University of St.Gallen

Worth the Cost? A Trading-Based Profitability Analysis of Expert Forecasts of US Treasury Yields

Internet Appendix

Master's Thesis

Master of Arts in Banking and Finance

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List of Abbreviations

AIC	Akaike information criteria
BIC	Bayesian information criteria
ER	Excess Returns
FRED	Federal Reserve Economic Data
HQIC	Hannan-Quinn information criteria
MAE	Mean Absolute Error
MDD	Maximum Drawdown
MOVE	ICE Bank of America Treasury Option Volatility Estimate Index
RMSE	Root Means Squared Error
VaR	Value at RiskRisk and Return Measures of the Trading Strategies

Risk and Return Measures of Trading Strategies

Trading Strategy A – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 1: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.69%	-0.58%	-1.32% ***	-1.32% ***	-1.64% ***
	(0.155)	(0.191)	(0.007)	(0.004)	(0.001)
Volatility (ann.)	1.69%	1.68%	1.70%	1.70%	1.68%
Skewness	1.098	-0.059	-0.050	-0.470	-0.945
Kurtosis	3.041	3.642	3.384	3.260	2.920
VaR (95%)	-2.40%	-2.27%	-3.04%	-3.04%	-3.33%
Maximum Drawdown	-3.67%	-5.99%	-9.84%	-9.01%	-10.51%
Sharpe Ratio	-0.199	-0.168	-0.383	-0.384	-0.484
Number of Observations	65	65	65	65	65

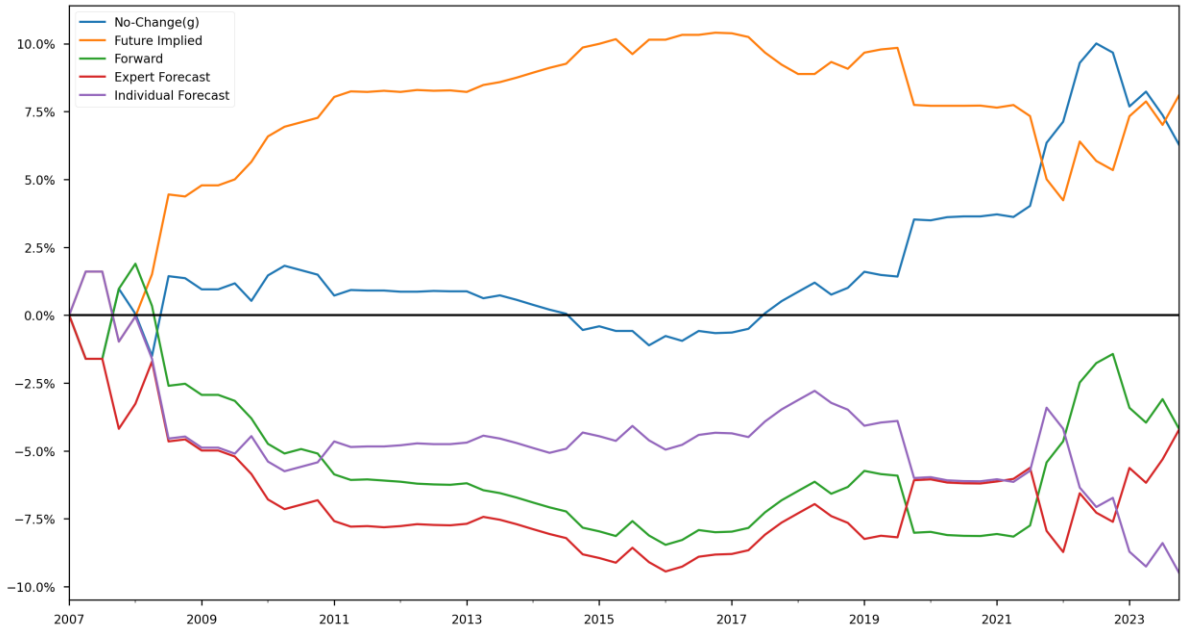
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 2: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.936			
Forward	0.258	0.342		
Expert Forecast	0.276	0.216	0.884	
Individual Forecast	0.212	0.198	0.568	0.806

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 1: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 3: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	**Futures-Implied Yield**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-0.44%	-0.77% *	-1.04% **	-0.85% **	-1.72% ***
	(0.242)	(0.056)	(0.014)	(0.018)	(0.0)
Volatility (ann.)	1.32%	1.56%	1.55%	1.38%	1.36%
Skewness	1.965	0.814	0.427	0.973	-1.768
Kurtosis	5.062	3.872	4.210	4.920	4.017
VaR (95%)	-1.57%	-2.29%	-2.54%	-2.08%	-2.89%
Maximum Drawdown	-2.89%	-9.17%	-9.59%	-6.67%	-11.09%
Sharpe Ratio	-0.159	-0.240	-0.332	-0.303	-0.631
Number of Observations	63	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 4: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.152			
Forward	0.156	0.406		
Expert Forecast	0.318	0.614	0.936	
Individual Forecast	0.132	0.176	0.204	0.236

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

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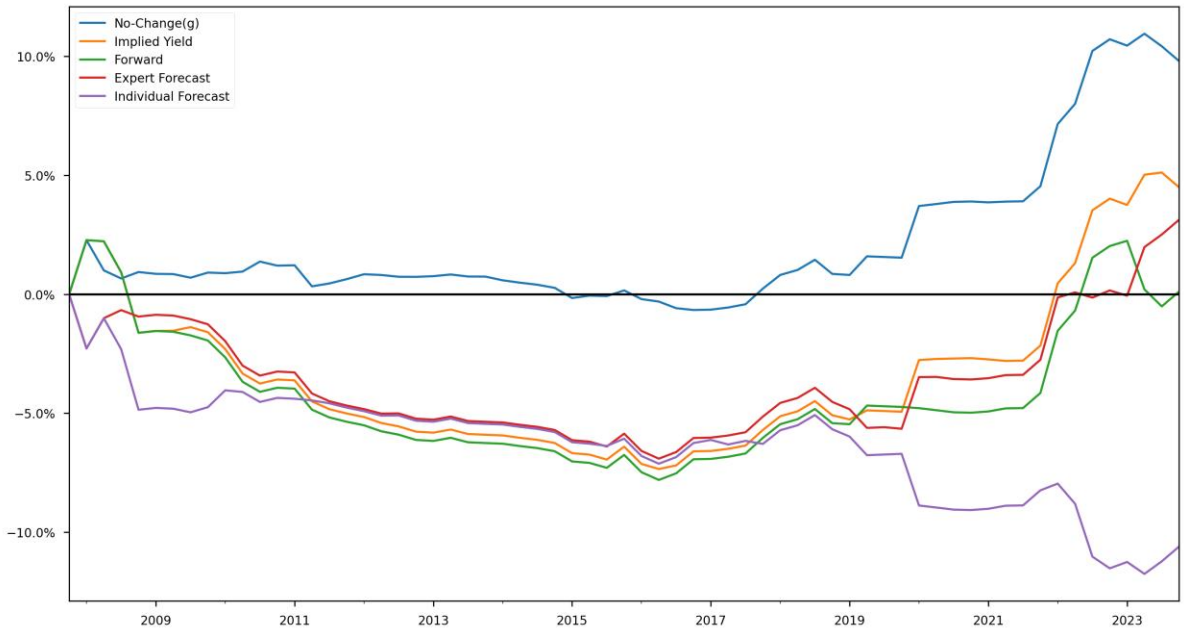

Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 5: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.60%	-1.13% ***	-1.06% ***	-1.25% ***	-1.73% ***
	(0.101)	(0.003)	(0.007)	(0.001)	(0.0)
Volatility (ann.)	1.29%	1.24%	1.48%	1.27%	1.52%
Skewness	1.567	-0.989	0.634	1.277	0.018
Kurtosis	6.290	5.580	3.895	4.744	3.960
VaR (95%)	-1.54%	-1.99%	-2.32%	-2.14%	-3.03%
Maximum Drawdown	-1.61%	-8.11%	-9.49%	-7.17%	-10.71%
Sharpe Ratio	-0.228	-0.452	-0.353	-0.484	-0.564
Number of Observations	63	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 6: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.424			
Forward	0.204	0.86		
Expert Forecast	0.138	0.798	0.172	
Individual Forecast	0.138	0.396	0.180	0.244

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

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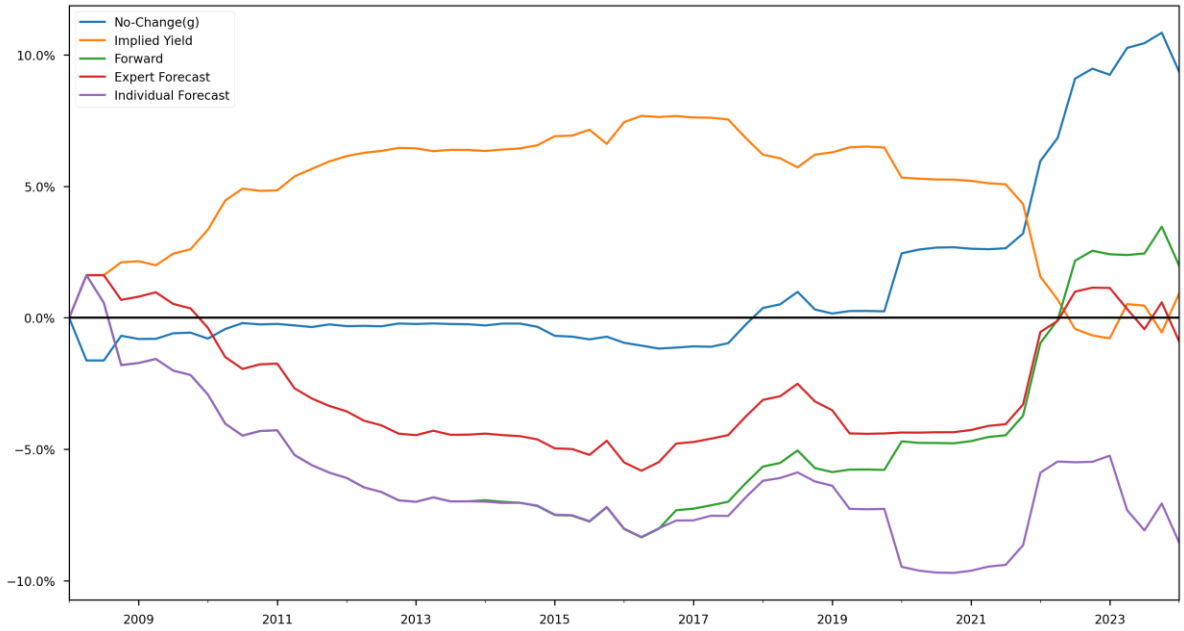


Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 7: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	**Futures-Implied Yield**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	0.49%	1.82%	-3.28% **	-1.72%	-0.70%
	(0.753)	(0.24)	(0.043)	(0.275)	(0.665)
Volatility (ann.)	6.16%	6.21%	6.29%	6.28%	6.38%
Skewness	0.566	0.454	-0.436	-0.464	-0.460
Kurtosis	1.153	0.855	0.898	1.236	1.186
VaR (95%)	-8.58%	-7.34%	-12.54%	-10.98%	-10.12%
Maximum Drawdown	-9.23%	-9.45%	-40.52%	-30.43%	-14.40%
Sharpe Ratio	0.056	0.160	-0.246	-0.121	-0.038
Number of Observations	65	65	65	65	65

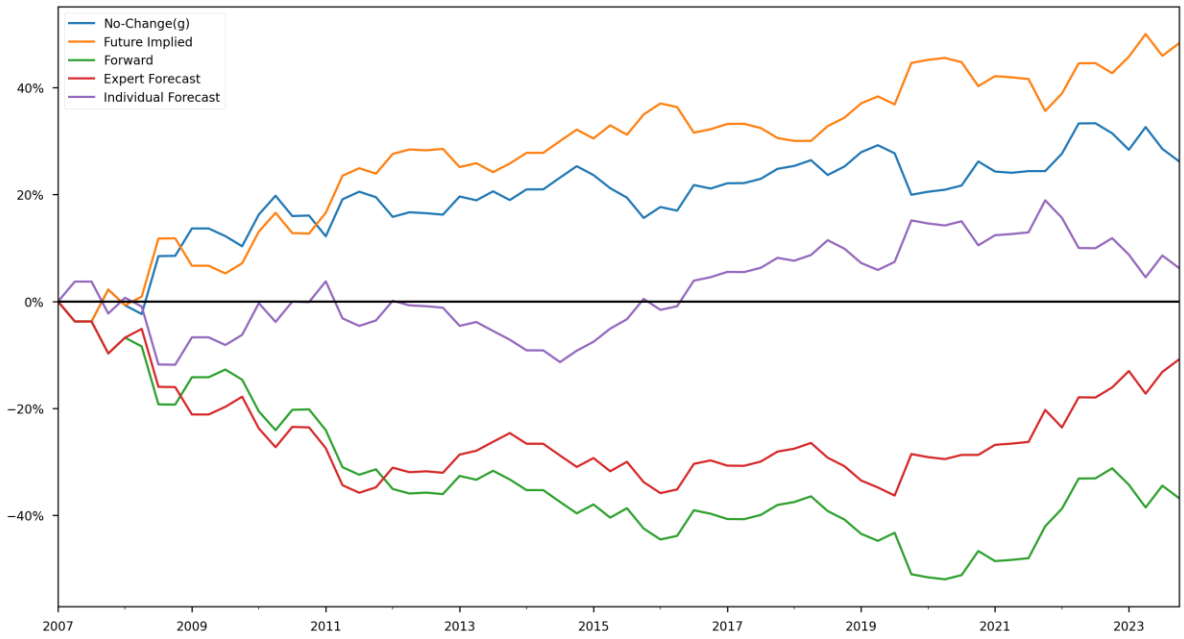
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 8: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.516			
Forward	0.158	0.132		
Expert Forecast	0.474	0.206	0.376	
Individual Forecast	0.666	0.384	0.216	0.538

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 4: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 9: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.43%	1.57%	-3.07% *	-0.70%	-1.62%
	(0.676)	(0.267)	(0.063)	(0.599)	(0.226)
Volatility (ann.)	3.92%	5.41%	6.46%	5.24%	5.02%
Skewness	0.483	0.412	-0.365	0.339	0.998
Kurtosis	1.016	0.364	0.590	1.132	3.733
VaR (95%)	-5.82%	-6.29%	-12.64%	-8.27%	-8.82%
Maximum Drawdown	-11.18%	-5.99%	-38.43%	-20.90%	-26.43%
Sharpe Ratio	-0.044	0.157	-0.223	-0.053	-0.145
Number of Observations	63	63	63	63	63

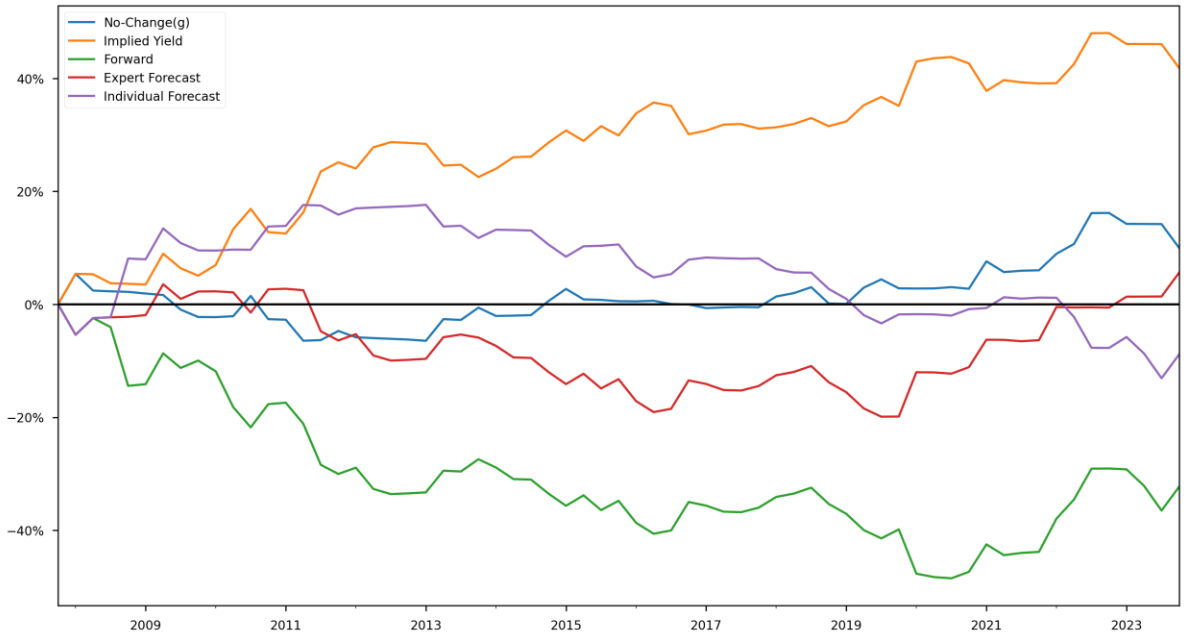
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 10: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.168			
Forward	0.276	0.098 *		
Expert Forecast	0.950	0.314	0.226	
Individual Forecast	0.686	0.118	0.678	0.546

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 5: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 11: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change(g)	**Futures-Implied Yield**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-0.48%	0.78%	-2.64%	-2.83% *	-1.20%
	(0.515)	(0.624)	(0.1)	(0.066)	(0.377)
Volatility (ann.)	2.77%	6.20%	6.33%	6.02%	5.24%
Skewness	0.359	0.442	-0.396	-0.352	-0.417
Kurtosis	1.033	0.861	0.787	0.861	2.629
VaR (95%)	-3.85%	-8.23%	-11.86%	-11.54%	-8.62%
Maximum Drawdown	-4.58%	-13.57%	-36.30%	-33.43%	-11.36%
Sharpe Ratio	-0.079	0.078	-0.194	-0.222	-0.101
Number of Observations	63	63	63	63	63

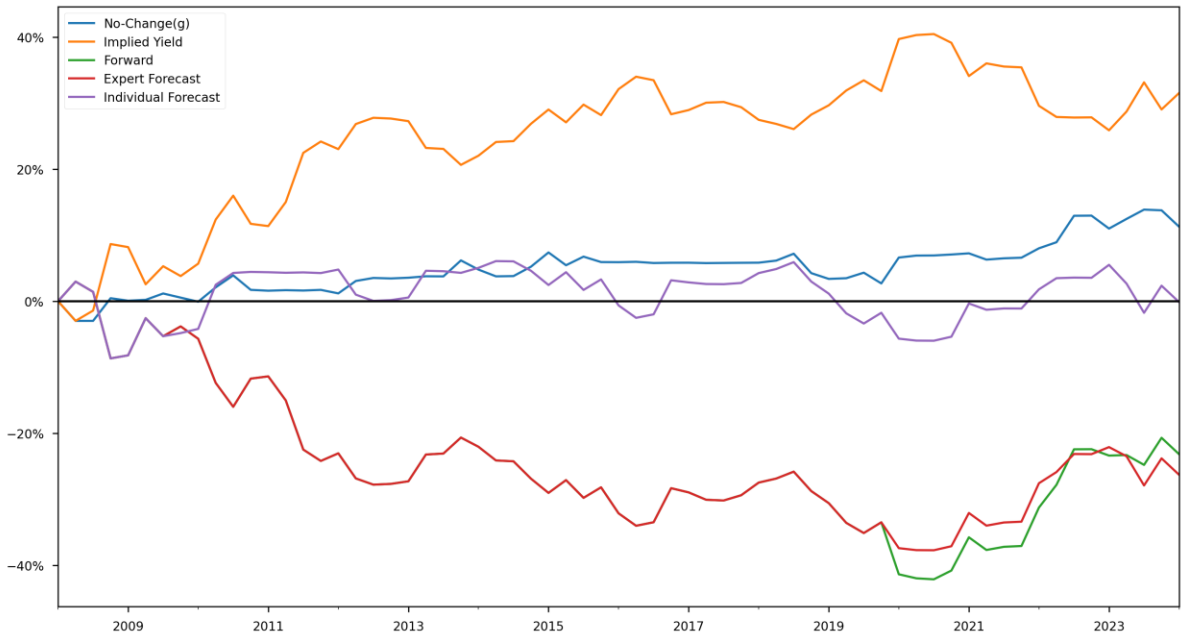
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 12: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.278			
Forward	0.526	0.282		
Expert Forecast	0.454	0.238	0.376	
Individual Forecast	0.922	0.470	0.400	0.286

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 6: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy B – ETFs

2-Year Treasury Yield

3-Month Forecast Horizon

Table 13: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.02% **	-0.76%	-0.58%	-0.54%	-0.92% *
	(0.037)	(0.142)	(0.221)	(0.258)	(0.060)
Volatility (ann.)	1.70%	1.71%	1.70%	1.70%	1.72%
Skewness	0.454	0.509	0.459	-0.012	-0.050
Kurtosis	2.563	2.272	2.250	2.522	2.421
VaR (95%)	-2.78%	-2.53%	-2.34%	-2.29%	-2.70%
Maximum Drawdown	-5.46%	-3.95%	-5.32%	-4.84%	-4.13%
Sharpe Ratio	-0.293	-0.214	-0.165	-0.153	-0.262
Number of Observations	65	65	65	65	65

Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 14: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.392			
Forward	0.264	0.656		
Expert Forecast	0.302	0.690	0.928	
Individual Forecast	0.838	0.744	0.566	0.464

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

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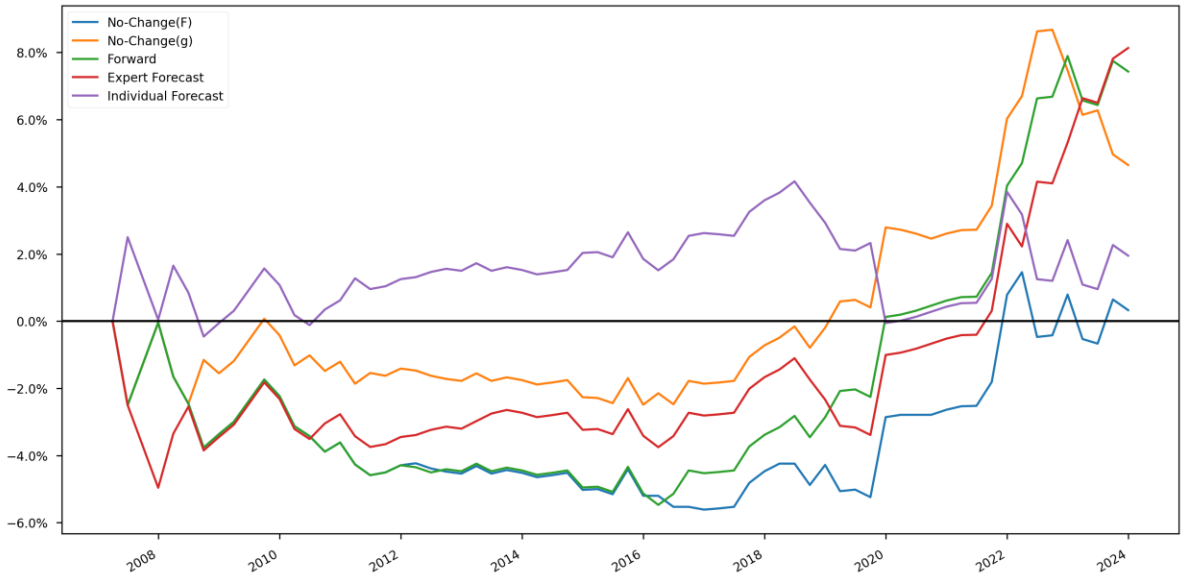


Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 15: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.53% ***	-0.55%	-0.40%	-0.77% **	-1.23% ***
	(0.001)	(0.157)	(0.290)	(0.038)	(0.004)
Volatility (ann.)	1.44%	1.37%	1.33%	1.23%	1.35%
Skewness	-1.569	1.832	1.104	0.102	-1.438
Kurtosis	3.848	5.463	3.928	6.158	4.081
VaR (95%)	-2.86%	-1.78%	-1.55%	-1.75%	-2.41%
Maximum Drawdown	-9.26%	-2.96%	-1.60%	-2.43%	-5.40%
Sharpe Ratio	-0.529	-0.196	-0.144	-0.309	-0.455
Number of Observations	63	63	63	63	63

