Return Simulator

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Learning Goals

- Understand the business problem that the Return Simulator addresses.
- Understand basic methodology used to backfill returns.
- Understand the information provided in the module and how it is applied throughout Aapryl.

Overview

- Newer managers lack the history required to be evaluated alongside managers that have longer histories.
- Aapryl's Return Simulator provides users with the ability to backfill performance data for managers with shorter histories.
- The methodology used in this module is applied in the other modules of Aapryl.

Review of Key Terms

- **Style Analysis:** Regression analysis that is performed within Aapryl to determine a manager's exposures to various factors.
- **Clone Portfolio**: A hypothetical portfolio designed to emulate the market exposure of a portfolio that is composed of the various factors that influence a manager's return.
- **Beta:** the return of a manager's clone portfolio which is the portion of a manager's return derived from the market.
- **Alpha:** The value add or excess return that a manager provides over the clone portfolio.

Overview of Methodology

- A style analysis is performed on the manager's existing performance to create a clone portfolio.
  - A minimum of 3 years of return history is required.
- The simulated, historic monthly returns are alculated by applying the clone portfolio's asset mix to each historic month's market returns.
- Each month's backfilled return is the return of the clone portfolio (the beta) adjusted for an expected excess return (alpha).

A View of Simulated Returns

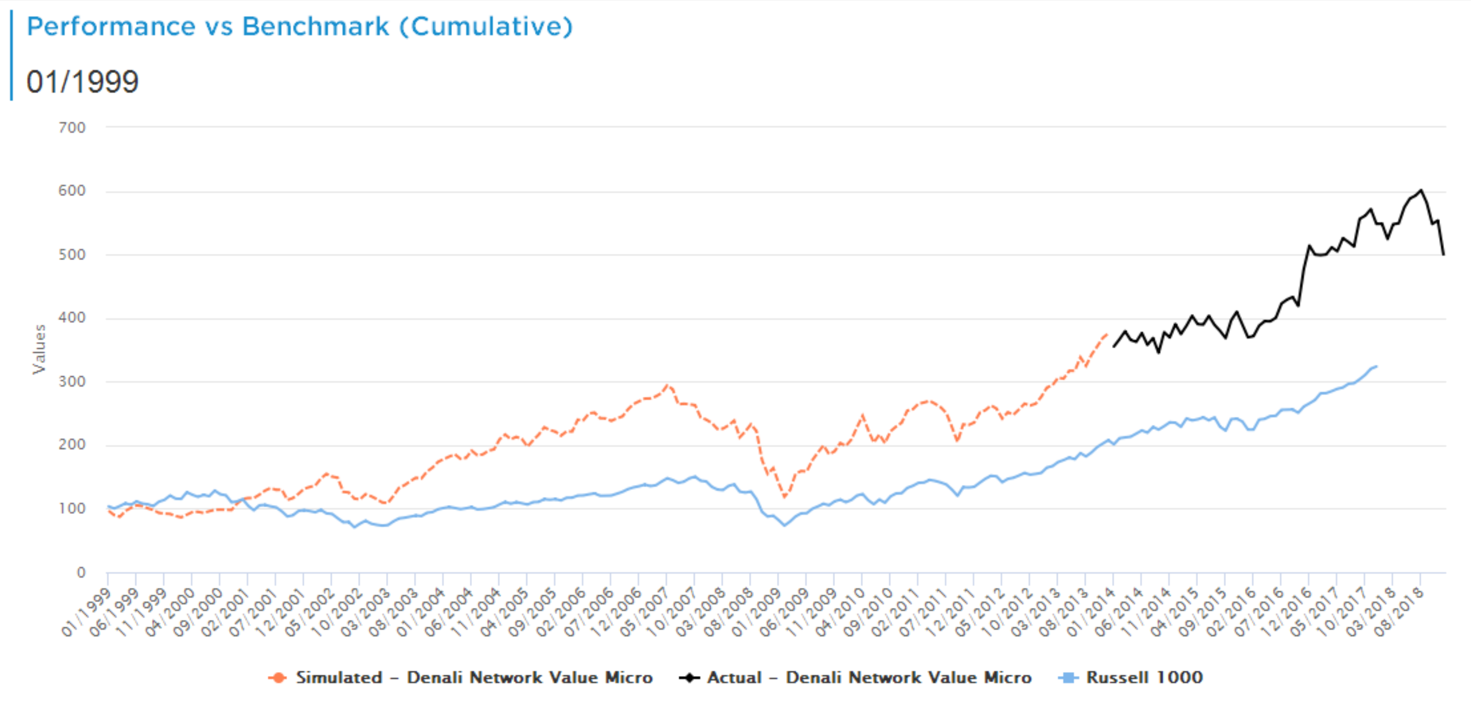
- The table shows the full history of the manager.
- The actual returns are in one column and the simulated returns are in another.

