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**1. ✅ Overall Structure**

* **Time Horizon:** 7-year forward period (2025–2031) – appropriate for macro scenario planning.
* **Scenarios:** Three distinct tracks – Low Growth, Base Case (Consensus), and High Growth – clearly delineated with plausible divergence.
* **Granularity:** Annual resolution, which is standard for macroeconomic modeling.

**📘 Macroeconomic Forecast Rationale Summary (2025–2031)**

This document outlines the underlying rationale for our scenario-based forecasts of key U.S. macroeconomic indicators. The projections are built using historically grounded assumptions and consistent application of macroeconomic theory. Each scenario reflects a distinct economic trajectory and its corresponding implications for inflation, interest rates, and corporate bond yields.

**🔴 Scenario 1: Low Growth**

**Overview:**  
Characterized by recessionary pressures in the early years (2026–2027) and a sluggish recovery thereafter. Persistent slack in the economy keeps inflation and yields subdued. Reflects analogs such as the post-GFC period (2009–2012) or Japan's lost decade dynamics.

**🔹 Real GDP**

* Begins with a shallow expansion (1.2%) and contracts in 2026 (–1.0%).
* Recovery is weak through 2031, averaging ~0.74%.
* Drivers: demand-side stagnation, deleveraging, global uncertainty, and potential policy constraints.

**🔹 Inflation (CPI YoY)**

* Starts mildly elevated (2.3%) from lagged pandemic effects but trends down due to excess capacity.
* Falls to ~1.5% by 2028 and slowly climbs back to ~1.8% by 2031.
* Reflects demand deficiency, weak labor market, and deflationary pressure typical of low-growth eras.

**🔹 10-Year Treasury Yield**

* Falls from 3.5% to a low of 2.5% by 2028 before modestly rising.
* Driven by low inflation expectations and low real interest rates.
* Fed remains accommodative throughout, with muted term premium.

**🔹 5-Year Treasury Yield**

* Tracks below 10Y yields; declines to 2.3% in 2026, then flattens around 2.6–2.8%.
* Curve remains mildly upward-sloping due to recession recovery dynamics.

**🔹 5-Year BBB- Bond Yield**

* Credit spreads widen significantly due to elevated credit risk, weak earnings, and tighter liquidity.
* Spreads range from ~300 to 375 bps.
* Yields decline gradually but remain elevated relative to Treasuries.

**🟡 Scenario 2: Base Case (Consensus)**

**Overview:**  
A balanced expansion scenario with real GDP near long-term potential, inflation stabilizing near the Fed's 2% target, and moderately rising interest rates. Reflects the steady-state environment observed in 2017–2019 or 1996–1999.

**🔹 Real GDP**

* Grows at a stable 1.4% in early years, rising to 2.0% from 2027 onward.
* Reflects productivity normalization, demographic constraints, and a soft landing from post-COVID tightening.

**🔹 Inflation**

* Gradually returns to 2.0% by 2027 and remains anchored there.
* Reflects the Fed’s success in controlling inflation expectations.
* Wage pressures remain contained as labor force participation recovers.

**🔹 10-Year Treasury Yield**

* Gradual rise from 3.7% to 4.0% by 2031.
* Reflects stable inflation expectations and a real neutral rate of ~1.0%.
* Term premium increases modestly with stronger demand for capital.

**🔹 5-Year Treasury Yield**

* Closely follows 10Y but lower by ~30–50 bps.
* Rises from 3.2% to 3.6%, consistent with Fed policy normalization.

**🔹 5-Year BBB- Bond Yield**

* Spreads remain within the historical norm (~180–225 bps).
* Credit conditions are benign; corporate balance sheets remain solid.
* Yields hover between 5.3%–5.5% with low volatility.

**🟢 Scenario 3: High Growth**

**Overview:**  
Strong and sustained expansion driven by productivity gains, favorable demographics, or fiscal/technological tailwinds. Inflation initially overshoots but declines due to proactive policy. Reflects conditions seen in the late 1990s or post-COVID growth rebound.

**🔹 Real GDP**

* Growth accelerates from 2.0% in 2025 to a peak of 3.5% in 2028–2029.
* High consumer and business confidence, strong investment cycle.
* Productivity growth absorbs overheating risk in later years.