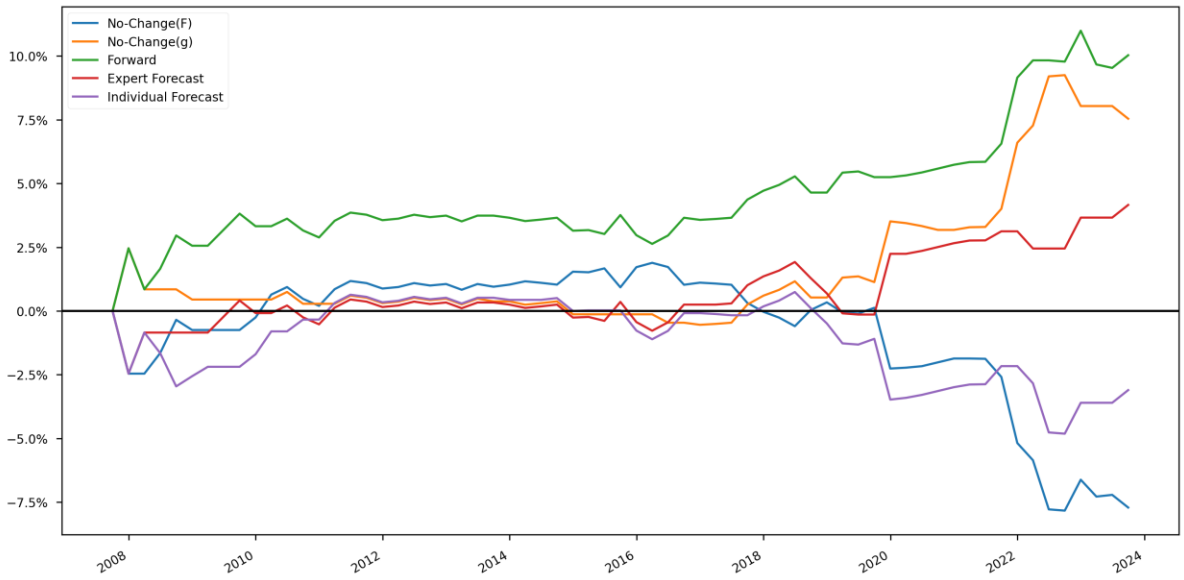
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 16: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.260			
Forward	0.148	0.664		
Expert Forecast	0.270	0.620	0.454	
Individual Forecast	0.480	0.396	0.236	0.430

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 8: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 17: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.89% **	-0.83% **	-0.65% *	-0.76% **	-1.03% **
	(0.011)	(0.024)	(0.085)	(0.030)	(0.013)
Volatility (ann.)	1.11%	1.23%	1.27%	1.13%	1.36%
Skewness	1.309	1.852	1.269	1.583	0.195
Kurtosis	6.526	7.128	3.372	5.076	4.293
VaR (95%)	-1.56%	-1.72%	-1.59%	-1.47%	-2.12%
Maximum Drawdown	-2.71%	-2.96%	-2.85%	-2.77%	-4.34%
Sharpe Ratio	-0.394	-0.332	-0.251	-0.331	-0.375
Number of Observations	63	63	63	63	63

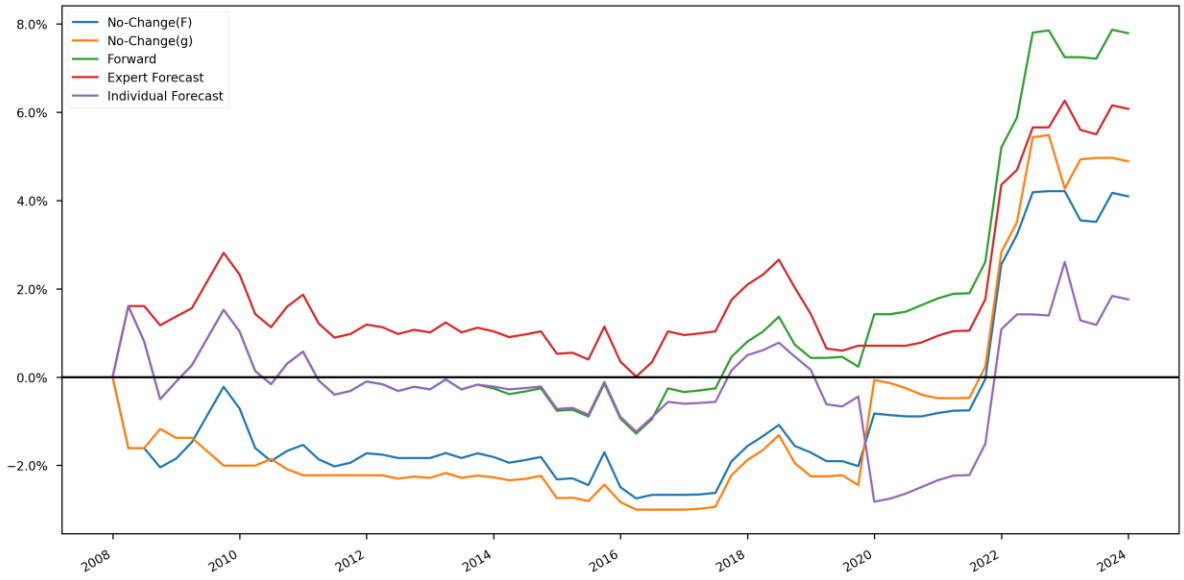
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 18: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.668			
Forward	0.250	0.518		
Expert Forecast	0.592	0.960	0.238	
Individual Forecast	0.956	0.830	0.256	0.400

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 9: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 19: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-2.78%	-0.98%	-2.69%	-1.04%	-0.59%
	(0.154)	(0.615)	(0.166)	(0.594)	(0.760)
Volatility (ann.)	7.60%	7.66%	7.62%	7.66%	7.66%
Skewness	-0.283	-0.520	-0.296	-0.146	-0.194
Kurtosis	0.124	0.243	0.112	0.234	0.257
VaR (95%)	-14.24%	-12.54%	-14.17%	-12.59%	-12.15%
Maximum Drawdown	-31.90%	-23.33%	-31.00%	-28.21%	-24.00%
Sharpe Ratio	-0.164	-0.045	-0.158	-0.048	-0.019
Number of Observations	65	65	65	65	65

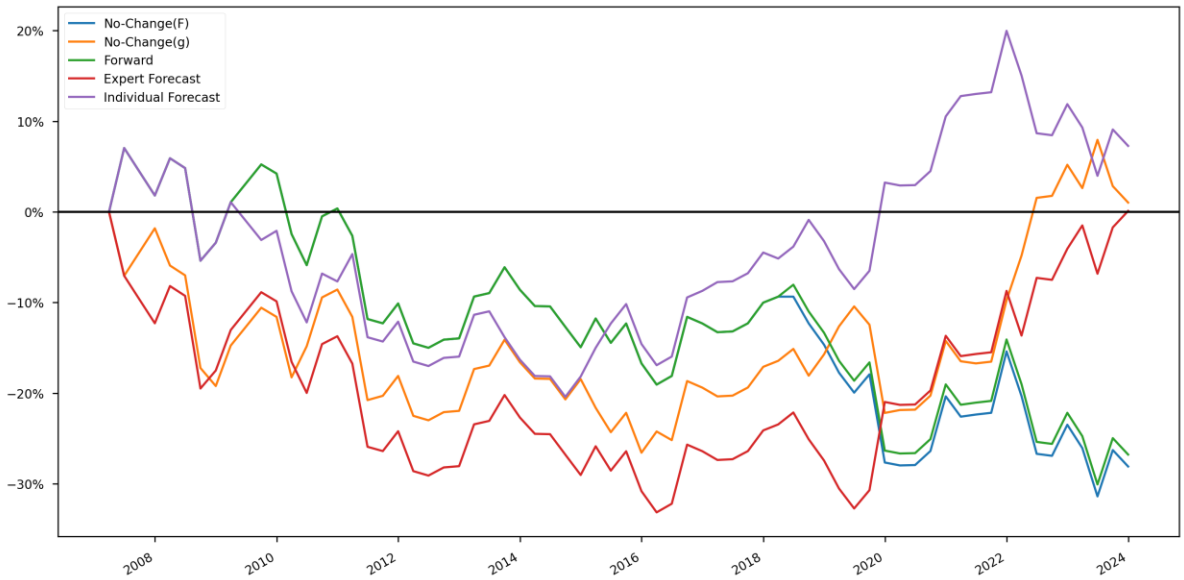
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 20: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.366			
Forward	0.378	0.394		
Expert Forecast	0.328	0.988	0.390	
Individual Forecast	0.246	0.872	0.256	0.764

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 10: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 21: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-3.56% **	-2.06%	-3.95% **	-0.62%	-2.84% *
	(0.033)	(0.128)	(0.037)	(0.664)	(0.051)
Volatility (ann.)	6.38%	5.21%	7.12%	5.54%	5.41%
Skewness	-0.347	-0.638	-0.381	-0.117	-0.037
Kurtosis	0.827	3.331	0.508	1.423	0.151
VaR (95%)	-13.02%	-9.59%	-14.61%	-8.70%	-10.68%
Maximum Drawdown	-37.41%	-28.34%	-38.60%	-15.13%	-26.41%
Sharpe Ratio	-0.265	-0.186	-0.261	-0.042	-0.248
Number of Observations	63	63	63	63	63

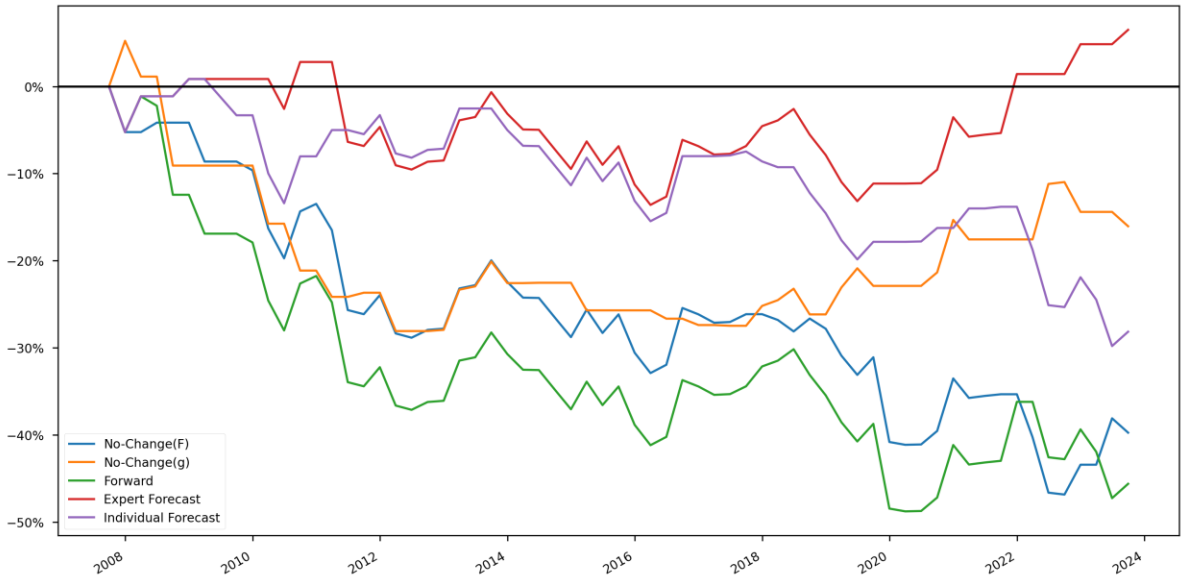
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 22: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.650			
Forward	0.922	0.690		
Expert Forecast	0.052 *	0.434	0.046 **	
Individual Forecast	0.836	0.782	0.876	0.098 *

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 11: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 23: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.97%	-0.63%	-2.08%	-1.89%	-1.64%
	(0.280)	(0.496)	(0.257)	(0.299)	(0.302)
Volatility (ann.)	6.99%	3.55%	7.03%	7.02%	6.08%
Skewness	-0.581	0.672	-0.557	-0.595	-0.641
Kurtosis	0.946	2.230	0.835	0.883	1.583
VaR (95%)	-12.30%	-5.33%	-12.49%	-12.29%	-10.49%
Maximum Drawdown	-26.50%	-9.37%	-27.79%	-27.79%	-20.07%
Sharpe Ratio	-0.124	-0.079	-0.131	-0.118	-0.120
Number of Observations	63	63	63	63	63

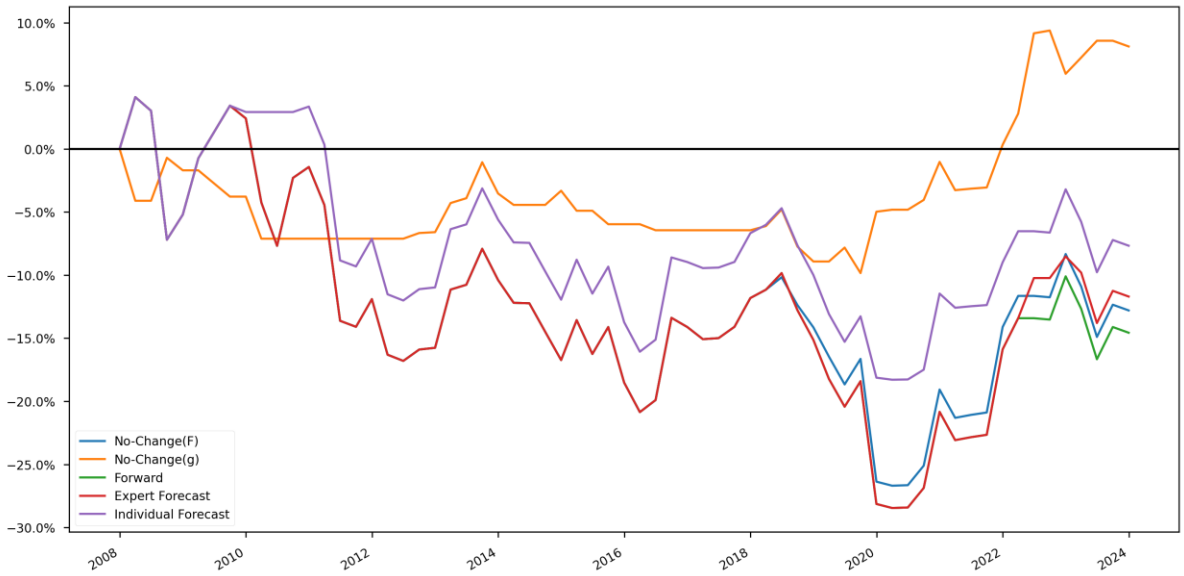
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 24: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.822			
Forward	0.857	0.784		
Expert Forecast	0.768	0.830		
Individual Forecast	0.932	0.808	0.836	0.982

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 12: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy B – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 25: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.56% ***	-0.82% *	-1.20% **	-1.04% **	-1.79% ***
	(0.002)	(0.095)	(0.013)	(0.023)	(0.000)
Volatility (ann.)	1.68%	1.70%	1.70%	1.70%	1.66%
Skewness	0.059	1.144	0.257	-0.099	-0.855
Kurtosis	3.642	3.059	3.411	3.366	2.950
VaR (95%)	-3.24%	-2.54%	-2.93%	-2.77%	-3.45%
Maximum Drawdown	-10.75%	-4.50%	-10.96%	-9.31%	-12.70%
Sharpe Ratio	-0.458	-0.234	-0.346	-0.301	-0.533
Number of Observations	65	65	65	65	65

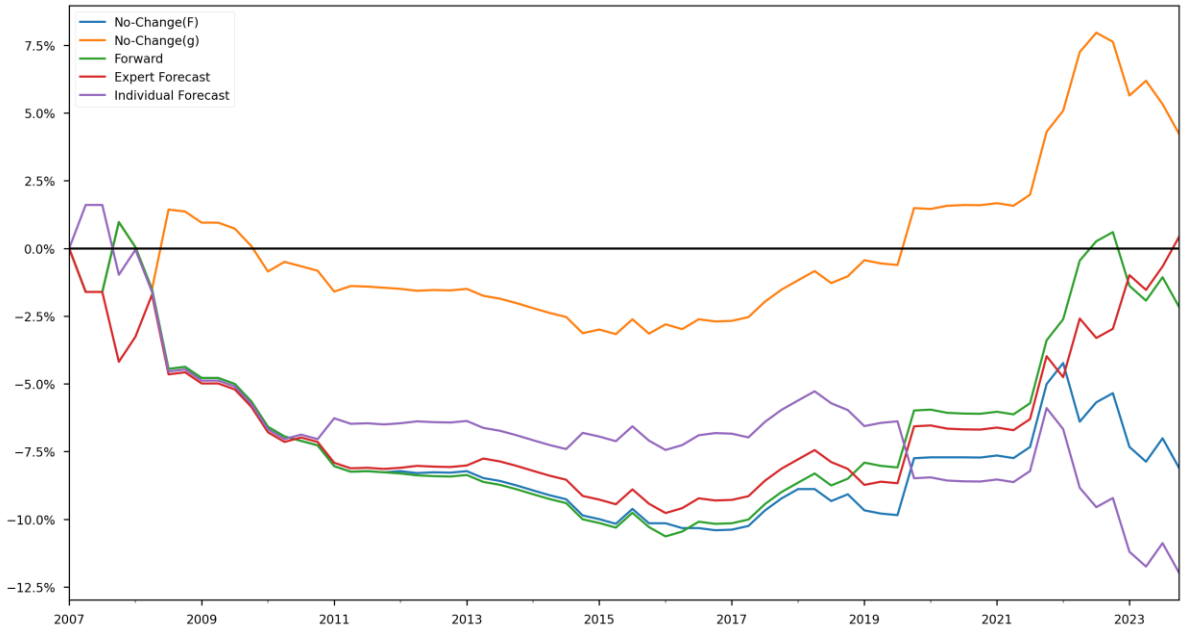
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 26: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.686			
Forward	0.660	0.496		
Expert Forecast	0.778	0.894	0.518	
Individual Forecast	0.952	0.690	0.606	0.838

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 13: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 27: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.40% ***	-0.31%	-0.44%	-0.85% **	-1.41% ***
	(0.005)	(0.397)	(0.304)	(0.013)	(0.001)
Volatility (ann.)	1.56%	1.29%	1.42%	1.10%	1.42%
Skewness	-0.772	2.048	1.065	-0.242	-1.718
Kurtosis	3.856	5.398	4.439	6.515	3.680
VaR (95%)	-2.91%	-1.39%	-1.73%	-1.60%	-2.70%
Maximum Drawdown	-12.10%	-1.60%	-2.94%	-2.25%	-6.68%
Sharpe Ratio	-0.445	-0.116	-0.150	-0.381	-0.495
Number of Observations	63	63	63	63	63

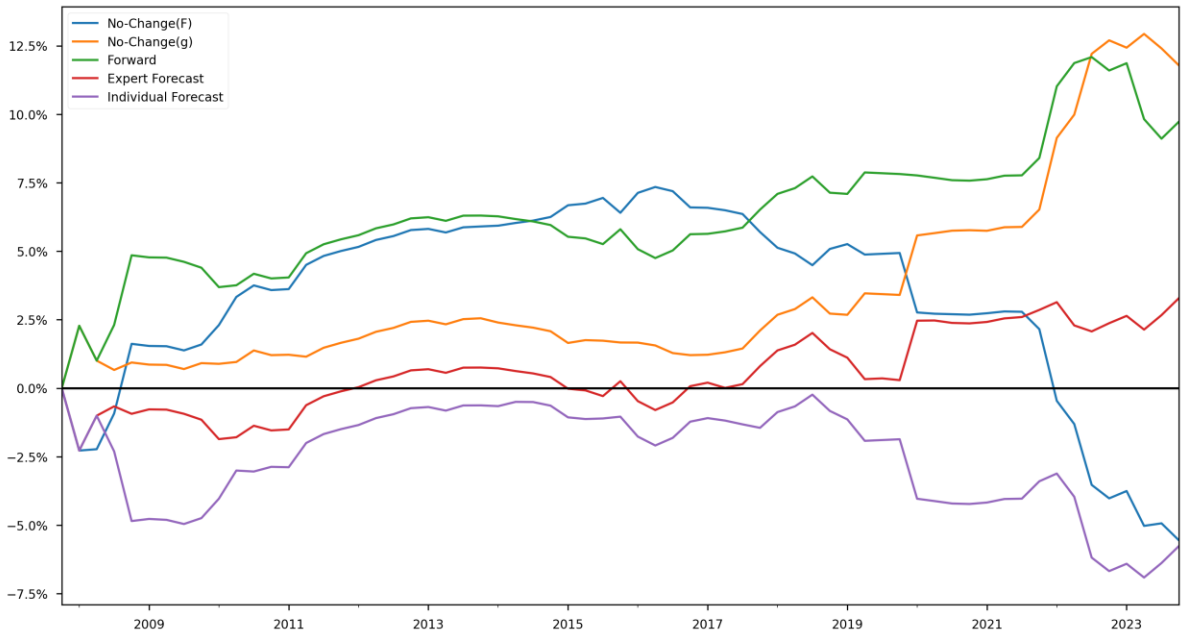
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 28: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.756			
Forward	0.804	0.888		
Expert Forecast	0.806	0.844	0.962	
Individual Forecast	0.346	0.270	0.276	0.206

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 14: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 29: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.25% ***	-0.62% *	-1.06% ***	-1.25% ***	-1.73% ***
	(0.001)	(0.094)	(0.007)	(0.001)	(0.000)
Volatility (ann.)	1.24%	1.31%	1.48%	1.27%	1.52%
Skewness	0.989	1.532	0.634	1.277	0.018
Kurtosis	5.580	5.961	3.895	4.744	3.960
VaR (95%)	-2.10%	-1.58%	-2.32%	-2.14%	-3.03%
Maximum Drawdown	-7.40%	-1.65%	-9.49%	-7.17%	-10.71%
Sharpe Ratio	-0.496	-0.231	-0.353	-0.484	-0.564
Number of Observations	63	63	63	63	63

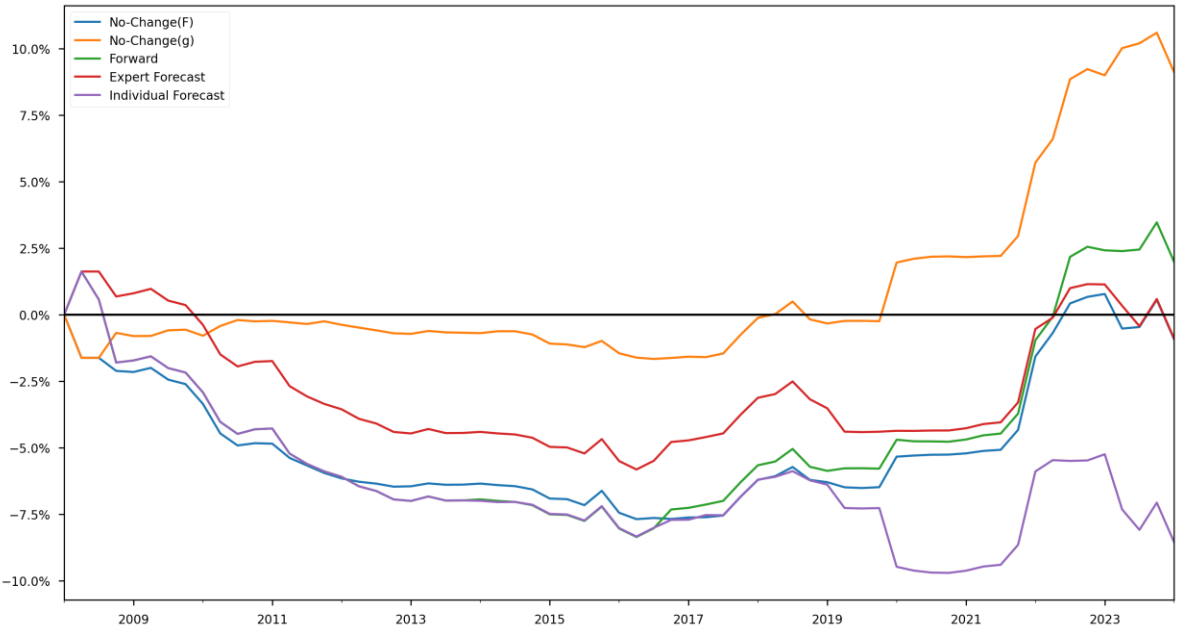
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 30: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.314			
Forward	0.472	0.168		
Expert Forecast	0.840	0.212	0.354	
Individual Forecast	0.910	0.252	0.324	0.410

