



CRESSET®

CRESSET CAPITAL MARKET ASSUMPTIONS

Q1 2023

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Capital Market & Yield Assumptions

ASSET CLASS	10-YR ARITHMETIC	10-YR GEOMETRIC	20-YR ARITHMETIC	20-YR GEOMETRIC	STANDARD DEVIATION	HISTORICAL RETURN (10-YR)
	RETURN ASSUMPTION	RETURN ASSUMPTION	RETURN ASSUMPTION	RETURN ASSUMPTION		
U.S. Large-Cap	8.2%	7.0%	8.4%	7.2%	15.4%	13.0%
U.S. Mid-Cap	9.5%	8.1%	9.3%	7.9%	16.8%	11.3%
U.S. Small-Cap	11.2%	9.2%	10.5%	8.5%	19.7%	14.1%
Int Developed Large-Cap	8.7%	7.3%	9.1%	7.7%	16.8%	5.9%
Int Developed Small-Cap	11.2%	9.6%	10.9%	9.0%	18.1%	7.6%
Emerging Markets	12.8%	10.3%	12.7%	10.3%	22.1%	3.4%
Global Equity	8.7%	7.5%	9.5%	8.3%	15.1%	9.3%
Thematic Equity	13.8%	11.2%	10.3%	10.3%	22.5%	9.3%
Intermediate-Term Municipal	3.7%	3.6%	3.3%	3.3%	3.9%	2.2%
Short-Term Municipal	2.5%	2.5%	2.4%	2.4%	1.2%	0.9%
Intermediate-Term Core	4.7%	4.6%	4.7%	4.5%	5.3%	1.5%
Short-Term Core	3.7%	3.7%	3.7%	3.6%	2.6%	1.0%
MBS/ABS	4.0%	3.9%	4.0%	3.8%	6.0%	1.2%
Municipal High Yield	6.0%	5.8%	6.1%	5.8%	6.5%	4.4%
High Yield	7.2%	6.8%	7.0%	6.7%	8.4%	4.5%
Bank Loans	6.5%	6.3%	6.6%	6.4%	6.1%	3.7%
Preferred Stocks	5.9%	4.7%	5.9%	4.7%	15.2%	4.5%
Convertible Bonds	3.0%	2.3%	3.0%	2.3%	12.1%	10.6%
Non-US Developed Debt	2.1%	1.7%	2.2%	1.8%	9.3%	-1.7%
Emerging Markets Debt	5.7%	5.2%	5.2%	4.8%	9.6%	0.3%
TIPS	2.7%	2.6%	2.7%	2.6%	5.4%	1.7%

For illustrative purposes only and subject to change based on market environment. Data as of 12.31.2022. Geometric return is the compounding rate of wealth invested solely in a single asset class. Arithmetic averages convey the typical single-year rate of return from investing in an asset class; this quantity is used when combining asset class returns into a portfolio return for a given year. Geometric returns are lower than the corresponding arithmetic returns by an amount known as risk drag: the more volatile the asset, the higher its risk drag. Returns are listed in local currency. Asset classes are proxied by their indexes. It is not possible to invest directly in an index. Please see Notes on back page.

Capital Market & Yield Assumptions ^{Cont.}

ASSET CLASS	10-YR ARITHMETIC	10-YR GEOMETRIC	20-YR ARITHMETIC	20-YR GEOMETRIC	STANDARD DEVIATION	HISTORICAL RETURN (10-YR)
	RETURN ASSUMPTION	RETURN ASSUMPTION	RETURN ASSUMPTION	RETURN ASSUMPTION		
Energy Infrastructure	7.8%	5.3%	8.7%	6.1%	22.4%	0.7%
Public Real Estate	9.3%	7.9%	9.6%	8.2%	17.0%	8.3%
Commodities	4.7%	3.6%	4.7%	3.6%	14.8%	-0.8%
Market Neutral	4.1%	3.9%	5.2%	5.2%	6.0%	4.7%
Hedged Equity	5.1%	4.7%	6.2%	6.2%	8.9%	5.2%
Private Credit	9.7%	9.4%	9.5%	9.2%	7.2%	9.7%
Private Real Estate	8.4%	8.0%	8.6%	8.3%	8.5%	10.3%
Private Equity – Secondaries	12.5%	11.2%	11.7%	10.4%	15.7%	14.4%
Private Equity	14.6%	12.7%	13.7%	11.8%	19.7%	18.7%
Cash	3.4%	3.4%	3.4%	3.4%	1.2%	0.6%

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Capital Market & Yield Assumptions Cont.