**🔹 Inflation**

* Climbs to 2.8% by 2027 due to demand-side pressure, then falls toward 2.0% by 2031.
* The Fed raises rates preemptively to avoid entrenching inflation.
* Inflation path reflects a temporary overshoot followed by disinflation.

**🔹 10-Year Treasury Yield**

* Peaks at 4.7% in 2027, then declines to 4.0% as inflation expectations fall.
* Yield curve remains positively sloped but flattens in later years.
* Reflects higher neutral rate (r\* ~1.25%) and larger term premium.

**🔹 5-Year Treasury Yield**

* Tracks closely with the 10Y yield; peaks at 4.3%, ends at 4.0%.
* Real yields remain elevated due to tight monetary policy.

**🔹 5-Year BBB- Bond Yield**

* Despite higher base rates, spreads compress to ~150–190 bps amid strong earnings and investor risk appetite.
* Yield peaks around 5.9%, then stabilizes around 5.7%.
* Credit risk is well contained due to robust economic conditions.

**📌 Concluding Summary**

| **Variable** | **Low Growth** | **Base Case (Consensus)** | **High Growth** |
| --- | --- | --- | --- |
| Real GDP | Weak, recessionary | Stable, near potential | Strong, above trend |
| Inflation | Disinflationary | Anchored at 2% | Overshoot, then re-anchor |
| 10Y Yield | Declines then stable | Rises gradually | Peaks then softens |
| 5Y Yield | Flat-to-modest rise | Gradual upward slope | High then tapering |
| BBB- Yield (5Y) | Elevated, credit stress | Stable, modest spreads | High base rates, tight spreads |

**2. 📉 Real GDP Forecasts**

**🔴 Low Growth Scenario**

|  |  |
| --- | --- |
| **Year** | **Growth Rate** |
| 2025 | 1.2% |
| 2026 | –1.0% |
| 2027 | 0.0% |
| 2028 | 1.0% |
| 2029 | 1.0% |
| 2030 | 1.5% |
| 2031 | 1.5% |

**Commentary:**

* Realistically reflects a mild recession (2026) followed by stagnation.
* Historical analogs: 2009 or 2020.
* Average ~0.74% CAGR over 7 years, consistent with subpar historical periods (e.g., 2008–2012).
* Appropriate for downside risk modeling and stress testing.

**📊 Base Case (Consensus)**

|  |  |
| --- | --- |
| Year | Growth Rate |
| 2025 | 1.4% |
| 2026 | 1.4% |
| 2027 | 2.0% |
| 2028 | 2.0% |
| 2029 | 2.0% |
| 2030 | 2.0% |
| 2031 | 2.0% |

**Commentary:**

* Tracks closely with FOMC long-run median (1.8% – 2.0%).
* Supported by CBO, IMF, and private forecaster consensus.
* Reflects soft landing dynamics, slight early drag from tight policy.
* Useful as a neutral benchmark.

**📈 High Growth Scenario**

|  |  |
| --- | --- |
| Year | Growth Rate |
| 2025 | 2.0% |
| 2026 | 2.5% |
| 2027 | 3.0% |
| 2028 | 3.5% |
| 2029 | 3.5% |
| 2030 | 2.8% |
| 2031 | 2.5% |

**Commentary:**

* Optimistic but plausible: driven by productivity, demographics, reshoring.
* Mirrors late 1990s or 2021 growth cycles.
* Average ~2.83% CAGR over 7 years.
* Useful for pricing in upside optionality.

**3. Inflation Expectations by Scenario (2025–2031)**

**🟥 Low Growth Scenario (Real GDP: 0.74% avg.)**

| **Year** | **GDP** | **Inflation** |
| --- | --- | --- |
| 2025 | 1.2% | **2.3%** ← inflation still elevated post-2024 |
| 2026 | –1.0% | **1.8%** ← recession drives disinflation |
| 2027 | 0.0% | **1.6%** ← slack persists |
| 2028 | 1.0% | **1.5%** ← low demand anchors inflation |
| 2029 | 1.0% | **1.5%** |
| 2030 | 1.5% | **1.7%** ← slight uptick with stabilization |
| 2031 | 1.5% | **1.8%** ← inflation converges to target |

**🎯 Rationale:**

* Weak growth and outright contraction (2026) generate **demand-side disinflation**.
* Persistent output gap limits wage pressure and pricing power.
* Reflects post-GFC dynamic: weak recovery, inflation <2% despite stimulus.
* Fed likely **maintains or reintroduces accommodative policy**.

