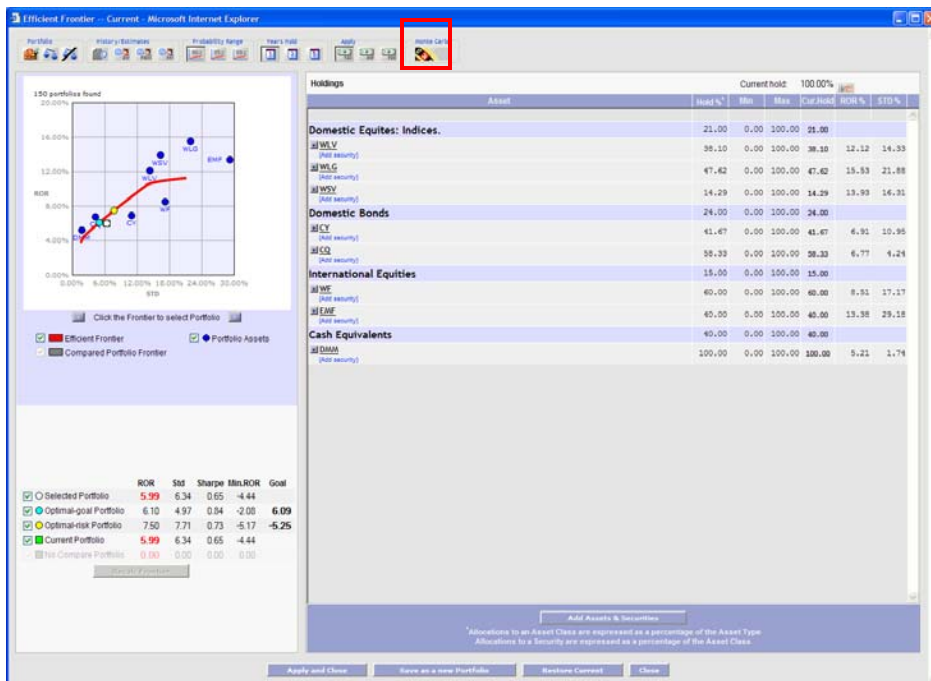
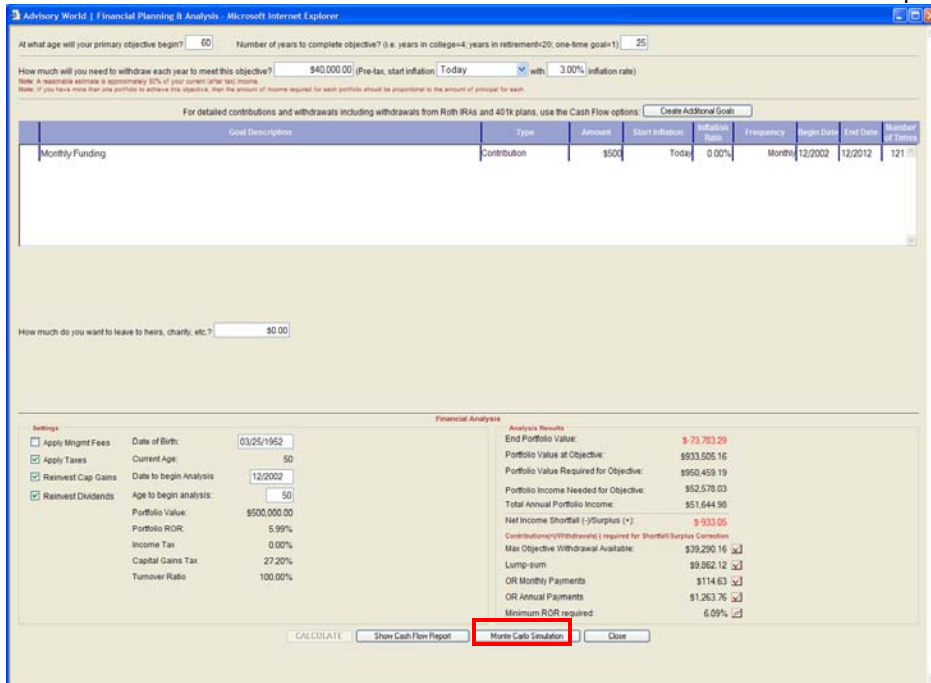


ICE Monte Carlo

The Monte Carlo Simulation module in the ICE application introduces variance to determine a probability of goal-based portfolio vitality.

