SCANalytics

Creating Reports in SCANalytics

Building a report in SCANalytics requires a Hypothetical in most instances. This is where all relevant portfolio information is entered, with each section designated in the programs as a tab. A Hypothetical starts with entering the *Investments*, inputting *Allocation*, designating *Fees*, accounting for historical *Cash Flows* and finally, generating *Reports*.

Below are the steps necessary to build a Hypothetical in SCANalytics so that PDF reports may be generated.
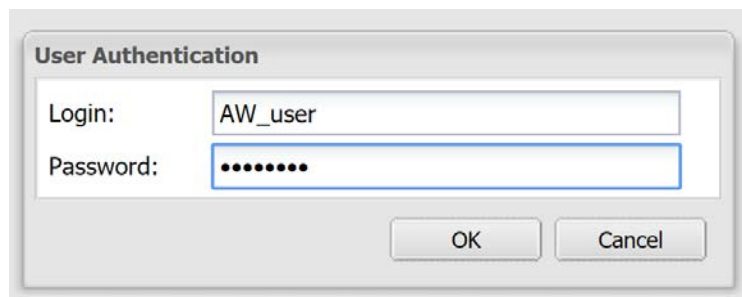
Building a New Hypothetical

1. **Logging into SCANalytics**

Go to http://scanalytics.advisoryworld.com and click Advisor Login.

> Note: Single Sign-On (SSO) users will automatically skip the first two steps and land at the SCANalytics Main Screen when first entering the program.
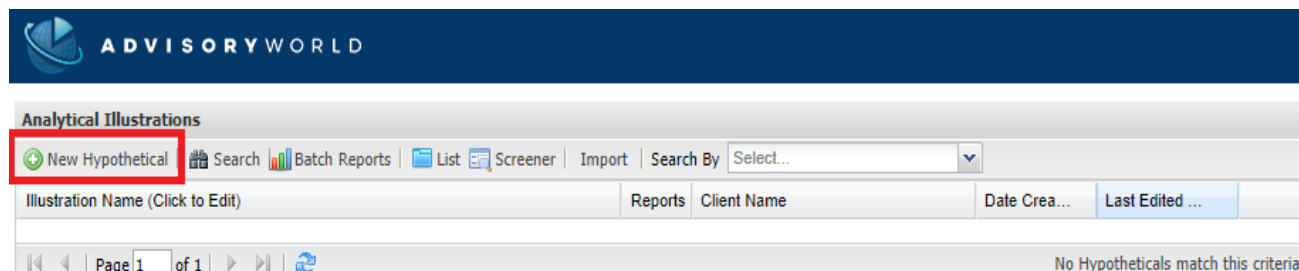
Enter the user's credentials in the pop-up window.

2. **Starting a New Hypothetical**

In the SCANalytics Main Screen, select "New Hypothetical". Tab #1, the *Investments* tab, will appear.

Tab 1: Investments

The Investments Tab is used to input portfolio assets located by ticker or CUSIP.

3. Inputting Investments

In Section 1.1, there are six main ways to input the investments to be illustrated in the Hypothetical.

> 1) Manually enter asset tickers, separated by a comma, in the text box.
> 2) Select "Import" to use the Excel template to load all tickers at once.
> 3) Click "Combine" to load multiple Hypotheticals into a single, new Hypothetical.
> 4) Use "List" to locate any available asset directly using the Asset List.
> 5) Find assets that meet specified criteria with the "Screener" tool.
> 6) Automatic allocation entry via an integration partner.

Once all asset tickers are entered in Section 1.1 select "Find."

4. Reviewing Assets

All assets found in the AdvisoryWorld databases will appear in Section 1.2, unless chosen directly in the blue folder "List." Ticker Symbol, Asset Name, the beginning and ending dates for available data, as well as asset type will show for all found assets. For any assets entered in Section 1.1 but not shown in Section 1.2, a proxy, or substitute, ticker will need to be entered.

Verify all assets to be used in the Hypothetical by checking the box for "Select" at the right side of each row, then click "Add."

