nuveen
A TIAA Company

Nuveen portfolio strategy group

Your partners for:

- Navigating the macro environment and cross-asset opportunities across public and private markets
- Advanced risk modeling and portfolio analytics to inform portfolio decisions
- Client engagement across a variety of investor audience

Portfolio construction guidance that spans public and private markets

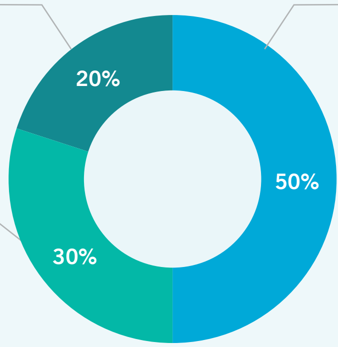
SAMPLE ANALYTICS

Long term allocations for a moderate risk tolerance, high-net-worth investor

Target allocation model

PRIVATE ASSETS	
Asset class	
Core real estate	5.0%
U.S. private credit	8.0%
U.S. private equity	7.0%
Total private assets	**20%**

FIXED INCOME	
Asset class	
Total U.S. bond market	9.0%
High yield corporate bonds	3.0%
Preferred securities	3.0%
U.S. leveraged loans	3.0%
Intermediate-term tax-exempt	9.0%
Tax-exempt high yield	3.0%
Total fixed income	**30%**



EQUITY	
Asset class	
U.S. large cap	24.0%
U.S. small cap	5.0%
Intl developed ex-U.S. market	10.0%
Emerging markets	5.0%
Global infrastructure	3.0%
REIT	3.0%
Total equity	**50%**

Tracking error vs. U.S. 60/40: ~3%

Source: Bank for International Settlements, December 2016.

Relative value across income sectors

A dashboard of the yield and spread of various income sectors, as well as how these spreads compare to their historical averages[1]

Based on standardized spread levels vs trailing 3, 5 and 10-year averages

As of 30 Sept 2024	U.S. agg bond	Securitized	IG corp	Pfd	EMD ($)	HY Corp	Lev loans	CLO (BB)	Taxable muni	AA muni	A muni	BBB muni	HY muni	Real estate
Yield to Worst	4.23	7.60	4.82	5.71	7.49	6.99	8.24	11.36	4.61	3.42	3.65	4.10	5.20	6.40
Spreads*	0.36	2.69	0.96	1.41	3.61	3.00	4.98	7.85	0.68	0.20	0.43	0.88	1.93	2.66
Net chg 1M	0.00	-0.02	-0.05	-0.23	-0.27	-0.02	0.03	0.03	0.00	0.00	0.00	0.00	0.01	0.17
Net chg 1Y	-0.16	-0.42	-0.35	-1.01	-0.69	-0.98	-0.53	-1.40	-0.16	-0.09	-0.10	-0.11	-0.15	1.10
3y avg spread	0.46	2.43	1.25	2.18	4.31	3.82	5.44	8.64	0.91	0.27	0.47	0.90	2.13	2.33
5y avg spread	0.47	2.34	1.26	2.12	4.16	4.03	5.45	8.62	1.01	0.24	0.44	0.91	2.28	3.05
10y avg spread	0.47	1.87	1.31	1.90	3.82	4.22	5.16	7.71	1.12	0.23	0.45	0.91	2.66	3.02
3y z-score	-1.16	0.36	-1.20	-1.73	-1.23	-1.06	-0.67	-0.73	-1.09	-0.92	-0.45	-0.12	-0.74	0.66
5y z-score	-0.88	0.41	-0.93	-1.20	-0.76	-0.89	-0.46	-0.46	-0.98	-0.52	-0.07	-0.14	-0.68	-0.38
10y z-score	-1.06	1.06	-1.23	-0.73	-0.31	-1.09	-0.19	0.08	-1.44	-0.48	-0.26	-0.16	-0.95	-0.48
Duration	6.13	4.40	8.44	4.63	6.11	2.85	0.25						6.53	

Spreads tighter than historic average — Spreads wider than historic average

Z-score = number of standard deviations between the current spread level and the historic average spread.

*Spreads for municipals are YTW vs. AAA 20-yr municipal yield; for CLO AA JPM CLO Total AA discount margin; for CLO BB JPM CLO Total BB discount margin; for leveraged loans and middle mkt loans discount margin (3-yr life); and OAS to U.S. Treasury for all other fixed income sectors.

