

INVESTMENT RISK & ANALYTICAL SERVICES

PRIVATE OUTLOOK

Helping You Anticipate Your Private Equity Portfolio's Behavior

MODEL FUTURE CASH FLOW & ALLOCATION

Private equity investment professionals and fiduciaries now can take advantage of a reporting service to forecast portfolio cash flow dynamics and estimate future allocation ranges. Northern Trust and Sand Hill Econometrics, Inc. jointly developed the Private Outlook modeling tool to help you understand the probable range of your portfolio's behavior in a world of investment uncertainty.

Private Outlook gives you insight into your program's potential responses by applying historic private equity behavior to the unique structure of your existing or proposed portfolio. You can:

- **Observe** likely as well as optimistic and pessimistic levels of takedowns and distributions;
- **Anticipate** allocation changes by reviewing potential unrealized valuation levels;
- **Create** custom scenarios including fast fundings and slow distributions;
- **Determine** the probable impact on making future investments; and
- **Review** behaviors by setting expected cash flow and performance speeds by asset type.

STAY PREPARED, AVOID SURPRISES

Unlike other asset classes, private equity can challenge the asset allocation process and create unexpected cash flow events. Private Outlook lets you anticipate and plan for such events to help minimize the potential for denominator effect and liquidity crises. By understanding your portfolio's potential behavior in good markets and bad, you can stay prepared and avoid surprises.

PRUDENT DECISION MAKING

Using Private Outlook underscores your adherence to practices of prudence and diligence. Private Outlook can illustrate a range of possibilities within the context of historic behavior, encompassing a wide range of scenarios. Liquidity planning can become clearer and the difficult task of forecasting future partnership allocations can become easier.

AVOID GUESSWORK

Private Outlook helps you minimize guesswork by setting takedown, distribution and growth speeds based upon observed history.

- **Establish** a base scenario for all asset classes by using a median speed.
- **Test** the potential outer ranges of behavior by using faster or slower speeds.
- **Customize** by type to model effects of combinations of takedown, distribution and growth speeds to simulate various investing environments.

CONTINUED



NEAR- AND LONG-TERM MODELING

To help you better understand near- and long-term cash flow needs, Private Outlook offers a one-year analysis and five-year model.

One-Year Analysis

This proprietary model helps you estimate capital calls, using econometric modeling techniques that incorporate the impact of external factors and expected trends. You can:

- **Input** data including commitment, start date, paid-in to date and distributed to date;
- **Override** standard settings with specific estimates provided by the manager;
- **Include** expected new partnerships in the portfolio; and
- **Create** point, optimistic and pessimistic estimates of take-downs.

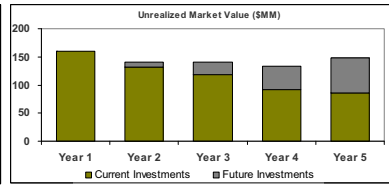
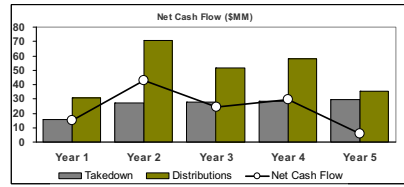
Five-Year Model

This model analyzes scenarios based upon a range of observed private equity behavior, allowing you to:

- **Input** data including commitment, start date, paid-in to date and distributed to date;
- **Select** a range of takedown, distribution and unrealized valuation growth speeds;
- **Model** by types of venture capital, buyout, distressed debt, fund of funds and real estate;
- **Include** and model expected partnerships; and
- **Create** reports of year-by-year estimates by type and total.

	Data Inputs for Model:				Parameter Selections Used in Model:			Model Estimates: Q1 2009 - Q1 2014		
	Number of Funds: Inactive	Active	Future	Used in Model	Takedown Pace	Distribution Pace	Returns Level	Takedown (\$MM)	Distributions (\$MM)	Multiple of Cost
Venture Capital	0	4	1	5	Median (50th %)	Median (50th %)	Median (50th %)	21.42	109.07	1.73
Buyout	5	11	2	13	Median (50th %)	Median (50th %)	Median (50th %)	39.01	75.95	1.65
Debt	0	0	0	0	Median (50th %)	Median (50th %)	Median (50th %)	-	-	-
Fund-of-Funds	0	0	0	0	Median (50th %)	Median (50th %)	Median (50th %)	-	-	-
Real Estate	0	4	1	5	Median (50th %)	Median (50th %)	Median (50th %)	68.47	61.32	1.24
Total Portfolio:	5	19	4	23				128.90	246.33	1.58

TOTAL PORTFOLIO (23 Funds):



Current Investments					Distributions (\$MM)					Unrealized Market Value (\$MM)				
2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1
15.74	19.52	13.13	6.83	3.83	30.78	70.63	51.72	54.17	27.46	159.62	132.45	117.87	92.22	85.78

Future Investments					Distributions (\$MM)					Unrealized Market Value (\$MM)				
2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1
0.00	7.98	14.53	21.40	25.94	0.00	0.00	0.05	3.55	7.96	0.00	7.98	22.46	41.79	62.08

Current Plus Future Investments					Distributions (\$MM)					Unrealized Market Value (\$MM)				
2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1	2010-Q1	2011-Q1	2012-Q1	2013-Q1	2014-Q1
15.74	27.50	27.66	28.24	29.77	30.78	70.63	51.77	57.72	35.43	159.62	140.43	140.32	134.01	147.86

REVIEW RESULTS

Observe the impacts of varying environments on takedown amounts and distribution levels to project near- and long-term cash needs and potential internal funding amounts.

- **Likely** asset levels help you understand probable changes in the value of your private equity portfolio.
- **Known** future commitments help you create “what if?” scenarios to forecast the commitments that might be required to maintain a target allocation, as well as the related impact on cash flows.

UNDERSTAND EFFECTS ON NEAR-TERM CALLS

Private Outlook’s unique approach helps you develop a more refined capital call estimate. To help you understand the internal and external influences driving your portfolio’s capital call behavior, our proprietary one-year analysis module integrates your portfolio’s data and observed historic takedown patterns with environmental factors including market, economic and total private equity

fundraising data. You also can incorporate your or your manager’s estimates of this year’s capital calls, as well as any partnership commitments you are considering within the year.

FOR MORE INFORMATION

To learn more about Northern Trust’s Private Outlook service, please contact your relationship manager.

Northern Trust has developed this model with Sand Hill Econometrics, Inc. This model is intended to help the investor understand scenarios of future portfolio behavior based upon observed historic behavior and market influences. Past performance is no guarantee of future results. Northern Trust and Sand Hill Econometrics cannot, and do not, guarantee future results based upon the model outputs nor does the model represent a recommendation to invest in any security.

IRS CIRCULAR 230 NOTICE: To the extent that this message or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law. For more information about this notice, see <http://www.northerntrust.com/circular230>.