> *Note: Many users enter ^QFWP as a cash placeholder if a proxy cannot be easily determined.*
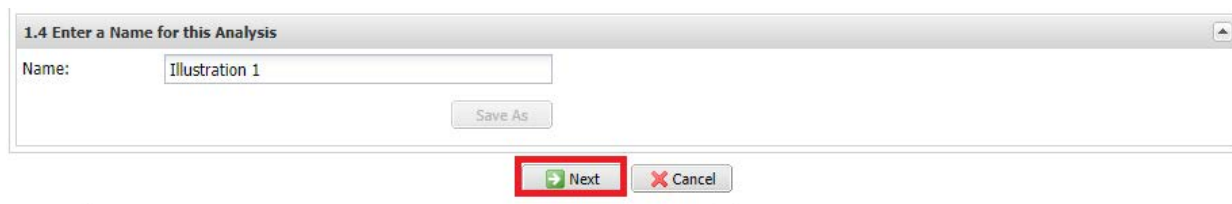
5. Selected Assets

Assets added from Section 1.2 show in the Selected Assets area, Section 1.3 for final verification.

Note: To remove assets mistakenly added, click "Delete" to the right of any assets.

6. Name the Hypothetical

The saved hypothetical can be named in Section 1.4. The default name for new hypotheticals starts with "Illustration 1" and increase with each new analysis created. Click "Next" to move to the Allocation tab.
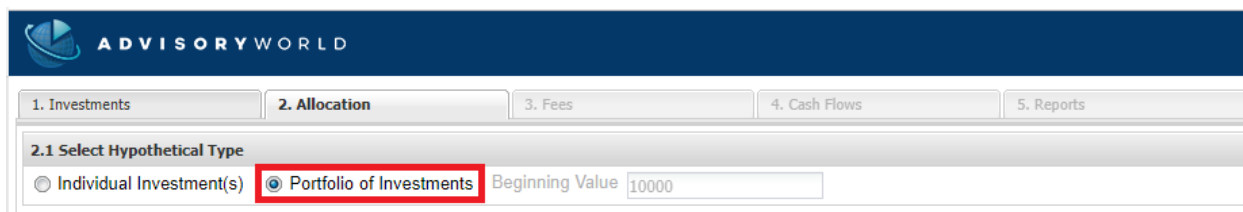
Note: Tabs at the top of the screen may also be used to navigate between sections, however, the information entered will not be automatically saved. Users will be asked to save information entered on the previous page when this option is chosen.

Tab 2: Allocations

The Allocations tab is used to enter the dollar or percentage amount associated with each previously entered asset in the Investments Tab.
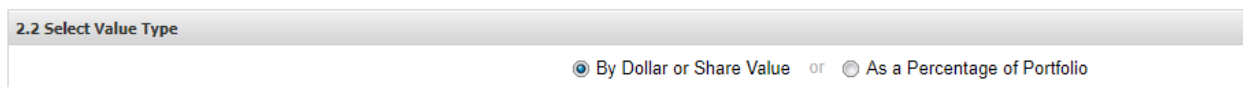
7. Hypothetical Type

To activate portfolio analytics, SCANalytics most common application, select "Portfolio of Investments" in Section 2.1. Select "Individual Investments" when analysis for each asset without portfolio-level analytics is warranted. See below for information on the Beginning Value box.

8. Allocation Value Type

In Section 2.2, the Hypothetical is allocated by Dollar or Percentage. The sample in this example is allocated by Dollar.

If "As a Percentage of Portfolio" is selected in Section 2.2, the *Beginning Value* text box in Section 2.1 will be made available for entry. All calculations will start from the dollar amount entered, with the default set at 10000 for all new hypotheticals.

◉ Portfolio of Investments   Beginning Value `10000`

> *Note: The Share Value option for entering allocations is no longer recommended for any hypothetical with assets that have split in the past, especially equities or mutual funds. In recent years, many splits have been in odd lots such as 7-to-1 or 5-to-1, creating extended decimals that when rounded can greatly impact hypothetical analysis.*

9. Allocation Value Entry

The hypothetical allocations are entered in Section 2.3. All assets chosen in the Investments tab should be listed in this section. Click on the cells located in the "Value" column then enter the desired value associated with the asset.

> *Program Note: Enter the value then click in the white area to the right or hit Enter before clicking the next field, the keyboard tab key will not move to the next allocation field.*

> *Important Note: Do not use commas or symbols ($) when entering information in these fields, this information will automatically populate.*

2.3 Enter Value

Symbol	Name ▲	Type	Value Type	Value
AAPL	APPLE INC	ST	Dollar Amount	$10,000.00
FB	FACEBOOK INC-A	ST	Dollar Amount	$10,000.00
SPY	SPDR S&P 500 ETF	ETF	Dollar Amount	0.00

|◀ ◀ | Page 1 | of 1 | ▶ ▶| | ⟳   Showing 1 - 3 of 3

10. Reinvesting Dividends or Capital Gains

Capital Gain and Dividend Reinvestment for mutual funds and ETFs is selected in Section 2.4.