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 15: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 31: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-3.96% **	-1.55%	-3.90% **	-2.09%	-1.42%
	(0.013)	(0.336)	(0.015)	(0.189)	(0.377)
Volatility (ann.)	6.21%	6.38%	6.23%	6.36%	6.38%
Skewness	-0.454	-0.556	-0.464	-0.251	-0.458
Kurtosis	0.855	1.051	0.834	1.064	1.082
VaR (95%)	-13.10%	-10.97%	-13.06%	-11.48%	-10.85%
Maximum Drawdown	-41.58%	-24.23%	-40.95%	-36.08%	-24.87%
Sharpe Ratio	-0.305	-0.106	-0.300	-0.148	-0.096
Number of Observations	65	65	65	65	65

Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 32: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.846			
Forward	0.456	0.452		
Expert Forecast	0.730	0.616	0.516	
Individual Forecast	0.920	0.796	0.418	0.726

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 16: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 33: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-3.93% ***	-2.32% *	-4.22% **	-1.04%	-2.75% **
	(0.006)	(0.062)	(0.01)	(0.386)	(0.028)
Volatility (ann.)	5.49%	4.80%	6.31%	4.74%	4.67%
Skewness	-0.350	-0.943	-0.457	-0.118	-0.131
Kurtosis	0.208	4.508	0.510	0.967	0.202
VaR (95%)	-11.90%	-9.16%	-13.53%	-7.78%	-9.38%
Maximum Drawdown	-38.13%	-28.93%	-42.19%	-18.57%	-27.50%
Sharpe Ratio	-0.346	-0.232	-0.322	-0.098	-0.282
Number of Observations	63	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 34: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	**No-Change (g)**	**Forward**	**Expert Forecast**
No-Change (g)	0.310			
Forward	0.504	0.256		
Expert Forecast	0.744	0.634	0.250	
Individual Forecast	0.730	0.232	0.916	0.302

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 17: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 35: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-3.16% **	-0.52%	-3.27% **	-3.06% *	-2.55% *
	(0.047)	(0.502)	(0.042)	(0.056)	(0.072)
Volatility (ann.)	6.20%	2.93%	6.24%	6.25%	5.48%
Skewness	-0.442	0.796	-0.419	-0.448	-0.572
Kurtosis	0.861	2.209	0.760	0.774	1.701
VaR (95%)	-12.17%	-4.14%	-12.34%	-12.15%	-10.37%
Maximum Drawdown	-35.24%	-6.14%	-36.30%	-36.30%	-26.33%
Sharpe Ratio	-0.241	-0.080	-0.248	-0.231	-0.221
Number of Observations	63	63	63	63	63

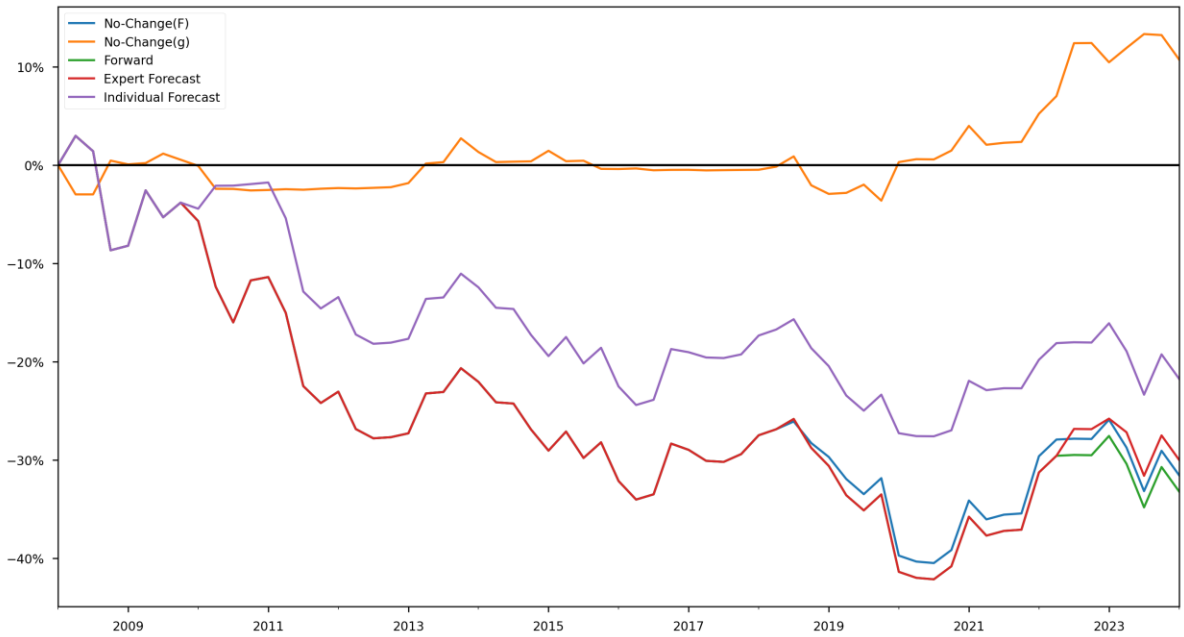
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 36: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.342			
Forward	0.778	0.774		
Expert Forecast	0.816	0.706	0.718	
Individual Forecast	0.600	0.930	0.544	0.380

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 18: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing futures contracts on the ten-year US treasury note in accordance with trading strategy B. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy C – ETFs

2-Year Treasury Yield

3-Month Forecast Horizon

Table 37: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.96% **	-0.79% *	-1.00% ***	-0.93% **
	(0.034)	(0.067)	(0.009)	(0.017)
Volatility (ann.)	1.47%	1.46%	1.20%	1.24%
Skewness	0.818	0.441	-0.123	0.566
Kurtosis	5.578	4.233	6.691	4.790
VaR (95%)	-2.33%	-2.16%	-1.94%	-1.93%
Maximum Drawdown	-5.20%	-3.37%	-4.80%	-2.15%
Sharpe Ratio	-0.318	-0.265	-0.409	-0.368
Number of Observations	65	65	65	65

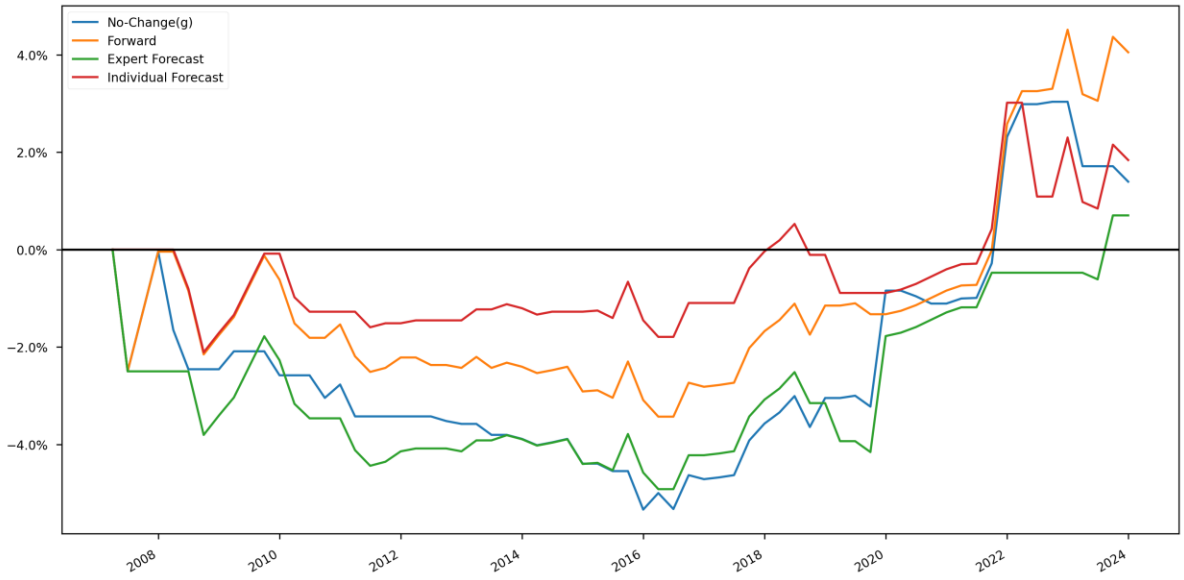
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 38: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.610		
Expert Forecast	0.602	0.432	
Individual Forecast	0.742	0.348	0.842

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 19: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 39: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.06% ***	-1.00% ***	-0.99% ***	-1.34% ***
	(0.000)	(0.000)	(0.001)	(0.000)
Volatility (ann.)	0.44%	0.54%	0.85%	1.18%
Skewness	-0.666	-2.758	-2.908	-2.316
Kurtosis	4.026	13.640	16.717	7.441
VaR (95%)	-0.74%	-0.86%	-1.35%	-2.24%
Maximum Drawdown	-1.23%	-1.49%	-2.43%	-6.85%
Sharpe Ratio	-1.214	-0.928	-0.580	-0.567
Number of Observations	63	63	63	63

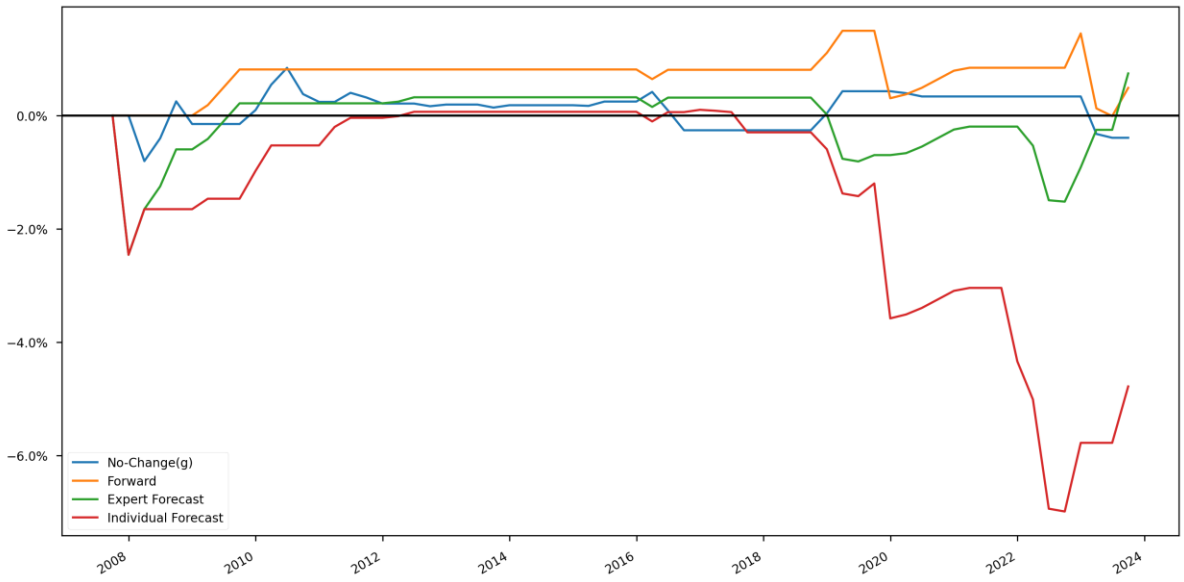
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 40: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.370		
Expert Forecast	0.240	0.372	
Individual Forecast	0.100	0.372	0.738

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 20: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 41: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.90% ***	-0.80% **	-0.81% **	-0.97% ***
	(0.008)	(0.025)	(0.016)	(0.006)
Volatility (ann.)	1.07%	1.14%	1.08%	1.12%
Skewness	1.958	1.381	1.707	1.326
Kurtosis	9.145	5.238	6.038	5.850
VaR (95%)	-1.51%	-1.52%	-1.44%	-1.67%
Maximum Drawdown	-2.83%	-2.67%	-2.67%	-2.66%
Sharpe Ratio	-0.413	-0.344	-0.369	-0.424
Number of Observations	63	63	63	63

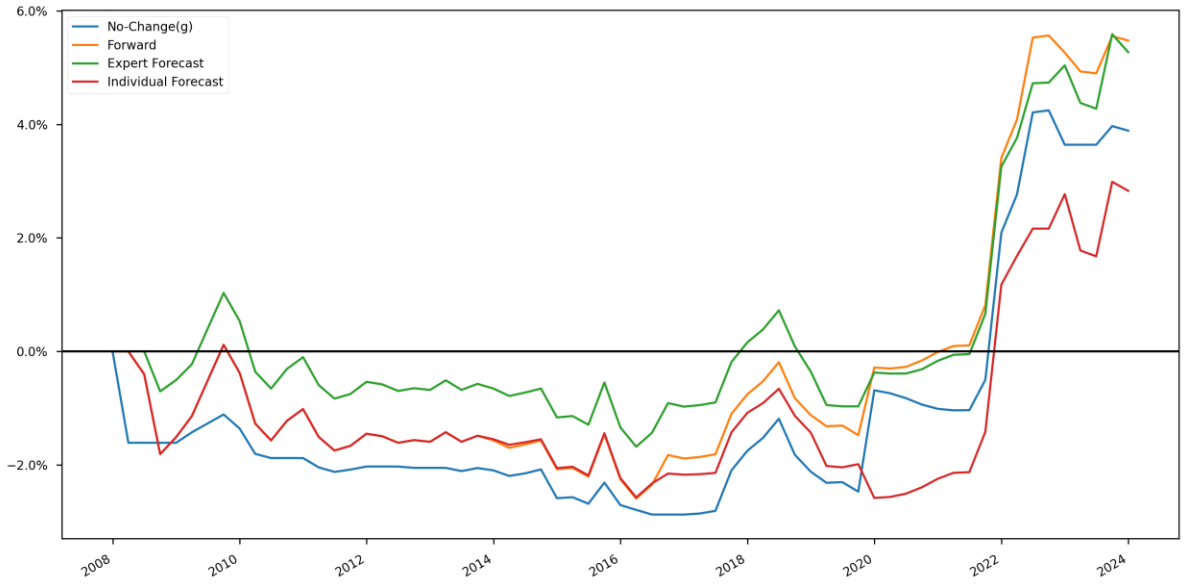
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 42: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.336		
Expert Forecast	0.678	0.534	
Individual Forecast	0.934	0.286	0.266

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 21: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 43: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.44%	-2.42%	-1.98%	-1.42%
	(0.218)	(0.188)	(0.226)	(0.379)
Volatility (ann.)	4.45%	7.15%	6.38%	6.34%
Skewness	-0.553	-0.453	-0.532	-0.472
Kurtosis	5.777	0.584	1.271	1.697
VaR (95%)	-7.71%	-13.14%	-11.42%	-10.80%
Maximum Drawdown	-11.91%	-28.60%	-20.41%	-16.82%
Sharpe Ratio	-0.150	-0.152	-0.140	-0.097
Number of Observations	65	65	65	65

Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 44: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.976		
Expert Forecast	0.976	0.874	
Individual Forecast	0.776	0.582	0.600

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 22: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 45: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.87% **	-2.96% *	-1.66%	-2.63% **
	(0.044)	(0.066)	(0.232)	(0.035)
Volatility (ann.)	3.51%	6.11%	5.35%	4.67%
Skewness	0.545	-0.508	-0.160	-0.102
Kurtosis	2.997	1.216	1.402	0.458
VaR (95%)	-6.60%	-11.96%	-9.41%	-9.28%
Maximum Drawdown	-19.22%	-32.12%	-19.91%	-26.71%
Sharpe Ratio	-0.257	-0.228	-0.141	-0.270
Number of Observations	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 46: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.810		
Expert Forecast	0.320	0.184	
Individual Forecast	0.928	0.742	0.164

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 23: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 47: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.69% **	-1.85%	-1.90%	-1.36%
	(0.046)	(0.316)	(0.302)	(0.399)
Volatility (ann.)	3.13%	7.11%	7.08%	6.17%
Skewness	-0.219	-0.684	-0.521	-0.607
Kurtosis	0.703	1.208	0.816	1.810
VaR (95%)	-5.69%	-12.40%	-12.39%	-10.36%
Maximum Drawdown	-14.86%	-28.57%	-26.75%	-17.77%
Sharpe Ratio	-0.262	-0.113	-0.117	-0.095
Number of Observations	63	63	63	63

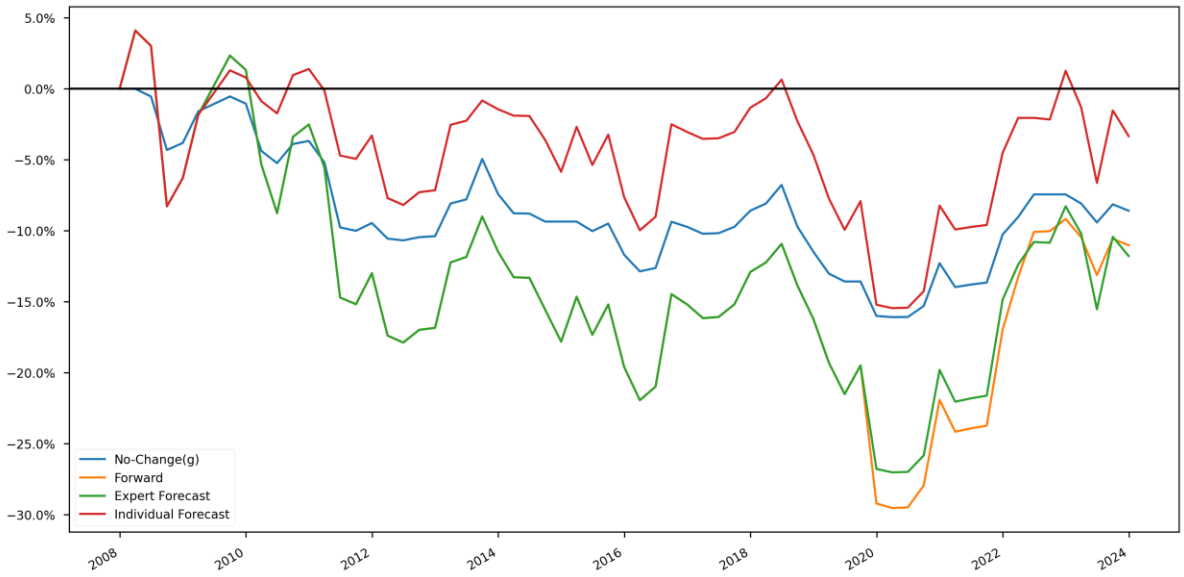
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 48: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)

	No-Change (g)	Forward	Expert Forecast
Forward	0.010 **		
Expert Forecast	0.020 **	0.872	
Individual Forecast	0.026 **	0.728	0.530

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 24: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy C – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 49: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.10% **	-1.43% ***	-1.43% ***	-1.59% ***
	(0.010)	(0.001)	(0.000)	(0.000)
Volatility (ann.)	1.39%	1.50%	1.13%	1.34%
Skewness	0.989	-0.099	-1.312	-1.210
Kurtosis	5.113	5.452	11.305	6.999
VaR (95%)	-2.31%	-2.82%	-2.22%	-2.72%
Maximum Drawdown	-6.62%	-9.92%	-9.48%	-8.30%
Sharpe Ratio	-0.391	-0.472	-0.632	-0.589
Number of Observations	65	65	65	65

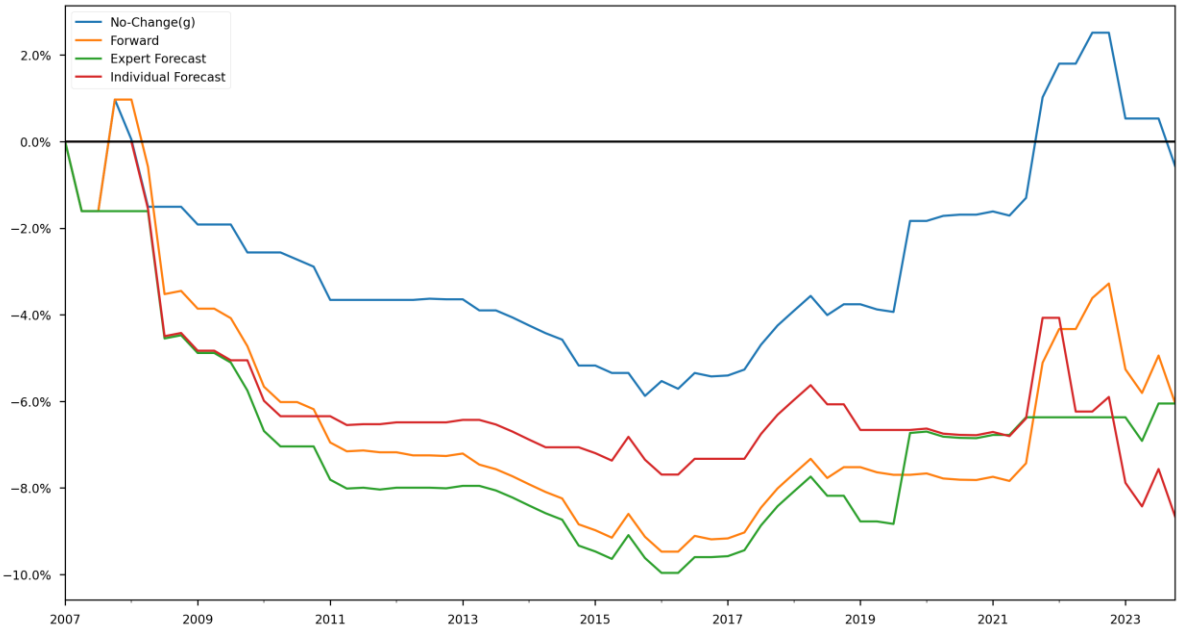
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 50: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.270		
Expert Forecast	0.162	0.396	
Individual Forecast	0.184	0.438	0.738

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 25: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 51: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-0.93% ***	-1.22% ***	-1.07% ***	-1.50% ***
	(0.001)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.54%	0.64%	0.84%	1.11%
Skewness	1.442	-4.391	-2.326	-2.585
Kurtosis	9.987	23.844	13.547	7.479
VaR (95%)	-0.77%	-1.22%	-1.39%	-2.27%
Maximum Drawdown	-1.38%	-3.60%	-2.55%	-8.20%
Sharpe Ratio	-0.848	-0.957	-0.639	-0.676
Number of Observations	63	63	63	63

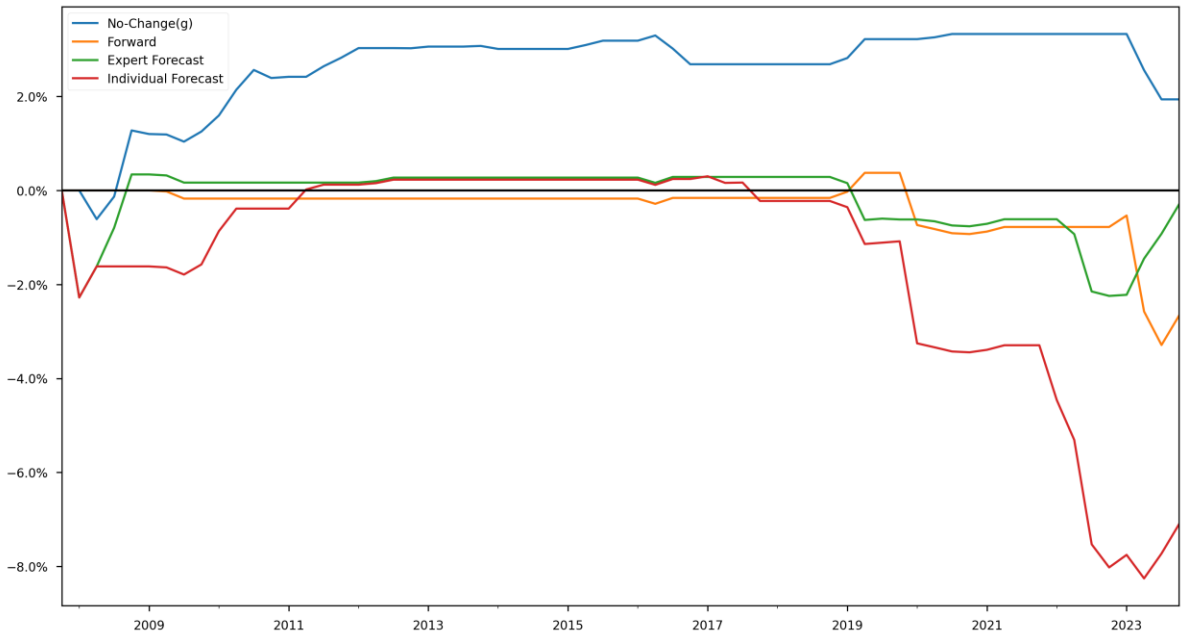
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 52: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.222		
Expert Forecast	0.346	0.524	
Individual Forecast	0.374	0.700	0.686