**🟨 Base Case Scenario (Real GDP: 1.89% avg.)**

| **Year** | **GDP** | **Inflation** |
| --- | --- | --- |
| 2025 | 1.4% | **2.4%** ← residual inflation pressure from supply lag |
| 2026 | 1.4% | **2.1%** ← near target as Fed manages a soft landing |
| 2027 | 2.0% | **2.0%** ← well-aligned with target |
| 2028 | 2.0% | **2.0%** |
| 2029 | 2.0% | **2.0%** |
| 2030 | 2.0% | **2.0%** |
| 2031 | 2.0% | **2.0%** |

**🎯 Rationale:**

* Economy grows close to potential → **output gap closes steadily**.
* Inflation gradually returns to **2% Fed target**, with modest variation.
* Reflects late-2010s dynamic: stable inflation despite full employment.
* The Fed likely **normalizes policy** with minimal tightening bias.

**🟩 High Growth Scenario (Real GDP: 2.83% avg.)**

| **Year** | **GDP** | **Inflation** |
| --- | --- | --- |
| 2025 | 2.0% | **2.5%** ← robust demand, lagging supply readjustments |
| 2026 | 2.5% | **2.7%** ← rising wages, tight labor markets |
| 2027 | 3.0% | **2.8%** ← peak price pressures |
| 2028 | 3.5% | **2.5%** ← Fed tightening tempers overshoot |
| 2029 | 3.5% | **2.3%** ← demand remains firm, but disinflation sets in |
| 2030 | 2.8% | **2.1%** ← glide path back to 2% |
| 2031 | 2.5% | **2.0%** ← price growth stabilizes |

**🎯 Rationale:**

* Above-trend growth generates **wage inflation and pricing power**.
* Inflation rises above 2% target and sustains it for several years.
* Mirrors 1965–69 or early post-COVID dynamics: overheating risk.
* Fed is **reactively hawkish**, moderating inflation by 2029–2031.

**📘 Summary Chart**

| **Scenario** | **Inflation Trend** | **Avg. Inflation (2025–2031)** |
| --- | --- | --- |
| Low | Disinflation → recovery | **1.66%** |
| Base | Return to anchored 2% | **2.07%** |
| High | Overheating → soft landing | **2.41%** |

**🔍 Qualitative Summary**

* **Low Growth**: Echoes post-2008 world — demand-deficient, Fed constrained by the zero lower bound, inflation remains below target.
* **Base Case**: Balanced expansion. Inflation is well-anchored; monetary policy remains credible and moderately active.
* **High Growth**: Strong demand puts upward pressure on wages and core prices. Fed is forced into a reactive tightening cycle that cools inflation gradually.

**4. 10-Year Treasury Forecasts**

We anchor the 10-year Treasury yield using the **Fisher equation + term premium framework**:

Nominal Yield=(I)Expected Inflation+(r∗)Neutral Real Rate+(τ)Term Premium

Each component is adjusted based on your scenario assumptions:

1. **Expected Inflation** → Driven by your inflation forecasts (5–10 yr averages).
2. *Neutral Real Rate (r)*\* → Varies modestly by scenario (typically 0.5%–1.5%).
3. **Term Premium (τ)** → Changes based on macro uncertainty, debt issuance, risk appetite.

**🔮 10-Year Treasury Yield Forecasts (2025–2031)**

**🟥 Low Growth Scenario**

| **Year** | **GDP** | **CPI** | **10Y Yield** |
| --- | --- | --- | --- |
| 2025 | 1.2% | 2.3% | 3.5% |
| 2026 | –1.0% | 1.8% | 2.8% |
| 2027 | 0.0% | 1.6% | 2.6% |
| 2028 | 1.0% | 1.5% | 2.5% |
| 2029 | 1.0% | 1.5% | 2.6% |
| 2030 | 1.5% | 1.7% | 2.8% |
| 2031 | 1.5% | 1.8% | 2.9% |

**🧠 Rationale:**

* Inflation gradually falls and stays below 2%.
* Growth is weak → Fed maintains accommodative policy → \**r* ~0.5%\*\*.
* Term premium low due to demand for safe assets and muted volatility.
* Mirrors **2011–2015 post-GFC** era with depressed yields.

