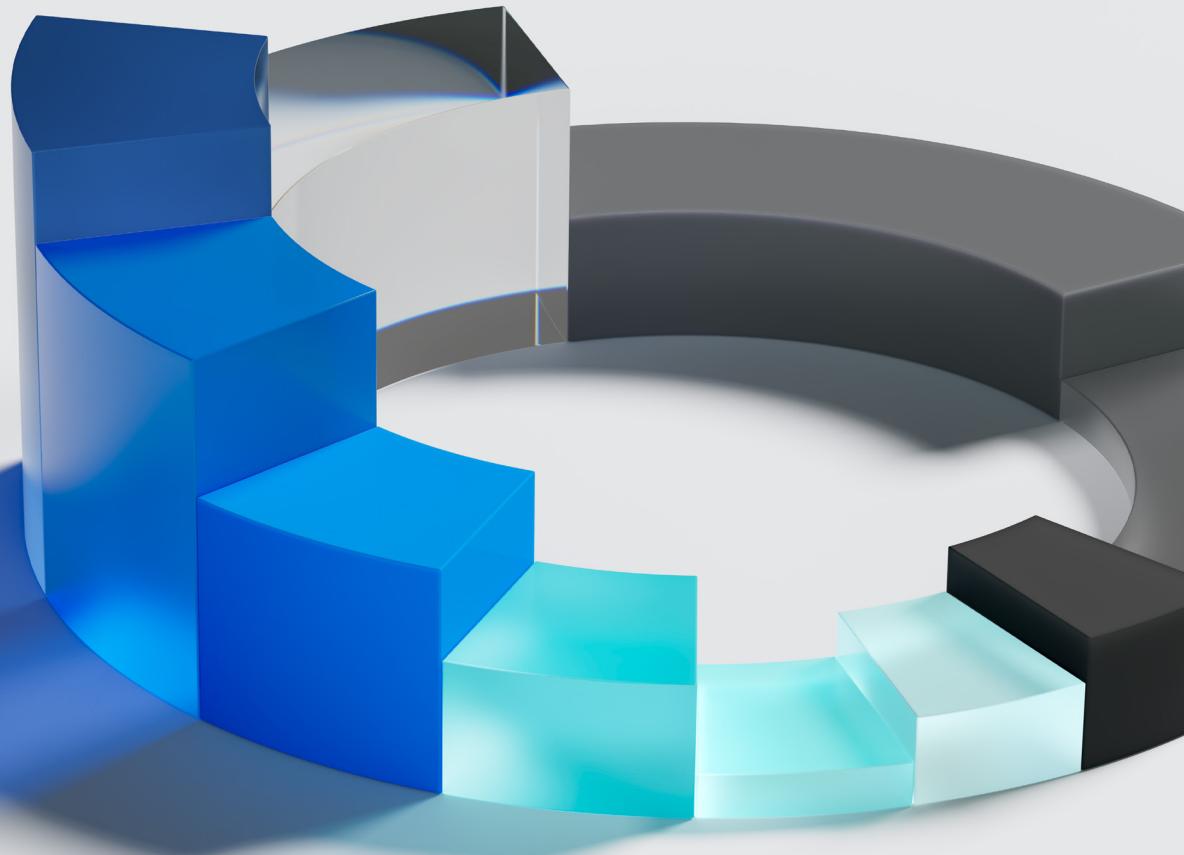


28th annual edition

2024 Long-Term Capital Market Assumptions

Time-tested projections to build stronger portfolios

Assumption matrix: U.S. dollar



		Compound Return 2023 (%)							
		Annualized Volatility (%)							
		Arithmetic Return 2024 (%)							
		Compound Return 2024 (%)							
Fixed income	U.S. Inflation	2.50	2.51	1.52	2.60	1.00	U.S. Inflation	U.S. Short Duration Government/Credit	
	U.S. Cash	2.90	2.90	0.59	2.40	-0.02	U.S. Cash	U.S. Intermediate Treasuries	
	U.S. Intermediate Treasuries	3.90	3.95	3.27	3.60	-0.26	0.17	1.00	U.S. Long Treasuries
	U.S. Long Treasuries	5.20	5.92	12.39	4.20	-0.21	0.06	0.83	TIPS
	TIPS	4.60	4.76	5.75	4.30	0.00	0.04	0.61	0.58
	U.S. Aggregate Bonds	5.10	5.19	4.28	4.60	-0.24	0.10	0.83	0.83
	U.S. Securitized	5.30	5.35	3.34	4.80	-0.22	0.12	0.79	0.73
	U.S. Short Duration Government/Credit	3.90	3.91	1.58	3.60	-0.29	0.26	0.83	0.58
	U.S. Long Duration Government/Credit	5.70	6.24	10.76	5.20	-0.20	0.04	0.72	0.89
	U.S. Inv Grade Corporate Bonds	5.80	6.04	7.14	5.50	-0.17	0.02	0.49	0.56
	U.S. Long Corporate Bonds	6.00	6.64	11.70	5.80	-0.17	0.01	0.48	0.64
	U.S. High Yield Bonds	6.50	6.83	8.36	6.80	0.01	-0.07	-0.06	-0.06
	U.S. Leveraged Loans	6.50	6.79	7.89	6.20	0.18	-0.09	-0.39	-0.31
	World Government Bonds hedged	4.20	4.27	3.74	3.70	-0.28	0.10	0.85	0.86
	World Government Bonds	4.80	5.03	6.91	4.40	-0.15	0.10	0.74	0.63
	World ex-U.S. Government Bonds hedged	4.00	4.07	3.71	3.60	-0.27	0.09	0.71	0.73
	World ex-U.S. Government Bonds	4.90	5.25	8.61	4.60	-0.13	0.09	0.63	0.52
	Emerging Markets Sovereign Debt	6.80	7.23	9.64	7.10	-0.12	0.03	0.27	0.30
	Emerging Markets Local Currency Debt	6.00	6.69	12.23	7.10	-0.03	0.12	0.19	0.14
	Emerging Markets Corporate Bonds	6.70	7.08	9.01	7.00	-0.05	-0.03	0.16	0.19
	U.S. Muni 1-15 Yr Blend	4.00	4.07	3.89	3.70	-0.16	0.09	0.52	0.49
	U.S. Muni High Yield	5.80	6.14	8.49	5.20	0.20	-0.04	0.11	0.20
Equities	U.S. Large Cap	7.00	8.19	16.19	7.90	0.01	-0.04	-0.11	-0.10
	U.S. Mid Cap	7.60	9.08	18.13	8.00	0.01	-0.05	-0.16	-0.12
	U.S. Small Cap	7.20	9.07	20.44	8.10	-0.02	-0.07	-0.19	-0.19
	Euro Area Large Cap	9.70	11.83	22.15	10.50	-0.02	0.05	-0.06	-0.10