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 26: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 53: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.93% ***	-1.15% ***	-1.24% ***	-1.50% ***
	(0.009)	(0.002)	(0.001)	(0.0)
Volatility (ann.)	1.18%	1.26%	1.18%	1.22%
Skewness	1.518	1.209	1.364	1.002
Kurtosis	7.555	4.984	6.478	6.612
VaR (95%)	-1.68%	-2.04%	-1.98%	-2.31%
Maximum Drawdown	-4.08%	-7.74%	-6.56%	-7.73%
Sharpe Ratio	-0.387	-0.448	-0.521	-0.609
Number of Observations	63	63	63	63

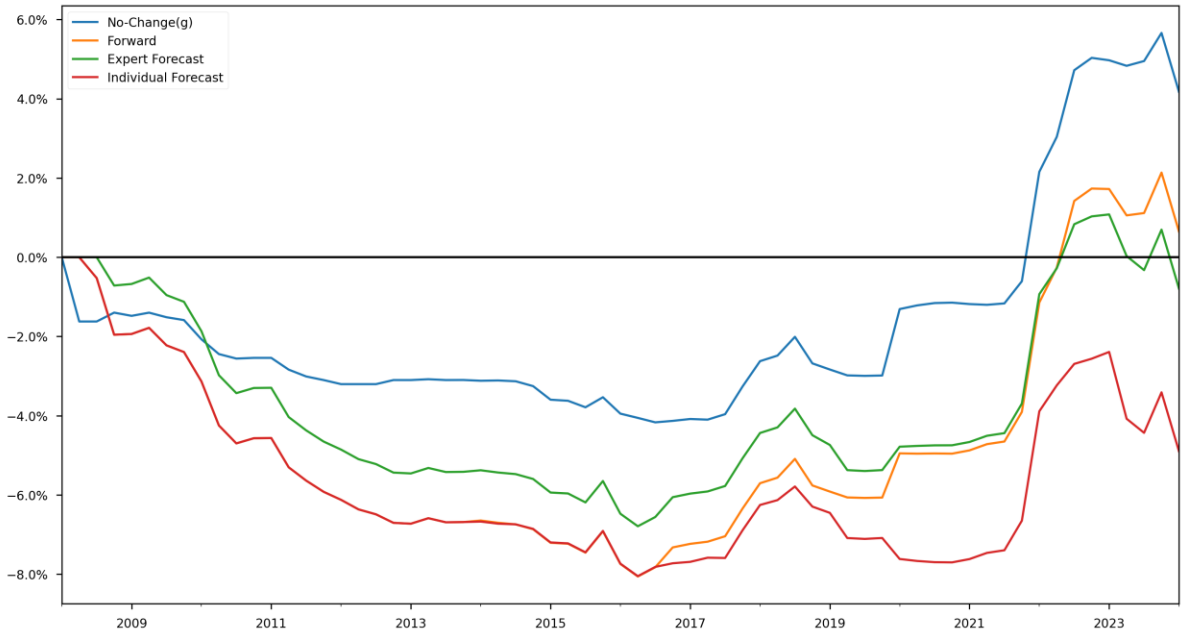
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 54: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.210		
Expert Forecast	0.152	0.252	
Individual Forecast	0.164	0.144	0.174

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 27: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 55: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.88% *	-3.59% **	-2.94% **	-2.30% *
	(0.055)	(0.020)	(0.030)	(0.092)
Volatility (ann.)	3.73%	5.98%	5.31%	5.32%
Skewness	-0.466	-0.572	-0.949	-0.902
Kurtosis	4.494	1.358	2.912	3.241
VaR (95%)	-6.94%	-12.35%	-10.59%	-9.97%
Maximum Drawdown	-15.62%	-38.26%	-30.91%	-22.85%
Sharpe Ratio	-0.243	-0.287	-0.267	-0.205
Number of Observations	65	65	65	65

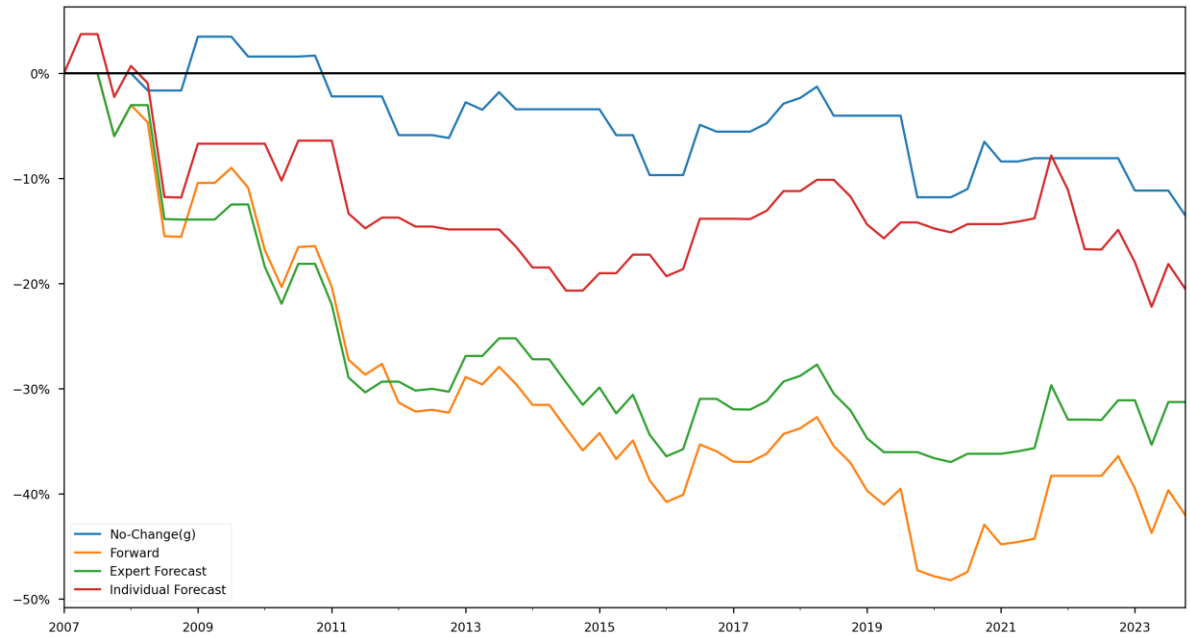
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 56: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.628		
Expert Forecast	0.772	0.794	
Individual Forecast	0.822	0.314	0.350

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 28: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 57: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.98% **	-3.44% **	-2.26% **	-2.79% ***
	(0.011)	(0.011)	(0.049)	(0.009)
Volatility (ann.)	2.96%	5.22%	4.48%	4.00%
Skewness	0.347	-0.404	-0.118	0.045
Kurtosis	2.666	0.685	1.062	0.968
VaR (95%)	-5.80%	-10.98%	-8.57%	-8.31%
Maximum Drawdown	-19.38%	-37.70%	-25.53%	-28.88%
Sharpe Ratio	-0.325	-0.319	-0.241	-0.337
Number of Observations	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 58: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.994		
Expert Forecast	0.468	0.184	
Individual Forecast	0.968	0.972	0.358

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 29: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 59: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.99% ***	-2.95% *	-3.05% *	-2.24%
	(0.008)	(0.063)	(0.052)	(0.101)
Volatility (ann.)	2.81%	6.22%	6.10%	5.28%
Skewness	0.060	-0.450	-0.365	-0.488
Kurtosis	0.302	0.843	0.761	2.042
VaR (95%)	-5.42%	-11.99%	-11.89%	-9.73%
Maximum Drawdown	-16.13%	-36.30%	-34.88%	-23.79%
Sharpe Ratio	-0.347	-0.224	-0.236	-0.200
Number of Observations	63	63	63	63

Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 60: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

	No-Change (g)	Forward	Expert Forecast
Forward	0.028 **		
Expert Forecast	0.050 *	0.416	
Individual Forecast	0.038 **	0.566	0.380

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 30: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures)

Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C. The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Risk and Return Measures of the Robustness Tests

Trading Strategy A – ETFs

2-Year Treasury Yield

6-Month Forecast Horizon

Table 61: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.02% ***	-0.97% ***	-0.86% ***	-0.90% ***	-1.13% ***
	(0.001)	(0.002)	(0.007)	(0.003)	(0.001)
Volatility (ann.)	0.97%	0.98%	1.03%	0.94%	1.07%
Skewness	2.203	2.261	1.975	-1.066	-1.675
Kurtosis	14.247	12.161	9.883	13.573	8.890
VaR (95%)	-1.58%	-1.55%	-1.52%	-1.41%	-1.86%
Maximum Drawdown	-2.87%	-2.80%	-2.09%	-2.43%	-3.60%
Sharpe Ratio	-0.522	-0.487	-0.414	-0.476	-0.523
Number of Observations	63	63	63	63	63

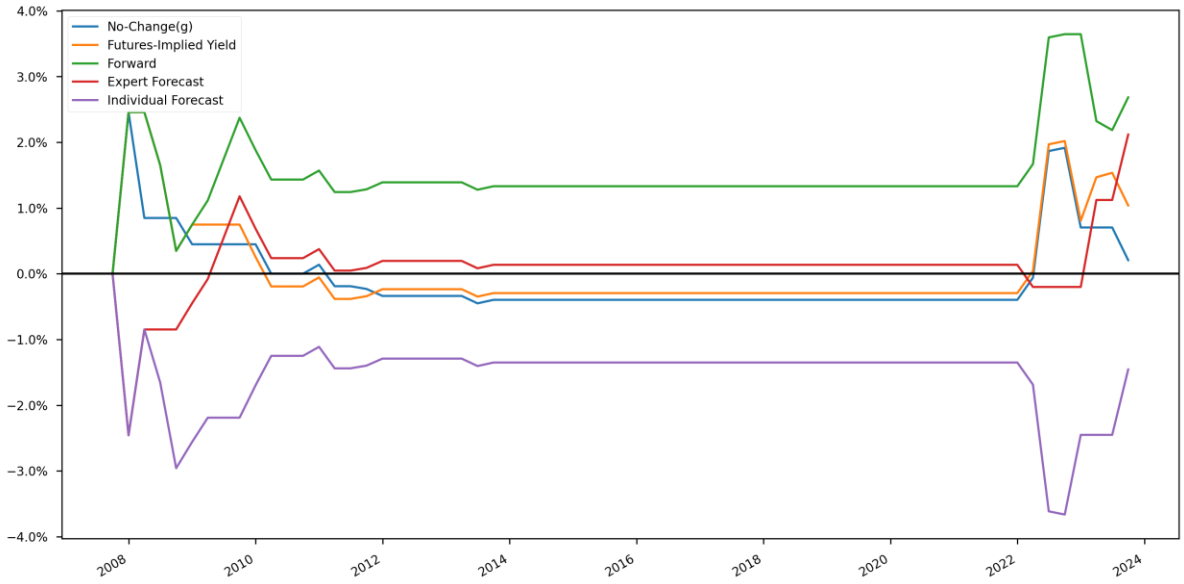
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 62: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.596			
Forward	0.266	0.360		
Expert Forecast	0.820	0.912	0.762	
Individual Forecast	0.964	0.934	0.620	0.744

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 31: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 63: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.26% ***	-1.05% ***	-1.07% ***	-1.02% ***	-1.16% ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.62%	0.63%	0.77%	0.70%	0.93%
Skewness	-2.304	1.123	0.978	2.560	0.640
Kurtosis	12.982	12.946	6.922	9.209	4.536
VaR (95%)	-1.14%	-0.93%	-1.19%	-1.03%	-1.53%
Maximum Drawdown	-2.38%	-1.81%	-2.09%	-1.77%	-2.87%
Sharpe Ratio	-1.007	-0.828	-0.688	-0.713	-0.617
Number of Observations	63	63	63	63	63

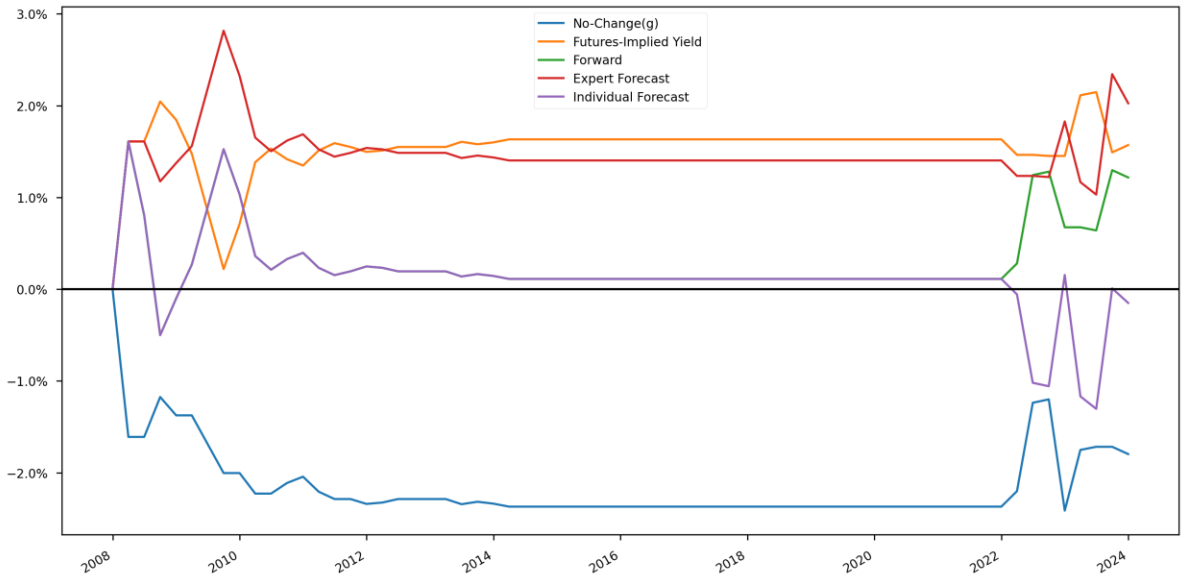
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 64: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.440			
Forward	0.306	0.742		
Expert Forecast	0.430	0.870	0.568	
Individual Forecast	0.214	0.618	0.820	0.256

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 32: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 65: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.23%	-0.13%	-0.53%	-1.07%	-2.50% **
	(0.845)	(0.911)	(0.651)	(0.351)	(0.035)
Volatility (ann.)	4.52%	4.51%	4.53%	4.54%	4.48%
Skewness	1.706	1.508	-0.959	-1.263	-1.561
Kurtosis	6.129	6.163	6.893	6.619	5.977
VaR (95%)	-6.62%	-6.52%	-6.94%	-7.49%	-8.81%
Maximum Drawdown	-7.32%	-10.08%	-11.69%	-13.25%	-23.54%
Sharpe Ratio	-0.013	-0.003	-0.047	-0.108	-0.272
Number of Observations	65	65	65	65	65

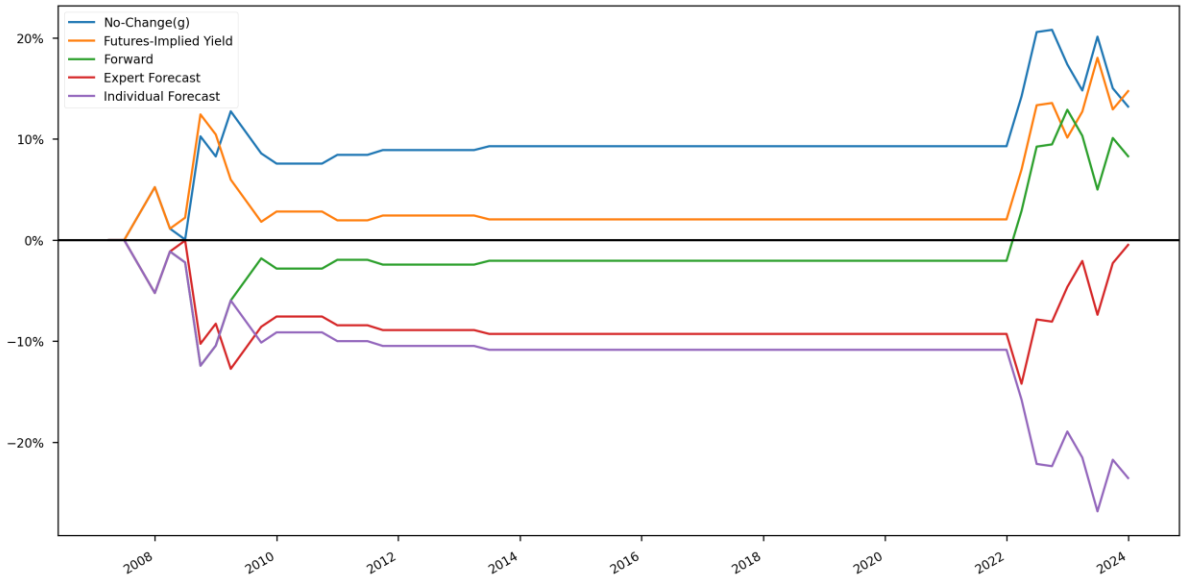
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 66: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.908			
Forward	0.894	0.860		
Expert Forecast	0.710	0.692	0.530	
Individual Forecast	0.336	0.326	0.208	0.272

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 33: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 67: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.07%	-0.05%	-1.17%	0.07%	-1.02%
	(0.153)	(0.95)	(0.315)	(0.921)	(0.371)
Volatility (ann.)	2.83%	2.80%	4.32%	2.83%	4.29%
Skewness	1.450	2.332	-1.380	0.496	1.088
Kurtosis	8.935	7.971	8.134	4.985	8.429
VaR (95%)	-4.69%	-3.62%	-7.22%	-3.55%	-7.04%
Maximum Drawdown	-10.74%	-4.95%	-11.69%	-5.10%	-15.24%
Sharpe Ratio	-0.179	-0.001	-0.125	0.020	-0.106
Number of Observations	63	63	63	63	63

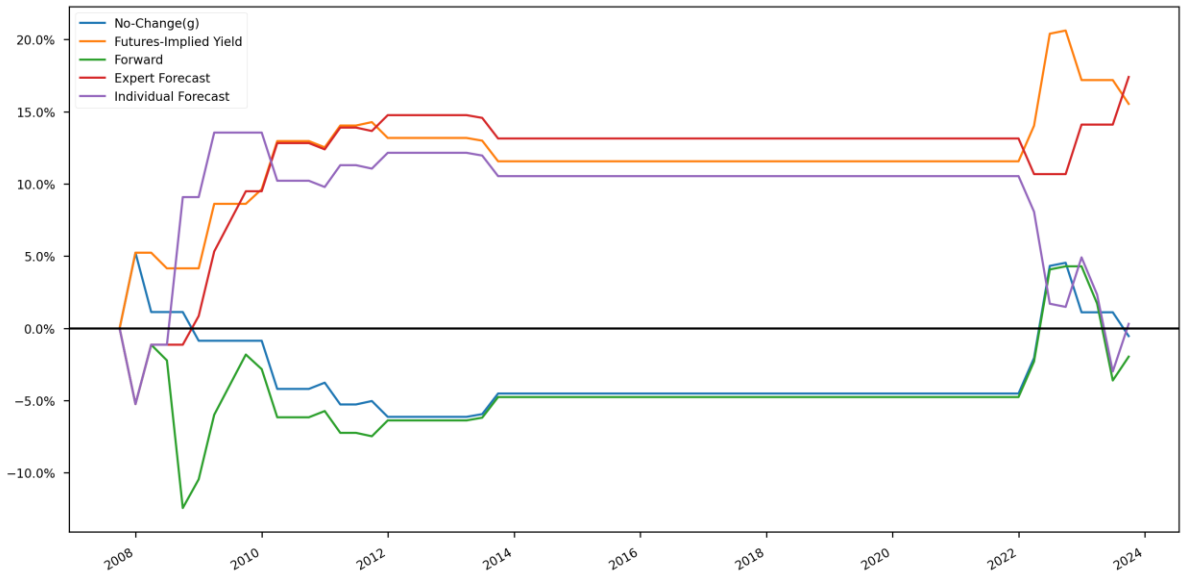
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 68: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.230			
Forward	0.754	0.474		
Expert Forecast	0.414	0.898	0.338	
Individual Forecast	0.764	0.638	0.930	0.350

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 34: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 69: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.35% **	-0.34%	-1.36%	-1.75%	-1.15%
	(0.021)	(0.739)	(0.172)	(0.108)	(0.287)
Volatility (ann.)	2.16%	4.01%	3.79%	4.09%	4.02%
Skewness	-0.548	1.728	-2.085	-1.614	-1.777
Kurtosis	5.316	9.167	12.461	9.209	10.081
VaR (95%)	-3.76%	-5.80%	-6.44%	-7.33%	-6.61%
Maximum Drawdown	-7.21%	-10.08%	-10.69%	-15.85%	-10.69%
Sharpe Ratio	-0.306	-0.032	-0.172	-0.206	-0.134
Number of Observations	63	63	63	63	63

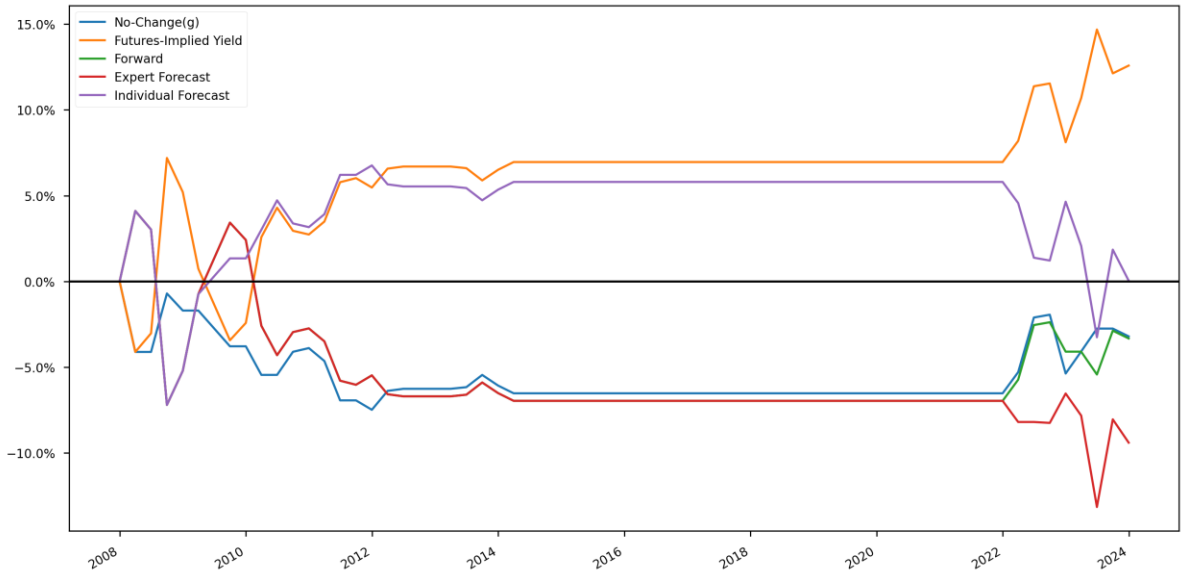
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 70: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.188			
Forward	0.466	0.614		
Expert Forecast	0.592	0.554	0.578	
Individual Forecast	0.428	0.736	0.746	0.376

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 35: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy A – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 71: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.97% **	-0.62%	-1.15% ***	-1.07% ***	-1.77% ***
	(0.019)	(0.106)	(0.004)	(0.005)	(0.000)
Volatility (ann.)	1.37%	1.35%	1.37%	1.37%	1.32%
Skewness	1.714	1.005	-0.343	-0.903	-2.532
Kurtosis	8.060	8.079	8.255	8.276	6.812
VaR (95%)	-2.15%	-1.77%	-2.33%	-2.26%	-2.88%
Maximum Drawdown	-3.67%	-2.55%	-5.92%	-4.48%	-11.05%
Sharpe Ratio	-0.348	-0.223	-0.416	-0.388	-0.669
Number of Observations	65	65	65	65	65

