Client Solutions Group

BlackRock.

US Public Pension Peer Risk Study

FY 2024 Allocations and Reporting

Sample Analysis

AIBM0625U/S-4565495-1/23

Important Disclosures

Source: BlackRock, Public Plan Database (PPD), and Pensions & Investments (P&I), May 2025. BlackRock does not verify the information reported by each plan or data provider.

Longer-term trend data:
Funded ratio, demographics, payments, contributions, assumed return, and realized return trends are sourced from PPD and are stated as reported. Data is based on availability and the cohort of plans included in trend data presented may change over time. BlackRock performs calculations using the PPD data to illustrate topical trends affecting public pensions through time. Allocation trend data includes approximately 93 plans with granular and consistent data from PPD. Actual plan allocations may differ based on reporting and proxying methodology and changes in exposure may represent modifications to reporting instead of an actual change in allocation. FY 2024 allocation data based on peer study coverage universe.

FY 2024 information used in peer comparisons:
Actuarial, return, and allocation data for each plan is sourced from public reports, data provided by plans, P&I and PPD. Details on the full peer universe is available on the "BlackRock's Public Pension Plan Coverage Universe" slide at the end of this presentation. In some instances, fund level modeled data, reported actuarial data, and returns data are reported at different entity levels based on information availability. The asset allocation of each plan is aligned to a defined asset allocation for comparability between plans and mapped to BlackRock's Capital Market Assumptions (CMA) to estimate the risk and return. Aggregate average metrics (peer group and all plans) is the simple average of the cohort.

Hypothetical Expected Return and Stress Testing Returns:
Expected returns are based upon BlackRock's March 2025 Capital Market Assumptions (CMA). Stress Test Returns are based upon BlackRock Solutions Aladdin risk model.
There is no guarantee that results of BlackRock's CMA or Aladdin risk model will be achieved and all returns could be significantly higher or lower than those shown. **All hypothetical results are not a guarantee of future returns.** Hypothetical returns are shown net of fees and expenses and include reinvestment of dividends, capital gains, and interest. The results shown are for illustrative discussion purposes only and no representation is being made that any account, product or strategy will achieve results shown. All hypothetical returns deduct advisory level and underlying asset class level fees and expenses. The advisory level model fee of 0.05% represents the highest advisory fee charged for the institutional client type. **Please read Appendix slides entitled Capital Markets Modeling Assumption (CMA) for table listing the underlying fees applied for each underlying asset class.**

Risk modeling uses a 84% confidence interval and 294 constant weighted monthly observations. Stress scenarios are instantaneous and fees are divided by 365 and deducted from the modeled scenario output. Stress scenario results do not represent any account, product or strategy and there is no guarantee that a proxy or portfolio will achieve results similar to those shown. The historical scenarios simulate each portfolio shown through hypothetical large market shocks and geopolitical stresses, with implied shocks. Scenario analysis is performed by parametrically shocking the underlying risk factor exposures of the portfolios by a set of instantaneous changes to derive the resulting hypothetical returns. The returns in the scenarios are expressed as a hypothetical percentage change in value if those shocks were to be realized and are based on criteria that have been applied retroactively with the benefit of hindsight and therefore cannot account for all financial risk that may affect actual performance.

Hypothetical Expected Risk
BlackRock, as of May 2025. Ex-ante risk is defined as annual expected volatility and is calculated using data derived from portfolio holdings, using the Aladdin portfolio risk model. This proprietary multi-factor model can be applied across multiple asset classes to analyze the impact of different characteristics of securities on their behaviors in the market place. In analyzing risk factors, the Aladdin portfolio risk model attempts to capture and monitor these attributes that can influence the risk/return behavior of a particular security/asset. Risk: Monthly Constant Weighted (MTC model) with 294 monthly observations; 1 standard deviation; 1yr horizon.

Read the Macro Factors Glossary, CMA disclosures, Asset Class Mapping, Stress testing disclosures and scenario definitions, and other information in the Appendix.

What
is the US Public Pension Peer Risk Study

Industry thought leadership
Our annual study provides a holistic overview of the pension investment landscape, including asset allocation, expected returns, risk factor decomposition, and stress testing

Who
is included in the analysis

Coverage
Our analysis covers over 145 plans ranging in size from $458M to $539B; peer groups are selected based on AUM, funded ratio, location, as well as other factors

Where
is the data sourced from

Sourcing
Plan data is sourced from public reports, data provided by plans, Pensions & Investments (P&I) and the Public Plans Database (PPD); PPD data is also leveraged for trend analysis which covers a different cohort of plans

How
is the analysis compiled

Capital market assumptions (CMAs)
Asset allocation data is mapped to an asset class represented by an index/proxy with an associated expected risk and return using the Aladdin® platform and our 10yr CMAs (May ’25)

When
is the data as of

Latest annual reports
While most peer data is as of June 2024, some plans report actuarial, return, or holdings data on another date. Refer to “Peer Group Summary” for the reporting dates of each plan

Important Info

Source: BlackRock, Pensions & Investments (P&I), Public Plan Data (PPD), May 2025. Plan data is sourced from fiscal year end Annual Reports as of 2024. There is no guarantee that the Capital Market Assumptions will be achieved, and actual returns could be significantly higher or lower than those shown. **Please refer to the “Capital Market and Modeling Assumptions” and “Asset Class Mapping” slides in the appendix for more information.** All aggregate average metrics (peer group and all plans) is the simple average of the cohort.

BlackRock's Public Pension Plan Coverage Universe

Our coverage universe includes 145 plans with total assets over $5.4 trillion; average plan size is $37.3bn and ranges from $458 million to $539 billion

Plans in Scope

Alameda County Empl Ret Assoc
Alaska Rtrmt Mgmt Board
Arkansas PERS
Arkansas Teachers Rtrmt Sys
Austin Police Retirement System
AZ Public Safety
AZ State Ret Sys
Boston Rtrmt Sys
CA Public Empl Rtrmt Sys
CA State Tchrs Ret Sys
Chicago Teachers Pension Fund
City of Ann Arbor Empl Ret Sys
City of Atlanta Employees PF
City of Atlanta Firefighters PF
City of Atlanta Police Officers PF
City of Austin ERS
City of Baltimore Fire & Police
City of Dallas Empl Rtrmt Fund
City of El Paso Employees Ret Trust
City of Fresno Ret Sys
City of Jacksonville ERS
City of LA Dept of Fire & Police
City of Milwaukee ERS
City of San Jose Police & Fire Dept Ret Plan
City of Tallahassee Ret Sys
Commonwealth of PA ERS
Contra Costa Cnty ERA
Cook Cnty Annuity & Benefit
County Employees' Ret Fund of Missouri
CT Ret Plans & Trusts
Dallas Police & Fire Pension Sys
DC Rtrmt Board
El Paso Fire & Police Pension Fund
ERS of Rhode Island
ERS of Texas
ERS of the State of Hawaii
Fairfax Cnty - Employees
Fairfax Cnty - Police
Fairfax Cnty - Uniformed
Firefighters' Ret Sys of Louisiana
Florida Ret Sys
Fort Worth Employees' Retirement Fund
Fresno Cnty ERA
Grand Rapids General Ret Sys
Grand Rapids Police & Fire Ret Sys
Hartford Municipal Employees Ret Fund
Houston Firefighters Relief & Ret Fund
Houston Municipal EPS
Houston Police Officers Pension Sys
Illinois Muni Rtrmt Fund
Illinois St Uni Rtrmt Sys
Illinois State Board of Inv
Imperial County Empl Ret System
Indiana Public Rtrmt System
Iowa Municipal Fire & Police Ret Sys
Iowa PERS
Kansas PERS
Kentucky County Employees Ret Sys
Kentucky Rtrmt Sys
Kern County Empl Ret Assoc
LA City Empl Ret Sys
LA Cnty ERA
LA Water & Power ERP
Louisiana Empl Ret Sys
Louisiana School Empl Ret Sys
Maine Public Empl Ret Sys
Marin County Empl Ret Assoc
Maryland St Rtrmt & Pension Sys
Massachusetts PRIM
Mendocino County ERA
Merced County Employees Ret Assoc
Miami Beach Fire & Police Pension Fund
Milwaukee County ERS
Minnesota State Board of Inv
Mississippi PERS
MO Local Gov Empl Ret Sys
MO State Empl Ret Sys
Montana Board of Investments
Montgomery Cnty Empl Ret Sys
Montgomery Cnty Public Schools Ret Sys
Muni Empl Ret Sys of Michigan
Nebraska Public Employees Ret Sys
New Hampshire Rtrmt Sys
New Mexico Educational Rtrmt Board
New York City Board of Ed
New York City ERS
New York City Fire Dept
New York City Police
New York City TRS
NJ Division of Investment
North Carolina Ret Sys
North Dakota State Inv Board
NYS Common Ret Fund
NYS Tchrs' Ret Sys
Ohio PERS
Ohio Police & Fire Pension
Oklahoma Muni Rtrmt Fund
Oklahoma PERS
Orange Cnty ERS
Oregon Public ERF
PA Public School Empl Ret Sys
Pennsylvania Municipal Ret Sys
PERS of Nevada
Philadelphia PERS
Phoenix Employees Ret Sys
Public Empl Ret Assoc of CO
Public Empl Ret Sys of Idaho
Public ERA of New Mexico
Public School & Ed ERS of MO
Ret Sys of AL
Sacramento Cnty ERS
San Bernardino Cnty ERA
San Diego City ERS
San Diego Cnty ERA
San Joaquin County Empl Ret Assoc
San Jose Federated City ERS
San Luis Obispo CPT
San Mateo Cnty ERA
Santa Barbara Cnty ERS
School ERS of Ohio
Seattle City Employees' Ret Sys
SF Empl Ret Sys
Sonoma County Empl Ret Assoc
South Carolina Ret Sys
South Dakota Inv Council
Stanislaus County Empl Ret Assoc
State of Michigan Rtrmt Sys
State of Wisconsin Inv Board
State Tchrs Ret Sys of Ohio
Tchrs Ret Sys of GA
Tchrs Ret Sys of Kentucky
Tchrs Rtrmt Sys of Illinois
Tchrs Rtrmt Sys of Louisiana
Tchrs Rtrmt Sys of Oklahoma
Teacher Ret Sys of Texas
Texas County & District RS
Texas Muni Rtrmt Sys
TN Consolidated Ret Sys
Tulare Cnty Empl Rtmrt Assoc
Ventura County Empl Ret Assoc
Vermont State Ret Sys
Virginia Ret Sys
Washington St Inv Board
Weld County Ret Plan
WV Inv Mgmt Board

