

SPY End of 2026 Price Forecasts

Comparing Six Quantitative Methodologies of Forecasting

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1 Introduction

As we enter 2026, forecasting SPY's year-end price target provides both a practical exercise in quantitative finance and insight into how different modeling assumptions shape predictions. This analysis compares six distinct forecasting methodologies, from simple historical averages to sophisticated regime-switching models, applied to 10 years of SPY historical data (2015-2025).

The goal is not to declare a single "correct" forecast, but rather to demonstrate how methodological choices reflect different market assumptions. Whether we assume the market follows a steady staircase (Linear Trend), a series of erratic jumps (Monte Carlo), or distinct emotional cycles (Regime Switching), each lens offers a unique perspective on risk and reward.

Key Finding: Across six methods, the average SPY end-2026 target is \$788.75, with forecasts ranging from \$729.44 to \$920.23, a spread of \$190.80.

2 Methodology

2.1 Historical Average

This model serves as our baseline by asking: "What if the future simply mirrors the past?" By calculating the compounded annual growth rate from the last decade and projecting it forward, we ignore short-term noise and cycles. This approach rests on the principle of long-run stationarity, treating the historical average return as the most reliable predictor of future performance. Confidence intervals derive from historical return volatility, scaled by \sqrt{t} to reflect expanding uncertainty.

2.2 Linear Trend

The Linear Trend model treats SPY as a consistent upward climb. By fitting a linear regression line through ten years of price action, we isolate the underlying "slope" of the market. To keep the forecast realistic, we anchor the start of the line to our most recent closing price, ensuring that the projection follows a deterministic path where any historical deviations are treated as temporary random noise rather than structural shifts.

2.3 ARIMA-GARCH

The market rarely moves in a straight line, it breathes. To capture this "pulse", we combine an ARIMA(1,0,1) model with a GARCH(1,1) framework. The ARIMA component identifies short-term patterns and price dependencies (autocorrelation), while the GARCH component accounts for

”volatility clustering”, which is the phenomenon where high-volatility periods tend to persist. This model functions on the premise that returns possess a conditional mean and variance that evolve based on recent observations, meaning the market’s ”mood” today heavily influences its behavior tomorrow.

2.4 Monte Carlo (GBM)

Rather than predicting one path, we simulated 10,000 of them using Geometric Brownian Motion—the math behind most options pricing. This method treats prices as a continuous-time random walk where returns are log-normally distributed with a constant upward ”drift.” By averaging 10,000 possible futures, we get a probabilistic view of where the SPY might land, while the outliers show us just how wide the distribution of possible outcomes can be.

2.5 Exponential Smoothing

Standard averages can be sluggish because they give the same weight to 2016 as they do to 2025. Exponential Smoothing (Holt-Winters) solves this by prioritizing recent data, effectively assuming that the most recent past is more relevant than distant history. This allows the model to adapt quickly to new trends, seeking a ”smooth” path forward that remains highly sensitive to the market’s current momentum.

2.6 Regime Switching

Markets are rarely monolithic, meaning they often shift between distinct ”regimes” of calm growth and high-stress turbulence. This Markov-based model identifies whether we are currently in a ”Bull” or ”Bear” state and projects forward based on the specific characteristics of that environment. It is the only model in our suite that acknowledges that market rules can change overnight, assuming that future returns are primarily dictated by the current discrete regime state.

2.7 Methodological Synthesis

While each of these six models operates on different mathematical assumptions, they collectively represent a spectrum of market philosophy. On one end, the Historical Average and Linear Trend models offer a ”long-view” perspective, prioritizing stability and decades of precedent. On the other, the Regime Switching and Exponential Smoothing models are ”short-view” reactive, prioritizing the immediate momentum of the 2024–2025 bull market. By combining these divergent views, we create a robust ”ensemble” outlook that accounts for both historical persistence and modern volatility.

3 Results

Figure 1 presents the dashboard comparing all six forecasts. Each subplot shows historical prices (blue) and the forecast through end-2026 (dashed), along with 95% confidence intervals where applicable. All methods connect smoothly to the last observed price (SPY \approx \$690 on 12/31/2025) and project forward one year.