ASSET CLASS	REPRESENTATIVE BENCHMARK
U.S. Large-Cap	S&P 500 Index
U.S. Mid-Cap	Russell Mid-Cap Index
U.S. Small-Cap	Russell 2000 Index
Int Developed Large-Cap	MSCI EAFE Index
Int Developed Small-Cap	MSCI EAFE Small-Cap Index
Emerging Markets	MSCI Emerging Markets Index
Global All-Cap	MSCI ACWI Index
Thematic Equity	Russell 2000 Growth Index
Intermediate Term Municipal Bonds	Barclays Intermediate Municipal 5-10 Year Index
Short-Term Municipal Bonds	Barclays Municipal 1-3 Year Index
Investment Grade Core	Barclays U.S. Aggregate Index
Investment Grade Short-Term	Barclays U.S. Government/Credit 1-3 Year Index
MBS/ABS	Barclays US MBS Index
Municipal High Yield Bonds	Barclays High Yield Municipal Index
High Yield Bonds	Barclays U.S. Corporate High Yield Index
Bank Loans	S&P/LSTA Leveraged Loan 100AY Index
Preferred Stock	S&P Preferred Stock Index
Convertible Bonds	Barclays Convertibles Index
Non-U.S. Developed	Barclays Global Aggregate Index
Emerging Market Bonds	50% JPMorgan EMBI Global Core/50% JPMorgan GBI-EM Index
TIPS	Barclays U.S. Treasury TIPS Index
Energy Infrastructure	Alerian MLP Index
Public Real Estate	FTSE NAREIT All Equity REITs Index
Commodities	Bloomberg Commodity Index
Infrastructure	S&P Global Infrastructure Index
Market Neutral	Credit Suisse Liquid Alternative Index
Long/Short Equity	Credit Suisse Long/Short Equity Index
Private Equity - Secondaries	PitchBook Secondary Private Equity Index
Private Equity	PitchBook PE All US Index
Private Real Estate	NCREIF Fund ODCE Index
Private Credit	Cresset Private Credit Index
Cash	ICE BofA 0-3 Month US Treasury Bill Index

Investments cannot be made in an index.

Capital Market Assumption Disclosure

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Each row in the prior tables pertains to an unmanaged index and such the data does not reflect fees, expenses or other costs that will be incurred and should be taken into consideration when determining the merits of any actual investment. It is not possible to invest directly in an index. Hence, the analysis is for illustrative purposes only and not a guarantee of performance or the strategy or types of investments that may apply to you.

Cresset's asset allocation modeling incorporates a number of inputs including, expected return assumptions, volatility (standard deviation), yield and correlation of asset classes. Cresset creates 20-year and 10-year projections.

Equity assumptions are a combination of income, real earnings growth, and repricing (valuation). This approach is utilized for U.S. Large-Cap Equity, U.S. Mid-Cap Equity, U.S. Small-Cap Equity, Global Equity, International Large-Cap Equity, International Small-Cap Equity, and Emerging Markets Equity.

Fixed income assumptions are a combination of expected real yield, expected roll return, historical premium/discount over Treasuries, and historical defaults and recoveries.

Private Investments & Alternative assumptions such as Hedged Equity are built using an initial public market equivalent assumption plus a beta/leverage adjustment and an illiquidity premium.

Geometric return is the compounding rate of wealth invested solely in a single asset class. Arithmetic averages convey the typical single-year rate of return from investing in an asset class; this quantity is used when combining asset class returns into a portfolio return for a given year. Geometric returns are lower than the corresponding arithmetic returns by an amount known as risk drag: the more volatile the asset, the higher its risk drag. Returns are listed in local currency. Asset classes are proxied by their indexes.

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