LONG-TERM CAPITAL MARKET ASSUMPTIONS

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LONG-TERM CAPITAL MARKET ASSUMPTIONS 2023

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This paper establishes our rationale for improved returns across most asset classes in 2023.

2022 was a year of major change for our long-term capital market assumptions. Valuations for both stocks and bonds started 2022 at very high levels, which implied muted future returns. After 2022's selloff in both, valuations are now more favorable and imply higher future returns for both asset classes.

Cash, which started the year yielding close to zero, was all the way up to a yield of about 4.0% as of this writing in December. The 10-year Treasury started the year with a yield of 1.5%, traded above 4.0% by late 2022 and stood at about 3.8% toward year end. The S&P 500 Index began the year with a forward price-to-earnings valuation ratio of 21 but was trading at a much more reasonable 17 at year end.

Consequently, the 2023 update of our long-term outlook calls for better returns across most asset classes. However, expected lower potential economic growth rates due to aging demographics and a slow-growing labor force still present headwinds for future returns. While off historically high levels, elevated corporate profit margins remain a potential headwind for future stock market returns.

CASH

The Federal Reserve has been aggressively raising short-term interest rates to combat stubbornly high inflation with short-term rates now above 4%. In the longer run (beyond 2024), the Federal Reserve projects short-term interest rates to be about 2.5%, after peaking above 5.0% in 2023 and falling to 4.0% in 2024. Given this higher level of short-term interest rates, our projected return for cash equivalents moves up to 3.0%.

BONDS

We now project the 10-year Treasury note to yield 4.0% in the longer run. This is consistent with the Federal Reserve's and Congressional Budget Office's projections of about 2.0% economic growth and 2.0% inflation over the longer run.

Investment-grade corporate bonds should see yields average about 1.0% higher than the equivalent Treasury bond, while high-yield bonds should see yields about 2.5% higher than the equivalent Treasury. This is consistent with bond yields over the last several economic cycles.

This implies investment-grade corporate bond yields of 5.0% and non-investment-grade bond yields of 6.5%. In aggregate, we expect longer-term returns from a portfolio of Treasuries and investment-grade corporate bonds to provide about 4.5% returns, which is consistent with the returns assumed above.

U.S. STOCKS AND REAL ESTATE

We anticipate U.S. large cap stocks and U.S. REITs to both provide 7.5% returns. This is consistent with lower potential economic growth, valuations more in line with historical averages, and still-elevated profit margins. Small cap stocks are projected to have 8.5% returns. These returns are consistent with a 4.0% 10-year Treasury and a 4.5% equity risk premium.

INTERNATIONAL STOCKS

For developed-world stocks, demographics and potential economic growth are less favorable than in the U.S. However, valuation is more favorable, and we anticipate stock market returns of 8.0% for developed international stocks. We see more favorable long-term economic growth conditions and valuation for emerging markets and expect returns of 8.5%.

COMMODITIES

We expect returns of 5.0% for commodities, consistent with historical returns of the last 20 years. However, there has been a lack of investment in commodities over the last decade, especially for traditional energy and base metals, while the movement to clean energy requires significant base metals. This implies potential upside to our 5.0% estimate.

ALTERNATIVES

Alternatives offer the potential to enhance returns while mitigating portfolio volatility. However, we see a wide range of potential returns, income, and diversification attributes for alternatives.

Alternative investments include private equity, hedge funds, real assets (including energy and commodity investments), commercial real estate, and private credit. This broad range of potential investments, coupled with many managers and investment styles, implies a wide range of returns are possible for alternatives.

For our representative returns and recommended allocations, we include a broad alternatives class and break out private equity as a stand-alone asset class.

We assume that broad alternatives (including relative value, equity hedge, event driven, global macro, and multi-strategy) provide returns of about 4.0%. This is consistent with alternative returns over the last 15 years and the future expected returns from stocks and bonds.

Private equity has been a top performing asset class over the last decade. Consequently, it is receiving significant investor attention with individual investors getting better access to the space. We assume private equity will provide returns of 9.0%. This is consistent with our return assumptions for public markets plus a premium for potential illiquidity risk.

IMPORTANCE OF CORRELATION

Correlation measures how closely the price movement of two assets are related. A correlation of one means both assets move up or down by the same percentage. A correlation of negative one means they move opposite one another while a correlation of zero means there is no relationship between their price movement.