Source: BlackRock, Pensions & Investments (P&I) as of May 2025.

Peer Group Summary

Below is an illustrative peer group. Public plans can customize the peer group, with many selecting peers based on size and funded ratio.

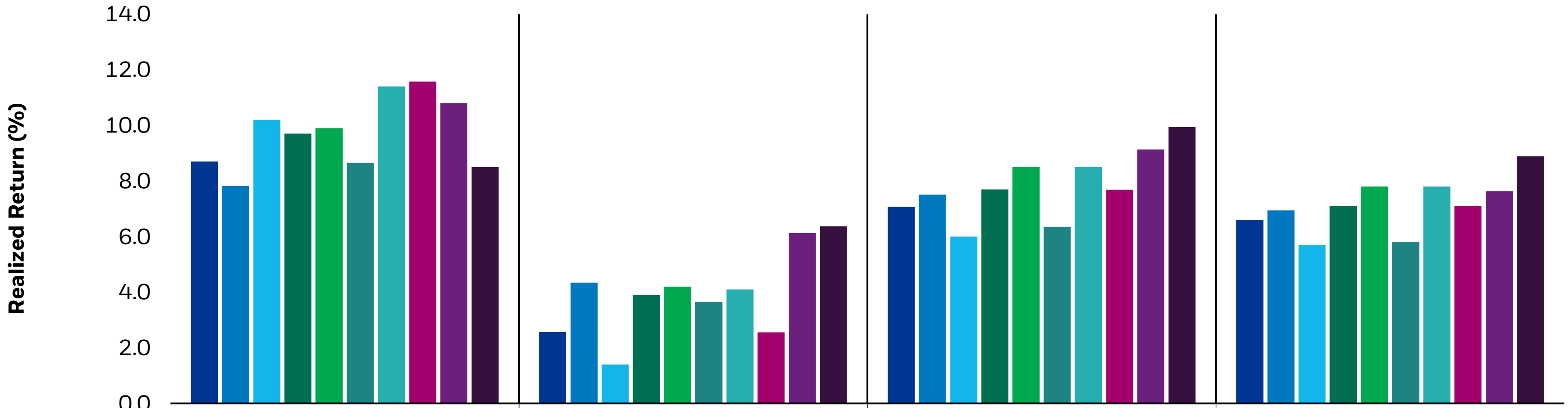
Plan Information		Modeled Data	Actuarial & Participant Information					Reported Dates		
Plan Name	**Label**	**Cash & Inv ($m)**	**Funded Ratio (%)**	**Total Participants**	**Active (%)**	**Inactive (%)**	**Retired (%)**	**Returns Data**	**Actuarial Data**	**Holdings Data**
Modeled Public Pension Universe	**All Plans**	5,406,869	77.7%	30,643,313	41%	24%	34%			
Peer Average	**Peer Avg**	53,262	77.9%	253,974	46%	16%	37%			
Plan A	**Plan A**	**23,074**	**73.4%**	**61,384**	**44%**	**19%**	**37%**	**Jun 2024**	**Jun 2024**	**Jun 2024**
Plan B	Plan B	5,882	76.7%	30,111	34%	20%	46%	Jun 2024	Dec 2023	Jun 2024
Plan C	Plan C	3,391	62.1%	20,584	54%	8%	38%	Jun 2024	Dec 2023	Jun 2024
Plan D	Plan D	27,300	74.0%	346,341	44%	22%	33%	Jun 2024	Dec 2023	Jun 2024
Plan E	Plan E	105,256	65.0%	386,508	52%	11%	38%	Jun 2024	Dec 2023	Jun 2024
Plan F	Plan F	17,502	67.2%	125,914	40%	24%	37%	Jun 2024	Jun 2024	Jun 2024
Plan G	Plan G	143,643	98.6%	454,804	58%	2%	40%	Jun 2024	Jun 2023	Jun 2024
Plan H	Plan H	750	94.3%	7,581	51%	9%	40%	Jun 2024	Jun 2024	Jun 2024
Plan I	Plan I	39,102	72.0%	437,739	33%	38%	29%	Jun 2024	Aug 2024	Jun 2024
Plan J	Plan J	166,717	96.2%	668,777	54%	11%	35%	Jun 2024	Jun 2023	Jun 2024

Source: BlackRock, Pensions & Investments (P&I), Public Plan Data (PPD), June 2024.
For more details on the full peer universe, see "BlackRock's Public Pension Plan Coverage Universe" at the end of this presentation. Returns data refers to the realized return quoted later in this presentation; actuarial data includes the actuarial assets, liabilities, funded ratio, and assumed return. In some instances, fund level modeled data, reported actuarial data, and returns data are reported at different entity levels based on information availability.

Broadening Horizons

Reported investment returns over different periods of measurement

1, 3, 5, and 10yr Annualized Realized Returns (as reported)



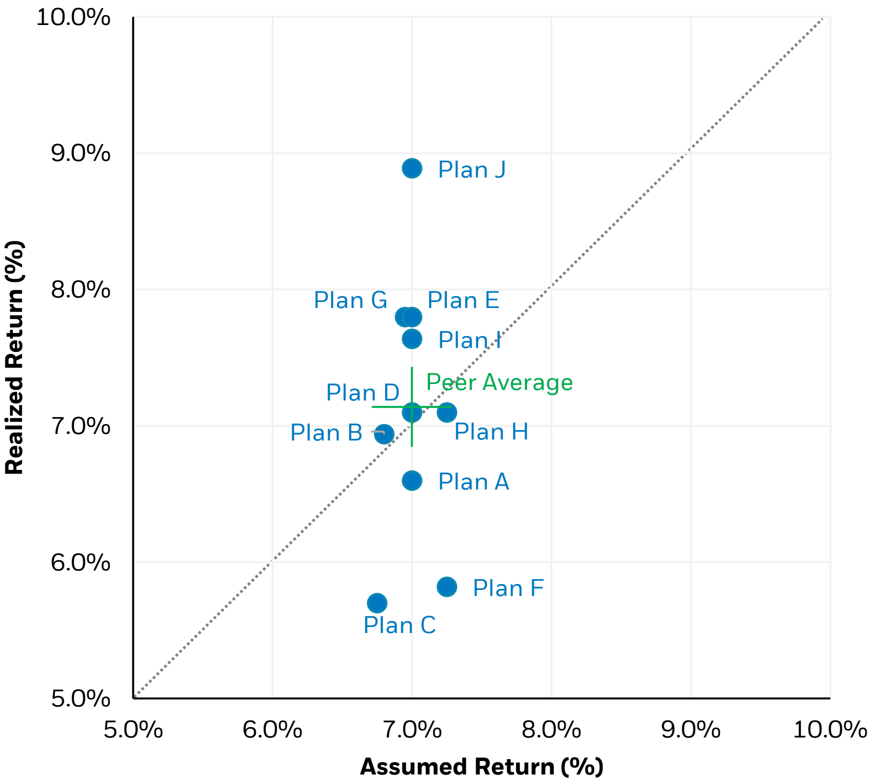
	1yr	3yr	5yr	10yr
Plan A (Jun)	8.70	2.57	7.08	6.60
Plan B (Jun)	7.82	4.35	7.51	6.94
Plan C (Jun)	10.20	1.40	6.00	5.70
Plan D (Jun)	9.70	3.90	7.70	7.10
Plan E (Jun)	9.90	4.20	8.50	7.80
Plan F (Jun)	8.66	3.65	6.35	5.82
Plan G (Jun)	11.40	4.10	8.50	7.80
Plan H (Jun)	11.58	2.56	7.69	7.10
Plan I (Jun)	10.80	6.13	9.13	7.64
Plan J (Jun)	8.50	6.37	9.94	8.89

Source: BlackRock, PPD, P&I as of May 2025. See the slide titled "Peer Group Summary" at the beginning of this presentation for reporting date of each plan. Realized returns are stated as reported, based on availability, and are not a guarantee of future results. Read additional disclosures on page 2.