**Option adjusted duration is shown, except for Leveraged Loans (effective duration is shown here).

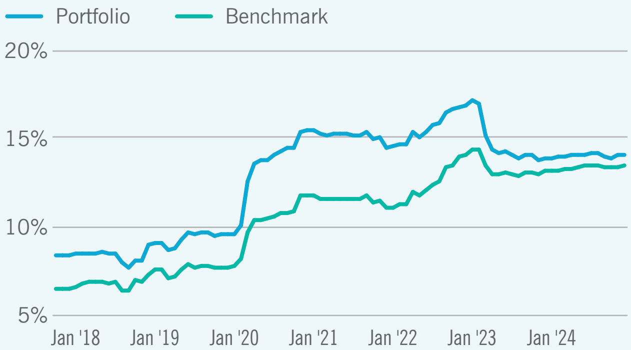
Analytics to inform portfolio decisions

Custom analytics for both public and private markets powered by Nuveen's portfolio review service, nSights. nSights models your portfolios of mutual funds, ETFs, SMAs and private markets, allowing you to fine-tune allocations to your client's risk and return objectives.

SAMPLE ANALYTICS

Historical risk analysis

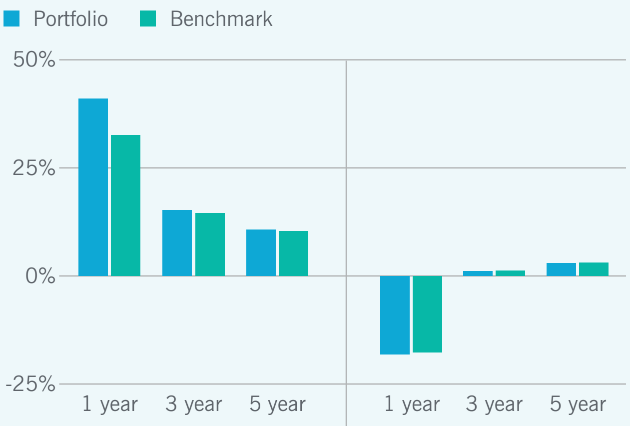
Historical 3 year standard deviation



Risk/return statistics

	3 year	5 year
Standard deviation	13.04%	14.10%
Sharpe ratio	0.15	0.45
Alpha	1.08%	0.12%
Beta	1.03	1.10
R-squared	0.98	0.97
Tracking error	1.83%	2.76%

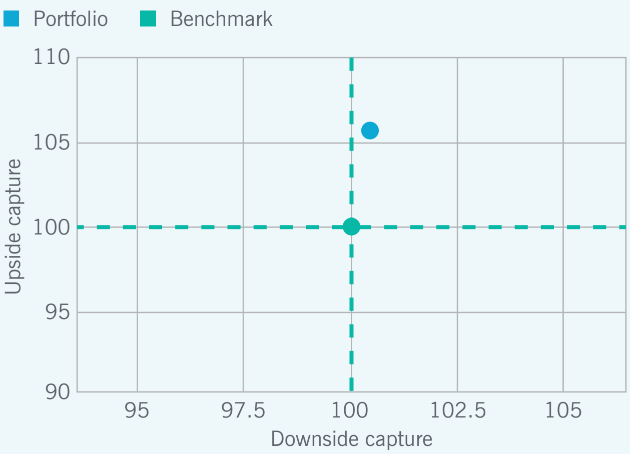
Best/worst returns



	Best returns periods		Worst returns periods	
	Portfolio	Benchmark	Portfolio	Benchmark
1 year	40.95	32.59	-18.12	-17.68
3 year	15.17	14.57	1.09	1.24
5 year	10.75	10.38	2.90	3.09

Sample performance is shown for illustrative and informational purposes only and does not reflect returns that any investor actually attained.

Upside/downside capture ratio (3 year)



	Portfolio	Benchmark
Upside capture	105.80	100.00
Downside capture	100.41	100.00

Benchmark: 60% SPDR MSCI Global Stock ETF (SPGM) + 40% Bloomberg Agg Index

Proposed investment products are provided by the financial professional or systematically selected based on the portfolio objectives/constraints provided by the financial professional, characteristics of the investment products in the initial portfolio and the characteristics of the Nuveen investment products available to the given financial professional/firm. If any of the holdings above are missing a ticker symbol, it may be an SMA, collective investment trust or index.