Click on either the Monte Carlo Simulation button from the Cash flow and Plan Analysis screen or on the roulette wheel button at the top of the Efficient Frontier window to access the Monte Carlo Simulation report.



Press Continue

Report Parameters Specifying - Microsoft Internet Explorer

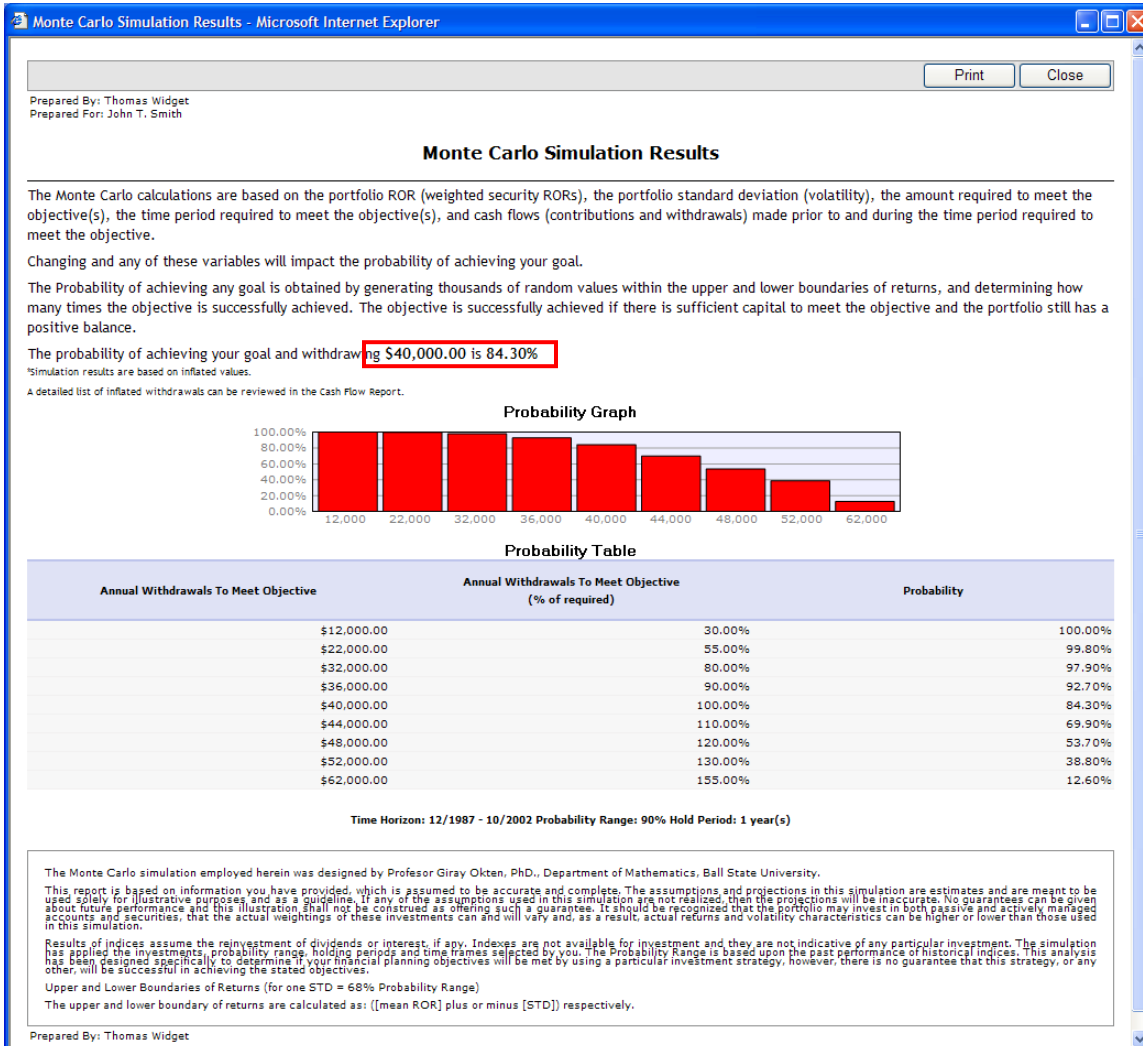
Please Specify Report Parameters

Parameters

Action	View & Print