The Realization of Assumptions

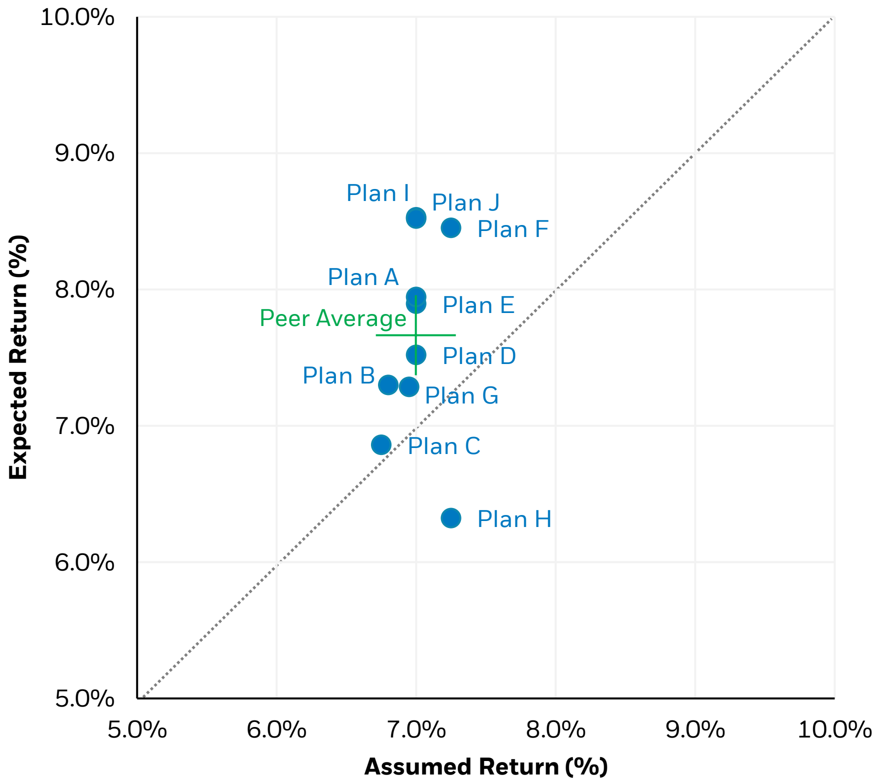
Plan A's 10yr annualized realized return of 6.60% fell short of current assumed return (7.00%) by 40bps; looking forward, we estimate Plan A's return over the next 10 years will be 7.95%, 95bps above its assumed return target

10 Year Annualized Realized Return vs. Assumed Return



Return Information	Peer Average	vs. Avg	All Plans	% Rank
Assumed Return	7.0%	0.0%	6.9%	49
Realized Return	7.1%	-0.5%	6.9%	30

10 Year Annualized Expected Return vs. Assumed Return



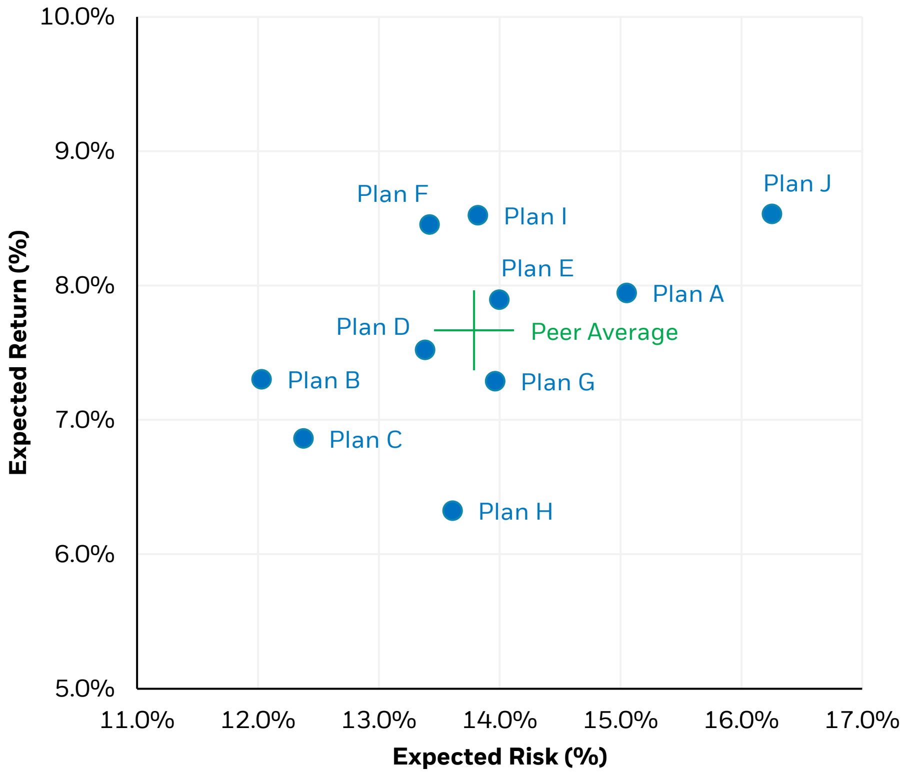
Return Information	Peer Average	vs. Avg	All Plans	% Rank
Assumed Return	7.0%	0.0%	6.9%	49
Expected Return	7.7%	0.3%	7.8%	63

Source: BlackRock, PPD, P&I as of May 2025. Realized/assumed returns (LHS) are stated as reported. **Actual and hypothetical results are not a guarantee of future results.** Realized/assumed returns (LHS) are stated as reported. Hypothetical results (RHS) are net of fees and expenses. The returns shown are for illustrative purposes only; no representation is being made that the results shown will be achieved. The hypothetical results are based on criteria applied retroactively with the benefit of hindsight and knowledge of factors that may affect actual performance. Interpretation of any results should take into consideration inherent limitations and risks of the model and assumptions used. Hypothetical results may be higher or lower than shown. **Read slide 2 and the Appendix for details.**

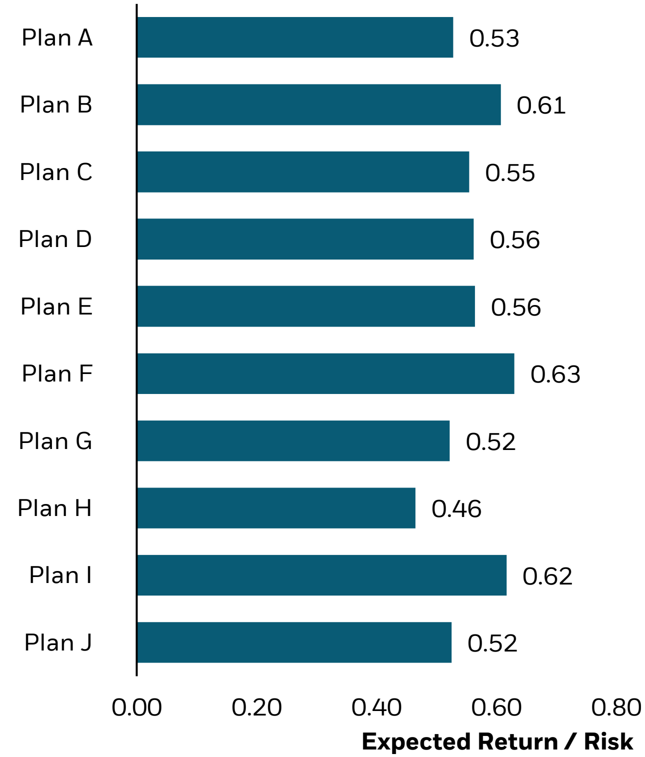
“The Future Depends on What you do Today”

Expected returns vs. expected risk: Are you being compensated for the risk you’re taking?