Meaningful analytics, insightful analysis

Our team brings together Nuveen's best thinking and partners with you to tackle the topics we know are important to you:

Perform an objective review of your asset allocation

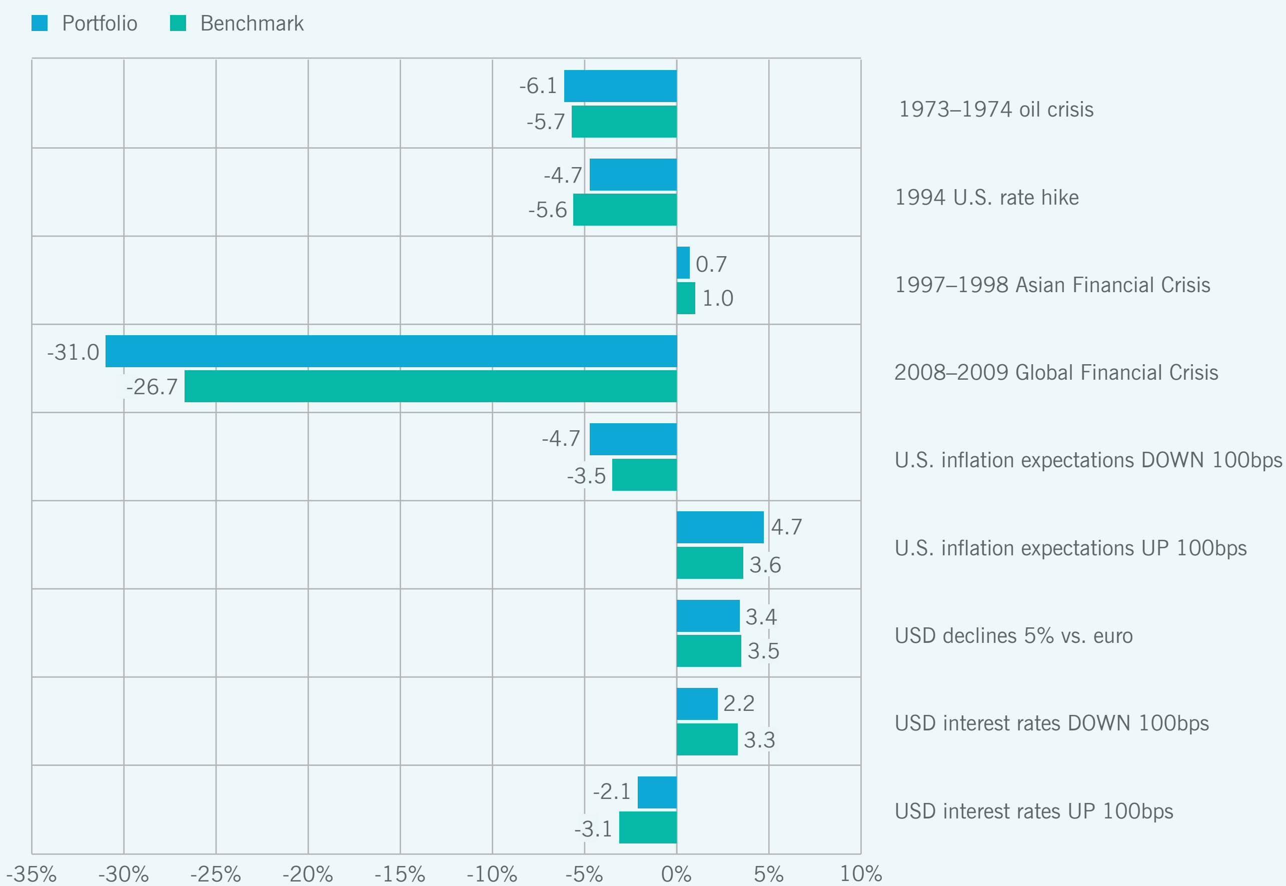
Align your portfolio to balance performance, risk, and liquidity needs