> *Note: Due to recent data feed changes, reinvesting stock dividends is no longer available. All dividends and capital gains for equities are automatically reinvested.*

2.4 Reinvest Dividends and/or Capital Gains

Symbol	Name ▲	Type	Dividends	Capital Gains	
SPY	SPDR S&P 500 ETF	ETF	✓	✓	

|◀ ◀ | Page 1 | of 1 | ▶ ▶| | ⟳   Showing 1 - 1 of 1

11. Time Horizon

Time Horizon for the Hypothetical is chosen in Section 2.5. "Common Asset Inception" is the program default and options for 1, 3, 5, 10, 15, and 20 year time horizons are also available.

```
1 Year
3 Years
5 Years
10 Years
15 Years
20 Years
Common Asset Incept. 05/31/2012
Common Asset Share Class Incept. 05/31/2012
Common Asset Share Class & Idx Incept. 12/31/1990
Custom
Common Asset Incept. 05/31/2012                  ▾
```

a. **Common Asset Inception** is the first day that all assets in the portfolio were active at the same time.
b. **Common Asset Share Class Inception** is often the same date as Common Asset Inception Date, but not always. This date corresponds to the inception of the asset share class associated with the underlying benchmark for assets in the hypothetical.
c. **Common Asset Share Class & Index Inception** is the date in which all benchmarks for the portfolio were online. This date can often be several decades before the Common Asset Inception date.
d. A **Custom** time horizons can also be set for the hypothetical. The beginning date for the custom time horizon can be set for any date after the Common Asset Share Class & Index Inception date for the portfolio.

12. Rebalancing

Rebalancing intervals for the Hypothetical can be selected in Section 2.6. The system will default to no rebalancing. All rebalancing options bring hypothetical allocations back to the original amounts set in section 2.3 with the effective date range running concurrent to the Fees schedule set in Section 3.1 in the #3 Fees tab.

Note: Dollar value entries in Section 2.3 will be converted to percent of overall original portfolio during the rebalancing process.

```
None
Quarterly
Semi-Annually
Annually
None                  ▾
```

Tab 3: Fees

Portfolio fees, sales charges, and transaction fees can be set in the Fees tab. Portfolio fees can be asset-based or set at the portfolio level.

13. Apply Global Settings

To apply all fees equally and simultaneously to all assets click "Apply Global Settings" in the top left corner of the third tab.
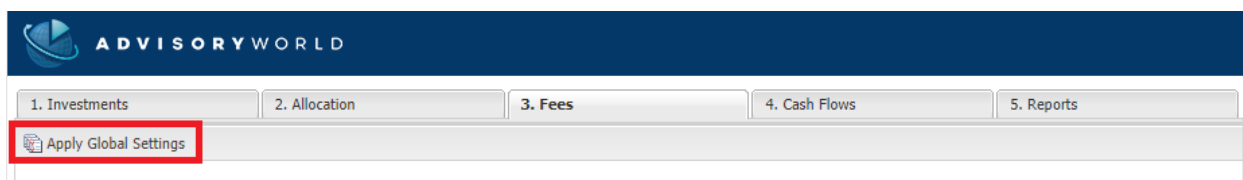
A pop-up will appear where Asset-Based Fees, Sales Charges and Transaction Fees applicable to all assets can be entered. See instructions below on wrap fee data entry methodology.

14. Fee Source and Schedule

Section 3.1 has two main parts. The first is the Payment Source and Rebalance & Fee Schedule.

    a. **Payment Source** is used to determine if the portfolio allocations for the hypothetical should be reduced to account for advisor fees.

        1. **Sale of Shares** will reduce the hypothetical's overall value in generated reports by the amount of the fee, sales charge or transaction fee.

        2. **Out-of-Pocket** will only show the overall fee amount in generated reports.

Note: Any fee amounts will only appear in generated reports. There is no field showing fee amounts in the program itself.

   b. **Rebalance & Fee Schedule** allows for selection of when any fees entered in Tab #3 or rebalancing options chosen in Section 2.6 should be applied. Reinvesting Capital Gains for all equities is automatic.