10 Year Annualized Expected Return vs. Expected Risk



Finding Efficiencies



Return Information	Peer Average	vs. Avg	All Plans	% Rank
Expected Risk	13.8%	1.3%	13.4%	88
Expected Return	7.7%	0.3%	7.8%	63

Portfolio Return/Risk	Peer Average	vs. Avg	All Plans	% Rank
Return/Risk	0.56	-0.03	0.58	22

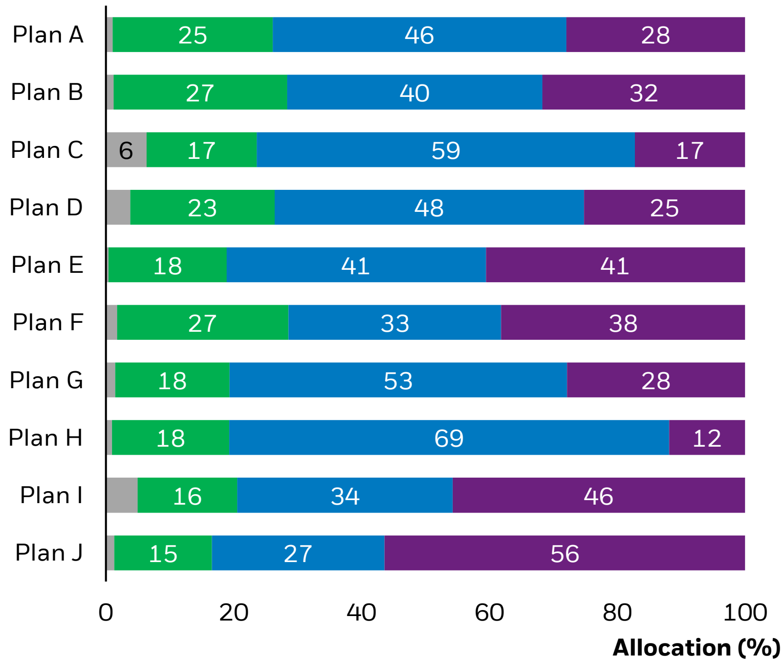
Source: BlackRock, PPD, P&I as of May 2025. **Hypothetical results are net of expenses and are not a guarantee of future results.** The hypothetical results shown are for illustrative purposes only; no representation is being made that the results shown will be achieved. The hypothetical results are based on criteria applied retroactively with the benefit of hindsight and knowledge of factors that may affect actual performance. Interpretation of any results should take into consideration inherent limitations and risks of the model and assumptions used. Hypothetical results may be higher or lower than shown. **Read slide 2 and the Appendix for details.**

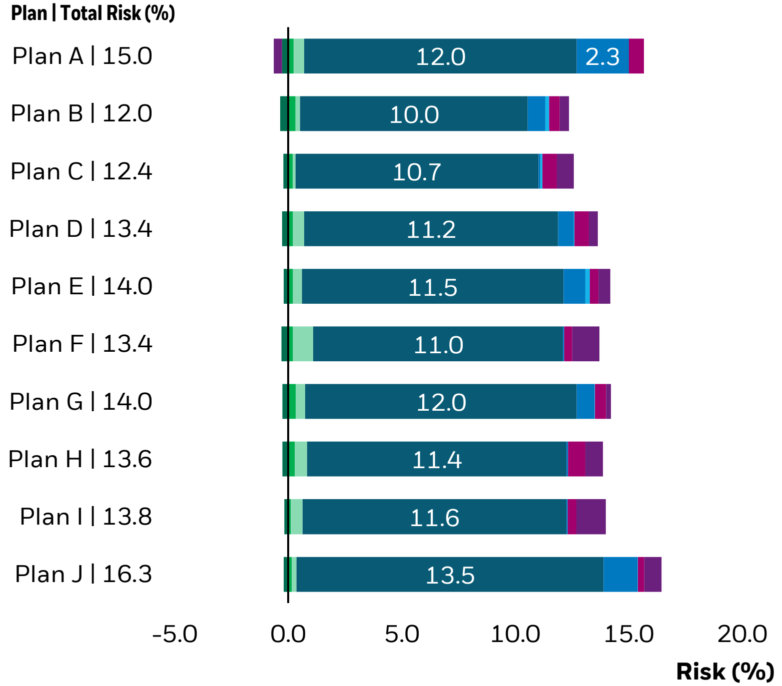
Asset Allocation Relative to Peers

Economic growth comprises 83% of Plan A's total risk of 15.0%; the peer group has an average total risk of 13.8% and ranges from 12% to 16.3%

Total Portfolio Allocation (%)	Peer Average	vs. Avg	All Plans	% Rank
Cash	2	-1	2	38
Fixed Income	20	5	20	76
Equity	45	1	44	57
Alternatives	32	-4	34	36
Other	0	0	0	3

Macro Factor Risk Decomp (%)	Peer Average	vs. Avg	All Plans	% Rank
Inflation	-0.2	0.0	-0.3	40
Real Rates	0.2	0.0	0.2	62
Credit	0.4	0.0	0.5	46
Economic Growth	11.5	0.5	11.3	73
EM	0.7	1.6	0.8	100
Commodity	0.0	0.0	0.1	55
FX	0.5	0.2	0.5	90
Systematic	0.6	-1.0	0.3	6
Total Risk	**13.8**	**1.3**	**13.4**	**88**

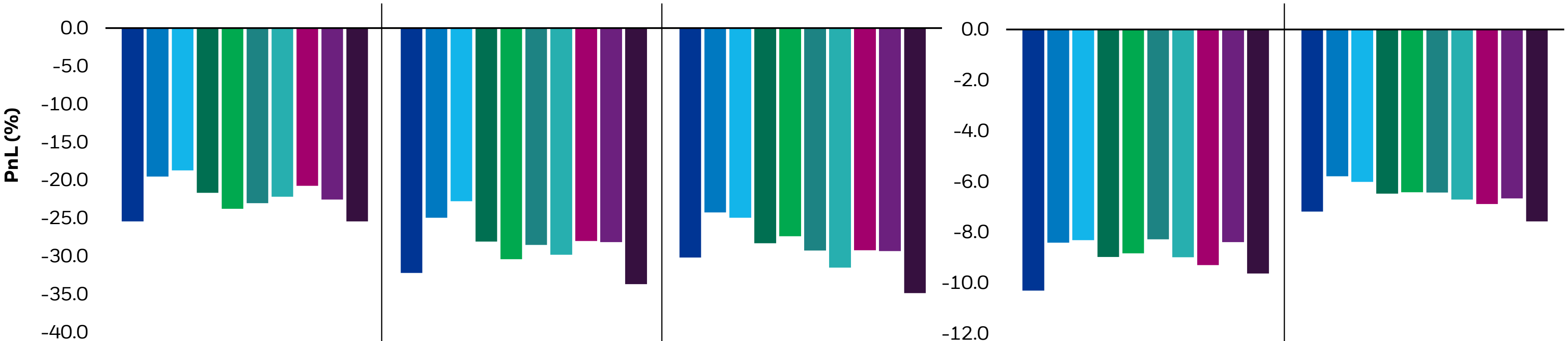




Source: BlackRock, PPD, P&I as of May 2025. Neither asset allocation nor diversification can guarantee profit or prevent loss. Risk: 84% confidence interval, 294 constant weighted monthly observations. Read the "Peer Group Summary" for reporting date of each plan, the "Macro Factors Glossary" for additional risk details; and regarding the indexes used to represent each asset class, see the Asset Class Mapping slides at the end of this presentation.

Total Portfolio: Scenario Analysis

Historical and hypothetical scenarios offer insight into downside risk protection; BlackRock's proprietary market-driven scenarios estimate the PnL impact of ensuing geo-political, environmental, and market catalysts



	Crash '08 (Historical) Lehman bankruptcy (Sep 12 –Nov 3, 2008)	**COVID Drawdown (Historical)** COVID-19 related stress (Feb 21 – Mar 23, 2020)	**Stagflation 1974 (Historical)** 1974 historical stagflation scenario. Policy variable shocks based on actual factor returns in the year 1974.	**Global Trade Protectionism (Hypothetical)** Tariffs increase dramatically on goods entering the U.S., negatively impacting the macro-outlook.	**US – Europe Decoupling (Hypothetical)** The US announces it will scale back its military presence in Europe, triggering uncertainty around European security.
Plan A	-25.44	-32.24	-30.18	-10.31	-7.19
Plan B	-19.56	-24.96	-24.28	-8.42	-5.79
Plan C	-18.73	-22.78	-24.97	-8.32	-6.02
Plan D	-21.69	-28.10	-28.30	-8.99	-6.49
Plan E	-23.79	-30.41	-27.39	-8.84	-6.43
Plan F	-23.05	-28.55	-29.27	-8.29	-6.44
Plan G	-22.21	-29.83	-31.51	-9.00	-6.71
Plan H	-20.78	-28.01	-29.24	-9.30	-6.90
Plan I	-22.58	-28.19	-29.36	-8.39	-6.67
Plan J	-25.44	-33.70	-34.88	-9.64	-7.58

Source: BlackRock as of May 2025, based on BlackRock's CMA. **The hypothetical performance shown is net of fee and is not a guarantee of future results.** Given the instantaneous nature of applied shocks, fees are divided by 365 and deducted from the modeled scenario output. Stress scenario results are for illustrative purposes and no representation is being made that results shown will be achieved. The historical scenarios simulate each portfolio shown through hypothetical large market shocks and geopolitical stresses, with implied shocks. Scenario analysis is performed by parametrically shocking the underlying risk factor exposures of the portfolios by a set of instantaneous changes to derive the resulting hypothetical returns. The returns in the scenarios are expressed as a hypothetical percentage change in value if those shocks were to be realized and are based on criteria that have been applied retroactively with the benefit of hindsight and therefore cannot account for all financial risk that may affect actual performance. Interpretation of any results should take into consideration inherent limitations and risks of the model and assumptions used. All results may be higher or lower than shown. **Read important disclosures on slide 2 and appendix for more information.**

How can BlackRock's Client Solutions Group help you?