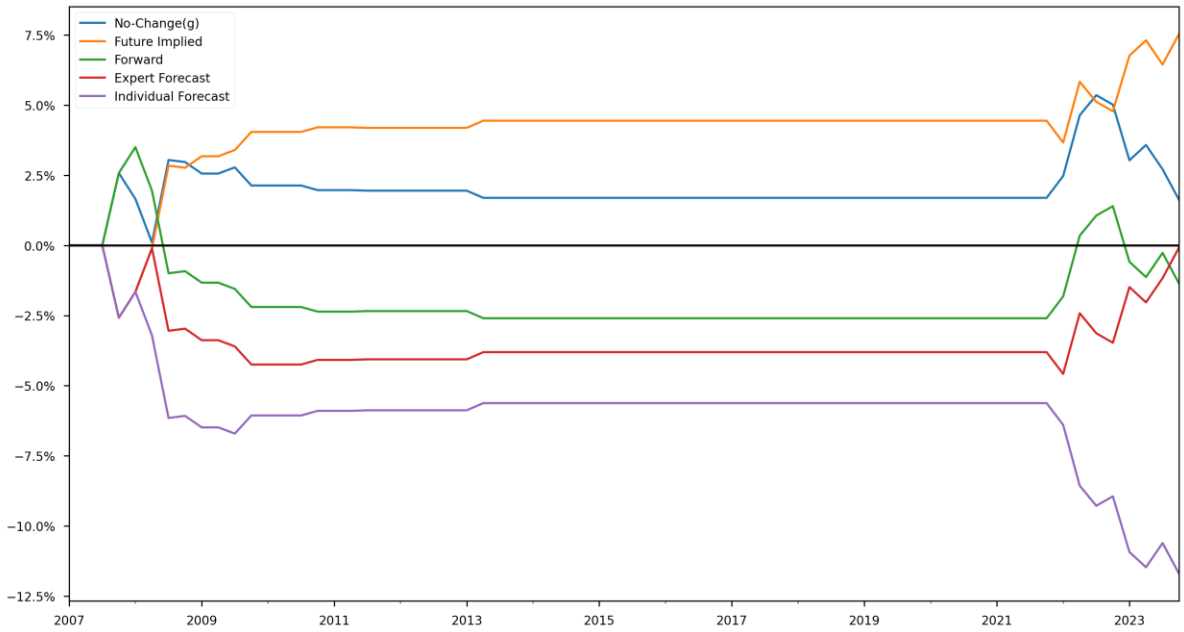
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 72: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.456			
Forward	0.620	0.406		
Expert Forecast	0.704	0.360	0.980	
Individual Forecast	0.244	0.154	0.260	0.304

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 36: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 73: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.91% ***	-1.06% ***	-1.23% ***	-1.08% ***	-1.46% ***
	(0.002)	(0.001)	(0.001)	(0.000)	(0.000)
Volatility (ann.)	0.93%	1.17%	1.24%	0.91%	1.16%
Skewness	2.966	0.441	-0.106	-0.186	-2.556
Kurtosis	14.439	10.357	8.911	14.436	8.572
VaR (95%)	-1.39%	-1.93%	-2.22%	-1.53%	-2.32%
Maximum Drawdown	-2.33%	-5.73%	-6.06%	-3.75%	-7.37%
Sharpe Ratio	-0.485	-0.448	-0.490	-0.593	-0.627
Number of Observations	63	63	63	63	63

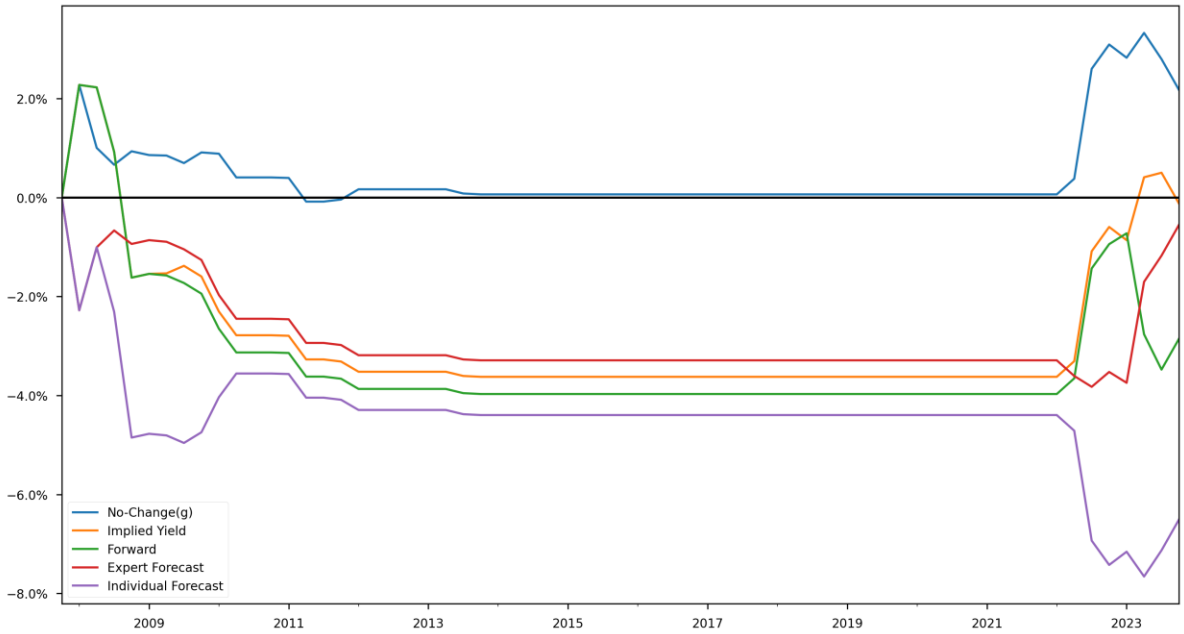
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 74: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.406			
Forward	0.548	0.994		
Expert Forecast	0.376	0.380	0.252	
Individual Forecast	0.554	0.656	0.602	0.508

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 37: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 75: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	**Futures-Implied Yield**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.16% ***	-0.80% ***	-1.41% ***	-1.46% ***	-1.76% ***
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.73%	0.74%	0.98%	0.76%	1.09%
Skewness	-1.367	2.180	-1.241	0.335	-1.511
Kurtosis	10.446	7.940	9.424	8.235	6.668
VaR (95%)	-1.18%	-0.83%	-1.83%	-1.52%	-2.37%
Maximum Drawdown	-1.61%	-1.07%	-5.93%	-5.71%	-10.17%
Sharpe Ratio	-0.791	-0.533	-0.717	-0.951	-0.804
Number of Observations	63	63	63	63	63

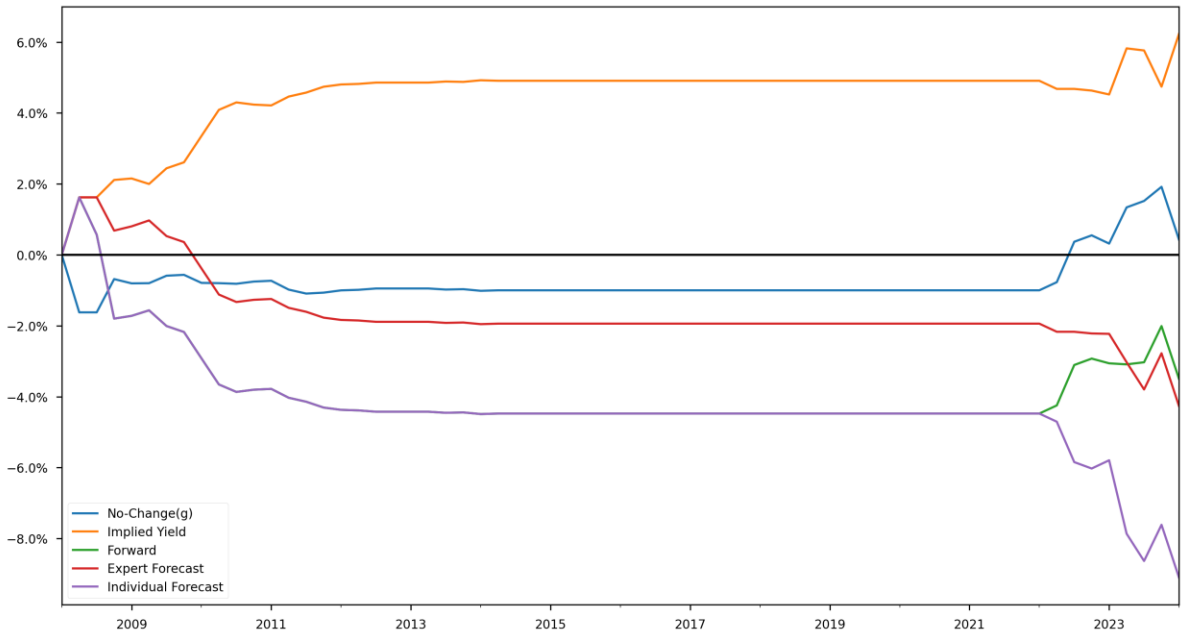
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 76: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.176			
Forward	0.588	0.084 *		
Expert Forecast	0.496	0.068 *	0.562	
Individual Forecast	0.774	0.102	0.792	0.300

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 38: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 77: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-0.07%	0.47%	-1.53%	-1.39%	-2.48% **
	(0.946)	(0.645)	(0.159)	(0.183)	(0.024)
Volatility (ann.)	4.16%	4.12%	4.19%	4.19%	4.14%
Skewness	2.548	2.157	-1.735	-2.156	-2.170
Kurtosis	9.777	9.838	10.372	10.387	9.841
VaR (95%)	-5.85%	-5.26%	-7.35%	-7.22%	-8.20%
Maximum Drawdown	-6.88%	-6.35%	-14.40%	-16.58%	-22.24%
Sharpe Ratio	0.003	0.065	-0.175	-0.159	-0.295
Number of Observations	65	65	65	65	65

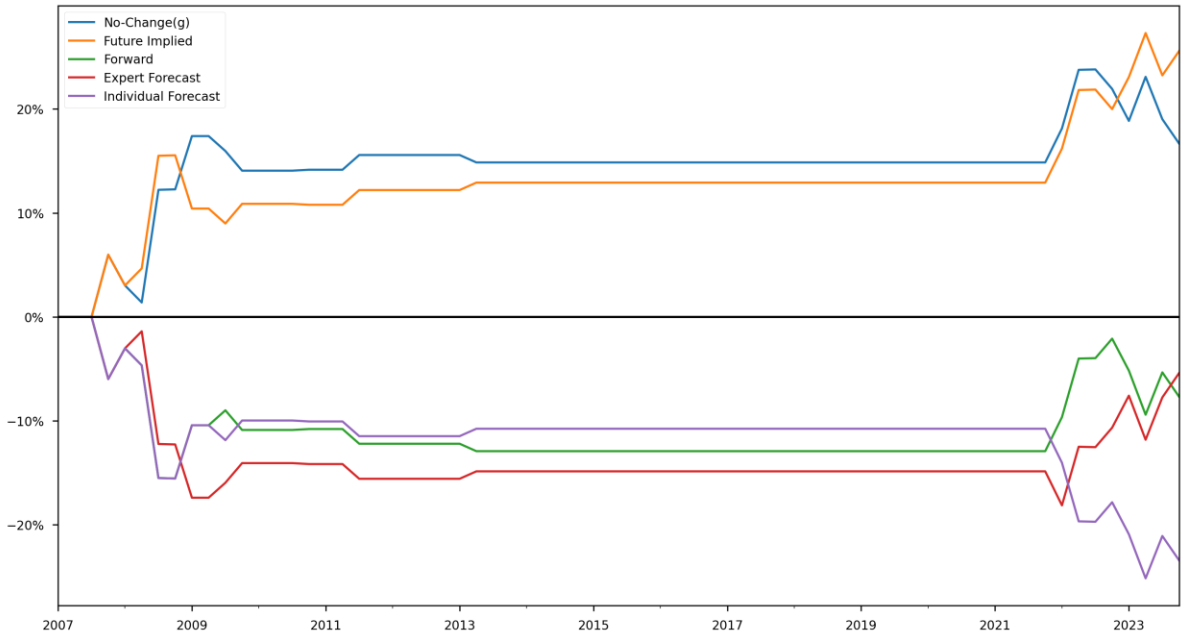
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 78: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.538			
Forward	0.456	0.352		
Expert Forecast	0.548	0.410	0.946	
Individual Forecast	0.332	0.236	0.322	0.334

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 39: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 79: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	**Futures-Implied Yield**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.36% *	-0.32%	-1.78%	-0.40%	-1.14%
	(0.060)	(0.689)	(0.101)	(0.557)	(0.305)
Volatility (ann.)	2.69%	2.97%	4.20%	2.67%	4.20%
Skewness	1.237	1.645	-1.458	0.455	1.579
Kurtosis	8.275	6.197	8.793	7.966	9.436
VaR (95%)	-4.73%	-4.15%	-7.63%	-3.75%	-6.99%
Maximum Drawdown	-11.90%	-5.99%	-15.85%	-5.25%	-17.33%
Sharpe Ratio	-0.243	-0.044	-0.204	-0.068	-0.122
Number of Observations	63	63	63	63	63

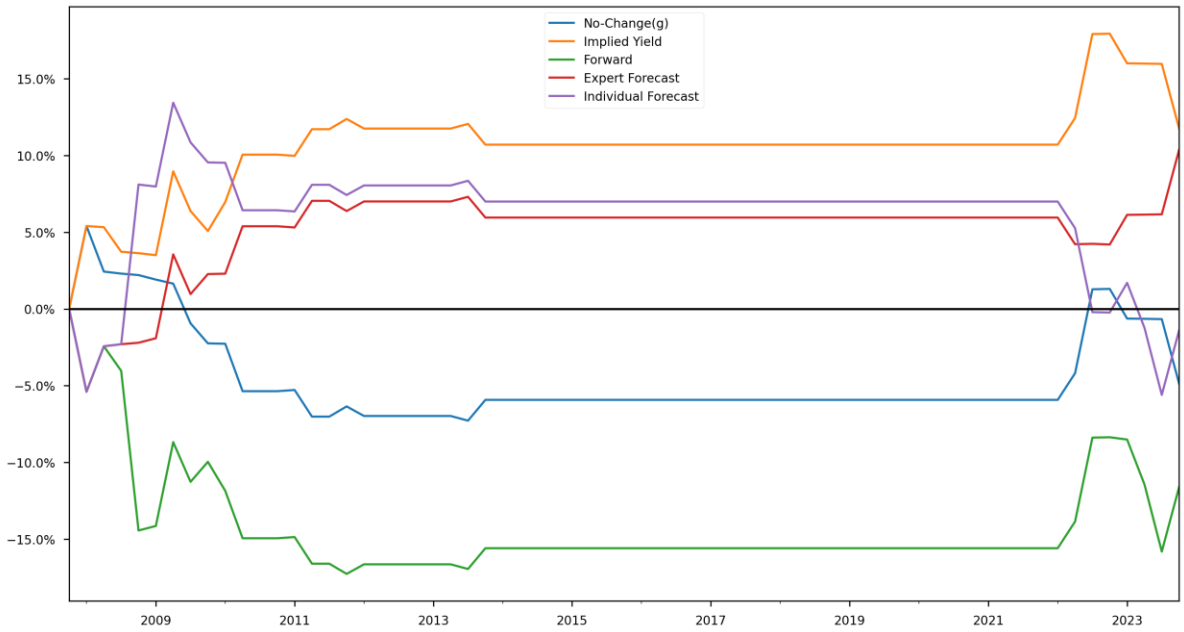
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 80: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.204			
Forward	0.878	0.368		
Expert Forecast	0.444	0.906	0.328	
Individual Forecast	0.644	0.722	0.690	0.752

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 40: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 81: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change(g)	Futures-Implied Yield	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.13% **	0.24%	-1.98% **	-2.41% **	-1.47%
	(0.025)	(0.813)	(0.037)	(0.016)	(0.160)
Volatility (ann.)	1.80%	3.90%	3.71%	3.79%	3.91%
Skewness	0.212	1.585	-1.822	-1.770	-1.590
Kurtosis	5.228	9.408	12.303	11.013	10.315
VaR (95%)	-2.90%	-4.99%	-6.90%	-7.45%	-6.71%
Maximum Drawdown	-3.20%	-5.91%	-16.88%	-21.43%	-10.98%
Sharpe Ratio	-0.309	0.040	-0.262	-0.314	-0.180
Number of Observations	63	63	63	63	63

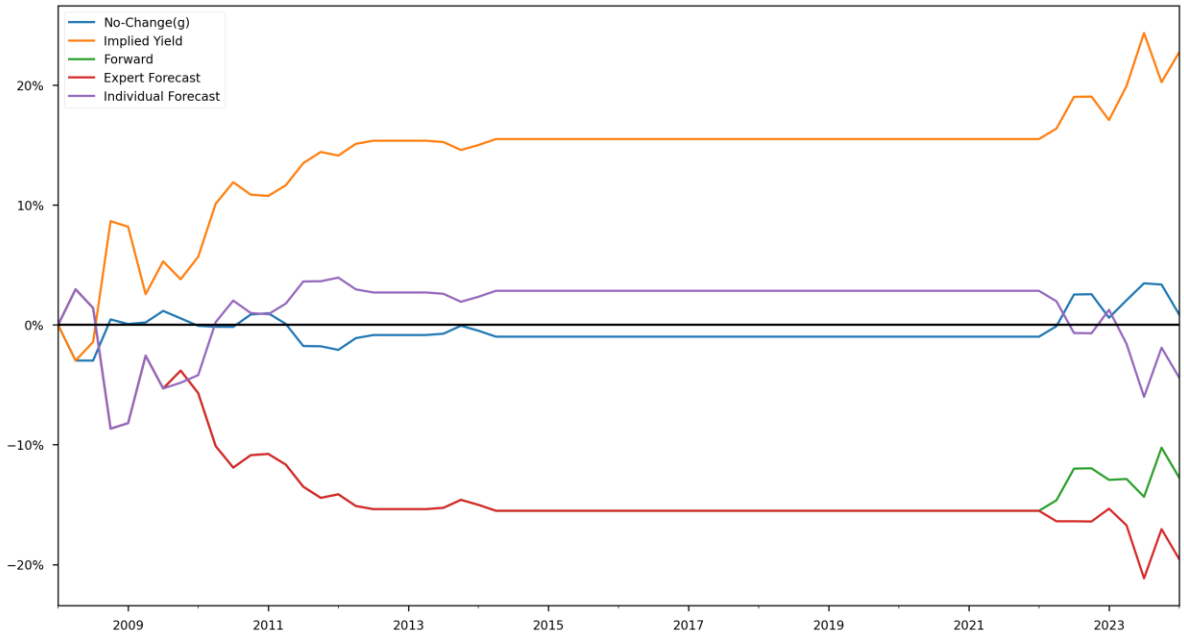
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy A, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 82: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)

	No-Change (g)	Futures-Implied Yield	Forward	Expert Forecast
Futures-Implied Yield	0.110			
Forward	0.914	0.350		
Expert Forecast	0.902	0.296	0.300	
Individual Forecast	0.544	0.436	0.490	0.290

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 41: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy A; Futures Contracts; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury notes in accordance with trading strategy A, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy B – ETFs

2-Year Treasury Yield

3-Month Forecast Horizon

Table 83: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.04% ***	-1.00% **	-0.80% **	-0.67% **	-1.24% ***
	(0.003)	(0.011)	(0.018)	(0.039)	(0.001)
Volatility (ann.)	1.18%	1.18%	1.17%	1.16%	1.17%
Skewness	0.365	1.107	1.165	-0.255	-1.063
Kurtosis	6.186	6.111	5.843	6.664	5.915
VaR (95%)	-1.94%	-1.89%	-1.69%	-1.54%	-2.12%
Maximum Drawdown	-3.65%	-3.95%	-3.65%	-2.43%	-4.10%
Sharpe Ratio	-0.438	-0.419	-0.338	-0.284	-0.525
Number of Observations	65	65	65	65	65

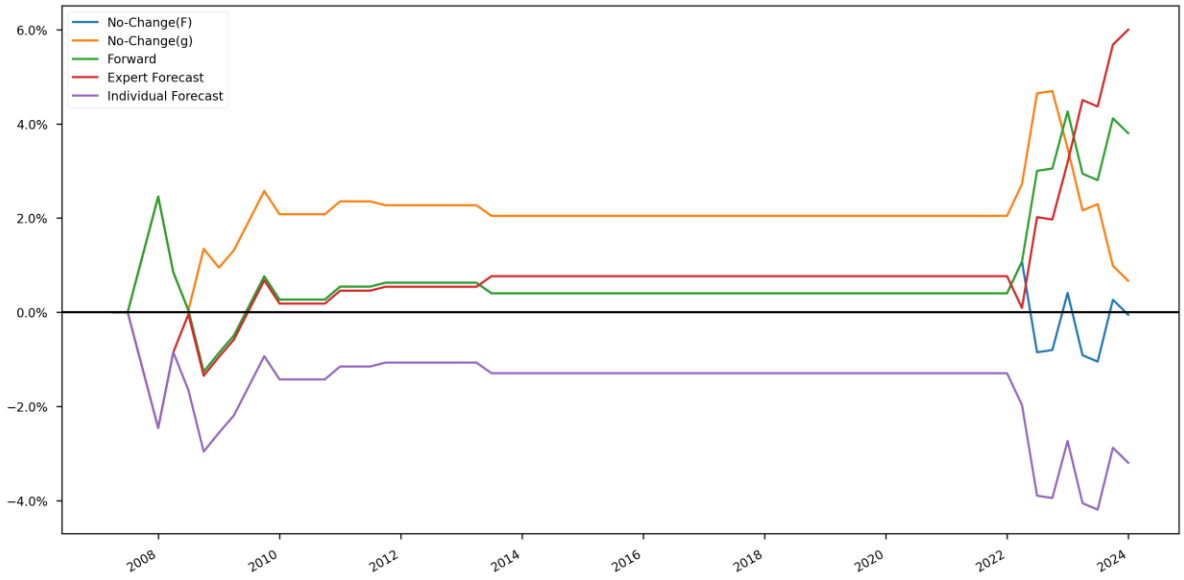
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 84: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.590			
Forward	0.523	0.770		
Expert Forecast	0.428	0.654	0.764	
Individual Forecast	0.788	0.530	0.420	0.250

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 42: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 85: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.16% ***	-1.01% ***	-0.81% ***	-0.97% ***	-1.15% ***
	(0.001)	(0.001)	(0.007)	(0.001)	(0.001)
Volatility (ann.)	0.98%	0.97%	1.03%	0.90%	1.05%
Skewness	-2.220	2.192	1.390	-1.338	-1.852
Kurtosis	11.985	14.215	8.587	16.155	9.676
VaR (95%)	-1.73%	-1.57%	-1.47%	-1.41%	-1.84%
Maximum Drawdown	-2.43%	-2.76%	-1.60%	-2.43%	-3.40%
Sharpe Ratio	-0.589	-0.518	-0.388	-0.542	-0.544
Number of Observations	63	63	63	63	63

