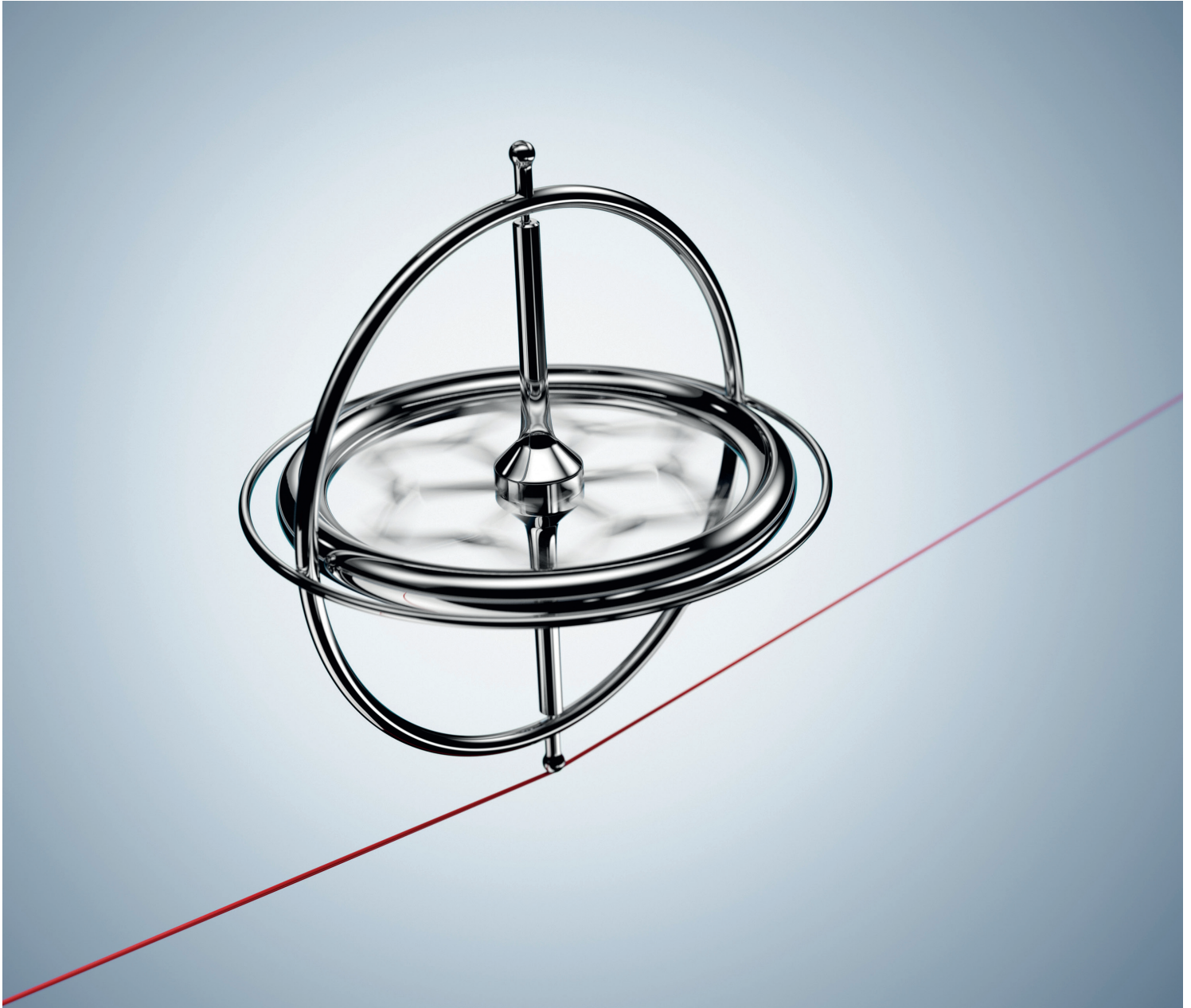


Long-term capital market return assumptions

2015 Edition | US



		Annualised Volatility: Square Root of 12																										
		Annualised Volatility																										
		Arithmetic Return 2015 (%)																										
		Compound Return 2015 (%)																										
		Compound Return 2014 (%)																										
FIXED INCOME	Inflation	2.25	2.25	2.26	1.50	1.50	1.00																					
	U.S. Cash	2.00	2.00	2.00	0.50	0.50	0.10	1.00																				
	U.S. Intermediate Treasuries	4.25	4.00	4.29	7.75	7.50	-0.22	0.03	1.00																			
	U.S. Long Treasuries	3.25	2.75	3.59	13.25	12.25	-0.25	0.00	0.90	1.00																		
	TIPS	4.75	4.25	4.50	7.25	7.00	0.01	-0.02	0.68	0.53	1.00																	
	U.S. Aggregate Bonds	4.25	4.00	4.08	4.00	3.75	-0.21	0.00	0.86	0.76	0.78	1.00																
	U.S. Short Duration Government/Credit	2.50	2.75	2.77	2.00	1.75	-0.20	0.29	0.64	0.41	0.65	0.74	1.00															
	U.S. Long Duration Government/Credit	4.75	4.00	4.41	9.25	8.75	-0.23	-0.07	0.83	0.86	0.66	0.90	0.51	1.00														
	U.S. Inv Grade Corporate Bonds	5.00	4.75	4.95	6.50	6.25	-0.21	-0.13	0.50	0.45	0.64	0.82	0.60	0.78	1.00													
	U.S. Long Corporate Bonds	5.00	4.50	4.95	9.75	9.00	-0.25	-0.14	0.55	0.58	0.57	0.81	0.47	0.87	0.93	1.00												
	U.S. High Yield Bonds	6.00	6.00	6.40	9.25	8.50	0.00	-0.16	-0.22	-0.29	0.27	0.19	0.11	0.10	0.57	0.46	1.00											
	U.S. Leveraged Loans	4.50	4.50	4.67	6.00	5.75	0.26	-0.10	-0.44	-0.43	0.03	-0.08	-0.15	-0.10	0.28	0.21	0.77	1.00										
	World Government Bonds hedged	3.25	2.75	2.80	3.25	3.25	-0.30	0.05	0.87	0.83	0.55	0.79	0.58	0.78	0.51	0.55	-0.21	-0.44	1.00									
	World Government Bonds	3.25	2.50	2.72	6.75	6.50	-0.06	0.05	0.57	0.43	0.63	0.64	0.62	0.52	0.52	0.48	0.15	-0.21	0.55	1.00								
	World ex-U.S. Government Bonds hedged	3.25	2.50	2.54	3.00	3.00	-0.30	0.02	0.76	0.73	0.45	0.71	0.50	0.71	0.48	0.52	-0.17	-0.38	0.95	0.50	1.00							
	World ex-U.S. Government Bonds	3.25	2.25	2.58	8.25	7.75	-0.02	0.04	0.46	0.31	0.58	0.56	0.56	0.44	0.49	0.44	0.22	-0.14	0.45	0.96	0.42	1.00						
