Multiple Investment Comparison report</li> <li>▶ Add Morningstar Rating for hedge funds to the Hedge Fund Summary report</li> </ul>
<p><b>User-Defined Notes</b></p>	<ul style="list-style-type: none"> <li>▶ Include most recent qualitative note written for stocks and funds in custom investment profiles created in Report Builder</li> </ul>	<ul style="list-style-type: none"> <li>▶ Added data point for note effective date to track records</li> </ul>

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### Global Document Library

- ▶ View company public documents, including financials, announcements, ownership, proxies, registrations, and insider activities
- ▶ Search investment terms and data points for definitions, methodology papers, examples of use, and related data points

### Functionality and Usability

- ▶ Enabled Search Criteria to find securities across all investment universes
- ▶ Display extended performance start date in data views
- ▶ Search for market indexes by Country Orientation
- ▶ Edit Data for Historical Valuation and Growth Measures within stock universe
- New in 3.6.1**
- ▶ Apply X-Ray for user-defined Aggregates and Custom Funds when saved as an Investment List
- ▶ Organize saved Investment List, Search Criteria, and Data Sets in subfolders under Workspace
- ▶ Import user-defined security name, grade, ID, category, and benchmarks
- ▶ View global investment databases or only user's local investment databases
- ▶ Quickly search investment universes for a single investment by ISIN, Name, and Legal Name
- ▶ New columns for Alert Rules and Triggered Alerts to display previous value, triggered value, new value, change direction, settings
- ▶ Home page widgets:
  - ▷ View changes to the Morningstar databases under recent additions, recent closes, and recent mergers/liquidations
  - ▷ View product development under Recent Update/Enhancements
  - ▷ Monitor market indexes in Canada, Australia, Asia, and Europe and auto refresh the intra-day market graph

### Data and Coverage

- ▶ Historical fund size (surveyed and estimates) for global investment universes
- ▶ Fair value analysis data points for ETFs
- ▶ Quarter-end stock returns
- ▶ U.S. Fixed-Inc Muni Sector Exposure breakdowns (Super sector, Primary sector, Secondary sector, and Muni sector)
- ▶ Equity country exposure to Estonia, Latvia, Lithuania, and Vietnam
- ▶ Historical daily price for close-end funds
- ▶ Historical NAV for life insurance products
- ▶ Standardized return periods for U.S. variable annuity sub-accounts (Trailing, Quarter-end, 1, 3, 5, 10 year, and Since Inception)
- New in 3.6.1**
- ▶ Unit Investment Trust universe
- ▶ Over 400 new stock data points including current and historical operational ratios and profitability ratios
- ▶ Currency conversion for data points found on the income statement, balance sheet, and statement of cash flow of stocks
- ▶ Target asset allocation fund glide path data
- ▶ Data point identifying mutual fund administrators and multiple advisors of a fund
- ▶ Search for the primary share class of investments in GIFS categories and display average performance
- ▶ S&P Specialist Sector at the fund level
- ▶ View more holding types in the detailed holding analysis including Bond–Option (Call)
- ▶ Australian funds surveyed asset allocation
- ▶ New categories for India and Thailand
- ▶ UK IMA “Property” sector
- ▶ Italian pension fund wrapper level data points
- ▶ MPF Sector data point for Hong Kong MPF sub-universe under Insurance/Life Products
- ▶ OMX Index sub-universe under Market Indexes
- ▶ Historical monthly yield for Market Indexes
- ▶ Historical 7 day yields for Money Market Funds