E-mail address	john@smith.com
Comments	

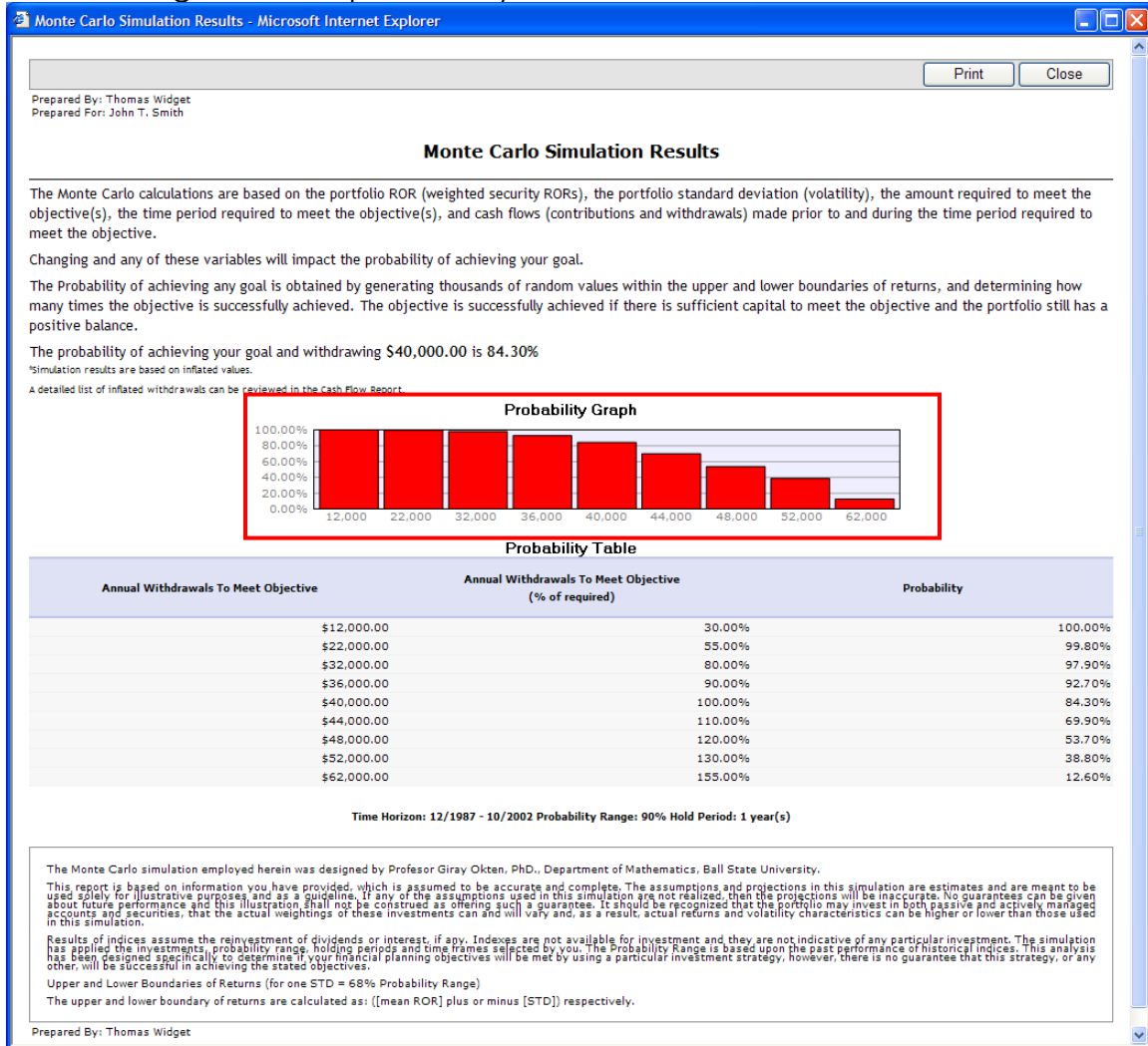
Note
Printed pages has header and footer (usually URL and date) according to the File->Page setup browser's settings.
To remove page header and footer click [here](#), select "Open this file from its current location" and answer "Yes" to its confirmation.
Note: Browser settings will be changed! You can restore them by **File->Page setup dialog**