	EM Sovereign Debt	6.75	7.00	7.58	11.25	10.50	-0.13	-0.07	0.29	0.17	0.56	0.60	0.43	0.50	0.75	0.67	0.69	0.35	0.29	0.48	0.30	0.49						
	EM Local Currency Debt	7.00	6.75	7.68	14.25	13.25	0.01	0.05	0.08	-0.04	0.38	0.34	0.30	0.24	0.50	0.43	0.59	0.24	0.09	0.55	0.11	0.59						
	EM Corporate Bonds	6.25	6.00	6.36	8.75	8.25	-0.08	-0.14	0.18	0.05	0.51	0.56	0.45	0.45	0.81	0.71	0.72	0.45	0.17	0.41	0.19	0.43						
	U.S. Muni 1-15 Yr Blend	3.75	3.25	3.33	4.00	3.75	-0.12	-0.05	0.52	0.45	0.55	0.66	0.47	0.57	0.60	0.55	0.29	0.12	0.52	0.37	0.49	0.33						
	U.S. Muni High Yield	5.25	5.00	5.25	7.25	6.75	0.18	-0.09	-0.01	-0.03	0.30	0.23	0.02	0.19	0.35	0.29	0.47	0.53	0.00	0.03	0.03	0.04						
EQUITIES	U.S. Large Cap	7.50	6.50	7.60	15.50	14.00	0.01	-0.06	-0.29	-0.37	0.04	-0.02	-0.05	-0.06	0.26	0.20	0.69	0.48	-0.27	0.16	-0.23	0.24						
	U.S. Mid Cap	7.75	6.75	8.34	18.75	16.50	0.04	-0.08	-0.32	-0.39	0.04	-0.04	-0.08	-0.08	0.25	0.19	0.72	0.53	-0.31	0.11	-0.26	0.19						
	U.S. Small Cap	7.50	6.75	8.81	21.50	19.00	0.01	-0.07	-0.34	-0.41	-0.05	-0.12	-0.14	-0.15	0.15	0.11	0.65	0.45	-0.32	0.07	-0.27	0.15						
	U.S. Large Cap Value	7.75	6.75	7.95	16.25	14.75	0.01	-0.06	-0.29	-0.36	0.01	-0.02	-0.06	-0.06	0.25	0.20	0.67	0.45	-0.25	0.17	-0.20	0.24						
	U.S. Large Cap Growth	7.25	6.25	7.39	15.75	14.25	0.02	-0.08	-0.31	-0.40	0.06	-0.04	-0.06	-0.09	0.23	0.18	0.70	0.52	-0.31	0.13	-0.27	0.20						
	Europe ex-UK Large Cap	7.75	7.25	8.83	18.75	17.25	0.03	0.04	-0.24	-0.33	0.11	0.05	0.08	-0.01	0.33	0.26	0.69	0.44	-0.21	0.35	-0.17	0.43						
	Japanese Equity	6.75	5.25	6.47	16.25	15.50	0.01	-0.02	-0.18	-0.21	0.11	0.08	0.05	0.06	0.34	0.29	0.53	0.39	-0.15	0.21	-0.11	0.26						
	UK Large Cap	8.00	6.75	8.34	18.75	17.00	0.07	0.00	-0.31	-0.39	0.08	0.02	0.01	-0.03	0.34	0.27	0.71	0.54	-0.29	0.28	-0.25	0.36						
	EAFE Equity hedged	7.75	7.00	8.03	15.00	13.75	-0.02	0.02	-0.37	-0.39	-0.06	-0.06	-0.10	-0.06	0.28	0.23	0.68	0.56	-0.30	0.01	-0.23	0.08						
	EAFE Equity	7.75	6.75	8.10	17.25	16.00	0.03	0.02	-0.25	-0.33	0.12	0.07	0.07	0.01	0.37	0.30	0.71	0.48	-0.22	0.34	-0.18	0.42						
	Emerging Markets Equity	9.00	8.75	11.77	26.50	22.50	0.03	0.08	-0.22	-0.30	0.17	0.07	0.08	0.01	0.35	0.28	0.69	0.47	-0.21	0.27	-0.17	0.34						