	Japanese Equity	9.30	10.39	15.62	10.40	-0.07	-0.03	-0.05	-0.03
	Hong Kong Equity	9.90	11.80	20.89	7.50	-0.03	-0.01	-0.06	-0.06
	UK Large Cap	8.60	10.01	17.76	9.10	0.05	-0.02	-0.17	-0.18
	EAFE Equity	9.20	10.58	17.64	9.80	-0.01	0.01	-0.08	-0.09
	Chinese Domestic Equity	10.80	14.38	29.33	11.80	-0.05	0.10	-0.05	-0.03
	Emerging Markets Equity	8.80	10.77	21.20	10.10	0.00	0.02	-0.07	-0.06
	AC Asia ex-Japan Equity	8.90	10.83	20.98	10.00	-0.05	0.01	-0.04	-0.02
	AC World Equity	7.80	9.05	16.68	8.50	0.00	-0.01	-0.10	-0.10
	U.S. Equity Value Factor	8.40	9.76	17.42	10.10	-0.02	-0.07	-0.16	-0.16
	U.S. Equity Momentum Factor	7.90	9.14	16.62	8.90	0.02	-0.03	-0.12	-0.07
	U.S. Equity Quality Factor	7.00	8.00	14.81	7.80	0.00	-0.02	-0.09	-0.08
	U.S. Equity Minimum Volatility Factor	7.40	8.17	12.98	8.20	-0.01	-0.08	-0.07	-0.04
	U.S. Equity Dividend Yield Factor	8.00	9.17	16.15	8.90	0.00	-0.08	-0.12	-0.11
	Global Convertible Bonds hedged	7.90	8.53	11.78	9.10	-0.08	-0.04	-0.12	-0.07
Alternatives	U.S. Core Real Estate	7.50	8.02	10.60	5.70	0.31	-0.17	-0.25	-0.16
	U.S. Value-Added Real Estate	9.70	11.08	17.66	7.70	0.31	-0.17	-0.25	-0.16
	European Core Real Estate	7.30	8.06	12.84	6.80	0.31	-0.16	-0.35	-0.31
	Asia Pacific Core Real Estate	8.70	9.75	15.32	8.10	0.22	-0.05	-0.27	-0.26
	U.S. REITs	8.20	9.36	16.05	6.80	0.00	-0.06	0.05	0.13
	Commercial Mortgage Loans	6.30	6.58	7.78	-	0.11	0.00	0.18	0.17
	Global Core Infrastructure	6.80	7.38	11.24	6.30	0.20	0.01	-0.25	-0.28
	Global Core Transport	7.70	8.60	14.06	7.50	0.16	0.13	0.01	-0.03
	Global Timberland	6.20	6.74	10.81	6.70	-0.02	0.18	-0.12	-0.21
	Commodities	3.80	5.31	18.00	3.10	0.27	-0.04	-0.17	-0.23
	Gold	4.10	5.43	16.93	3.50	-0.01	0.09	0.37	0.31
	Private Equity	9.70	11.46	20.06	9.90	0.09	0.00	-0.36	-0.42
	Venture Capital	9.20	11.34	22.17	8.50	-0.07	-0.05	-0.27	-0.28
	Diversified Hedge Funds	5.00	5.16	5.80	5.00	0.09	0.01	-0.33	-0.25
	Event Driven Hedge Funds	5.00	5.32	8.22	5.40	0.09	-0.05	-0.29	-0.29
	Long Bias Hedge Funds	4.70	5.27	11.04	5.00	0.02	-0.04	-0.21	-0.21
	Relative Value Hedge Funds	4.90	5.06	5.73	4.90	0.14	-0.06	-0.29	-0.25
	Macro Hedge Funds	3.60	3.84	7.08	4.10	-0.03	0.04	-0.09	-0.08
	Direct Lending	8.50	9.29	13.21	7.80	0.24	-0.11	-0.43	-0.43