Talk through additional portfolio ideas

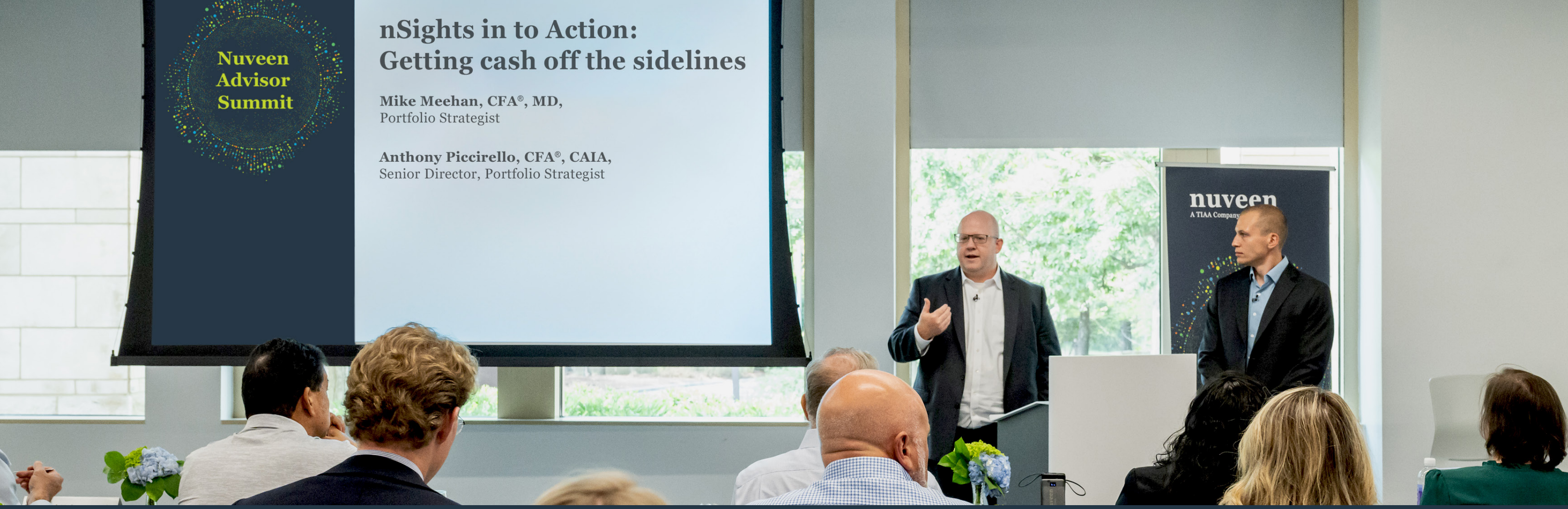
And at the center of every decision, is your client's goals.

SAMPLE ANALYTICS

Stress test scenarios



nSights analysis can support your efforts to better manage risk and stress test your portfolio. It can also help you understand the opportunities and implications of various portfolio decisions.



Client engagement

TEAM

A team of portfolio construction experts available to speak on themacro-economic outlook, financial markets and portfolio construction. We specialize in demystifying complex concepts to educate a wide variety of investor audiences.

PROCESS

Our process starts and ends with investor outcomes. We work to define investor priorities and desired outcomes such as growth, income and improved diversification. We pull together our understanding of your goals to proactively highlight concentrations, biases and risks in your portfolio and opportunities for enhancements.