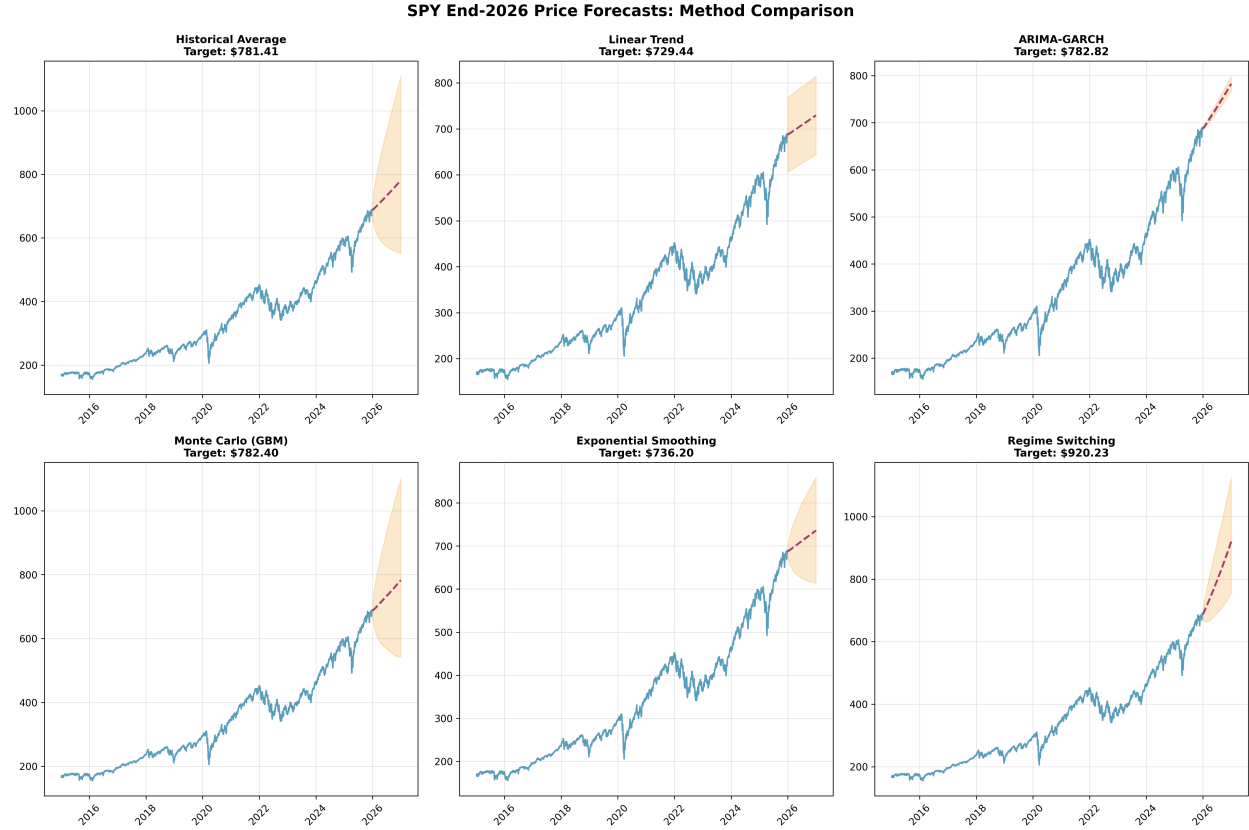


Figure 1: SPY End-2026 Forecasts: Six-Method Comparison. Each panel shows historical data (2015-2025) and forecasts through December 2026 with 95% confidence intervals.

Table 1 summarizes the end-2026 price targets and confidence intervals for each method:

Method	Target	95% CI Lower	95% CI Upper
Historical Average	\$781.41	\$550.72	\$1,108.73
Linear Trend	\$729.44	\$644.27	\$814.60
ARIMA-GARCH	\$782.82	\$766.94	\$799.02
Monte Carlo (GBM)	\$782.40	\$542.48	\$1,103.80
Exponential Smoothing	\$736.20	\$613.43	\$858.97
Regime Switching	\$920.23	\$752.83	\$1,124.86
Average	\$788.75	-	-