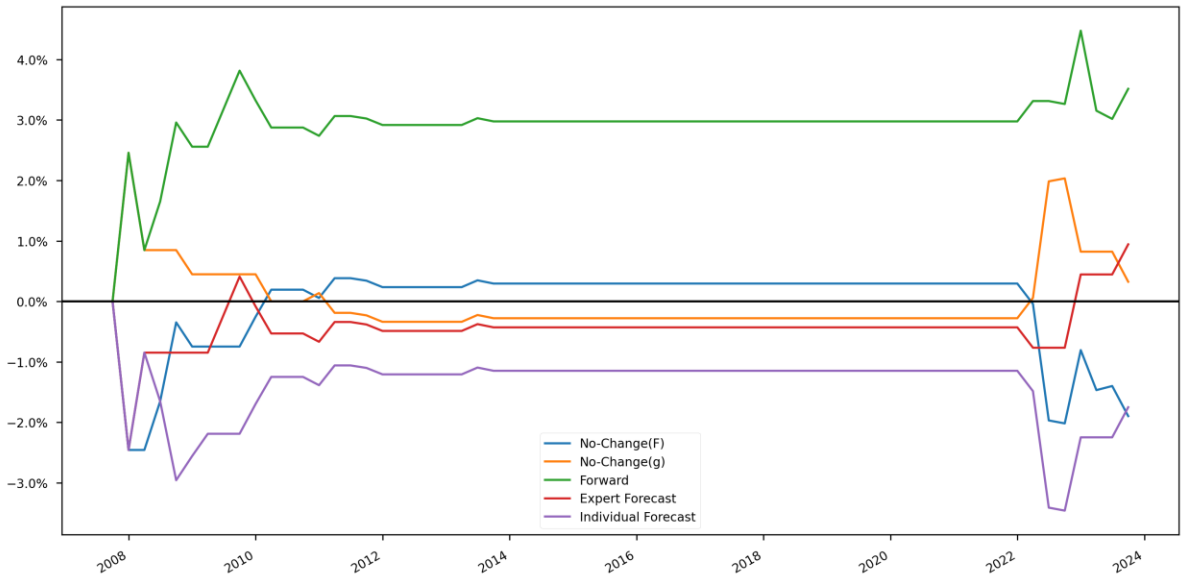
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 86: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.958			
Forward	0.482	0.498		
Expert Forecast	0.944	0.998	0.512	
Individual Forecast	0.942	0.998	0.616	0.994

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 43: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 87: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.25% ***	-1.26% ***	-1.07% ***	-1.04% ***	-1.19% ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.63%	0.62%	0.77%	0.64%	0.88%
Skewness	-1.123	-2.304	0.978	2.598	0.437
Kurtosis	12.946	12.982	6.922	11.289	5.110
VaR (95%)	-1.13%	-1.14%	-1.19%	-0.95%	-1.49%
Maximum Drawdown	-2.12%	-2.38%	-2.09%	-1.74%	-2.84%
Sharpe Ratio	-0.991	-1.007	-0.688	-0.805	-0.670
Number of Observations	63	63	63	63	63

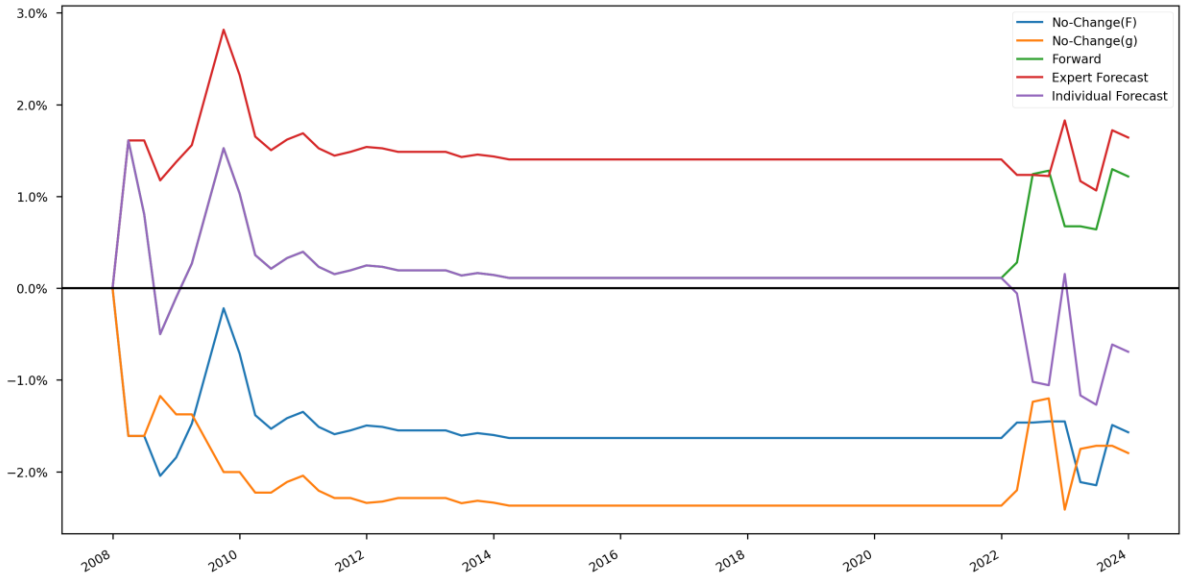
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 88: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.860			
Forward	0.310	0.292		
Expert Forecast	0.486	0.544	0.252	
Individual Forecast	0.270	0.256	0.956	0.202

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 44: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 89: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.95%	-0.55%	-1.95%	-0.62%	-2.45% **
	(0.101)	(0.636)	(0.101)	(0.588)	(0.039)
Volatility (ann.)	4.51%	4.53%	4.51%	4.53%	4.48%
Skewness	-1.508	-0.728	-1.508	-1.183	-1.573
Kurtosis	6.163	6.831	6.163	6.880	5.980
VaR (95%)	-8.33%	-6.96%	-8.33%	-7.04%	-8.77%
Maximum Drawdown	-16.50%	-15.97%	-16.50%	-11.69%	-22.96%
Sharpe Ratio	-0.208	-0.049	-0.208	-0.058	-0.266
Number of Observations	65	65	65	65	65

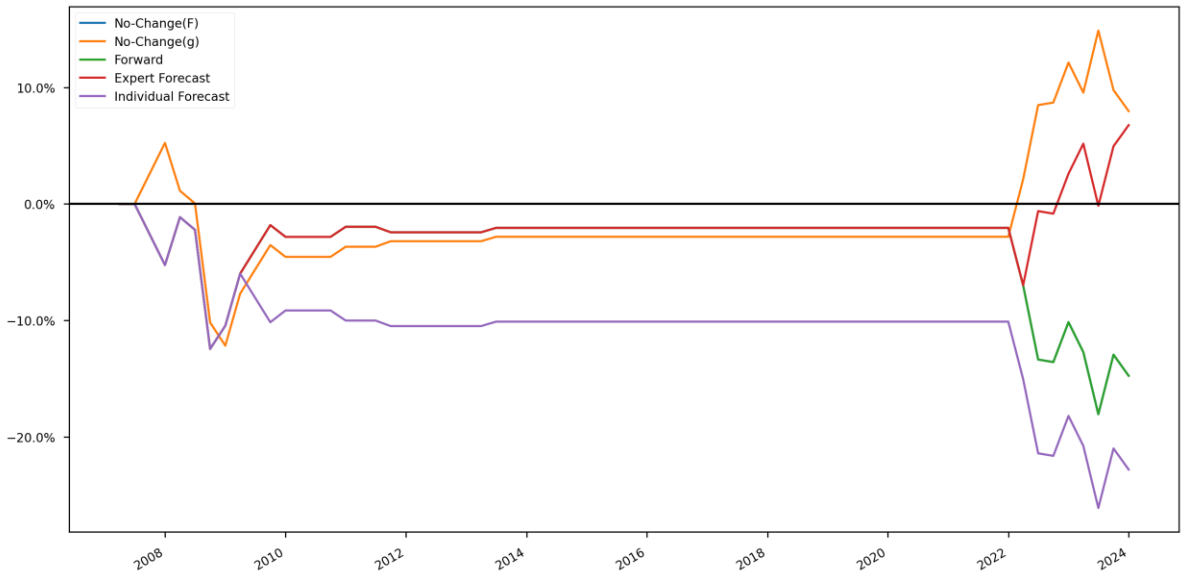
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 90: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.412			
Forward	0.362	0.398		
Expert Forecast	0.512	0.954		
Individual Forecast	0.379	0.304	0.452	0.241

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 45: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 91: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.89% **	-1.59%	-3.06% ***	-0.38%	-2.20% **
	(0.021)	(0.111)	(0.007)	(0.543)	(0.018)
Volatility (ann.)	3.12%	3.78%	4.12%	2.31%	3.32%
Skewness	-1.073	-1.660	-2.267	-0.350	-1.456
Kurtosis	6.827	13.692	7.717	9.306	4.526
VaR (95%)	-5.99%	-6.78%	-8.80%	-3.14%	-6.61%
Maximum Drawdown	-18.63%	-17.79%	-28.37%	-5.10%	-18.70%
Sharpe Ratio	-0.298	-0.204	-0.369	-0.075	-0.326
Number of Observations	63	63	63	63	63

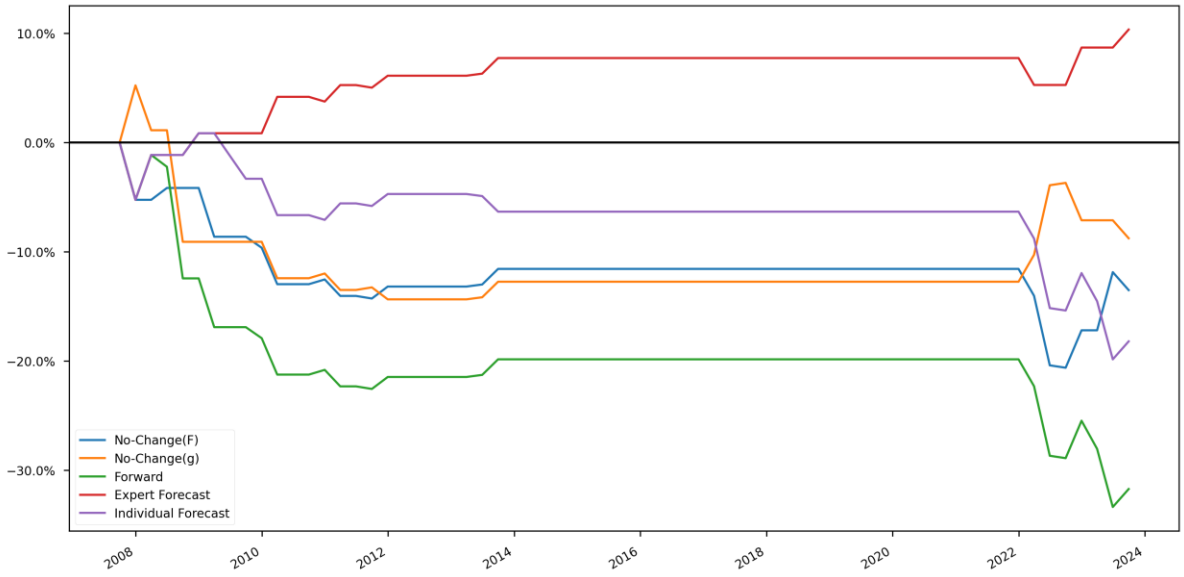
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 92: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.634			
Forward	0.678	0.456		
Expert Forecast	0.250	0.518	0.154	
Individual Forecast	0.948	0.582	0.490	0.154

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 46: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 93: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.95% *	-1.35% **	-1.95% *	-1.77% *	-1.77% *
	(0.069)	(0.021)	(0.069)	(0.084)	(0.084)
Volatility (ann.)	4.01%	2.16%	4.01%	3.82%	3.81%
Skewness	-1.728	-0.548	-1.728	-2.068	-1.845
Kurtosis	9.167	5.316	9.167	11.583	11.492
VaR (95%)	-7.39%	-3.76%	-7.39%	-6.91%	-6.88%
Maximum Drawdown	-17.13%	-7.21%	-17.13%	-14.72%	-14.72%
Sharpe Ratio	-0.236	-0.306	-0.236	-0.225	-0.225
Number of Observations	63	63	63	63	63

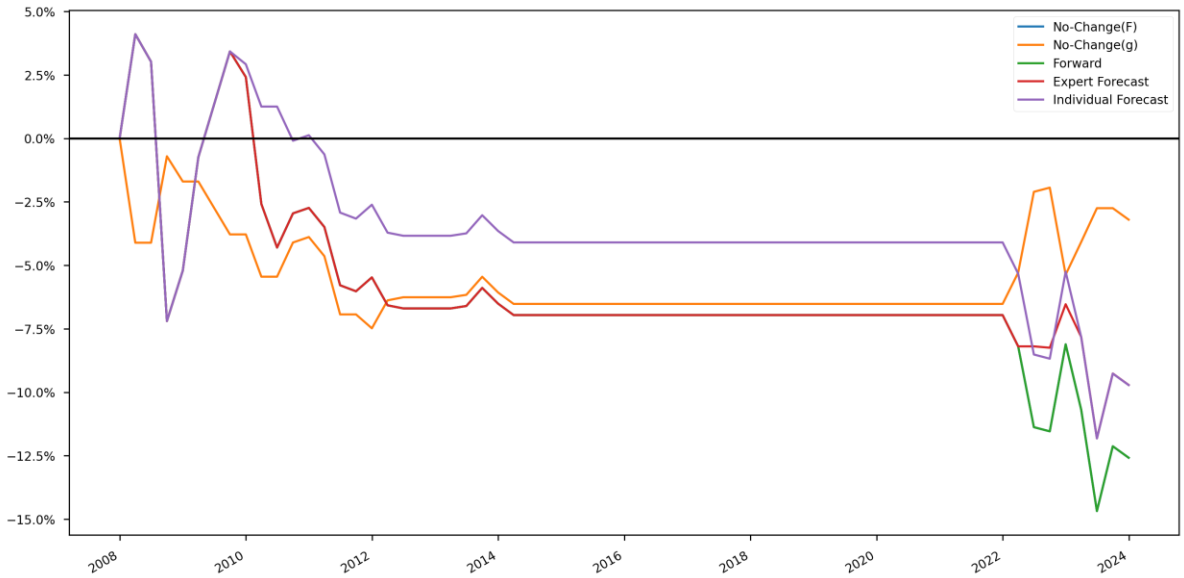
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 94: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.702			
Forward	0.581	0.678		
Expert Forecast	0.718	0.688	0.778	
Individual Forecast	0.692	0.696	0.717	0.984

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 47: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy B – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 95: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.52% ***	-1.00% **	-1.26% ***	-1.05% ***	-1.90% ***
	(0.000)	(0.016)	(0.002)	(0.005)	(0.000)
Volatility (ann.)	1.35%	1.37%	1.37%	1.37%	1.31%
Skewness	-1.005	1.740	-0.298	-0.922	-2.536
Kurtosis	8.079	8.114	8.279	8.304	6.833
VaR (95%)	-2.67%	-2.18%	-2.44%	-2.24%	-2.97%
Maximum Drawdown	-9.63%	-3.67%	-6.78%	-4.79%	-12.92%
Sharpe Ratio	-0.560	-0.357	-0.457	-0.380	-0.728
Number of Observations	65	65	65	65	65

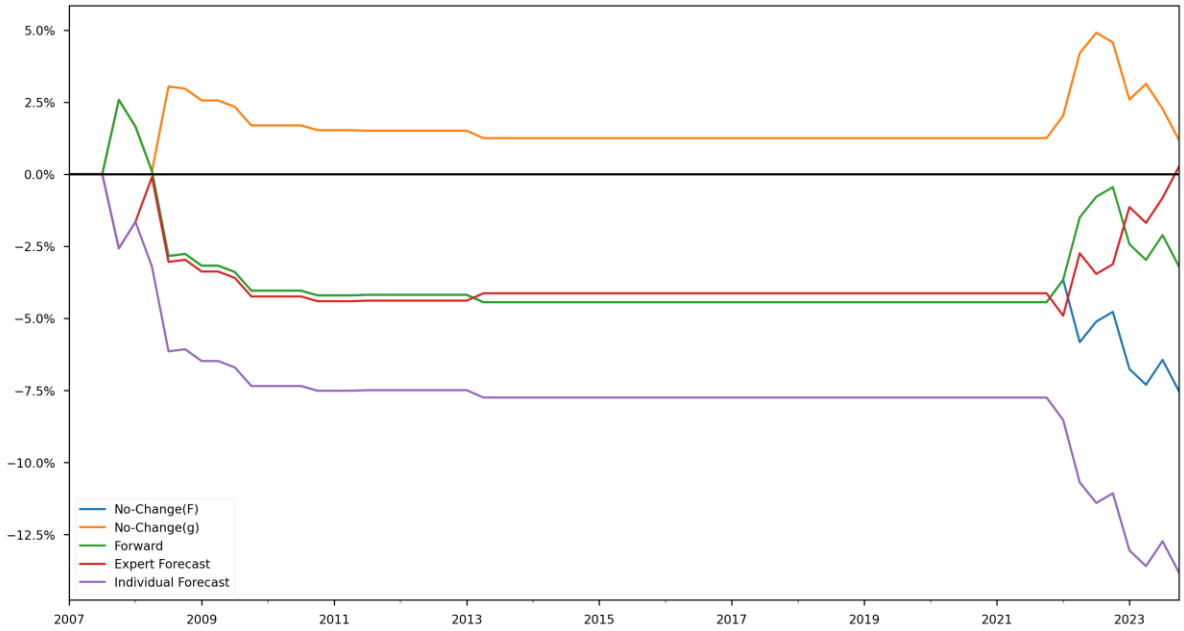
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 96: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.326			
Forward	0.418	0.454		
Expert Forecast	0.436	0.722	0.758	
Individual Forecast	0.422	0.266	0.248	0.190

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 48: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 97: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.11% ***	-0.90% ***	-0.91% **	-1.10% ***	-1.35% ***
	(0.007)	(0.002)	(0.018)	(0.000)	(0.000)
Volatility (ann.)	1.17%	0.93%	1.16%	0.76%	1.17%
Skewness	-0.394	2.950	1.372	-2.660	-2.616
Kurtosis	10.324	14.395	9.440	18.894	8.731
VaR (95%)	-1.98%	-1.38%	-1.77%	-1.31%	-2.23%
Maximum Drawdown	-4.46%	-2.33%	-3.19%	-2.31%	-5.80%
Sharpe Ratio	-0.472	-0.478	-0.387	-0.721	-0.578
Number of Observations	63	63	63	63	63

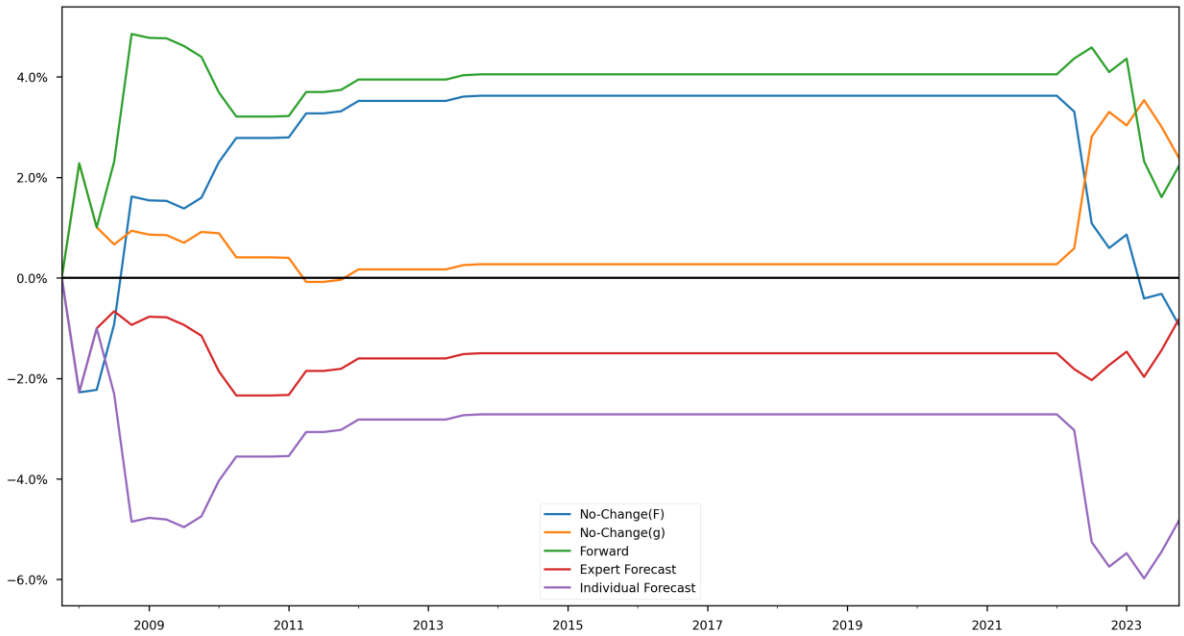
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 98: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.784			
Forward	0.680	0.482		
Expert Forecast	0.224	0.344	0.242	
Individual Forecast	0.402	0.690	0.420	0.168

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 49: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 99: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.58% ***	-1.16% ***	-1.41% ***	-1.46% ***	-1.76% ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.74%	0.73%	0.98%	0.76%	1.09%
Skewness	-2.180	-1.367	-1.241	0.335	-1.511
Kurtosis	7.940	10.446	9.424	8.235	6.668
VaR (95%)	-1.61%	-1.18%	-1.83%	-1.52%	-2.37%
Maximum Drawdown	-6.04%	-1.61%	-5.93%	-5.71%	-10.17%
Sharpe Ratio	-1.066	-0.791	-0.717	-0.951	-0.804
Number of Observations	63	63	63	63	63

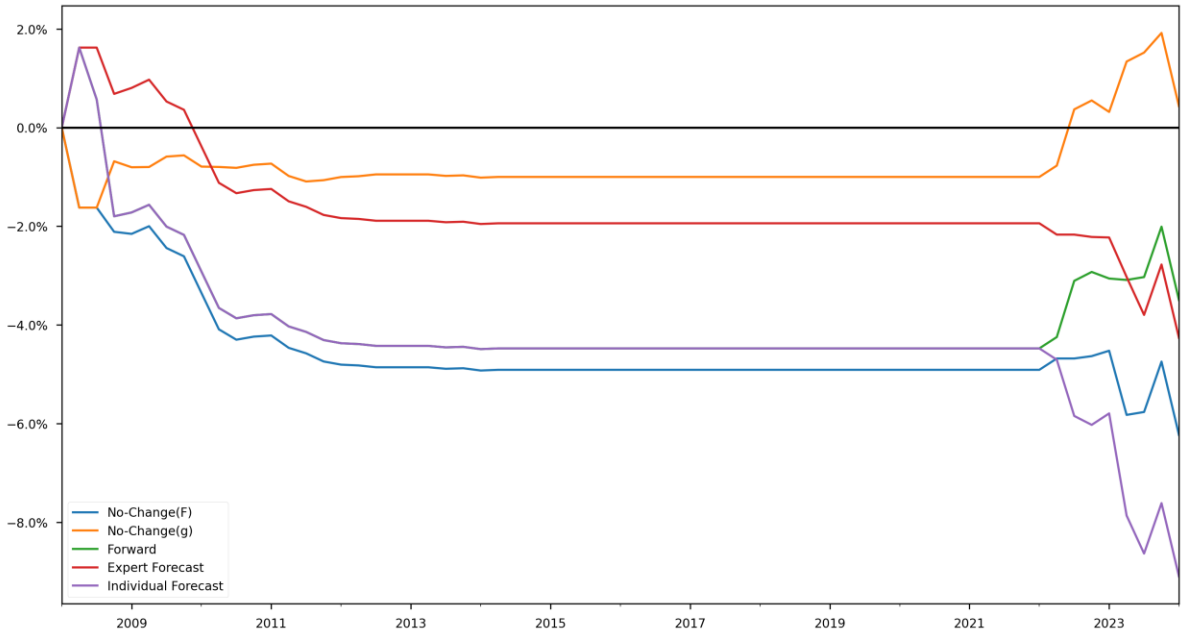
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 100: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.220			
Forward	0.366	0.574		
Expert Forecast	0.542	0.502	0.578	
Individual Forecast	0.192	0.760	0.814	0.304

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 50: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 101: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-2.60% **	-0.97%	-2.60% **	-1.27%	-2.56% **
	(0.017)	(0.362)	(0.017)	(0.224)	(0.019)
Volatility (ann.)	4.12%	4.19%	4.12%	4.19%	4.13%
Skewness	-2.157	-1.280	-2.157	-1.796	-2.153
Kurtosis	9.838	10.750	9.838	10.524	9.844
VaR (95%)	-8.31%	-6.80%	-8.31%	-7.10%	-8.27%
Maximum Drawdown	-23.90%	-14.30%	-23.90%	-14.95%	-23.34%
Sharpe Ratio	-0.311	-0.106	-0.311	-0.144	-0.306
Number of Observations	65	65	65	65	65