**🟨 Base Case (Consensus) Scenario**

| **Year** | **GDP** | **CPI** | **10Y Yield** |
| --- | --- | --- | --- |
| 2025 | 1.4% | 2.4% | 3.7% |
| 2026 | 1.4% | 2.1% | 3.5% |
| 2027 | 2.0% | 2.0% | 3.6% |
| 2028 | 2.0% | 2.0% | 3.7% |
| 2029 | 2.0% | 2.0% | 3.8% |
| 2030 | 2.0% | 2.0% | 3.9% |
| 2031 | 2.0% | 2.0% | 4.0% |

**🧠 Rationale:**

* Inflation remains anchored at 2%.
* Growth is steady and close to potential → \**r* ~1.0%\*\*.
* Term premium modestly positive (~0.5–0.75%) due to fiscal supply and moderate macro volatility.
* Mirrors **1996–1999 or 2017–2019**: stable yields with moderate tightening.

**🟩 High Growth Scenario**

| **Year** | **GDP** | **CPI** | **10Y Yield** |
| --- | --- | --- | --- |
| 2025 | 2.0% | 2.5% | 4.2% |
| 2026 | 2.5% | 2.7% | 4.5% |
| 2027 | 3.0% | 2.8% | 4.7% |
| 2028 | 3.5% | 2.5% | 4.6% |
| 2029 | 3.5% | 2.3% | 4.4% |
| 2030 | 2.8% | 2.1% | 4.2% |
| 2031 | 2.5% | 2.0% | 4.0% |

**🧠 Rationale:**

* Sustained strong growth raises *neutral real rate (r)*\* to ~1.25–1.5%.
* Inflation overshoots → higher inflation expectations embedded in long bond yields.
* Term premium builds due to higher volatility, Fed tightening cycles, and heavier Treasury issuance.
* Reflects environment similar to **late 1960s or early 2022** with tightening into overheating.

**5. 5-Year Treasury and 5-Year BBB- Bond Yield Forecasts**

5Y BBB- Yield=5Y Treasury Yield+BBB- Spread

**Key Variables:**

| **Component** | **Influences** |
| --- | --- |
| 5Y Treasury Yield | Forward inflation, real neutral rate, Fed stance |
| BBB- Credit Spread | Growth, inflation volatility, default/downgrade probability, investor risk appetite |

Historical 5Y BBB- spreads typically range:

* **Tight** (~130–170 bps): Strong growth, low volatility (e.g. 1996–1999, 2017–2019)
* **Moderate** (~180–250 bps): Trend growth, modest inflation risk (baseline norm)
* **Wide** (~300–500+ bps): Recession risk, volatility, liquidity crunches (e.g. 2009, 2020)

**📊 Forecasts by Scenario (2025–2031)**

**🟥 Low Growth Scenario**

**Macro Summary:**

* GDP avg ~0.7%
* Inflation falls to ~1.5%
* 5Y Treasury yield: ~2.3% → 2.8%
* BBB- spread: **300–375 bps**

| **Year** | **5Y Tsy** | **Spread** | **BBB- Yield** | **Explanation** |
| --- | --- | --- | --- | --- |
| 2025 | 2.8% | 300 bps | **5.8%** | Elevated risk but Fed still dovish |
| 2026 | 2.3% | 375 bps | **5.1%** | Recession → flight to quality, credit stress |
| 2027 | 2.4% | 350 bps | **5.0%** | Recovery weak, spreads remain wide |
| 2028 | 2.5% | 325 bps | **4.8%** | Mild rebound, some spread compression |
| 2029 | 2.6% | 300 bps | **4.6%** | Still elevated due to low growth trend |
| 2030 | 2.7% | 280 bps | **4.5%** | Modest normalization |
| 2031 | 2.8% | 275 bps | **4.6%** | Slight improvement, but not full recovery |

**🔎 Rationale:**

* Investors demand **high compensation** for deteriorating credit fundamentals, downgrade risk, and uncertainty.
* Fed likely remains accommodative, but **growth fragility prevents spread normalization**.