	Asia ex-Japan Equity	9.25	9.75	12.48	25.25	21.75	-0.03	0.06	-0.20	-0.28	0.16	0.10	0.10	0.05	0.40	0.33	0.70	0.47	-0.17	0.26	-0.13	0.33						
	AC World Equity	7.75	6.75	8.14	17.50	15.75	0.03	0.00	-0.28	-0.37	0.10	0.03	0.02	-0.03	0.33	0.27	0.74	0.50	-0.26	0.27	-0.21	0.35						
ALTERNATIVES	Private Equity	8.00	7.75	9.89	22.00	20.00	0.05	-0.11	-0.39	-0.44	-0.03	-0.13	-0.13	-0.16	0.18	0.12	0.69	0.53	-0.36	0.06	-0.30	0.14						
	U.S. Direct Real Estate	6.00	6.00	6.61	11.50	10.75	0.00	-0.01	-0.03	-0.06	0.04	0.05	0.00	0.03	0.11	0.10	0.25	0.14	-0.02	0.09	-0.01	0.11						
	U.S. Value Added Real Estate	7.75	7.75	8.84	15.50	14.25	0.00	-0.01	-0.03	-0.06	0.04	0.05	0.00	0.03	0.11	0.10	0.25	0.14	-0.02	0.09	-0.01	0.11						
	European Direct Real Estate	5.75	5.75	6.89	15.75	14.75	-0.04	0.00	-0.03	-0.04	0.03	0.06	0.02	0.06	0.15	0.14	0.20	0.13	0.03	0.05	0.06	0.07						
	U.S. REITs	6.75	6.50	8.17	19.25	17.75	-0.03	-0.04	-0.04	-0.11	0.14	0.17	0.03	0.14	0.35	0.31	0.64	0.35	-0.02	0.26	0.00	0.30						
	Global Infrastructure	7.25	6.75	7.47	12.50	11.75	0.10	-0.01	-0.11	-0.14	0.01	-0.03	-0.04	-0.04	0.06	0.04	0.21	0.17	-0.11	0.04	-0.10	0.07						
	Diversified Hedge Funds	5.25	4.50	4.67	6.00	5.75	0.16	0.10	-0.41	-0.43	0.03	-0.14	-0.12	-0.15	0.17	0.11	0.58	0.54	-0.39	0.02	-0.34	0.10						
	Event Driven Hedge Funds	6.00	6.00	6.23	7.00	6.50	0.14	0.00	-0.46	-0.51	0.01	-0.14	-0.12	-0.18	0.23	0.14	0.73	0.62	-0.42	0.07	-0.35	0.15						
	Long Bias Hedge Funds	6.25	5.25	5.82	11.00	10.50	0.10	0.02	-0.42	-0.49	0.04	-0.11	-0.06	-0.16	0.24	0.16	0.72	0.57	-0.41	0.11	-0.35	0.20						
	Relative Value Hedge Funds	4.75	5.00	5.16	5.75	5.50	0.17	-0.03	-0.40	-0.45	0.11	-0.02	-0.03	-0.08	0.37	0.26	0.81	0.76	-0.38	0.01	-0.32	0.08						
	Macro Hedge Funds	5.25	4.75	5.22	10.00	9.50	-0.02	0.20	-0.09	-0.10	0.16	0.01	0.14	0.00	0.13	0.10	0.20	0.03	-0.06	0.33	-0.04	0.37						
	Commodities	3.75	3.50	5.22	19.25	17.25	0.22	0.08	-0.15	-0.24	0.23	0.05	0.12	0.00	0.23	0.17	0.41	0.28	-0.22	0.31	-0.22	0.37						
	Gold	4.25	4.00	6.11	21.50	18.50	0.08	0.10	0.20	0.08	0.39	0.27	0.31	0.15	0.25	0.17	0.10	-0.10	0.11	0.45	0.07	0.46						