Return Series

ANALYSIS DATE	ACTUAL (4 YEARS 6 MONTHS)	SIMULATED (15 YEARS)
03/31/2014	3.41 %	
02/28/2014	3.21 %	
01/31/2014	-5.48 %	
12/31/2013		1.93 %
11/30/2013		3.80 %
10/31/2013		3.72 %

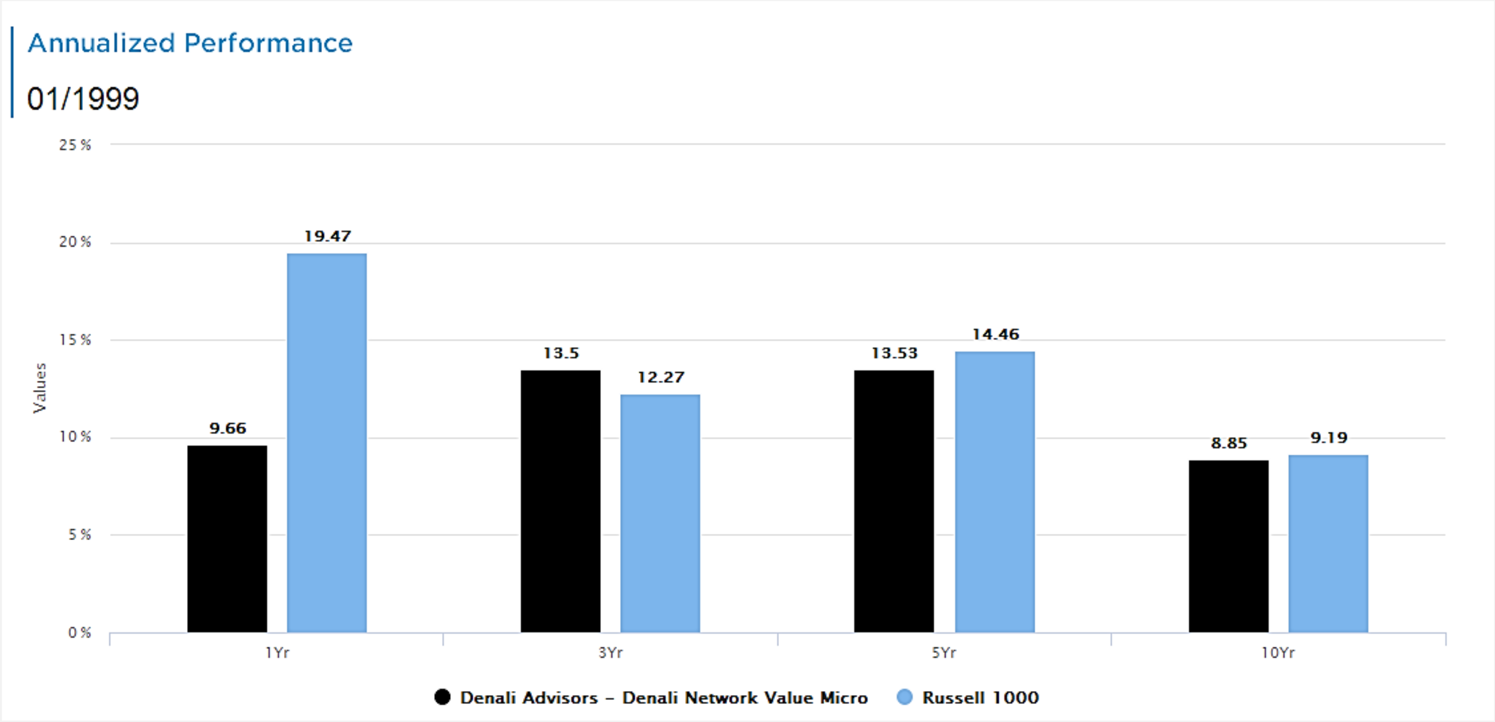
Growth of $100

- This charts the growth of $100 of the manager against the benchmark.
- The manager's return includes both the simulated and actual performance.
- They are distinguished by color so that users can see the portion of the return that has been simulated.