U.S. dollar assumptions

Note: All estimates on this page are in U.S. dollar terms. 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 of these asset classes and strategies. Exclusive reliance on this information is not advised. This information is not intended as a recommendation to invest in an particular asset class or strategy or as a promise of future performance. These asset class and strategy assumptions are passive only for liquid assets and industry averages (median managers) for alternatives. The assumptions do not consider the impact of active management. Reference to future returns are not promises or even estimates of actual returns portfolio's may achieve. Assumptions, opinions and estimates are provided for illustrative purposes only. Forecasts of financial market trends that are based on current market conditions constitute our judgement and are subject to change without notice. We believe the information provided herein is reliable, but to not warrant its accuracy or completeness. This materials is not intended to provide and should not be relied upon for accounting, legal or tax advice.

Source: J.P. Morgan Asset Management; as of September 30, 2023. Alternative asset classes (including hedge funds, private equity, real estate, direct lending, transportation, infrastructure and timberland) are unlike other asset categories shown above in that there is no underlying investible index. The return estimates for these alternative asset classes and strategies are estimates of the industry average – median manager, net of manager fees. The dispersion of return among managers of these asset classes and strategies is typically significantly wider than that of traditional asset classes. Correlations of value-added and core real estate in their local currencies are identical since value-added local returns are scaled versions of their corresponding core real estate local returns. This year, we have updated the raw data source for Europe and U.K. Real Estate and this may result in a change in correlation forecasts. For equity and fixed income assumptions we assume current index regional weight in composite indices with multiple countries/regions. All returns are nominal. The return forecasts of composite and hedged assets are computed using unrounded return and rounded to the nearest 10bp at the final stage. In some cases this may lead to apparent differences in hedging impact across assets, but this is purely due to rounding. For the full opportunity set, please contact your J.P. Morgan representative.

U.S. Large Cap	1.00	U.S. Mid Cap	0.96	U.S. Small Cap	0.90	Euro Area Large Cap	0.95	Japanese Equity	0.76	Hong Kong Equity	0.84	UK Large Cap	0.72	EAFE Equity	0.70	Chinese Domestic Equity	0.
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