> Schedule a meeting

Find efficiencies

Reallocations

Strategic asset allocations

Forward simulations

Stress testing

Capital market assumptions

Historical returns analysis

Manager correlations

Equity style factor tilts

Calibrate liquidity

Balancing liquidity

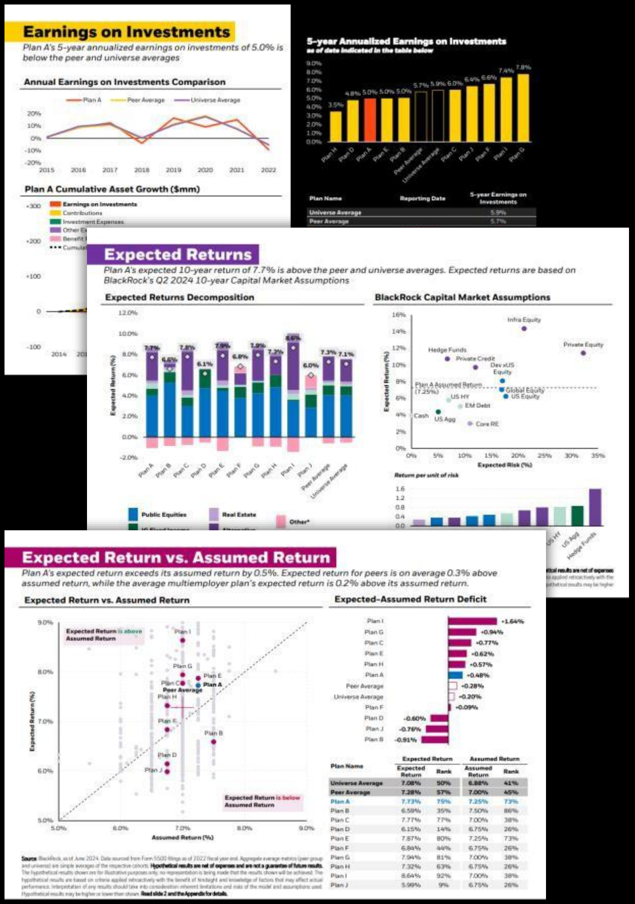
Private market pacing

Enhance income

Fixed income risks

Peer benchmarking

Visualize and understand positioning within broader industry context



For illustrative purpose only

Appendix

Macro Factors Glossary

Drivers of Portfolio Return and Risk

These common economic factors are intuitive, applicable across all asset classes, and explain the majority of asset class risk

Factor	Description
Inflation	Risk of bearing exposure to changes in nominal prices *Return of long nominal bonds, short inflation-linked bonds portfolio*
Real Rates	Risk of bearing exposure to real interest rate changes *Inflation-linked bond returns*
Credit	Risk of default or spread widening *Return of long corporate bonds, short nominal government bonds portfolio*
Economic Growth	Risk associated with global economic growth *Broad-market equity index returns*
Emerging Markets	Risk that emerging sovereign governments will change capital market rules *Equally weighted basket of EM asset classes: EM CDX, EM FX, and long EM equity short DM equity*
Commodity	Risk associated with commodity markets *Weighted GSCI commodity index returns*
FX	Risk associated with developed foreign currency exposure *USD-denominated basket of EUR, JPY, GBP, CAD and AUD*

Broad Factor Exposures of Certain Asset Classes

Factor exposures					***Examples:***
Real Rates					Inflation-protected bonds
Real Rates	Inflation				Nominal bonds
Economic Growth	FX	Emerging Markets			Global Equity
Real Rates	Inflation	Emerging Markets	Credit		Hard Currency EM Debt
Real Rates	Inflation	Emerging Markets	Credit	FX	Global HY

Source: BlackRock as of May 2025. Ex-ante risk is defined as annual expected volatility and is calculated using data derived from representative indices, using the Aladdin portfolio risk model. This proprietary multi-factor model can be applied across multiple asset classes to analyze the impact of different characteristics of securities on their behaviors in the market place. In analyzing risk factors, the Aladdin portfolio risk model attempts to capture and monitor these attributes that can influence the risk/return behavior of a particular security/asset. Systematic reflects the portion of the risk that is undefined by the other factors.

Capital Market and Modeling Assumptions

Asset Class	Asset Description	BlackRock CMA Proxy	Fee Deducted	10yr Ann. (Net) Expected Return	Expected Risk
Cash	Cash	US Cash	-	3.86%	-
Fixed Income	US	BBG Barc US Aggregate Index	0.11%	4.18%	4.91%
Fixed Income	HY	BBG Barc US Corporate High Yield 2% Issuer Capped Index	0.30%	5.97%	6.39%
Fixed Income	EM	50% JPMGBIEGDV | 50% EMBIGLOBAL Index	0.45%	5.52%	8.17%
Fixed Income	Treasuries	BBG Barc Government Index	0.12%	3.87%	4.93%
Fixed Income	Long Duration	BBG Barc Treasury 10+ Yr. Index	0.12%	3.81%	12.57%
Fixed Income	TIPS	BBG Barc US Government Inflation-Linked Bond Index	0.12%	4.53%	5.43%
Fixed Income	Global	BBG Barc Global Aggregate Index	0.11%	4.21%	5.75%
Fixed Income	Bank Loans	S&P/LSTA Leveraged Loan Index	0.45%	6.20%	8.00%
Fixed Income	Convertibles	BBG Barc US Aggregate Index	0.11%	4.18%	4.91%
Fixed Income	Multi-Strat	BBG Barc US Universal Index	0.11%	4.41%	4.72%
Fixed Income	Securitized	BBG Barc Securitized Index	0.05%	4.72%	5.07%
Equity	US Large Cap	Russell 1000 Index	0.13%	6.34%	18.44%
Equity	US Mid Cap	Russell Midcap Index	0.13%	4.02%	19.41%
Equity	US Small/Mid Cap	Russell 2500 Index	0.20%	2.97%	21.86%
Equity	US Small Cap	Russell 2000 Index	0.19%	2.69%	23.20%
Equity	US All Cap	Russell 3000 Index	0.20%	6.13%	18.59%
Equity	Non-US / Developed (World-ex US)	MSCI World ex-US Index	0.20%	8.14%	16.87%
Equity	Non-US (ACWI ex-US)	MSCI All Country World ex-US Index	0.25%	8.66%	17.21%
Equity	EM	MSCI Emerging Markets Index	0.36%	8.20%	20.60%
Equity	Global (ACWI)	MSCI All Country World Index	0.18%	7.09%	17.35%

Source: BlackRock as of May 2025. Expected returns shown are net of fees and expenses. The representative indices listed above may differ from those that are publicly available, but the underlying methodology and assumptions are consistent. BlackRock expected market return information is based on BlackRock's capital market assumptions as of May 2025 which are subject to change. Capital market assumptions contain forward-looking information that is not purely historical in nature. **They should not be construed as guarantees of future returns**. The projections in the chart above are based on BlackRock's proprietary capital markets assumptions for risk and geometric return (above) and correlations between major asset classes. These asset class assumptions are passive only and do not consider the impact of active management. The assumptions are presented for illustrative purposes only and should not be used, or relied upon, to make investment decisions. The assumptions are not meant to be a representation of, nor should they be interpreted as BlackRock's investment recommendations. Allocations, assumptions, and expected returns are not meant to represent BlackRock performance. Capital markets assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect actual future performance. Ultimately, the value of these assumptions is not in their accuracy as estimates of future returns, but in their ability to capture relevant relationships and changes in those relationships as a function of economic and market influences. Please note all information shown is based on assumptions, therefore, exclusive reliance on these assumptions is incomplete and not advised. The individual asset class assumptions are not a promise of future performance. Indexes are unmanaged and used for illustrative purposes only and are not intended to be indicative of any fund's performance. It is not possible to invest directly in an index.

The hypothetical returns shown are net of a all fees and expenses. Please see the expense column for additional details on each asset class.

Please continue reading disclosure on the following slide.