Source: J.P. Morgan Asset Management. Data as of 30 September 2014, except hedge funds (diversified, event driven, long bias, and relative value) as of 30 June 2014 and hedge fund Private equity, hedge funds, real estate, infrastructure and commodities are unlike other asset categories shown above in that there is no underlying investable index. Hedge fund returns managers in these asset classes and strategies is typically far wider than for traditional asset classes.

J.P. MORGAN LONG-TERM CAPITAL MARKET RETURN ASSUMPTIONS - U.S. DOLLAR

2015 Estimates - Correlation Matrix

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 judgement as well as quantitative optimisation approaches in setting strategic allocations to all the above asset classes and strategies. Please note that all information shown is based on qualitative analysis. Exclusive reliance on the above is not advised. 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 and strategy assumptions are passive only—they do not consider the impact of active management. 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 judgement 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.

Emerging Markets Sovereign Debt	Emerging Markets Local Currency Debt	Emerging Markets Corporate Bonds	U.S. Muni 1-15 Yr Blend	U.S. Muni High Yield	U.S. Large Cap	U.S. Mid Cap	U.S. Small Cap	U.S. Large Cap Value	U.S. Large Cap Growth	Europe ex-UK Large Cap	Japanese Equity	UK Large Cap	EAFE Equity hedged	EAFE Equity	Emerging Markets Equity	Asia ex-Japan Equity	AC World Equity	Private Equity	U.S. Direct Real Estate	U.S. Value Added Real Estate	European Direct Real Estate	U.S. REITs	Global Infrastructure	Diversified Hedge Funds	Event Driven Hedge Funds	Long Bias Hedge Funds	Relative Value Hedge Funds	Macro Hedge Funds	Commodities	Gold
1.00																														
0.79	1.00																													
0.86	0.68	1.00																												
0.53	0.22	0.44	1.00																											
0.40	0.21	0.40	0.55	1.00																										
0.50	0.64	0.52	0.00	0.21	1.00																									
0.50	0.63	0.53	0.01	0.23	0.95	1.00																								
0.41	0.59	0.42	-0.06	0.14	0.92	0.94	1.00																							
0.50	0.65	0.52	-0.01	0.20	0.96	0.94	0.91	1.00																						
0.49	0.60	0.51	0.01	0.23	0.96	0.95	0.91	0.93	1.00																					
0.59	0.75	0.58	0.00	0.19	0.88	0.86	0.80	0.87	0.85	1.00																				
0.45	0.59	0.47	0.00	0.14	0.66	0.67	0.61	0.66	0.64	0.71	1.00																			
0.57	0.70	0.59	0.02	0.31	0.86	0.84	0.75	0.85	0.83	0.93	0.69	1.00																		