       1. **Inception Anniversary** is associated with the first day of the month following an asset's initial trading day, so all fees and rebalancing options would begin that date.

       2. The **Calendar** option would apply any fees and rebalancing options in a January 1, April 1, July 1, and October 1 quarterly breakdown.

15. Apply Fees Manually by Asset

The second part of Section 3.1 is where fees can be entered manually by asset, referred to as a Wrap Fee in SCANalytics. This area uses the Payment Source and Rebalance & Fee Schedule to calculate and apply fees on reports for the Hypothetical.

Symbol	Name ▲	Type	Wrap Fee	Wrap Fee Frequency	Apply Advisory Fees
AAPL	APPLE INC	ST	0.000%	Quarterly	☑

Note: Using this method requires data entry for each asset. For longer portfolios, please see related instructions on "Apply Global Settings" to input this information for all assets simultaneously.

   a. **Wrap Fee %** is entered in percent form and will be applied at the rate chosen in the Wrap Fee Frequency field.

       Note: For a 1.0% annual fee, billed quarterly, enter .25% for the Wrap Fee % and quarterly for the Wrap Fee Frequency.

   b. **Wrap Fee Frequency** will apply the Wrap Fee % for each repletion. Available options are similar to selections for rebalancing shown in section 2.6.

   c. **Apply Advisory Fees** is checked as a default for all assets. That fee, which is created in the *My Info* area, is applied in addition to any Wrap Fees entered in Section 3.1. For

instructions on creating the Apply Advisory Fees waterfall see separate instructions in the *My Info* area of this manual.

Note: If nothing has been entered in the Apply Advisory Fees waterfall in the My Info area of the program, leaving the "Apply Advisory Fees" box checked will have no material impact on generated reports unless the My Info waterfall is filled out later.

16. Sales Charges

Sales Charges can be entered in Section 3.2, when applicable, and are comprised of two potential charges: Front-End Load fees, and Redemption/CDSC or Back-End Load fees.

3.2 Sales Charges

Adjust Household Discounts

Symbol	Name ▲	Type	Front End Load	View	Custom Front End L...	Apply Redemption/CDSC	View
SPY	SPDR S&P 500 ETF	ETF	Standard	🤑		✓	🤑

a. The standard front-end load for all ETFs and Mutual Funds will be applied if present in the database as a default, but a custom load or no load can also be chosen.

Front End Load

Standard ▼
Standard
None
Custom

b. To view the standard front-end or CDSC/Redemption information present in the database select the 🤑 symbol. A pop-up for each asset will appear above the 🤑 icon when selected.

c. Front-End load information will look like this, when applicable, though many have no information, like the SPY ETF:

SPDR S&P 500 ETF Frond-End Sales Charges ☒

	Value	Sales Load

This example is for a common mutual fund ticker AGTHX, the Growth Fund of America:

American Funds Gro;A Frond-End Sales Charges ☒

Value	Sales Load
$0.00–$24,999.99	5.75%
$25,000.00–$49,999.99	5.00%
$50,000.00–$99,999.99	4.50%
$100,000.00–$249,999.99	3.50%
$250,000.00–$499,999.99	2.50%
$500,000.00–$749,999.99	2.00%
$750,000.00–$999,999.99	1.50%
$1,000,000.00 and above	0.00%

d. CDSC/Redemption fee information will look like this, when applicable:

e. To create a custom front-end load, select "Custom" in the Front End Load column, then double click on the "Custom Front End Load" icon to enter a custom load.

17. Transaction Fees

Enter any transaction fees in Section 3.3. Dollar cost per share or per trade are the available options. The default for all assets is "None."

Click "Next" or select the #4 Cash Flows tab to enter historical cash flows for the Hypothetical. If there are no Cash Flows to enter, click the #5 Reports tab and skip to page 10.

Tab 4: Cash Flows

Any portfolio deposit or withdrawal that has impacted the hypothetical in the past; whether one-time, recurring or both; can be entered in the Cash Flows tab. To enter future cash flows, use the Monte Carlo cash flows area in the Detailed Analytics report manual.

Note: Today's date cannot be entered into any cash flow field in SCANalytics as either a beginning or ending date.