Capital Market and Modeling Assumptions (continued)

Asset Class	Asset Description	BlackRock CMA Proxy	Fee Deducted	Alpha	10yr Ann. (Net) Expected Return	Expected Risk
Alternatives	Hedge Funds	BlackRock Proxy: HFRI global fund weighted index (Hedged)	2.20%	3.30%	9.37%	6.93%
Alternatives	Private Equity	BlackRock Proxy: US Buyout Private Equity – eFront Insights Research US Buyout Private Equity Index	4.68%	5.70%	11.71%	32.08%
Alternatives	Commodities	Bloomberg Commodities Index (Unhedged)	0.75%	-	3.85%	14.87%
Alternatives	Energy	BlackRock Proxy: Global Diversified Infrastructure – eFront Insights Research Global Infrastructure Index	1.50%	5.50%	14.82%	19.85%
Alternatives	Infrastructure	BlackRock Proxy: Global Diversified Infrastructure – eFront Insights Research Global Infrastructure Index	1.50%	5.50%	14.82%	19.85%
Alternatives	Listed Infrastructure	FTSE Developed Core Infrastructure Net Index	0.75%	-	5.99%	14.15%
Alternatives	Timber	Bloomberg Commodities Index (Unhedged)	0.75%	-	3.85%	14.87%
Alternatives	Farmland	FTSE Nareit Equity Diversified	0.25%	-	5.63%	22.36%
Alternatives	MLPs	Bloomberg Commodities Index (Unhedged)	0.75%	-	3.85%	14.87%
Alternatives	Real Assets: Other	Bloomberg Commodities Index (Unhedged)	0.75%	-	3.85%	14.87%
Alternatives	Real Estate: Core/Core-Plus	BlackRock Proxy: US Core Real Estate - NCREIF ODCE Index	0.91%	0.80%	3.10%	10.89%
Alternatives	Real Estate: Non-Core	BlackRock Proxy: US Value-Added Real Estate – NCREIF Index/ S&P Global/Refinitiv	0.91%	4.40%	7.08%	16.64%
Alternatives	Real Estate: Debt	BlackRock Proxy: Real Estate Mezzanine Debt (Unhedged)	1.20%	2.20%	8.47%	9.50%
Alternatives	Real Estate: REITs	FTSE EPRA Nareit United States Index	0.25%	-	4.15%	19.95%
Alternatives	RE - Other	BlackRock Proxy: US Core Real Estate – NCREIF ODCE Index	0.91%	0.80%	3.10%	10.89%
Alternatives	Private Credit: Direct Lending	BlackRock Proxy: Direct Lending – Lincoln Senior Debt Index	2.99%	2.20%	9.67%	12.01%
Alternatives	Portable Alpha	BlackRock Proxy: HFRI global fund weighted index (Hedged)	2.20%	3.30%	9.37%	6.93%
Alternatives	Risk Parity	14.75% Long Dur, US HY, TIPS, EMD | 20% MSCI ACWI | 21% Cmdty	-	-	5.64%	7.61%

For additional details on Private Market asset class proxies, see the following slide titled "Alternative Risk Proxy Descriptions." Disclosure continued from prior slide, please read full disclosure.

The Risk Parity asset above was constructed by blending seven capital market assumptions together; please see prior page for more information on each component.

Expected returns shown net of fees and expenses and are for informational purposes only. Expected returns for the following asset classes are inclusive of an additional alpha assumption: Direct Lending: 2.20%, PE: 5.70%, Global Infra Equity: 5.50%, Global Hedge Funds: 3.30%, US Core Real Estate: 0.80%, RE Value Added: 4.40%, RE Debt: 2.20%. The alpha assumption for private markets are defined as expected outperformance from a top quartile manager vs a median manager. For top-quartile performance in PE buyout, direct lending, and mezzanine debt, net of fees Preqin data is used. PE data consists of 800 managers over a 25-year period to 2012 vintage, direct lending and mezzanine debt data consists of 240 managers over the same period. We use forward five-year performance for each fund launched in each calendar year: we find that at least five years' worth of data is needed to draw meaningful conclusions on performance. Infrastructure equity excess returns are assumed to be similar as PE buyout excess returns. Historical National Council of Real Estate Investment Fiduciaries (NCREIF) index performance, with a 5-year lookback period as of March 2019, was used for US core real estate also defined as expected outperformance from a top quartile vs median manager performance, net of fees.

Alternative Risk Proxy Descriptions

Asset Class	Risk Proxy Description
Private Equity	The private equity risk proxy estimates the economic risks of a private equity fund, within the context of a multi-asset portfolio, using the Aladdin Private Equity Risk Model. The proxy uses average observed fund exposures spanning vintages 2000 to present day (or the latest available). These averaged exposures consider capital deployed along with geographic, industry and size dimensions. The risk proxy also uses a leverage adjustment based on average observed deal equity contributions and the leveraged loan market. Data inputs to this proxy's construction include Bloomberg, MSCI, Refinitiv, S&P and BlackRock proprietary data.
Real Estate	The real estate risk proxy estimates the economic risks of a real estate private equity fund, within the context of a multi-asset portfolio, using the Aladdin Real Estate Risk Model. The proxy uses average observed fund exposures and real estate transactions. These exposures consider both geographies and property types while, depending on investment strategy, adjusting for average Loan-to-Value ratios. Data inputs to this proxy's construction include Asian Association for Investors in Non-Listed Real Estate Vehicles (ANREV), Investors in Non-Listed Real Estate Vehicles (INREV), National Council of Real Estate Investment Fiduciaries (NCREIF), Real Capital Analytics, S&P SNL and BlackRock proprietary data.
Infrastructure	The infrastructure risk proxy estimates the economic risks of an infrastructure private equity fund, within the context of a multi-asset portfolio, using the Aladdin Private Infrastructure Risk Model. The proxy uses average observed fund exposures as well as transactions from Insight Research Infrastructure transactions. These averaged exposures consider capital deployed along with geographic and industry dimensions. Data inputs to this proxy's construction include eFront Insight Resarch, BlackRock Proprietary data and BFRE factors.
Hedge Funds	The hedge fund risk proxies estimate the economic risks of a given hedge fund strategy, within the context of a multi-asset portfolio, using the Aladdin Hedge Fund Risk Model. The proxy uses a regression-based analysis to identify key risk factor exposures for each hedge fund strategy cohort. This analysis considers equity, fixed income, commodity and strategy-specific effects. Data inputs to the construction of these proxies include Hedge Fund Research, Lipper TASS and BlackRock proprietary data.
Direct Lending	The direct lending capital market assumption risk proxy is a blend of Business Development Company (BDC) equity and bank loan exposure to estimate the risk level of a direct lending investment.

Source: BlackRock as of May 2025.

BlackRock Capital Market Assumptions Methodology and Limitations

BlackRock Capital Market Assumptions

This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise of future performance. Note that these asset class assumptions are passive, and do not consider the impact of active management. All estimates in this document are in U.S. dollar terms unless noted otherwise. Given the complex risk-reward trade-offs involved, we advise clients to rely on judgment as well as quantitative optimization approaches in setting strategic allocations to all the asset classes and strategies.

References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This material has been prepared for information purposes only and is not intended to provide, and should not be relied on for, accounting, legal, or tax advice.

The outputs of the assumptions are provided for illustration purposes only and are subject to significant limitations. "Expected" return estimates are subject to uncertainty and error. Expected returns for each asset class can be conditional on economic scenarios; in the event a particular scenario comes to pass, actual returns could be significantly higher or lower than forecasted. Because of the inherent limitations of all models, potential investors should not rely exclusively on the model when making an investment decision. The model cannot account for the impact that economic, market, and other factors may have on the implementation and ongoing management of an actual investment portfolio. Unlike actual portfolio outcomes, the model outcomes do not reflect actual trading, liquidity constraints, fees, expenses, taxes and other factors that could impact future returns.

BlackRock 10-year asset return and long-term volatility assumptions

Annualized return assumptions are in geometric terms and reflect total nominal returns. Return assumptions for all asset classes are shown in unhedged terms unless otherwise noted. We use long-term volatility assumptions. We break down each asset class into factor exposures and analyze those factors' historical volatilities and correlations over the past 15+ years. We combine the historical volatilities with the current factor makeup of each asset class to arrive at our forward-looking assumptions. This approach takes into account how asset classes evolve over time. Example: Some fixed income indices are of shorter or longer duration than they were in the past. Our forward-looking assumptions reflect these changes, whereas a volatility calculation based only on historical monthly index returns would fail to capture the shifts. We have created BlackRock proxies to represent asset classes where historical data is either lacking or of poor quality. Expected return estimates are subject to uncertainty and error. Expected returns for each asset class can be conditional on economic scenarios; in the event a particular scenario comes to pass, actual returns could be significantly higher or lower than forecasted. The geometric return, sometimes called the time-weighted rate of return, takes into account the effects of compounding over the investment period. The arithmetic return can be thought of as a simple average calculated by taking the individual annual returns divided by the number of years in the investment period.

Index returns are for illustrative purposes only and do not represent any actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.

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The information provided here is neither tax nor legal advice. Investors should speak to their tax professional for specific information regarding their tax situation. Investment involves risk including possible loss of principal. International investing involves risks, including risks related to foreign currency, limited liquidity, less government regulation, and the possibility of substantial volatility due to adverse political, economic or other developments. These risks are often heightened for investments in emerging/developing markets or smaller capital markets.