The following Monte Carlo Simulation Results screen will pop-up. The first data to review is the actual probability of your *Target Main Goal* being achieved. This probability is based on the current portfolio value, historical Rate of Return, all contributions/withdrawals and **Variance**.



The Graph:

The probability graph plots various Main Goal annual dollar withdrawal amounts against their probability of achievement.



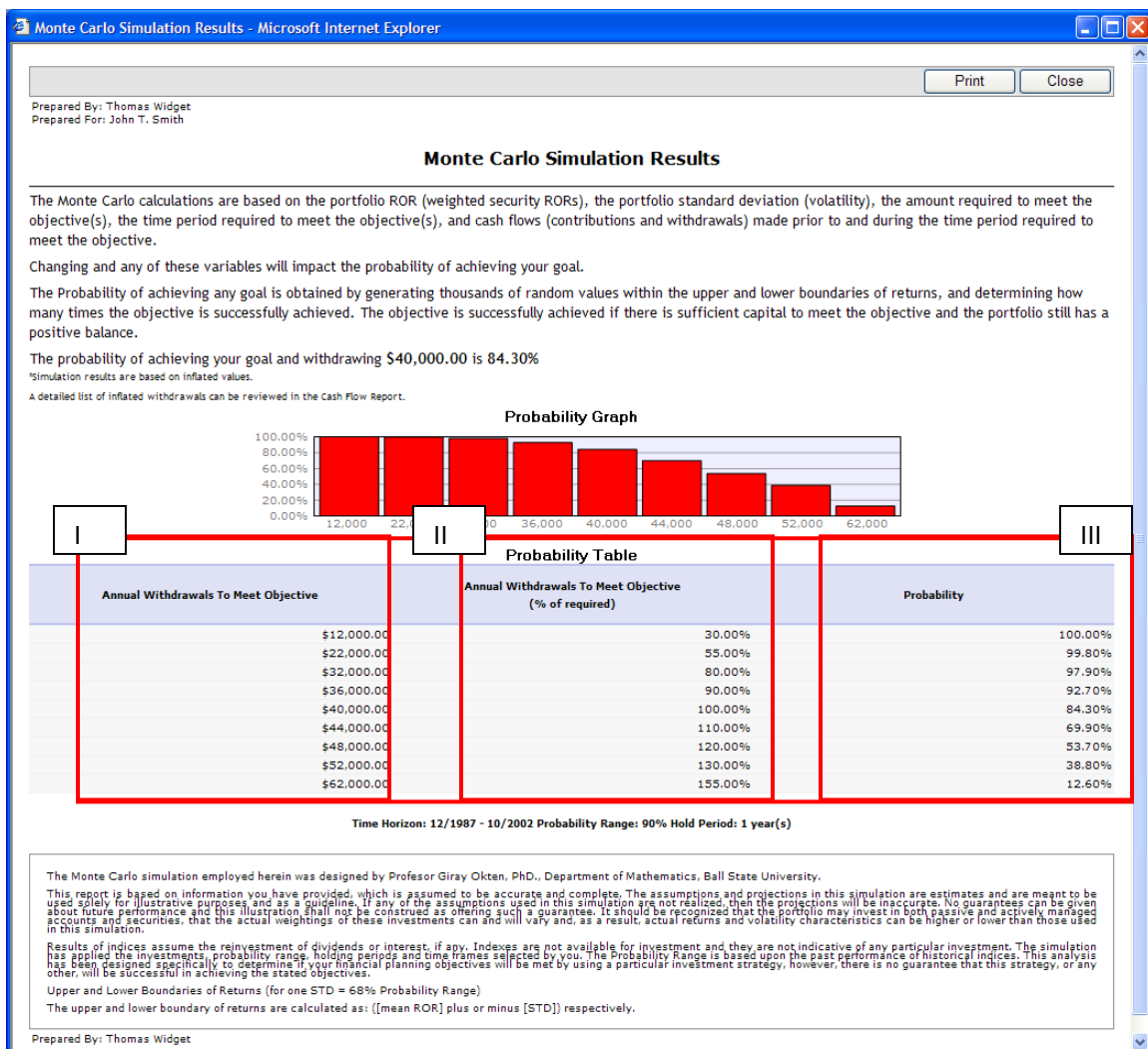
The Table:

The probability table consists of three columns.

I. Annual Withdrawals To Meet Objective=Various Main Goal dollar withdrawal amounts. These figures will include your Target Main Goal.

II. Annual Withdrawals To meet Objective (%of Required)= Take the Target Main Goal and divide it by the Annual Withdrawals To Meet Objective from the first column.

III. Probability=The % of simulated results that achieve the Annual Withdrawals To Meet Objective(column I).



Increase Probability

-Using Financial planning

I. Simply reducing the annual withdrawal amount of the Main Goal will increase probability of success as demonstrable in both the probability graph and table.

II. Your client can also improve their likelihood of success by contributing to the portfolio either monthly or annually. Try adding a contribution and see what that does to the Monte Carlo Simulation.

The screenshot displays the 'Financial Explorer' software interface. At the top, there are input fields for 'At what age will your primary objective begin?' (set to 60), 'How much will you need to withdraw each year to meet this objective?' (set to \$40,000.00), and 'How much do you want to leave to heirs, charity, etc.?' (set to \$0.00). A table below shows a 'Monthly Funding' goal with a contribution of \$500. The bottom section contains 'Settings' and 'Financial Analysis' results.

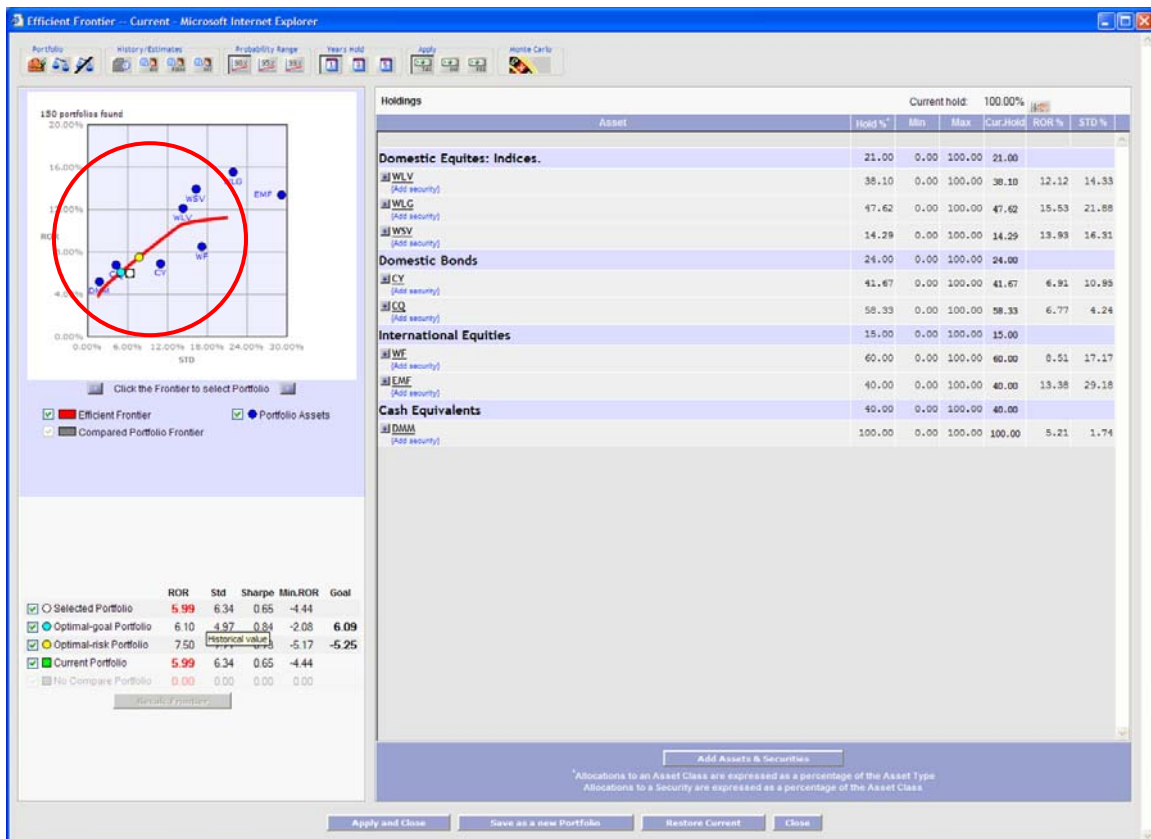
Goal Description	Type	Amount	Start	End	Frequency	Begin Date	End Date	Number of Times
Monthly Funding	Contribution	\$500	Today		Monthly	12/2002	12/2012	121

Settings	Financial Analysis