Figure 1

Asset Class	1	2	3	4	5	6	7	8	9	10	11	12
1. Large Cap Stocks	1.00											
2. Small Cap Stocks	0.90	1.00										
3. Developed International Stocks	0.82	0.77	1.00									
4. Emerging Market Stocks	0.71	0.69	0.79	1.00								
5. Investment-Grade Bonds	0.18	0.13	0.18	0.16	1.00							
6. High-Yield Bonds	0.65	0.65	0.63	0.62	0.41	1.00						
7. Cash Equivalents (US Treasuries)	(0.08)	(0.10)	(0.07)	(0.06)	0.13	(0.09)	1.00					
8. Real Estate	0.59	0.59	0.54	0.46	0.25	0.51	(0.02)	1.00				
9. Hedge Funds	0.70	0.70	0.69	0.65	0.21	0.62	(0.03)	0.45	1.00			
10. Commodities	0.35	0.36	0.42	0.43	0.07	0.38	(0.01)	0.26	0.40	1.00		
11. Private Equity	0.75	0.75	0.70	0.63	0.11	0.56	(0.07)	0.49	0.62	0.34	1.00	
12. Private Debt	0.57	0.58	0.55	0.52	0.22	0.72	(0.10)	0.43	0.57	0.34	0.59	1.00

Source: Janney ISG, Horizon Actuarial Services, Morningstar

Correlation is the key attribute for portfolio diversification. Ideally, a well-diversified portfolio combines assets that are not highly correlated with each other so that portfolio volatility gets dampened.

Figure 1 lists representative correlations among the various major asset classes.

OBSERVATIONS FROM CORRELATION MATRIX

1. Large cap stocks have their highest correlation with other stocks (0.90–0.71), private equity (0.75), hedge funds (0.70), high-yield bonds (0.65) and then private debt (0.57).
2. Investment-grade bonds have their highest correlation with high-yield bonds (0.41), real estate (0.25), private debt (0.22), and hedge funds (0.21).
3. High-yield bonds have their highest correlation with private debt (0.72) and stocks (0.65-0.62).
4. Real Estate has its highest correlation with stocks (0.59-0.46), high-yield bonds (0.51), private equity (0.49), hedge funds (0.45), and private debt (0.43).
5. Hedge funds have their highest correlation with stocks (0.70-0.65), high-yield bonds (0.62), private equity (0.62), and private debt (0.57).
6. Commodities have their highest correlation with emerging-market stocks.
7. Private Equity has its highest correlation with stocks (0.75-0.63), hedge funds (0.62), private debt (0.59), and high-yield bonds (0.56).
8. Private debt has its highest correlation with high-yield bonds (0.72), private equity (0.59), stocks (0.58-0.52), and hedge funds (0.57).

REPRESENTATIVE PORTFOLIOS

Figure 2 summarizes our long-term capital market assumptions and includes representative weightings and returns for equity growth to income portfolios.

Figure 2

Asset Class	Expected Return (%)	Equity Growth Portfolio Weights (%)	Diversified Growth Portfolio	60/40 Balanced Portfolio	40/60 Balanced Portfolio	Diversified Income Portfolio	Income Portfolio Weights (%)
Large Cap Stocks	7.5	55	44	33	23	12	0
Small/Mid Cap Stocks	8.5	10	8	6	4	2	0
Developed International Stocks	8.0	15	12	9	6	3	0
Emerging Market Stocks	8.5	5	4	4	3	2	0
Real Estate	7.5	5	4	3	2	2	0
Investment-Grade Bonds	5.0	0	19	38	56	75	98
Hedge Funds	4.0	4	4	3	2	1	0
Commodities	5.0	4	3	2	2	1	0
Cash Equivalents (US Treasuries)	3.0	2	2	2	2	2	2
Expected Portfolio Return	–	7.4	6.9	6.5	6.0	5.5	5.0

Source: Janney ISG, Horizon Actuarial Services, Morningstar

COMPARISON OF JANNEY TO CONSENSUS ESTIMATES

Our Long-Term Capital Market Assumptions are submitted to Horizon Actuarial Services, which compiles consensus estimates from many investment firms (40 firms participated in 2022). While significant variation exists for the estimates that comprise the consensus, Janney's estimates have generally been consistent with the consensus.

Figure 3 shows the consensus estimates for the 2022 survey. Given that most of the effective dates of the survey participant's assumptions were on or around January 1, 2022, the significant move higher in interest rates and more favorable valuation for stocks by the end of 2022 are not fully reflected in the survey. Consequently, our estimates are now on the higher end of the most recent survey. The figure also illustrates the significant variation that exists for the major asset class estimates.