18. Adding Historical Cashflows

To add a new deposit or withdrawal to the Hypothetical, select "Add New Cash Flow". Common cash flows can be a monthly deposit or withdrawal to show the accumulation of changes over time or a large

deposit due to an inheritance received several years ago. Other common cash flows might include a large withdrawal for a home remodel or medical bill earlier this year.

19. Cash Flow Description

Cash Flow Description is a free text box that displays seven (7) characters in the program and on generated reports.

20. Cash Flow Type

Cash flow type has several options the cash flow being entered. Deposits and withdrawals to the Hypothetical can be notated by the "Contribution" options by dollar, share or percentage. "Contribution by Dollar" is the program default.

21. Apply Cash Flows to Existing Allocations

Cash Flow application within the Hypothetical is next. The historical cash flow can be applied to a single asset in the portfolio or applied to the portfolio as a whole. "Portfolio Evenly Split" will divide the cash flow by the total number of assets before applying any related adjustments. "Portfolio Pro-Rata Split" will apply the Cash Flow in the same percentages allocated to each asset in Section 2.3.

22. Cash Flow Time Horizon

Enter the cash flow beginning and ending dates. For one-time Cash Flows, the beginning and ending dates should be the same.

Note: Tab #4 is only for historical cash flows and *today* is not an available option.

Calendar dates that are valid according to the Time Horizon set in Section 2.5 will appear in black for that month.

Calendar dates that are not available for entry, such as a future date, will appear as all gray.

23. Inflation

Apply Inflation is the last entry for a cash flow. "None" will be the default, but 'Historical CPI' or a custom amount may also be entered.

Once all Cash Flows have been entered click "Next" or the #5 Reports tab.

Tab 5: Reports

The SCANalytics Reports Tab contains more than just report options and parameters.

- **Enter Report Name and Tax Information**
  To enter Report Name, if different from the saved hypothetical name, and enter applicable tax information, see Step 24, Report Name below.

- **Enter Tax Information Only**
  To use the saved hypothetical name and enter Tax Information only, **CLICK HERE** to move forward to Step 25, Tax Information.

- **Generate Report(s)**
  To generate a report using the saved hypothetical name and without tax information, **CLICK HERE** to move forward to Report Types and Parameters.

24. Report Name

A Report Name specific to the current Hypothetical can be selected or input in the very top of the screen if the name saved in Section 1.4 is not sufficient for client-facing report output.

> *Note: Saving a Report Name will not impact the hypothetical name, allowing the same report to be applied multiple times. Common uses for this option include saved models or proposals.*

Selecting the black arrow will show a list of previously saved Hypothetical Report Names, or if a new Report Name needs to be created, click "New Client." "State of Residence," "Taxable Income" and other tax information for the Client can also be entered in this space, if applicable.

> *Note: Tax information does not need to be entered to create a Report Name.*

Once the new Report Name and applicable tax information has been entered, **CLICK HERE** to move forward to Report Types and Parameters.

25. Tax Information

Tax information is left blank and turned off in SCANalytics by default. If tax information is applicable to a Hypothetical it can be entered in the **Taxes** area in the middle of the #5 Reports tab; simply check the box next to "Apply Tax Rates" and the tax information fields appear active.

Taxes
Apply Tax Rates ☑

1. **Filing Status** can be "Single," "Married Filing Individually" or "Married Filing Joint".
   Filling Status:
   - Single
   - Married Filing Individually
   - Married Filing Joint

2. **Taxable income** should be entered without commas or dollar signs.

3. **State of Residence** can be selected from the pulldown which appears after selecting the black down arrow. A state must be chosen for state tax selections to apply.

4. **Account Type** can be either "Non-Qualified" or "Qualified." SCANalytics will default to "Non-Qualified" when "Apply Tax Rates" is selected.
   Account Type:
   - Non-Qualified
   - Qualified

5. **Payment Source** is the same as the Fees area in Section 3.1; either "Sales of Shares" or "Out-of-Pocket" may be chosen.
   Note: Sales of Shares will reduce portfolio amounts by the applicable taxes applied.

   Payment Source:
   - Out-of-Pocket
   - Sale of Shares
   - Out-of-Pocket

6. **Tax Rates** can be entered for the "Federal" and "State" levels for both Income and Capital Gains.

	Income	Capital Gains
Federal	0.00%	0.00%
State	1.00%	5

Once all applicable tax information has been entered and verified, move forward to Report Types and Parameters to select the report(s) to be generated.