Asset Class Mapping: Traditional Assets

Cash: 2.2% **Fixed Income: 19.8%** **Public Equity: 44.2%**

Asset Class	**Asset Description**	**Benchmark / Proxy Description**	All Plans Avg **Allocation**
Cash	Cash	US Cash	2.2%
Fixed Income	Domestic	BBG Barc US Aggregate Index	11.5%
Fixed Income	Long Duration	BBG Barc Treasury 10+ Yr Index	0.5%
Fixed Income	Treasuries	BBG Barc Government Index	1.5%
Fixed Income	TIPs	BBG Barc US Government Inflation-Linked Bond Index	1.2%
Fixed Income	Securitized	BBG Barc Securitized Index	0.6%
Fixed Income	Emerging markets	50% JPM GBI-EM Global Diversified Index | 50% JPM Global EMBI Index	0.7%
Fixed Income	International/Global	BBG Barc Global Aggregate Index	0.3%
Fixed Income	High yield	BBG Barc US Corporate High Yield 2% Issuer Capped Index	2.2%
Fixed Income	Bank Loans	BlackRock Proxy, based on S&P/LSTA Leveraged Loan Index	0.5%
Fixed Income	Multi-Strategy	BBG Barc US Universal Index	0.8%
Fixed Income	Convertibles	BBG Barc U.S. Aggregate Index	0.1%
Equity	US All-Cap	Russell 3000 Index	8.0%
Equity	US Large-Cap	Russell 1000 Index	12.2%
Equity	US Mid-Cap	Russell Midcap Index	0.9%
Equity	US SMID-Cap	Russell 2500 Index	0.8%
Equity	US Small-Cap	Russell 2000 Index	2.0%
Equity	Developed ex-US	MSCI World ex-US	7.4%
Equity	International	MSCI All Country World ex-US	5.1%
Equity	Emerging markets	MSCI Emerging Markets Index	3.0%
Equity	Global Equity	MSCI All Country World Index	4.7%

Indices are unmanaged; direct investment is not possible. Neither asset allocation nor diversification can guarantee profit or prevent loss.

Asset Class Mapping: Alternative Assets

Alternatives: 33.9%

Asset Class	Asset Description	Benchmark / Proxy Description	All Plans Avg **Allocation**
Alternatives	HF	BlackRock Proxy: HFRI Global Fund Weighted Index (Hedged)	3.6%
Alternatives	Portable Alpha	BlackRock Proxy: HFRI Global Fund Weighted Index (Hedged)	0.2%
Alternatives	Risk Parity	14.75% Long Dur | 14.75% US HY | 14.75% TIPS | 14.75% EMD | 20% MSCI ACWI | 21% Cmdty	0.5%
Alternatives	Private Equity	BlackRock Proxy: US Buyout Private Equity – eFront Insights Research US Buyout Private Equity Index	12.0%
Alternatives	Real Estate: REITs	FTSE EPRA Nareit United States Index	0.6%
Alternatives	Real Estate: Debt	BlackRock Proxy: Real Estate Mezzanine Debt (Unhedged)	0.3%
Alternatives	Real Estate: Core/Core-Plus	BlackRock Proxy: US Core Real Estate - NCREIF ODCE Index	3.5%
Alternatives	Real Estate: Non-Core	BlackRock Proxy: US Value-Added Real Estate – NCREIF Index/ S&P Global/Refinitiv	1.8%
Alternatives	Real Estate: Other	BlackRock Proxy: US Core Real Estate - NCREIF ODCE Index	2.5%
Alternatives	Real Assets: Commodities	Bloomberg Commodities Index (Unhedged)	0.4%
Alternatives	Real Assets: Energy	BlackRock Proxy: Global Diversified Infrastructure – eFront Insights Research Global Infrastructure Index	0.5%
Alternatives	Real Assets: MLPs	Bloomberg Commodities Index (Unhedged)	0.1%
Alternatives	Real Assets: Infrastructure	BlackRock Proxy: Global Diversified Infrastructure – eFront Insights Research Global Infrastructure Index	2.6%
Alternatives	Real Assets: Farmland	FTSE Nareit Equity Diversified	0.2%
Alternatives	Real Assets: Timber	Bloomberg Commodities Index (Unhedged)	0.2%
Alternatives	Real Assets: Other	Bloomberg Commodities Index (Unhedged)	0.3%
Alternatives	Alt Credit: Direct Lending	BlackRock Proxy: Direct Lending – Lincoln Senior Debt Index	4.6%

Indices are unmanaged; direct investment is not possible. Neither asset allocation nor diversification can guarantee profit or prevent loss.

Stress Test Scenario Definitions

Scenario	Type	Historical Period	Implied Shock	Description and Catalysts of Event
Crash 2008	Historical Scenario	Sep 12, 2008 – Nov 03, 2008	-	Credit & liquidity crisis and equity market crash set off by Lehman Brothers bankruptcy. Significant credit spreads widening caused by massive deleveraging.
COVID Drawdown	Historical Scenario	Feb 21, 2020 – Mar 23, 2020	-	Major and sudden global market crash as a response to the spread of COVID-19. Massive equity selloffs led to circuit breakers halting trading in an attempt to curb panic selling. Biggest global market crash since 2008.
Stagflation 1974	Historical Scenario	Jan 1974 – Dec 1974	-	1974 Historical Stagflation Scenario. Policy variable shocks are based on actual factor returns in the year 1974.
Global Trade Protectionism	Hypothetical Scenario	N/A	NAMR Ind. Mach. Trade Co. & Dist.: -7% NAMR Distribution & Specialty Retail: -8% NAMR Electrical Equipment: -8% S&P 500-MSCI World Ex U.S.: +7% Tsy 2Y: +85bps US-Global HY Credit: -50bps US INF 2Y: +65bps DXY: +5% China Equity: -30% Mexico Equity: -7% Canada Equity: -5% China Corp HY: +500bps Mexico Corp HY: +30bps CNY/USD: -3% MXN/USD: -10%	**Description:** Tariffs increase dramatically on goods entering the U.S., negatively impacting the macro outlook. **Catalysts:** Trump announces new potential tariffs through social media or other channels. Negotiations break down between the U.S. and targeted countries and / or fail to deliver desired policy adjustments, causing the U.S. to move to impose tariffs. Countries take retaliatory measures, leading to an ongoing action-reaction cycle. **Calibration:** Universal Trade Tariffs: U.S. companies in specialty retail & distribution and industrial machinery trade & distribution, sectors with supply chains that have the most dependency on non-U.S. inputs sell-off on the back of universal tariffs. Additional tariffs lead to higher domestic inflation, pushing up interest rates and the dollar. **Targeted Tariffs & Retaliation:** Additional tariffs on China, Mexico, and Canada impact equities, spreads, and their respective FX currencies. Immediate countermeasures announced from China and Mexico target electrical equipment and automobile sectors, respectively.
US - Europe Decoupling	Hypothetical Scenario	N/A	Crude Oil NYME: +10% Gold: +5% DEM 10Y: +50bps EUR/USD: -2% VIX: +20% Pan Euro Credit HY: +60bps Ukraine: -15% MSCI China Index: +5% S&P 500 MSCI Europe (EUR): +5%	**Description:** The US announces it will scale back its military presence in Europe, triggering uncertainty around European security. **Catalysts:** US presence in Europe declines, Russia increases military pressure on Ukraine/the Baltics, raising fears of broader conflict. EU member nations scale defense spending significantly in the short-term. Germany moves to revise debt brake to allow for the increase in spending. **Calibration:** Risk-off sentiment driven by geopolitical instability leads to sell-off in equity markets, primarily focused on EU and Ukraine-linked stocks. EU defense sector rallies on increased defense funding. China rallies on the back of US-EU decoupling. Sovereign yields in the Eurozone rise as countries substantially increase defense spending, funded by long-term issuance. Meanwhile, Treasuries remain relatively stable as the market assesses the US spending impact. Eurozone HY spreads widen, reflecting increased uncertainty and negative sentiment. Euro weakens against dollar and other major currencies. Energy prices spike due to supply chain disruptions and potential Russian retaliation (gas/oil export cuts). Investors buy gold as a safe-haven asset.

Stress Test Scenarios Methodology, Assumptions and Limitations

Methodology and Assumptions

Risk calculations performed using BlackRock Solutions Aladdin risk model. Each portfolio component is mapped to a broad set of risk factors; the parametric sensitivity to changes in key interest rates, spreads, and other risk factors is calculated for each portfolio component. The parametric exposures are then summed using the appropriate portfolio weights to compute the portfolio's exposure to systematic market risk factors. BlackRock Solutions' parametric return model then uses the risk factor changes and exposures in the specified time period to estimate the return of the portfolio.

Historical scenarios are calibrated to historical markets and the shocks used are representative of the actual market moves during these periods. Each portfolio component is mapped to a broad set of risk factors; the parametric sensitivity to changes in key interest rates, spreads, and other risk factors is calculated for each portfolio component. Market-Driven scenarios simulate current portfolio through hypothetical large market shocks and geopolitical stresses. These are also defined by a set of risk factors with carefully calibrated shocks. The remaining market shocks are implied using a covariance matrix.