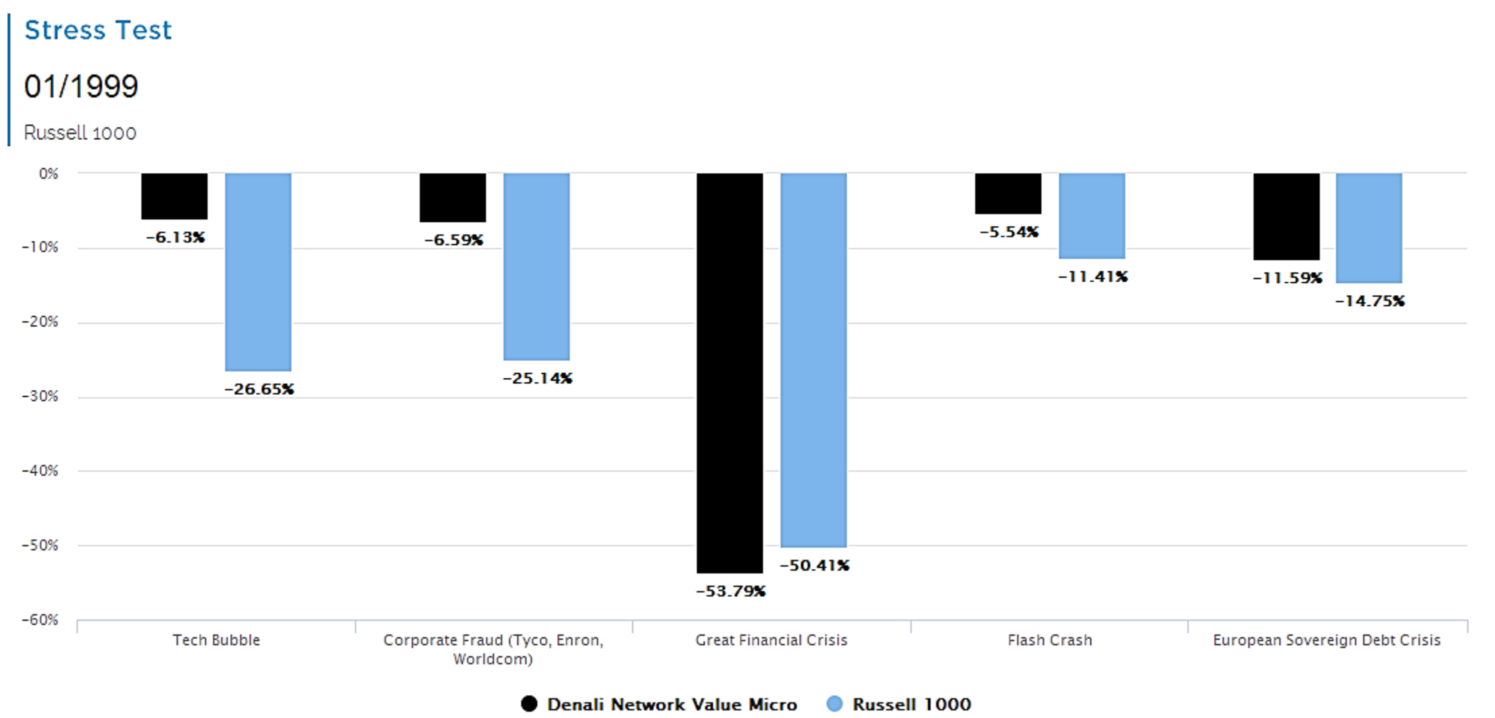
Annualized Performance

- This table shows the annualized performance for both the manager and the benchmark across commonly viewed time periods.
- The actual and simulated returns are combined to provide the longer term performance chart.



Aapryl's Stress Test

- This chart shows the hypothetical performance of the manager during user defined historic stress periods.
- Results use the simulated returns to calculate how a manager would have performed during the stress periods.



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