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Report Types and Parameters

Once all information for the hypothetical has been entered, verified, and saved, any available SCANalytics report can be generated using tab #5. All SCANalytics reports are generated in PDF format. Multiple reports can be generated simultaneously and will appear in the same document.

26. Report Selection

There are five main reports available in SCANalytics, Fact Sheets for both individual assets and portfolio-as-a-whole, along with an option to add a semi-customizable Cover Page.

Note: See next page for more information on each SCANalytics Report Output Type.

Select Reports to be Included and Adjust Format		
Hypothetical Performance	Parameters	☐
HoldingScan	Parameters	☐
CompariScan	Parameters	☐
Detailed Analytics	Parameters	☐
Fact Sheets	Parameters	☐
Allocation Analysis	Parameters	☐
Cover Page	Parameters	☐

Note: All SCANalytics reports show a hypothetical back-testing of current allocations. Performance reports are not possible without cost basis and trading updates. SCANalytics report layout is static but several report types have sections which can be turned on or off, providing a minimal level customization of output. All SCANalytics reports are portrait format except the Allocation Analysis report which is generated in landscape format.

27. Report Generation

To generate a report in SCANalytics simply check the box to the right of each line. To select report output settings, click "Parameters." Multiple reports can be generated simultaneously but AdvisoryWorld does not recommend generating more than two different reports plus a Cover Page simultaneously. The final PDF report will save to the default browser download file location.

Note: Larger reports like the Detailed Analytics and Allocation Analysis report may take over one minute to generate. Combining them with more than one other report will often cause an error.

Once all report types and parameters have been selected, click "Build Reports" in the lower right corner.

Build Report

SCANalytics Report Types Overview

Below is a brief overview of each SCANalytics report type. More in-depth instructions for each report, its analytical focus, and its relevant parameters, will be available in the *SCANalytics Reports Manual,* to be published in late 2020.

Hypothetical Performance – The Hypothetical Performance report is designed to give a broad overview of the performance of a portfolio's current holdings over time. This report is well-suited for investors with nominal understanding of financial charts and concepts as well as those investors just starting their investment journey. Many graphs are larger in size with fewer items shown in the accompanying charts and analytics are kept to a minimum.

HoldingScan – The HoldingScan report is designed to show initial statistical analysis of a portfolio, a bird's eye view of the portfolio as a whole. Basic Market Portfolio Theory (MPT) statistics like Beta, Alpha, and Sharpe Ratio are introduced and compared to the portfolio's chosen benchmark(s). Allocation breakdowns, asset properties and the Top-10 holdings section show overall diversification of the portfolio. A risk vs return chart shows the interaction between returns and standard deviation to give a clearer picture of a portfolio's risk profile.

CompariScan – The CompariScan report is designed to show two HoldingScan reports, side-by-side, without direct comparison. Basic Market Portfolio Theory (MPT) statistics like Beta, Alpha, and Sharpe Ratio are introduced and can illustrate differences between the compared portfolios. Allocation breakdowns, asset properties and the Top-10 holdings section show overall diversification of each portfolio. A risk vs return chart shows the interaction between returns and standard deviation to give a clearer understanding of the risk profiles of the chosen portfolios.

Detailed Analytics – The Detailed Analytics report is designed to show an extensive analytical comparison of two portfolios. An in-depth side-by-side Market Portfolio Theory (MPT) Analysis of the two portfolios, accompanied by an wide array of MPT statistics like Sortino Ratio, Maximum Drawdown and R-squared show a portfolio's maximum possible return in relation to risk taken. A Monte Carlo analysis looks at past returns and standard deviation to show future possibilities.

Allocation Analysis – The Allocation Analysis report is designed to show an in-depth returns comparison between two portfolios following acceptance of proposed account allocation changes. Side-by-side allocation charts showing diversification breakdowns accompany basic Market Portfolio Theory (MPT) statistics like Beta, Alpha, and Sharpe Ratio to illustrate differences between the compared portfolios.

Fact Sheets – The Fact Sheet report is designed to show returns, metrics and analytics for individual assets over a period of time. AdvisoryWorld has two Fact Sheet versions, one showing assets in relation to the time horizon of a related Hypothetical portfolio and another version showing only information on a single asset since its inception. Included in the portfolio fact sheets is a one-page synopsis of the portfolio as a whole.