0.52	0.61	0.53	-0.03	0.26	0.88	0.89	0.82	0.87	0.86	0.87	0.78	0.87	1.00																	
0.61	0.78	0.61	0.02	0.22	0.88	0.87	0.81	0.87	0.86	0.96	0.78	0.94	0.90	1.00																
0.64	0.80	0.62	0.02	0.25	0.77	0.79	0.72	0.75	0.78	0.85	0.67	0.84	0.81	0.88	1.00															
0.63	0.76	0.63	0.05	0.25	0.76	0.77	0.71	0.74	0.77	0.83	0.64	0.81	0.80	0.86	0.95	1.00														
0.59	0.75	0.60	0.01	0.23	0.93	0.93	0.87	0.92	0.92	0.95	0.75	0.93	0.91	0.96	0.89	0.87	1.00													
0.38	0.55	0.44	-0.06	0.24	0.88	0.92	0.93	0.87	0.89	0.77	0.65	0.74	0.80	0.79	0.72	0.70	0.85	1.00												
0.20	0.23	0.16	0.05	0.08	0.30	0.31	0.31	0.32	0.28	0.27	0.21	0.25	0.26	0.27	0.22	0.22	0.29	0.28	1.00											
0.20	0.23	0.16	0.05	0.08	0.30	0.31	0.31	0.32	0.28	0.27	0.21	0.25	0.26	0.27	0.22	0.22	0.29	0.28	0.16	1.00										
0.21	0.21	0.20	0.06	0.10	0.26	0.25	0.23	0.26	0.24	0.27	0.24	0.25	0.30	0.27	0.24	0.24	0.27	0.22	0.08	0.08	1.00									
0.54	0.59	0.45	0.15	0.22	0.76	0.77	0.77	0.79	0.71	0.68	0.52	0.62	0.66	0.68	0.56	0.56	0.72	0.70	0.40	0.40	0.21	1.00								
0.14	0.19	0.15	-0.01	0.08	0.30	0.29	0.28	0.29	0.29	0.27	0.20	0.26	0.26	0.27	0.23	0.22	0.29	0.27	0.09	0.09	0.07	0.22	1.00							
0.34	0.50	0.40	-0.08	0.37	0.65	0.69	0.61	0.62	0.69	0.68	0.62	0.74	0.74	0.73	0.77	0.72	0.74	0.68	0.14	0.14	0.20	0.35	0.21	1.00						
0.43	0.57	0.52	-0.06	0.41	0.80	0.84	0.78	0.78	0.81	0.80	0.64	0.84	0.82	0.83	0.81	0.77	0.85	0.84	0.22	0.22	0.23	0.56	0.25	0.88	0.93	1.00				
0.49	0.66	0.55	-0.07	0.29	0.85	0.87	0.82	0.82	0.87	0.86	0.71	0.88	0.87	0.89	0.90	0.87	0.91	0.84	0.22	0.22	0.24	0.56	0.26	0.88	0.93	1.00				
0.50	0.53	0.59	0.08	0.53	0.67	0.71	0.62	0.65	0.69	0.69	0.60	0.77	0.75	0.74	0.75	0.73	0.75	0.70	0.19	0.19	0.21	0.47	0.22	0.85	0.89	0.85	1.00			
0.20	0.42	0.18	-0.02	0.07	0.27	0.28	0.22	0.25	0.29	0.39	0.37	0.41	0.31	0.43	0.50	0.45	0.40	0.25	0.04	0.04	0.09	0.11	0.08	0.64	0.46	0.52	0.38	1.00		
0.35	0.49	0.39	-0.09	0.14	0.43	0.46	0.36	0.42	0.45	0.53	0.35	0.62	0.41	0.56	0.59	0.52	0.55	0.38	0.10	0.10	0.10	0.26	0.15	0.58	0.55	0.62	0.54	0.56	1.00	
0.29	0.38	0.29	0.15	0.04	0.04	0.06	0.05	0.05	0.06	0.14	0.09	0.18	-0.02	0.17	0.28	0.24	0.15	0.05	0.02	0.02	0.00	0.07	0.02	0.24	0.15	0.24	0.16	0.49	0.50	1.00

(macro) as of 31 May 2014. U.S. Intermediate Treasury returns based on Barclays Capital U.S. Treasury: 7-10 Year Index. TIPS=Treasury Inflation Protected Securities. are shown net of manager fees. The return estimates shown for these alternative asset classes and strategies are our estimates of industry medians—the dispersion of returns among

J.P. MORGAN ASSET MANAGEMENT LONG-TERM CAPITAL MARKET RETURN

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