<input type="checkbox"/> Apply Mgmt Fees	End Portfolio Value: \$-73,783.29
<input checked="" type="checkbox"/> Apply Taxes	Portfolio Value at Objective: \$533,505.16
<input checked="" type="checkbox"/> Reinvest Cap Gains	Portfolio Value Required for Objective: \$950,459.19
<input checked="" type="checkbox"/> Reinvest Dividends	Portfolio Income Needed for Objective: \$52,578.03
Date of Birth: 03/25/1952	Total Annual Portfolio Income: \$51,644.98
Current Age: 50	Net Income Shortfall (-)/Surplus (+): \$-933.05
Date to begin Analysis: 12/2002	Contributions/Withdrawals required for Shortfall/Surplus Correction:
Age to begin analysis: 50	Max Objective Withdrawal Available: \$39,290.16
Portfolio Value: \$500,000.00	Lump-sum: \$9,862.12
Portfolio ROR: 5.99%	OR Monthly Payments: \$114.63
Income Tax: 0.00%	OR Annual Payments: \$1,263.76
Capital Gains Tax: 27.20%	Minimum ROR required: 6.09%
Turnover Ratio: 100.00%	

-Using Optimization

In general optimal portfolios tend to have a higher probability of achieving success than inefficient portfolios.

Simply click on different points on the efficient frontier (red line) and then run the Monte Carlo Simulation on that new portfolio's asset mix. You might find it interesting that many times portfolios with a lower Rate of Return (lower on the curve) show a higher likelihood of success. These results will help you, and your clients, understand the true value in diversification.



Please feel free to contact us if you have any questions about Monte Carlo Simulation or the **ICE** application .

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