Table 1: Summary of SPY End-2026 Price Targets by Method

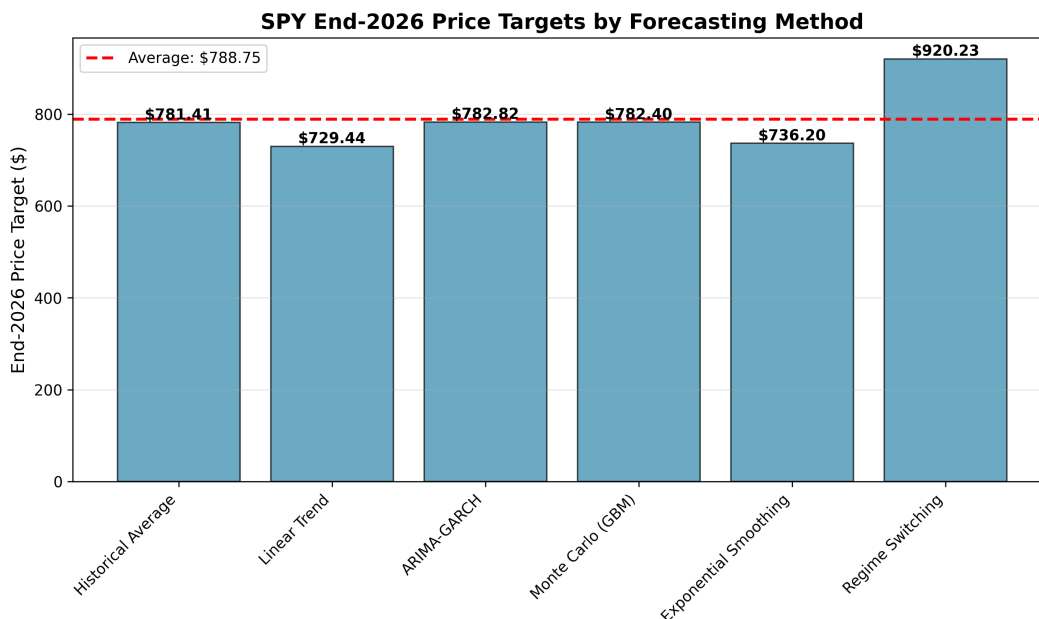


Figure 2: Bar chart comparison for end of 2026 targets. Red dashed line shows the average forecast (\$788.75).

4 Discussion

4.1 Forecast Convergence and Divergence

The results of this study reveal a tension between consensus and divergence. While five of our six methodologies form a "consensus huddle" near the \$780 mark, the Regime Switching model emerges as a significant outlier with a target of \$920. This gap tells a compelling story about how we interpret the recent past. The Regime model has effectively locked onto the aggressive "Bull" state of the last few years, betting that this momentum will stay at full throttle. In contrast, models like the Linear Trend act as the market skeptic; by smoothing out recent highs, they suggest a more grounded, long-term return to the mean.

4.2 Uncertainty Quantification

This variance in price targets is further complicated by how each method quantifies uncertainty. The width of our confidence intervals provides a necessary "reality check" for any forward-looking projection. For instance, the ARIMA-GARCH model offers a remarkably narrow band, suggesting that if current volatility patterns persist, the range of outcomes remains tight. On the other end of the spectrum, the Monte Carlo and Historical Average models serve as a lesson in humility. Their expansive intervals—stretching from the mid-\$500s to over \$1,100—acknowledge that the market is historically capable of massive structural swings that can easily dwarf any single-point prediction.

4.3 Practical Takeaways

From a strategic standpoint, an average target of \$788.75 suggests a healthy 14% upside from current levels. While this provides a reason for optimism, it is not a signal for complacency. The \$190 spread between our highest and lowest models represents a "volatility tax" on our certainty.

For a disciplined investor, these results should not be viewed as a rigid target to trade against, but rather as a map of the "plausible." They suggest a market that is fundamentally biased upward, yet remains highly sensitive to the varied interpretations of trend, noise, and regime shifts.

4.4 Limitations

Ultimately, we must acknowledge that these models are purely statistical animals. They are tuned to price action and volatility, but they remain blind to the "human" catalysts that often define a year such as Federal Reserve pivots, geopolitical shocks, or corporate earnings breakthroughs. These projections show us what should happen if the mathematical logic of the last decade holds true. However, as any seasoned observer of the S&P 500 knows, the market specializes in breaking its own rules just when they seem most established.

5 Conclusion

Forecasting is as much art as science. By comparing six distinct methodologies, this project illustrates how modeling choices such as trend assumptions, volatility dynamics, regime identification, ultimately shape predictions. The consensus around \$788 (14% upside) provides a directional view, but the wide dispersion of forecasts reminds us that uncertainty dominates in finance.

As 2026 unfolds, revisiting these forecasts will offer valuable lessons on which assumptions held and which failed—continuing the iterative process of learning from quantitative modeling.

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