**🟨 Base Case (Consensus) Scenario**

**Macro Summary:**

* GDP avg ~1.9%
* Inflation ~2%
* 5Y Treasury yield: ~3.2% → 3.6%
* BBB- spread: **180–225 bps**

| **Year** | **5Y Tsy** | **Spread** | **BBB- Yield** | **Explanation** |
| --- | --- | --- | --- | --- |
| 2025 | 3.2% | 225 bps | **5.5%** | Modestly wide due to policy uncertainty |
| 2026 | 3.3% | 200 bps | **5.3%** | Steady economy, mild spread compression |
| 2027 | 3.4% | 190 bps | **5.3%** | Neutral rates, Fed credibility anchors spreads |
| 2028 | 3.5% | 185 bps | **5.4%** | Stable backdrop |
| 2029 | 3.6% | 180 bps | **5.4%** | Mild curve steepening |
| 2030 | 3.6% | 180 bps | **5.4%** |  |
| 2031 | 3.6% | 180 bps | **5.4%** |  |

**🔎 Rationale:**

* Solid macro balance = **modest, range-bound credit spreads**.
* Inflation controlled, no major stress in corporate funding markets.
* This resembles **2017–2019 conditions** with benign inflation and healthy risk appetite.

**🟩 High Growth Scenario**

**Macro Summary:**

* GDP avg ~2.8%
* Inflation peaks ~2.8% then declines
* 5Y Treasury yield: ~4.0% → 4.3%
* BBB- spread: **150–190 bps**, tightest of all scenarios

| **Year** | **5Y Tsy** | **Spread** | **BBB- Yield** | **Explanation** |
| --- | --- | --- | --- | --- |
| 2025 | 4.0% | 190 bps | **5.9%** | Credit outlook good, but inflation risk priced in |
| 2026 | 4.1% | 180 bps | **5.9%** | Yield curve normalizes, spreads narrow |
| 2027 | 4.2% | 160 bps | **5.8%** | Investors confident in growth, Fed tightening priced |
| 2028 | 4.3% | 150 bps | **5.8%** | Strong demand for credit risk, high nominal growth |
| 2029 | 4.2% | 155 bps | **5.75%** | Inflation slowing helps credit further |
| 2030 | 4.1% | 160 bps | **5.7%** |  |
| 2031 | 4.0% | 170 bps | **5.7%** |  |

**🔎 Rationale:**

* Strong real growth → credit metrics improve, defaults low.
* Tight spreads **despite higher yields**—reflects risk-on sentiment.
* Mirrors **late 1990s** or **2021** before inflation surged—credit exuberance, tight liquidity premium.

**📈 Summary Table: 5Y BBB- Bond Yields**

| **Year** | **🟥 Low Growth** | **🟨 Base Case** | **🟩 High Growth** |
| --- | --- | --- | --- |
| 2025 | **5.8%** | **5.5%** | **5.9%** |
| 2026 | **5.1%** | **5.3%** | **5.9%** |
| 2027 | **5.0%** | **5.3%** | **5.8%** |
| 2028 | **4.8%** | **5.4%** | **5.8%** |
| 2029 | **4.6%** | **5.4%** | **5.75%** |
| 2030 | **4.5%** | **5.4%** | **5.7%** |
| 2031 | **4.6%** | **5.4%** | **5.7%** |

**✅ Conclusion**

| **Scenario** | **Spread Behavior** | **BBB- Yield Characteristics** |
| --- | --- | --- |
| **Low Growth** | High + sticky due to credit risk | Yields fall only moderately — spread dominates |
| **Base Case** | Stable, modest spreads | Yields range-bound, reflect balance |
| **High Growth** | Compressed spreads | Yields high due to Fed policy, but risk appetite keeps spreads tight |

**6. 📊 Summary Chart & Qualitative Assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Low Growth | Base Case | High Growth |
| Real GDP (avg) | ~0.74% | ~1.89% | ~2.83% |
| Inflation (avg) | ~1.66% | ~2.07% | ~2.41% |
| 10Y Treasury | 3.5% → 2.5% → 2.9% | 3.7% → 4.0% | 4.2% → 4.7% → 4.0% |
| 5Y Treasury | 2.8% → 2.3% → 2.8% | 3.2% → 3.6% | 4.0% → 4.3% → 4.0% |
| 5Y BBB- Yield | 5.8% → 5.0% → 4.6% | 5.5% → 5.4% | 5.9% → 5.7% |

**Qualitative Takeaways:**

* **Low Growth:** Disinflation, credit stress, accommodative Fed.
* **Base Case:** Balanced macro, stable rates, healthy credit environment.
* **High Growth:** Inflation risks front-loaded, but resolved; yields elevated yet stable.