

## Market-Based, Imputed NGDP Forecasts for Future Quarters

To estimate NGDP growth for future quarters, I use a method that combines analysts' earnings estimates with S&P 500 futures prices to calculate future expected S&P 500 concurrent quarter earnings yields. Here's how the process works:

1. **Adjust Earnings Projections:** I begin by adjusting the S&P 500 analyst earnings projections up by 10% to account for the typical underestimation bias observed in recent years.
2. **Calculate Expected Earnings Yield:** Using the adjusted earnings projections and S&P 500 futures prices, I calculate the expected S&P 500 concurrent quarter earnings yield. This approach ensures that I'm working with forward-looking data rather than relying on 12-month trailing earnings.
3. **Estimate NGDP Growth:** With the expected earnings yield in hand, I apply the following formula to estimate NGDP growth:

Expected NGDP Growth = Baseline Expected NGDP Growth + (Baseline Expected NGDP Growth - Expected S&P 500 Earnings Yield)

This formula adjusts the baseline NGDP growth estimate by accounting for the difference between the baseline and the expected S&P 500 earnings yield. The rationale is to capture the long-term equilibrium relationship between these variables.

Although these estimates are rough, this method provides valuable insights into expected economic growth, allowing for adjustments as market conditions and earnings forecasts evolve.