Figure 3

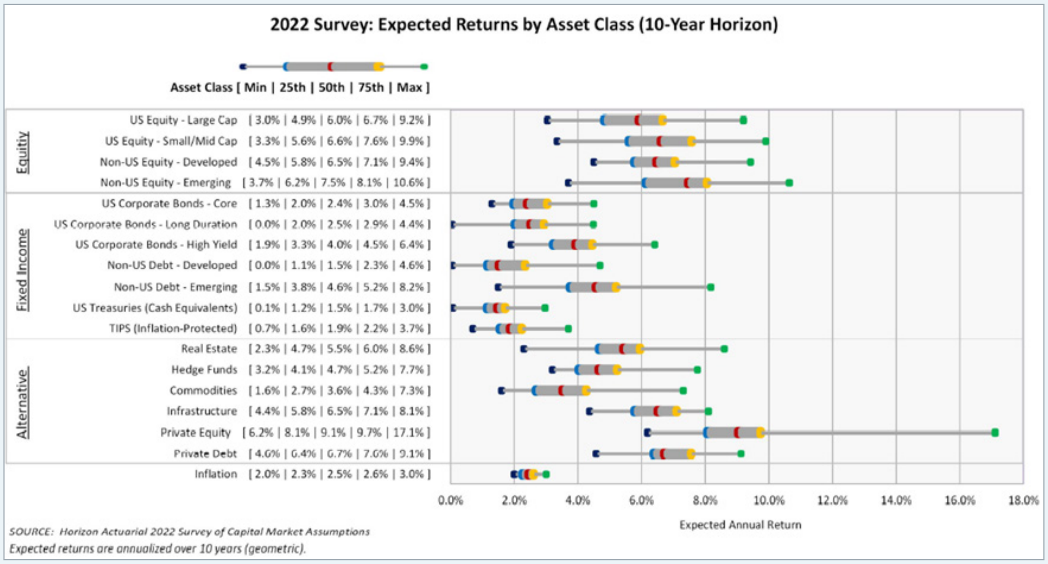

Figure 4 shows the comparison of Janney's estimates to the consensus and the 10-year historical returns for the major asset classes. The table shows both Janney's projection and consensus estimated returns are expected to be below the last 10-year historical returns for stocks but above for bonds.

Figure 4

Asset Class	Janney Expected Return	Consensus Expected Return	10-Year Historical Return	Comments
Large Cap Stocks	7.5%	5.9%	13.3%	11.4% average annual return since 1926. Lower projected returns are consistent with lower potential economic growth, relatively full current valuations, and elevated profit margins.
Small Cap Stocks	8.5%	6.6%	10.1%	16.0% average annual return since 1926. Over very long-term, small cap stocks have been rewarded with higher returns as compensation for higher volatility associated with owning them.
Investment-Grade Bonds	5.0%	2.7%	1.1%	6.0% average annual return since 1926. We anticipate corporate bonds to see yields average about 1.0% higher than the equivalent Treasury bond, consistent with yields over the last several economic cycles.
High-Yield Bonds	6.5%	4.1%	4.2%	High-yield bonds had an advantageous starting point for the last decade's returns. We anticipate high-yield bonds to see yields average about 2.5% higher than the equivalent Treasury bond, consistent with yields over the last several economic cycles.
Cash	3.0%	1.6%	0.7%	3.4% average annual return since 1926. Consistent with Federal Reserve longer-run projections for short-term interest rates of about 2.5%. This return level is low by historical standards and reflects the lower level of potential economic growth.
Equity Growth	7.4%	5.8%	–	Includes US Large Cap (55%) and Mid-Small Caps (10%), US REITs (5%), International Developed (15%), Emerging Markets (5%), Alternatives (4%), Commodities (4%), and assumes 2% cash position.
Balanced 60% Equity – 40% Fixed Income	6.5%	4.4%	–	Includes US Large Cap (33%) and Mid-Small Caps (6%), US REITs (3%), International Developed (9%), Emerging Markets (4%), Alternatives (3%), Commodities (2%), US Bonds (38%), and assumes 2% cash position.

Source: Janney ISG, Horizon Actuarial Services, Morningstar
* Consensus as of midyear 2022. We expect the 2023 consensus update to reflect higher returns for stocks, bonds, and cash.

The table also shows Janney projections and consensus estimates for a blended equity growth and a balanced stock-bond (60/40) portfolio. These projections suggest reasonable return assumptions are 7-8% for an all-equity portfolio and 6-7% for a balanced 60% stock and 40% bond portfolio.

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