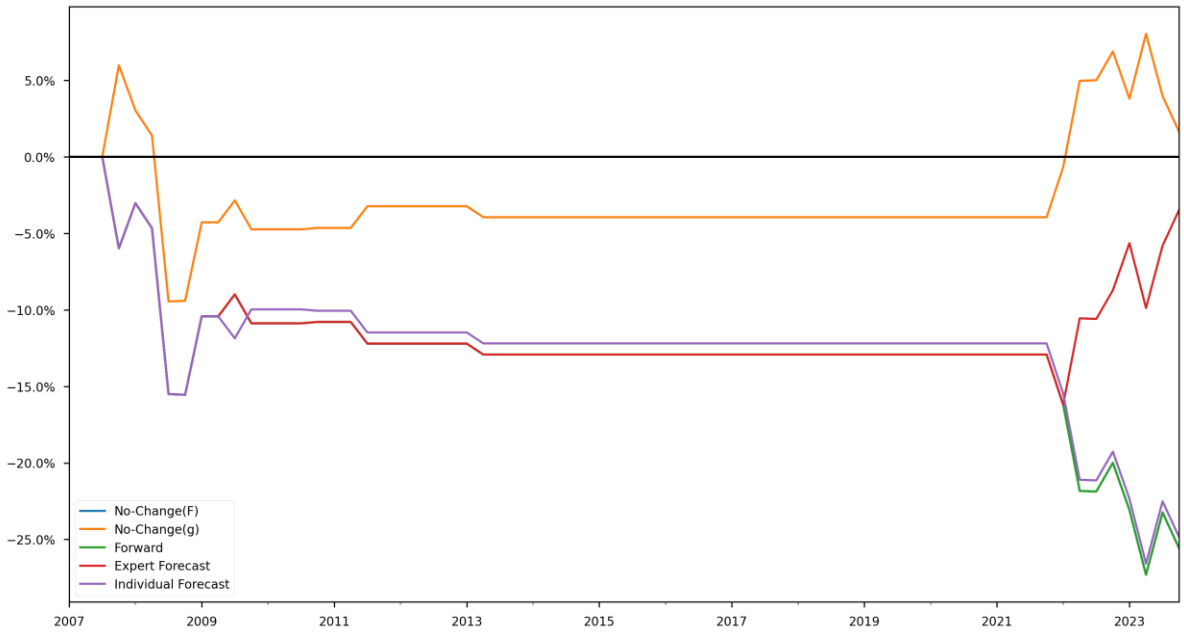
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 102: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.268			
Forward	0.248	0.250		
Expert Forecast	0.642	0.766		
Individual Forecast	0.854	0.256	0.836	0.284

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 51: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 103: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change(g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-2.04% **	-1.98% **	-2.93% ***	-0.27%	-1.76% **
	(0.016)	(0.042)	(0.008)	(0.646)	(0.033)
Volatility (ann.)	3.15%	3.72%	4.14%	2.29%	2.98%
Skewness	-1.482	-1.962	-2.203	-0.493	-1.245
Kurtosis	4.861	14.311	7.806	10.031	5.063
VaR (95%)	-6.16%	-7.03%	-8.67%	-2.99%	-5.60%
Maximum Drawdown	-16.41%	-20.19%	-28.89%	-5.25%	-15.16%
Sharpe Ratio	-0.320	-0.261	-0.351	-0.053	-0.290
Number of Observations	63	63	63	63	63

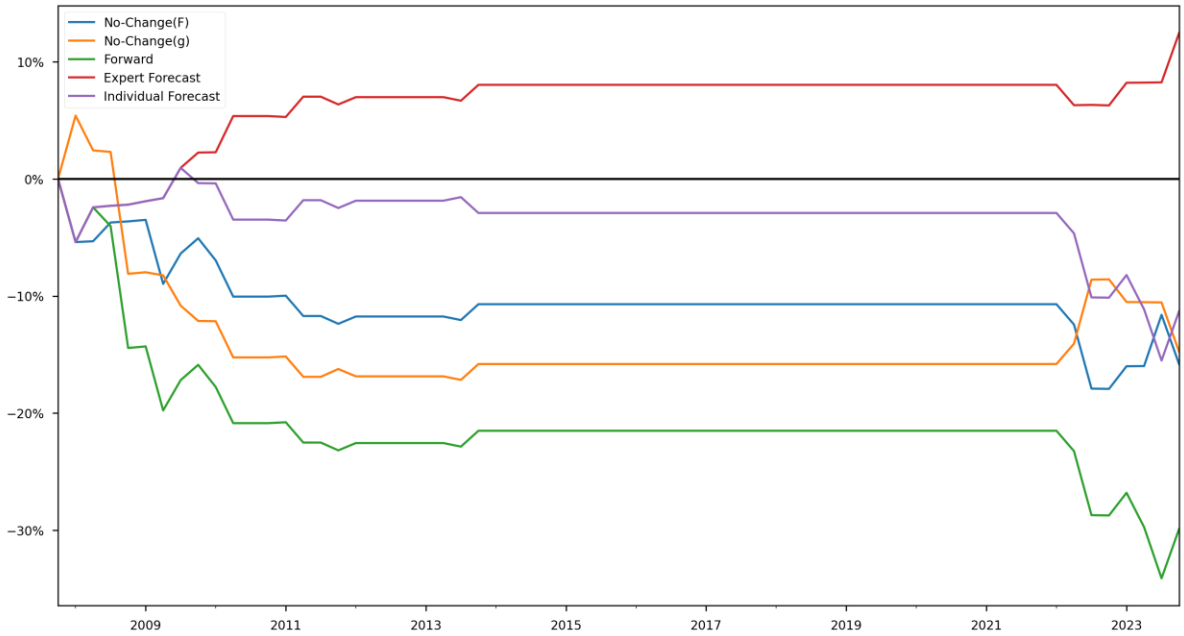
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 104: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.768			
Forward	0.770	0.662		
Expert Forecast	0.188	0.330	0.138	
Individual Forecast	0.788	0.950	0.328	0.164

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 52: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 105: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	**No-Change(g)**	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-2.62% **	-1.13% **	-2.62% **	-2.41% **	-2.27% **
	(0.012)	(0.025)	(0.012)	(0.016)	(0.023)
Volatility (ann.)	3.90%	1.80%	3.90%	3.79%	3.71%
Skewness	-1.585	0.212	-1.585	-1.770	-1.799
Kurtosis	9.408	5.228	9.408	11.013	12.012
VaR (95%)	-7.83%	-2.90%	-7.83%	-7.45%	-7.18%
Maximum Drawdown	-23.92%	-3.20%	-23.92%	-21.43%	-19.62%
Sharpe Ratio	-0.330	-0.309	-0.330	-0.314	-0.301
Number of Observations	63	63	63	63	63

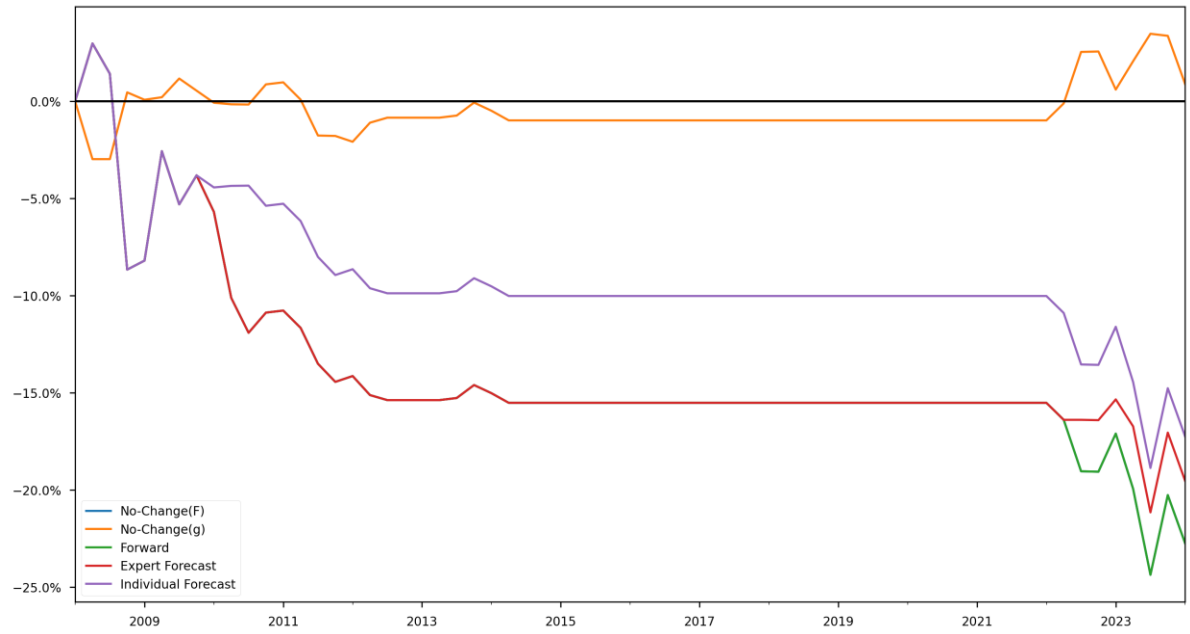
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy B, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 106: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)

	No-Change	No-Change (g)	Forward	Expert Forecast
No-Change (g)	0.858			
Forward	0.671	0.850		
Expert Forecast	0.564	0.910	0.546	
Individual Forecast	0.420	0.982	0.458	0.652

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 53: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy B; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing futures contracts on the ten-year US treasury note in accordance with trading strategy B, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy C – ETFs

2-Year Treasury Yield

3-Month Forecast Horizon

Table 107: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.10% ***	-0.82% ***	-0.95% ***	-1.11% ***
	(0.000)	(0.007)	(0.000)	(0.000)
Volatility (ann.)	0.86%	0.99%	0.58%	0.89%
Skewness	1.648	1.706	1.013	-0.929
Kurtosis	18.152	9.135	14.609	7.570
VaR (95%)	-1.48%	-1.42%	-0.87%	-1.54%
Maximum Drawdown	-3.35%	-2.09%	-1.30%	-2.15%
Sharpe Ratio	-0.630	-0.410	-0.806	-0.619
Number of Observations	65	65	65	65

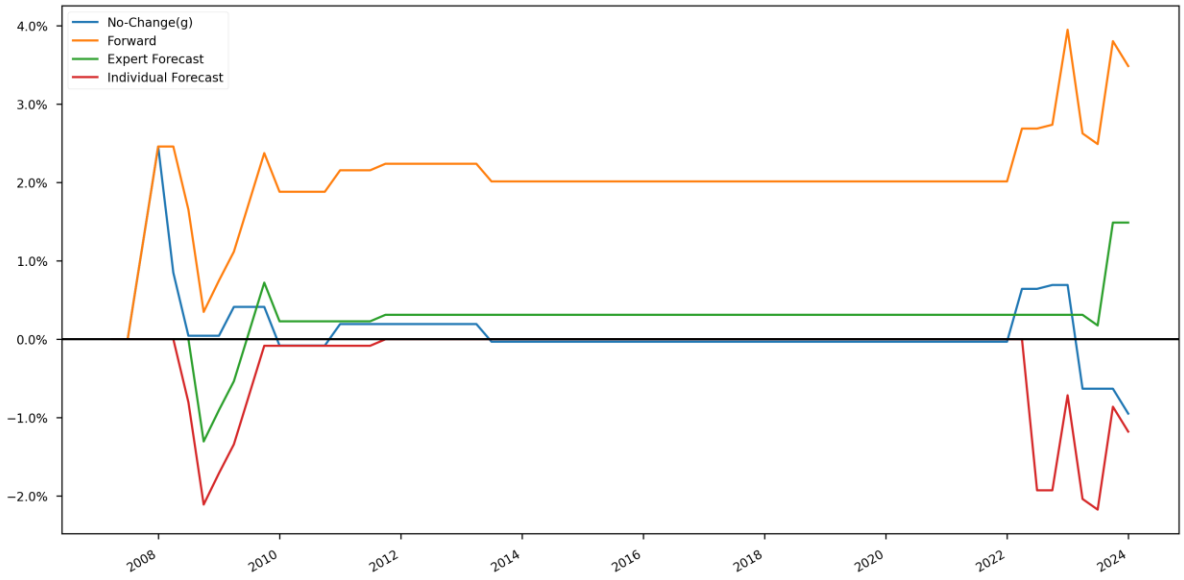
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 108: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.174		
Expert Forecast	0.696	0.292	
Individual Forecast	0.976	0.406	0.222

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 54: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 109: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.09% ***	-1.01% ***	-0.96% ***	-1.08% ***
	(0.000)	(0.000)	(0.001)	(0.001)
Volatility (ann.)	0.35%	0.42%	0.82%	0.92%
Skewness	-1.354	-2.998	-3.195	-2.918
Kurtosis	11.354	24.682	20.010	15.535
VaR (95%)	-0.62%	-0.67%	-1.27%	-1.56%
Maximum Drawdown	-1.03%	-1.45%	-2.43%	-2.80%
Sharpe Ratio	-1.556	-1.189	-0.588	-0.581
Number of Observations	63	63	63	63

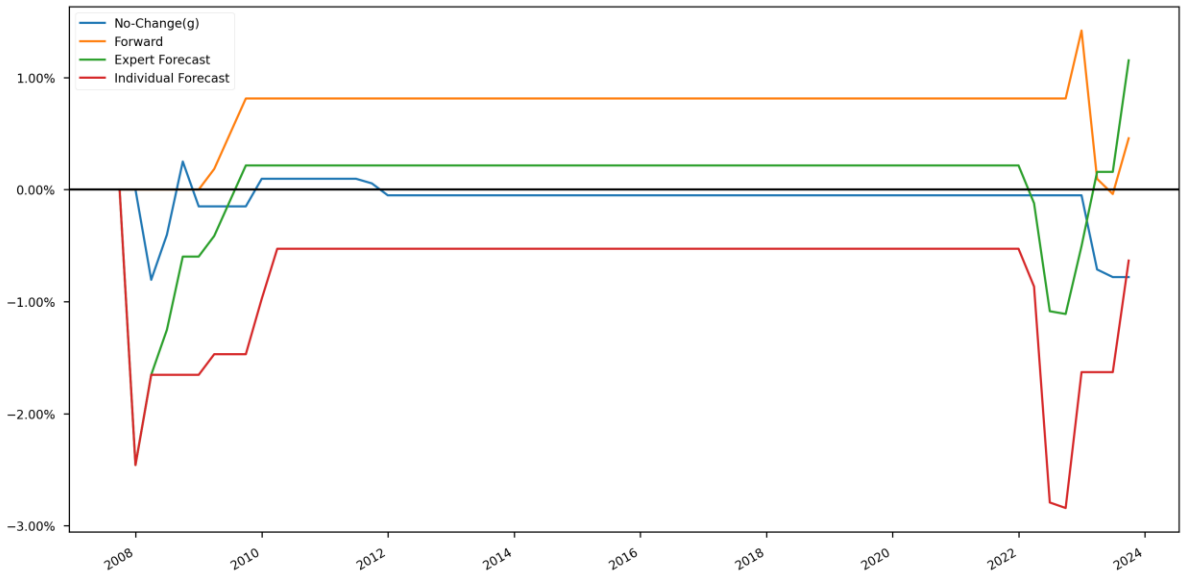
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 110: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.468		
Expert Forecast	0.276	0.402	
Individual Forecast	0.162	0.270	0.994

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 55: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 111: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.25% ***	-1.19% ***	-1.14% ***	-1.22% ***
	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.49%	0.60%	0.58%	0.72%
Skewness	-4.394	-0.409	2.042	0.212
Kurtosis	26.314	10.885	10.649	7.588
VaR (95%)	-0.91%	-1.03%	-0.95%	-1.25%
Maximum Drawdown	-1.98%	-1.79%	-1.86%	-2.37%
Sharpe Ratio	-1.286	-0.993	-0.968	-0.846
Number of Observations	63	63	63	63

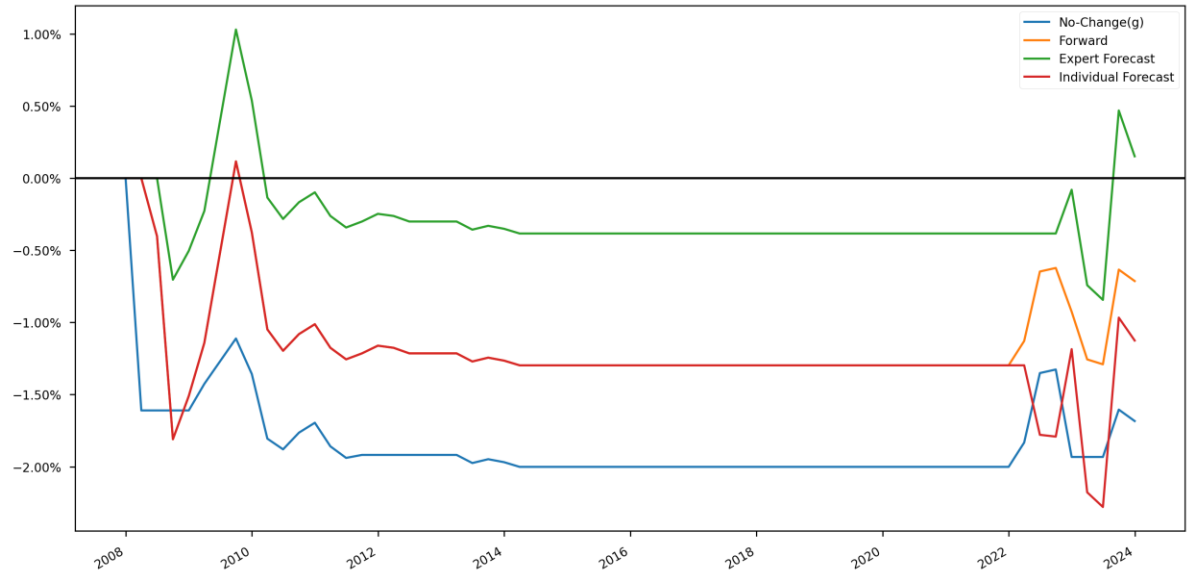
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in the SHY ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 112: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.396		
Expert Forecast	0.532	0.800	
Individual Forecast	0.286	0.484	0.210

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 56: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in the SHY ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 113: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.09% **	-1.24%	-1.51%	-2.23% *
	(0.020)	(0.247)	(0.145)	(0.054)
Volatility (ann.)	1.42%	4.07%	4.00%	4.36%
Skewness	2.800	-1.704	-2.053	-1.702
Kurtosis	24.477	9.680	10.418	7.015
VaR (95%)	-2.39%	-6.89%	-7.05%	-8.36%
Maximum Drawdown	-4.29%	-11.69%	-11.94%	-20.10%
Sharpe Ratio	-0.373	-0.144	-0.182	-0.248
Number of Observations	65	65	65	65

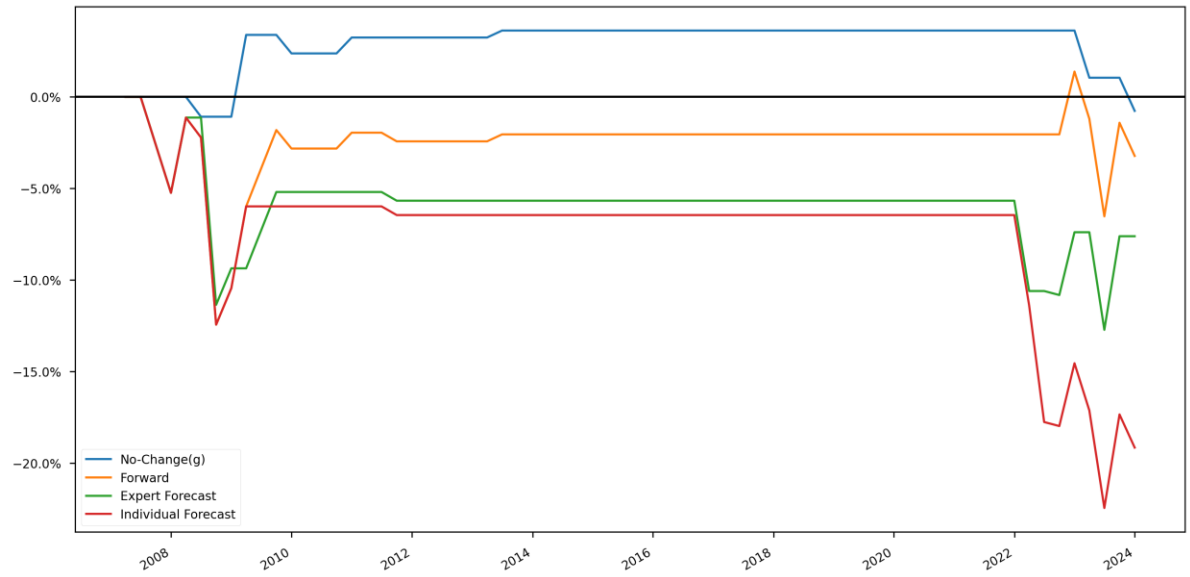
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 114: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.170		
Expert Forecast	0.524	0.534	
Individual Forecast	0.686	0.178	0.364

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 57: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 115: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.55% ***	-1.60% **	-0.92%	-1.47% *
	(0.000)	(0.022)	(0.118)	(0.075)
Volatility (ann.)	1.27%	2.45%	2.22%	3.07%
Skewness	-3.008	-2.324	-1.177	-0.915
Kurtosis	11.632	7.767	9.549	6.974
VaR (95%)	-2.60%	-4.58%	-3.54%	-5.47%
Maximum Drawdown	-9.20%	-10.30%	-5.60%	-11.80%
Sharpe Ratio	-0.611	-0.323	-0.203	-0.233
Number of Observations	63	63	63	63

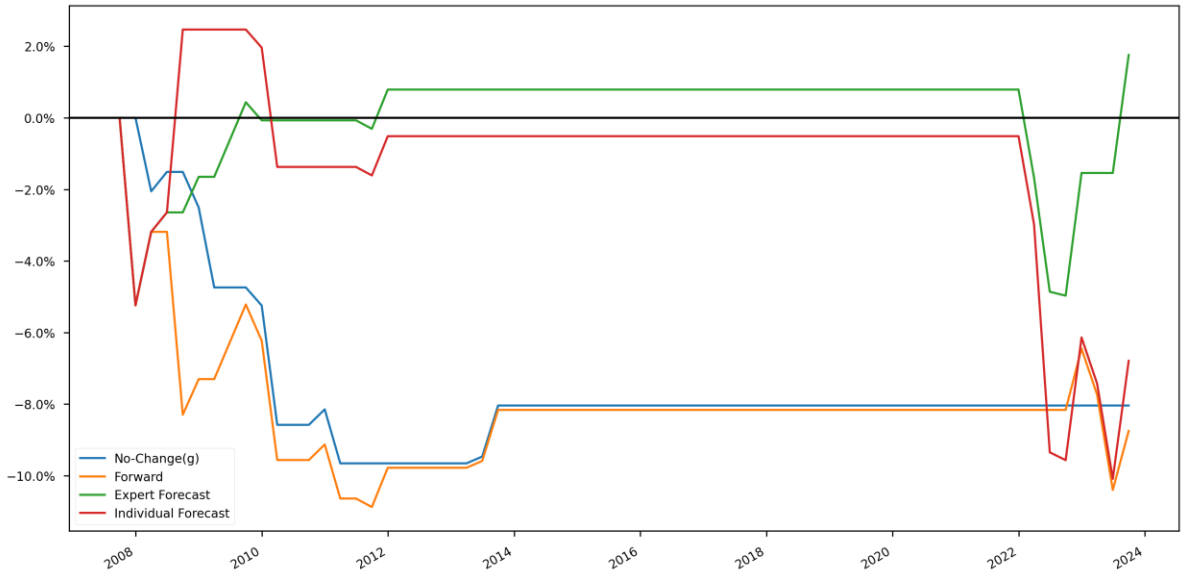
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 116: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.066 *		
Expert Forecast	0.078 *	0.294	
Individual Forecast	0.104	0.578	0.798

