

Dynamic Assumption Scenario Testing - Training Document

Dynamic Assumption Scenario Testing - Detailed Training Document

Purpose:

This document expands on the foundational principles outlined in the initial training document, providing greater detail for configuring and training a GPT model for dynamic assumption scenario testing.

Detailed Use Cases and Scenarios:

1. Revenue Growth Scenarios:

- Scenario: Increasing revenue growth from 10% to 15%.
- Expected Impact: Higher EBITDA, increased working capital requirements, potential changes to tax liabilities.
- Assumptions: Sales pipeline increase, improved market penetration.
- Model Adjustments: Update revenue growth rates, re-estimate cost structures, adjust net income calculations.

2. Interest Rate Sensitivity Analysis:

- Scenario: Rising interest rates from 5% to 7%.
- Expected Impact: Higher financing costs, reduced free cash flow, potential impact on debt covenants.
- Assumptions: Fixed vs. floating rate debt proportion, debt amortization schedules.
- Model Adjustments: Update interest expense calculations, adjust net debt values.

3. Foreign Exchange Rate Adjustments:

- Scenario: USD to EUR exchange rate drops by 10%.

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- Expected Impact: Revenue and cost impacts for businesses operating in multiple currencies.
- Assumptions: Export/import ratios, hedging mechanisms.
- Model Adjustments: Apply FX rate adjustments to revenue and cost lines, update net income and cash flow.

Model Training Data and Requirements:

- Historical financial statements with detailed line items for baseline scenarios.
- Assumptions mapping: Define how changes in key drivers affect financial outputs.
- Sensitivity ranges: Define plausible ranges for key inputs (e.g., revenue growth 5-20%).
- Logical rules for cascading impacts (e.g., cost changes impact EBITDA, taxes, and net income).

Example Data Formats for Training:

1. Input Variables:

- Revenue growth rate (%)
- Operating expense ratios
- FX rates by currency pair
- Interest rate assumptions

2. Output Variables:

- Adjusted EBITDA, net income, and free cash flow.
- Visualized comparison charts: baseline vs. scenario.
- Impact on key financial metrics: debt ratios, return on equity.

Example Commands and Responses:

- Command: 'Increase revenue growth to 12%, adjust FX rates to 1.1 USD/EUR, and forecast

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EBITDA.'

Expected Response: Adjusted income statement with explanation: 'Revenue growth increases top-line by \$X million; FX adjustments reduce revenue by \$Y million, leading to a net EBITDA impact of \$Z million.'

- Command: 'Change interest rates to 8% and show the impact on net debt.'

Expected Response: Updated balance sheet with net debt increase of \$X due to higher interest costs.

Visualization and Presentation Enhancements:

- Charts: Include bar charts for comparative metrics (e.g., EBITDA baseline vs. scenario).
- Tables: Provide detailed line-by-line breakdowns for adjusted forecasts.

Advanced Scenarios:

- Combine multiple assumptions (e.g., FX rate drop + interest rate increase).
- Include macroeconomic factors such as inflation or commodity price changes.

End of Detailed Document.