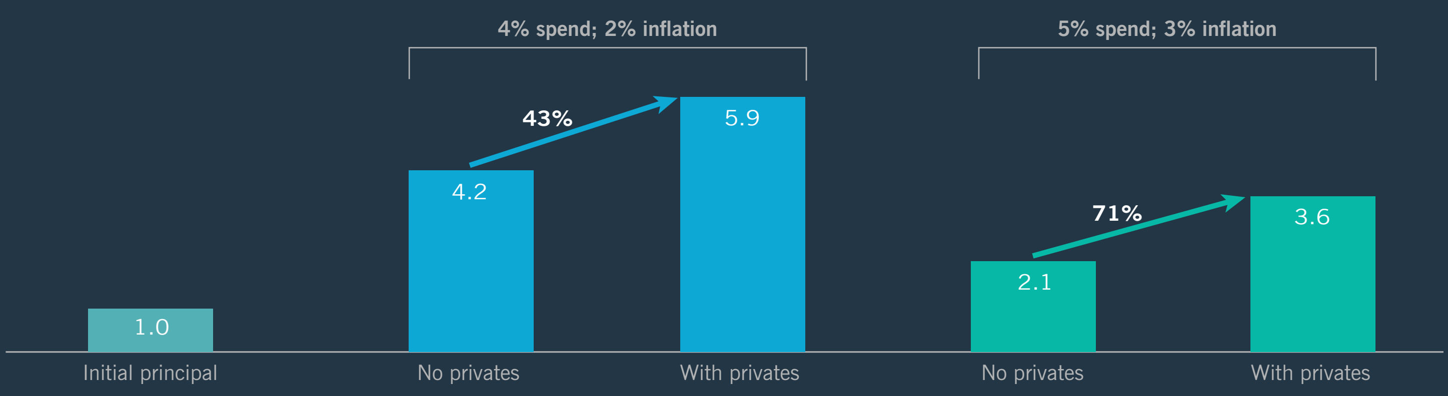
SAMPLE ANALYTICS

Private markets may be beneficial for financial plans

Potential return premiums in private markets can help power through clients who overspend, inflation settling at higher levels and lower forward returns on public equities.

FINANCIAL PLANNING ANALYSIS[2]

Asset value (millions USD)



For more information, please consult with your Nuveen Advisor Consultant or visit nuveen.com.

Endnotes

1 Source: Bloomberg, Thompson Reuters MMD as of 30 September 2024. **Representative indexes: U.S. Agg Bond:** Bloomberg Barclays U.S. Aggregate Total Return Value Unhedged USD Index; **Securitized:** Equal blend of ICE BofA AA-BBB US Fixed Rate CMBS Index, ICE BofA US Fixed Rate ABS Index and Bloomberg US MBS Total Return Index; **Investment Grade Corp:** Bloomberg Barclays Liquid Investment Grade Corp Total Return Unhedged USD Index; **Preferred securities:** ICE BofA US ALL Capital Securities Index (3/2012-4/2021), CE BofA Fixed Rate Preferred Securities Index (4/2011-2/2012); **Emerging Investment Grade Corp:** Bloomberg Barclays Liquid Investment Grade Corp Total Return Unhedged USD Index; markets debt: JPM EMBI Global Diversified Index; **High yield corporates:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Total Return Value Unhedged Index; **Leveraged loans:** Credit Suisse Leveraged Loan Index; **CLO BB:** JPM CLO Total BB Yield Index; Index inception 12.30.11; **Taxable municipals:** Bloomberg Barclays Municipal Index Taxable Bonds Total Return Index Value; **AA, A, and BBB Municipal:** Thompson Reuters MMD Scale; **High yield municipals:** Bloomberg Barclays High Yield Municipal Index; **Real estate:** Green street advisors, Nominal Cap Rate of Major Sectors, Spread = difference between Nominal Cap Rate and the U.S.10Y Treasury Yield. **Past performance is no guarantee of future results. It is not possible to invest directly in an index.**

2 Source: Nuveen Portfolio Strategy & Solutions; Bloomberg. Dollar values based on Expected Return of portfolios under two spending and inflation scenarios over 30 years. In both scenarios, the No Privates portfolio consists of 60% S&P 500 / 40% US Aggregate Bond Index while the With Privates portfolio consists of 50% S&P 500, 9% Private Equity, 5% Private Real Estate, 6% Private Credit, and 30% US Aggregate Bond Index. Expected Returns are computed by Nuveen. Portfolio analysis performed using Portfolio Visualizer.

Before investing, carefully consider fund investment objectives, risks, charges and expenses. For this and other information that should be read carefully, please request a prospectus or summary prospectus from your financial professional or Nuveen at 800.257.8787.

Nuveen's nSights reports are educational in nature, for financial professional use only and in response to a specific request. Nuveen does not provide legal or tax advice. Nuveen cannot guarantee or assure the ability to meet any of goals, objectives or that any hypothetical results will occur; reports do not reflect actual or future investment results. This analysis should not be considered investment advice or a recommendation for any product or service and should not serve as the sole or primary basis for making investment, financial, tax or legal decisions.

Portfolio allocation will be principally to funds managed by affiliates and to affiliated sub-advisers, which may present a conflict of interest.

Investing involves risk; principal loss is possible. If evaluating investment companies, please carefully consider a fund's investment objectives, risks, charges and expenses before investing. For this and other information that should be read carefully, please obtain a fund prospectus or summary prospectus from your Nuveen Advisor Consultant at 800.752.8700 or visit nuveen.com.

Nuveen Solutions comprises a team of investment professionals who are dual employees of Nuveen-affiliated investment advisers Nuveen Asset Management, LLC, and Teachers Advisors, LLC.

nuveen

A TIAA Company

4349123 WF2356750