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 58: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 117: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.67% ***	-1.72% *	-1.91% *	-1.62%
	(0.001)	(0.097)	(0.097)	(0.144)
Volatility (ann.)	1.68%	3.91%	4.33%	4.15%
Skewness	-1.915	-2.643	-1.877	-2.123
Kurtosis	7.965	15.756	10.459	12.721
VaR (95%)	-3.29%	-7.01%	-7.87%	-7.29%
Maximum Drawdown	-8.68%	-14.14%	-17.94%	-13.78%
Sharpe Ratio	-0.495	-0.215	-0.213	-0.188
Number of Observations	63	63	63	63

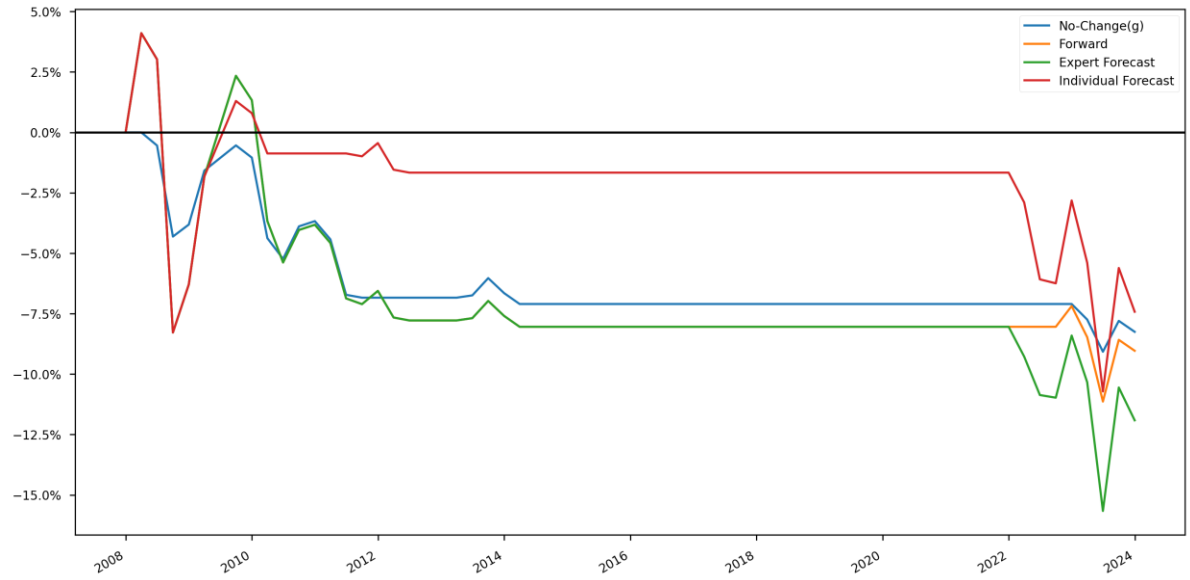
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in the IEF ETF in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 118: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.096 *		
Expert Forecast	0.052 *	0.980	
Individual Forecast	0.072 *	0.664	0.456

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 59: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in the IEF ETF in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

Trading Strategy C – Futures

2-Year Treasury Yield

3-Month Forecast Horizon

Table 119: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.25% ***	-1.34% ***	-1.30% ***	-1.65% ***
	(0.000)	(0.001)	(0.000)	(0.000)
Volatility (ann.)	1.00%	1.24%	0.78%	1.12%
Skewness	0.739	-0.956	-5.996	-3.329
Kurtosis	13.637	11.212	42.906	11.638
VaR (95%)	-1.82%	-2.30%	-1.51%	-2.41%
Maximum Drawdown	-5.39%	-6.79%	-4.56%	-9.18%
Sharpe Ratio	-0.618	-0.537	-0.839	-0.738
Number of Observations	65	65	65	65

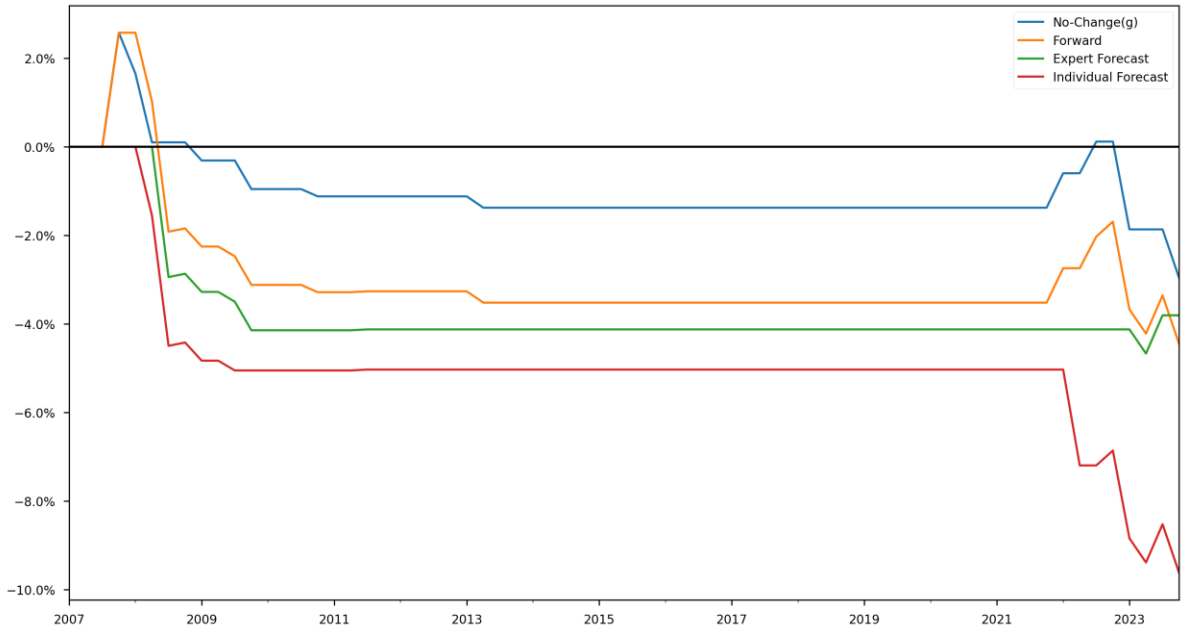
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 120: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.430		
Expert Forecast	0.302	0.230	
Individual Forecast	0.492	0.378	0.250

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 60: Cumulative Returns for the 3-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 121: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	**Forward**	**Expert Forecasts**	**Individual Forecasts**
Log-ER (ann.)	-1.02% ***	-1.18% ***	-1.02% ***	-1.21% ***
	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.49%	0.56%	0.81%	0.89%
Skewness	2.105	-5.676	-2.539	-3.653
Kurtosis	17.314	38.416	15.888	16.701
VaR (95%)	-0.77%	-1.06%	-1.30%	-1.62%
Maximum Drawdown	-1.38%	-2.72%	-2.25%	-3.58%
Sharpe Ratio	-1.042	-1.051	-0.630	-0.682
Number of Observations	63	63	63	63

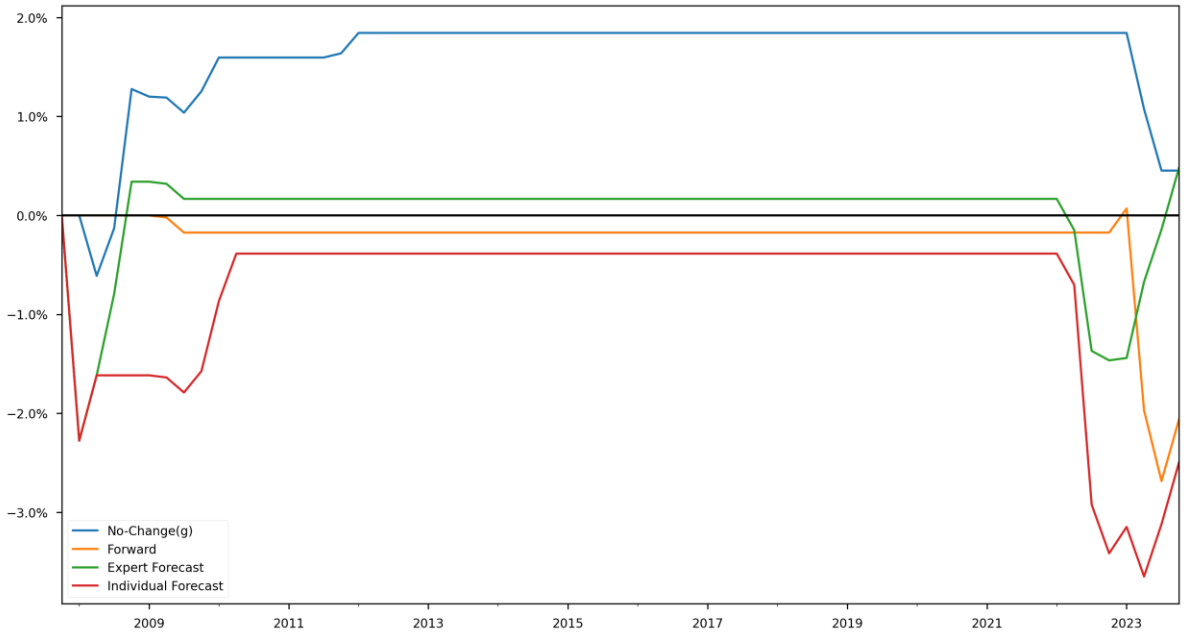
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 122: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.640		
Expert Forecast	0.768	0.552	
Individual Forecast	0.916	0.422	0.994

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 61: Cumulative Returns for the 6-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 123: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.37% ***	-1.49% ***	-1.52% ***	-1.67% ***
	(0.000)	(0.000)	(0.000)	(0.000)
Volatility (ann.)	0.62%	0.69%	0.62%	0.77%
Skewness	-3.279	-1.762	-1.705	-2.113
Kurtosis	15.373	7.712	8.840	7.347
VaR (95%)	-1.20%	-1.43%	-1.34%	-1.75%
Maximum Drawdown	-2.93%	-4.75%	-5.11%	-7.38%
Sharpe Ratio	-1.103	-1.087	-1.231	-1.085
Number of Observations	63	63	63	63

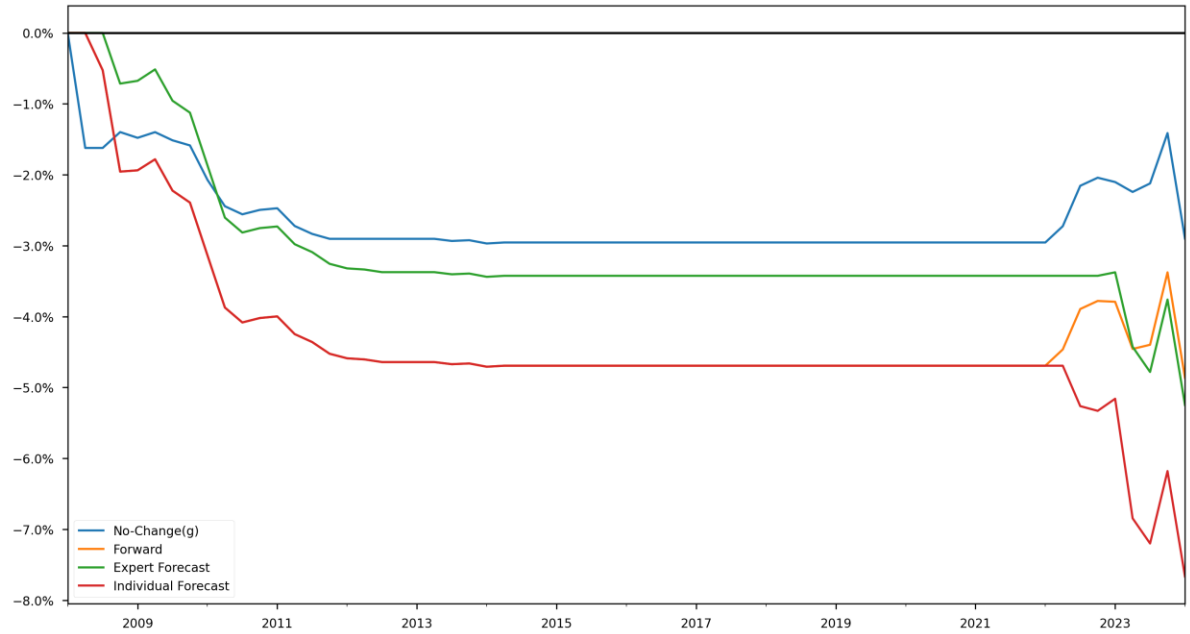
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 2-year US treasury yield investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 124: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.302		
Expert Forecast	0.446	0.434	
Individual Forecast	0.846	0.458	0.412

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 62: Cumulative Returns for the 12-Month-Ahead Forecast of the 2-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 2-year US Treasury note investing in futures contracts on the two-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.

10-Year Treasury Yield

3-Month Forecast Horizon

Table 125: Risk and Return Metrics for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.34% **	-2.07% **	-2.00% **	-2.54% **
	(0.010)	(0.042)	(0.030)	(0.019)
Volatility (ann.)	1.69%	3.85%	3.55%	4.08%
Skewness	2.250	-2.509	-3.602	-2.247
Kurtosis	22.103	13.699	18.881	10.391
VaR (95%)	-3.04%	-7.32%	-6.77%	-8.18%
Maximum Drawdown	-7.63%	-16.77%	-17.77%	-23.07%
Sharpe Ratio	-0.386	-0.264	-0.280	-0.307
Number of Observations	65	65	65	65

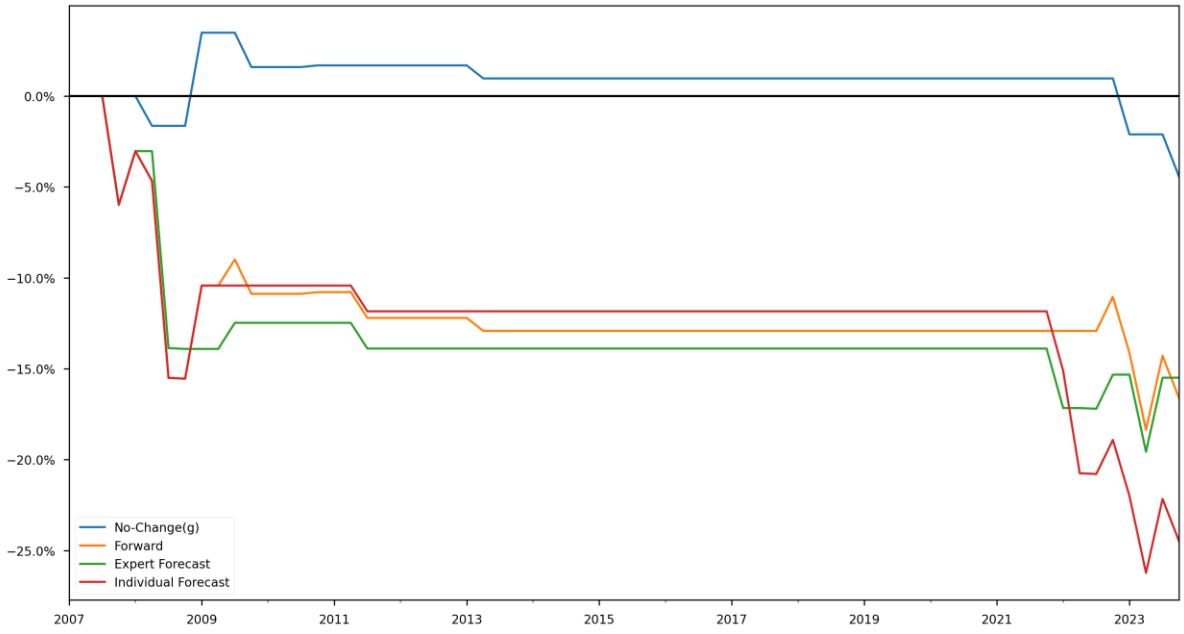
Note: This table presents risk and return metrics for the strategies based on the 3-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 65 quarterly returns over the sample period between Q2-2007 and Q1-2024. Data for Q3-2007 and Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 126: Sharpe Ratio Comparison for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.544		
Expert Forecast	0.810	0.754	
Individual Forecast	0.852	0.382	0.822

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 63: Cumulative Returns for the 3-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; ETFs; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 3-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q2-2007 and Q1-2024.

6-Month Forecast Horizon

Table 127: Risk and Return Metrics for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.57% ***	-1.78% ***	-1.09% **	-1.46% *
	(0.000)	(0.008)	(0.042)	(0.060)
Volatility (ann.)	1.25%	2.52%	2.05%	2.87%
Skewness	-3.126	-1.629	-1.343	-0.523
Kurtosis	11.974	8.391	14.502	7.774
VaR (95%)	-2.58%	-4.88%	-3.42%	-5.13%
Maximum Drawdown	-9.21%	-14.68%	-6.63%	-12.20%
Sharpe Ratio	-0.629	-0.350	-0.262	-0.248
Number of Observations	63	63	63	63

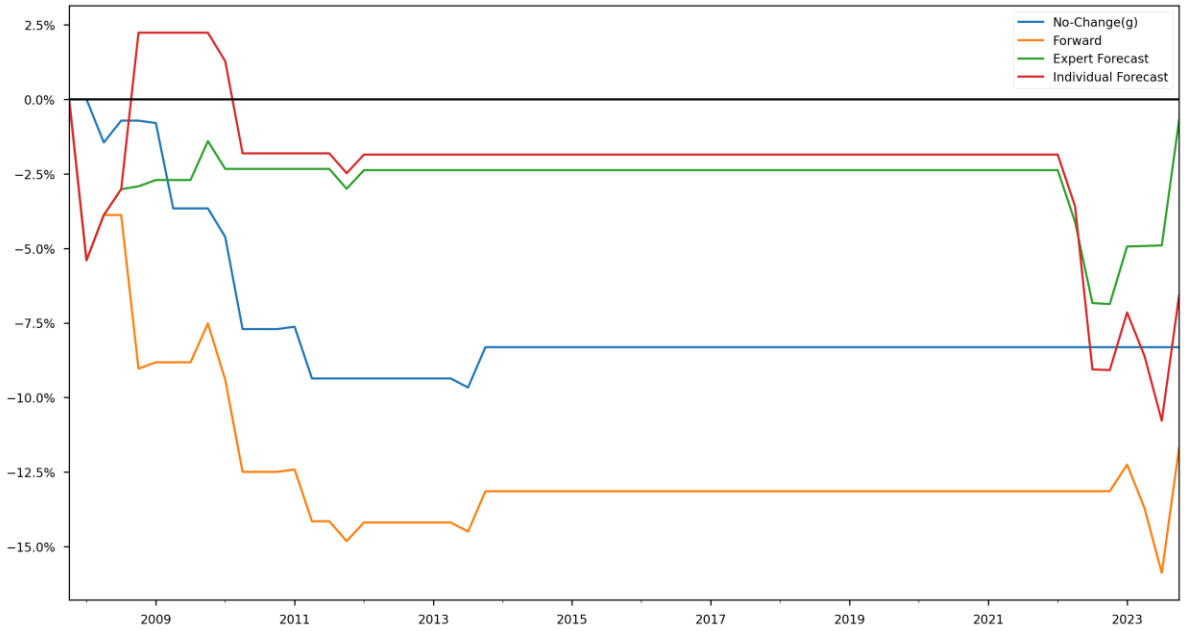
Note: This table presents risk and return metrics for the strategies based on the 6-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q4-2007 and Q4-2023. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 128: Sharpe Ratio Comparison for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.134		
Expert Forecast	0.104	0.242	
Individual Forecast	0.120	0.488	0.852

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 64: Cumulative Returns for the 6-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 6-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q4-2007 and Q4-2023.

12-Month Forecast Horizon

Table 129: Risk and Return Metrics for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecasts	Individual Forecasts
Log-ER (ann.)	-1.88% ***	-2.30% **	-2.52% **	-2.04% **
	(0.000)	(0.018)	(0.013)	(0.038)
Volatility (ann.)	1.69%	3.69%	3.82%	3.66%
Skewness	-0.545	-1.834	-1.686	-1.972
Kurtosis	5.267	12.310	10.419	13.132
VaR (95%)	-3.47%	-7.18%	-7.61%	-6.87%
Maximum Drawdown	-10.35%	-20.01%	-22.69%	-16.60%
Sharpe Ratio	-0.550	-0.307	-0.324	-0.274
Number of Observations	63	63	63	63

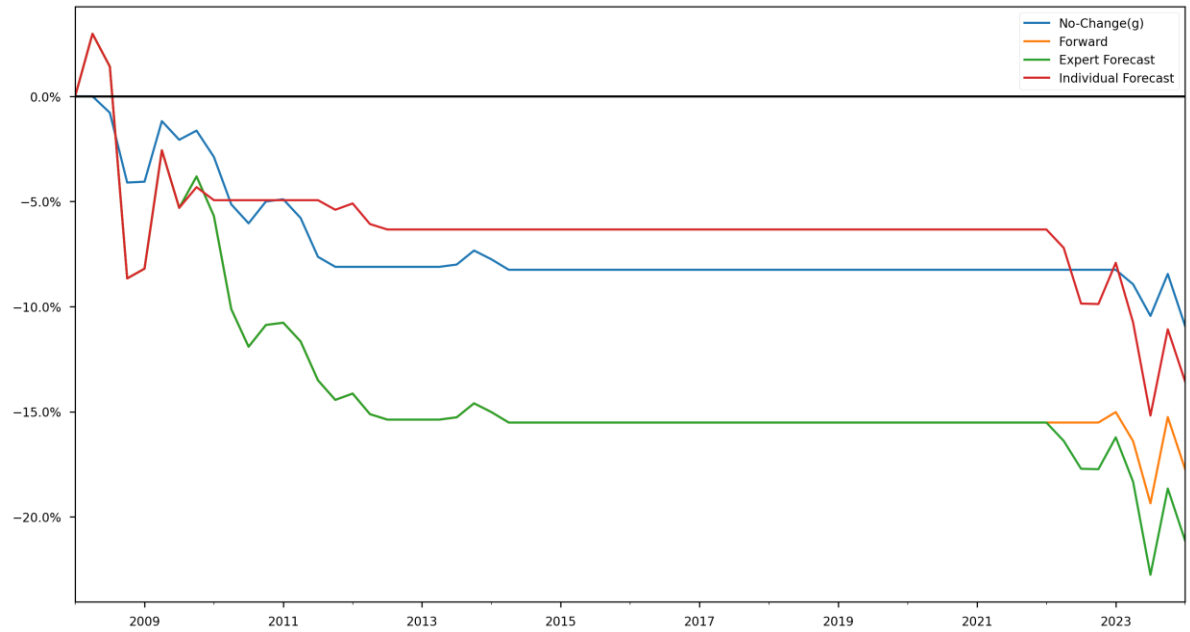
Note: This table presents risk and return metrics for the strategies based on the 12-month-ahead forecast of the 10-year US treasury yield investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, also taking into account the ICE Bank of America MOVE Index. Specifically, positions are only taken when the MOVE index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The measures are based on 63 quarterly returns over the sample period between Q1-2008 and Q1-2024. Data for Q2-2009 is missing due to a lack of survey responses. The p-values of the two-sided one-sample t-test (H_0: quarterly mean ER = 0) are given in parentheses. *, **, *** denote the 10%, 5%, and 1% significance levels.

Table 130: Sharpe Ratio Comparison for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)

	No-Change (g)	Forward	Expert Forecast
Forward	0.062 *		
Expert Forecast	0.058 *	0.476	
Individual Forecast	0.062 *	0.360	0.214

Note: This table presents the p-values for pairwise comparisons of Sharpe Ratios between the different forecasting methods. The p-values are computed using the bootstrap method proposed by Ledoit and Wolf (2008), which accounts for non-normality and time-series characteristics in return data. The null hypothesis (H_0) states that there is no significant difference between the Sharpe Ratios of the compared types of forecast. *, **, *** denote the 10%, 5%, and 1% significance levels.

Figure 65: Cumulative Returns for the 12-Month-Ahead Forecast of the 10-Year US Treasury Yield (Trading Strategy C; Futures; Robustness Test with the MOVE Index)



Note: This figure illustrates the cumulative returns generated by the 12-month-ahead forecasts of the yield on the 10-year US Treasury note investing in futures contracts on the ten-year US treasury note in accordance with trading strategy C, wherein positions are only taken when the ICE Bank of America MOVE Index is above its 75th percentile value for the period June 2004 – June 2024 (99.8). The figure is based on quarterly return data over the sample period between Q1-2008 and Q1-2024.