Stress test scenarios were performed using Portfolio Risk Tools, a proprietary BlackRock Solutions software. Scenarios have been chosen based on risks relevant to the peer group based on the composition of the portfolios and desire to protect against downside risk. Stress test performance is determined by the implied shock to each risk factor that the security or portfolio is exposed to. Shocks for unconstrained risk factors (i.e. implied interest rate moves, economic and market volatility, etc. in the risk model were derived using their historical correlations with the constrained factors). Implied shock scenarios provide the ability to perform hypothetical stress tests with the full risk factor set. Relationships between risk factors and implied shocks are derived using historical correlations and BlackRock analysis.

Please note that this list of assumptions does not include all assumptions that may have been applied to a particular model and that the models themselves do not factor in every performance factor that can have a significant impact on a portfolio. Since many potential scenarios may exist, it is impossible to show all of the potential circumstances that would yield similar results. Actual events will vary and may differ materially from those assumed. It is provided to illustrate the estimated investment P&L of a company in a specific stress scenario. Actual returns may vary. The model is based purely on assumptions using available data, based on past and current market conditions, and assumptions relating to available investment opportunities, each of which are subject to change. The model is subject to significant limitations. It cannot account for the impact that economic, market, and other factors may have on the implementation of an actual investment. In addition to the variables identified above, the return of any portfolio will vary materially from the return shown based on numerous factors including, but not limited to, current market conditions, the specific securities in the portfolio, and the current leverage costs, among others. While leverage can increase returns, it also increases risk of loss. This model is not intended to provide, and should not be relied upon for investment, accounting, legal or tax advice, nor used with any third-parties.

Limitations

Hypothetical performance has inherent limitations. Such results do not represent actual trading, and thus may not reflect material economic and market factors, such as liquidity constraints, that may have had an impact on our actual decision-making. No representation is made that a portfolio will achieve results similar to those shown, and performance of actual portfolios may vary significantly from the hypothetical results.

No representation is made as to the accuracy or completeness of the scenario analysis shown in this material or the validity of the underlying methodology, and results are provided for informational purposes only. The shocks specified give more color as to the magnitude of the moves, but are not the comprehensive set of moves that occur in each stress test. In addition, the models themselves do not factor in every performance factor that can have a significant impact on a portfolio. The scenario analysis should not be misinterpreted as constituting the actual performance of the portfolios nor should it be relied upon in connection with any investment decision relating to any product or strategy. All investments involve a risk of loss of capital, and no guarantee or representation can be made that an investment will generate profits or will avoid losses.

We would be happy to further discuss our methodology and assumptions at your request.

Important Notes

Risk Warnings:

Past performance information indicated herein is neither a guarantee nor indicative of future performance or investment returns and actual events or conditions may not be consistent with, and may differ materially from, historical or forecasted events or conditions. There is no assurance that any strategy will achieve its investment objective or generate positive returns. Investing involves risk, including possible loss of principal. **All asset class characteristics and allocations shown are for informational purposes only.** Such characteristics and allocations are not intended to be predictions or projections of any portfolio's performance. Neither asset allocation nor diversification ensure profit or protect against loss of principal.

Equity Risk: Stock values may fluctuate in price so the value of your investment can go down depending on market conditions. Investing in small- and mid-cap companies may entail greater risk than large-cap companies, due to shorter operating histories, less seasoned management or lower trading volumes. International investing involves specials risks including, but not limited to currency fluctuations, illiquidity and volatility. These risks may be heightened for investments in emerging markets. Investments in emerging markets may be considered speculative and are more likely to experience hyperinflation and currency deviations, which adversely affect returns. In addition, many emerging securities markets have lower trading volumes and less liquidity.

Bond Risk: Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk. Mortgage and asset-backed securities may be sensitive to changes in interest rates, subject to early repayment risk, and while generally backed by a government, government-agency or private guarantor there is no assurance that the guarantor will meet its obligations. High-yield, lower-rated, securities involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. Investors will, at times, incur a tax liability. Income from municipal bonds may be subject to state and local taxes and at times the alternative minimum tax.

Risks Associated with Private Equity:

Limited Regulatory Oversight: Since private equity funds are typically private investments, they do not face the same oversight and scrutiny from financial regulatory entities such as the Securities and Exchange Commission ("SEC") and are not subject to the same regulatory requirements as regulated investment companies, (i.e., open-end or closed-end mutual funds) including requirements for such entities to provide certain periodic pricing and valuation information to investors. Private equity offering documents are not reviewed or approved by the SEC or any US state securities administrator or any other regulatory body. Also, managers may not be required by law or regulation to supply investors with their portfolio holdings, pricing, or valuation information.

Strategy Risk: Many private equity funds employ a single investment strategy. Thus, a private equity funds may be subject to strategy risk, associated with the failure or deterioration of an entire strategy.

Use of Leverage and Other Speculative Investment Practices: Since many private equity fund managers use leverage and speculative investment strategies such as options, investors should be aware of the potential risks. When used prudently and for the purpose of risk reduction, these instruments can add value to a portfolio. However, when leverage is used excessively and the market goes down, a portfolio can suffer tremendously. When options are used to speculate (i.e., buy calls, short puts), a portfolio's returns can suffer and the risk of the portfolio can increase.

Valuations: Further there have been a number of high profile instances where private equity fund managers have mispriced portfolios, either as an act of fraud or negligence.

Limited Liquidity: Investors in private equity funds have limited rights to transfer their investments. In addition, since private equity funds are not listed on any exchange, it is not expected that there will be a secondary market for them. Repurchases may be available, but only on a limited basis. A private equity fund's manager may deny a request to transfer.

Risks Associated with Private Credit

Risks associated with an investment in a private credit strategy (the Strategy) include, but are not limited to, the following: (i) the Strategy is speculative and its investments are subject to a risk of total loss, (ii) the performance of the Strategy may be volatile, (iii) the general partner of the Strategy will retain ultimate authority over the Strategy's assets and investment decisions, (iv) there are restrictions on the ability of investors to withdraw capital and on the transferability of investor ownership interests in the Strategy, (v) the fees and expenses of the Strategy may offset any profits of the Strategy, (vi) investing the Strategy may involve complex tax structures and delays in distributing important tax information, (vii) the Strategy is not subject to the same regulatory requirements as mutual funds. Investors should also be aware that as a global provider of investment management, risk management and advisory services to institutional and retail clients, BlackRock engages in a broad spectrum of activities. Although the relationships and activities of BlackRock may help offer attractive opportunities and service to the Strategy, such relationships and activities create certain inherent conflicts of interest between BlackRock and the Strategy and/or the Strategy's investors. Further risks associated with the Strategy include, but are not limited to, the following: i.) Credit & Interest Rate risk ii.) Risks associated with high-yield, non-investment-grade debt securities ("high-yield bonds" or "junk bonds"); iii) Derivatives; iv) Foreign/International Markets; and v) Emerging market risk.

Risks Associated with Infrastructure

Infrastructure Funds invest exclusively or almost exclusively in equity or debt, or equity or debt related instruments, linked to infrastructure assets. Therefore, the performance of an Infrastructure Fund may be materially and adversely affected by risks associated with the related infrastructure assets including: construction and operator risks; environmental risks; legal and regulatory risks; political or social instability; governmental and regional political risks; sector specific risks; interest rate changes; currency risks; and other risks and factors which may or will impact infrastructure and as a result may substantially affect aggregate returns. Investments in Infrastructure assets are typically illiquid and investors seeking to redeem their holdings in an Infrastructure Fund can experience significant delays and fluctuations in value.

Important Notes (continued)

Risk Associated with Hedge Funds
An investment in a hedge fund is speculative and includes a high degree of risk, including the risk of a total loss of capital. A hedge fund is illiquid, subject to significant restrictions on transfer and investors should be aware that they may be required to bear the risks associated with holding such investment for an indefinite period of time. Investors should carefully review the confidential private placement memorandum and other offering documents for the hedge fund strategy prior to making an investment decision. Any investment decision with respect to a hedge fund should be made solely on the definitive and final version of the private placement memorandum, the governing agreements, subscription agreements and other ancillary documents.

Risks Associated with Real Estate
Funds that invest in real estate or property invest exclusively or almost exclusively in equity or debt, or equity or debt related instruments. Therefore, in addition to risks associated with investment in such equity or debt instrument, the performance of the real estate fund may be material and adversely affected by risks associated with the related real estate assets. Past performance of funds investing in real estate are not indicative of the performance of the real estate market as a whole and the value of real property will generally be a matter of a valuer's opinion rather than fact. The value of any real estate investment may be significantly diminished in the event of a downturn in the real estate market. Real estate investments are subject to many factors including adverse changes in economic conditions, adverse local market conditions and risks associated with the acquisition, financing, ownership, operation, and disposal of real estate

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Aladdin Portfolio Risk Analysis: Charts and graphs provided herein are for illustrative purposes only. Neither BlackRock nor the Aladdin portfolio risk model can predict a portfolio's risk of loss due to, among other things, changing market conditions or other unanticipated circumstances. The Aladdin portfolio risk model is based purely on assumptions using available data and any of its predictions are subject to change. Product specific inputs are typically based on the latest disclosed data, which may be lagged.