

# Bloomberg Spreadsheet Analysis - Module 2

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## BQL for Macro

### Introduction to BQL for Macro

Welcome to Module 2: BQL for Macro. In this module, you'll follow Summit Capital's macro research team as they determine which countries to invest in. Their objective is to identify regions with strong future growth prospects while maintaining stable inflation and unemployment rates. To achieve this, the team will use Bloomberg Query Language (BQL) to analyze historical economic trends, review economist forecasts, and evaluate key policy expectations. By the end of the module, you will learn how to use BQL to filter countries based on macroeconomic criteria, retrieve and analyze historical and forecasted economic data, and create queries related to policy rate trends and economic event calendars.

### Setting the Criteria

To align with the university endowment's investment mandate, Mia begins by narrowing down the list of investable countries. She prioritizes nations with high GDP growth potential, low and stable inflation and unemployment rates, and liquid financial markets that facilitate efficient trading. Using BQL in Excel, Mia constructs a query to identify developed market countries with GDP growth greater than 2%. She retrieves the latest GDP data along with forecasts for 2025 and 2026 to support her analysis and guide investment decisions.

In this guided practice, we take a closer look at Mia's BQL query by building it step by step. We begin with the **filter** function, a core BQL component used to refine a dataset by applying specific conditions to a defined universe. It ensures that only entities meeting those criteria are returned. Next, we add the **countries** function, which defines the universe of entities Mia is analyzing. By including the argument **developed markets**, the universe is limited to countries classified as developed markets. Then we apply the condition **GDP > 2**, which restricts the results to only those developed countries with a gross domestic product greater than 2%, filtering for nations with relatively strong economic output. Following this, we request the **GDP** value itself, which retrieves the current GDP for each country in the filtered universe. We then specify forecasted data using parameters: first, **GDP.period=2025** to retrieve the GDP projection for 2025, and then **GDP.period=2026** to get the projection for 2026. After building Mia's query step by step, users are encouraged to reconstruct the full query independently as additional BQL practice. This hands-on approach reinforces query-building skills and helps users grow more proficient with the BQL language.

Now that you've completed hands-on practice constructing Mia's query step by step, it's time to apply your skills independently. In this activity, you'll practice modifying Mia's query to reinforce your understanding. Click the Play button below to begin and continue developing your proficiency with BQL.

To filter for countries with GDP greater than 3% instead of 2%, you would modify the condition within the query syntax where the GDP threshold is specified. The correct part of the syntax to adjust is the condition **GDP > 2**. Updating this to **GDP > 3** will apply the new filter criteria. Correct—this is the appropriate section to modify. Click "Continue" to proceed with the course.

Mia's analysis identifies Ireland, Chile, and the United States as promising investment candidates based on their strong GDP growth potential and consistent economic performance. However, GDP alone does not provide a complete picture. To fully meet the university endowment's investment criteria, Mia must also evaluate these countries for stable inflation and unemployment rates, ensuring a thorough assessment of overall macroeconomic health. In the next section, she will construct a new BQL query in Excel that focuses on inflation and unemployment trends, helping her move closer to finalizing her investment recommendations.

## Assessing Inflation and Unemployment

To deepen her analysis and refine the list of investable countries, Mia incorporates additional macroeconomic factors—specifically inflation and unemployment. These indicators not only reflect economic stability but also influence central bank policy decisions, which are crucial for both growth equity and fixed income strategies. Using BQL, Mia builds a new query to filter for countries with inflation rates below 3% and unemployment rates above 4%. These criteria help identify regions where central banks may be more inclined to lower policy rates in the future, thereby creating favorable conditions for economic growth.

To strengthen your BQL query construction skills, you are given two options: either build Mia's query independently or follow a step-by-step guided practice. To begin, define the universe of selected countries—United States, Canada, United Kingdom, and Australia—by dragging the country list next to **equals BQL**. Mia's objective is to retrieve a calendar of key economic events, including major indicators such as GDP and CPI releases, as well as central bank events like interest rate decisions and policy updates. To construct the query, drag **calendar** next to the defined universe, then add **economic releases** next to **calendar**, and finally drag **central banks** next to **economic releases**. You have successfully completed the exercise. Click to repeat the practice or click "Continue" to proceed with the course.

Now that you've completed the practice exercise, it's time to apply what you've learned in real time. Ensure you are logged into Bloomberg and have Excel open, as both are required to complete this exercise. Your task is to modify Mia's BQL query and observe how changes to the conditions impact the results. Hands-on practice is essential for mastering BQL, so take your time analyzing the output. Once you feel confident, proceed to the next section.

## Evaluating Recent Economic Trends

Mia narrows her analysis to four key countries—United States, Canada, United Kingdom, and Australia—in order to evaluate their recent economic trends and identify potential risks. She uses BQL to analyze five years of monthly data for GDP, inflation (CPI), and unemployment across these countries.

In this exercise, step one involves dragging each query component into its correct clause. In step two, you must place the appropriate BQL components into cell B7 in the correct order to construct the query. Once completed, the results will display below. You have successfully completed the exercise. Click to retry the practice if desired, or click "Continue" to proceed with the course.

Mia has constructed her BQL query, but some values in the resulting dataset appear as NA, indicating that the data is either unavailable or has not yet been published. Although these NA values are not considered errors, Mia aims to refine her dataset by focusing exclusively on available data. To achieve this, she completes a practice activity to learn how to remove NA values, ensuring a cleaner and more reliable dataset for analysis.

In this exercise, step one involves identifying missing data by clicking "Show Data" to view Mia's initial BQL query results. In step two, Mia applies the **dropNA** function to remove rows with missing GDP values. After clicking "Apply dropNA," the query updates to display only rows with valid GDP data. As she scrolls further, Mia observes that some CPI values are still missing. It is now your turn to modify the BQL query by inserting **dropNA** in the appropriate location to remove rows with missing CPI values. Once completed, Mia confirms that all missing values have been removed. Having successfully cleaned the dataset, click "Continue" to proceed to the next section.

## Understanding Economic Event Calendars

To refine her analysis further, Mia shifts her focus to the current health of the economies she is evaluating. By reviewing upcoming economic and central bank events, she gains insights into factors that could influence policy decisions and near-term market movements. Using BQL, Mia constructs a query that retrieves a calendar of economic and central bank-related events for the selected countries over the next week.

To reinforce BQL query skills, begin by specifying the selected countries for analysis—United States, Canada, United Kingdom, and Australia—by dragging the country list next to `equals BQL`. Mia needs to retrieve a calendar of key economic events, including economic releases such as GDP and CPI reports, as well as central bank events like interest rate decisions and policy updates. To build this query, drag **Calendar** next to the universe, then add **economic releases** next to **Calendar**, and finally drag **central banks** next to **economic releases**. You have successfully completed the exercise. Click to repeat the practice or click “Continue” to proceed with the course.

The results of Mia’s query return a schedule of significant economic events across the selected countries, detailing each event’s date, name, and both forecasted and actual values. This calendar highlights several key economic indicators that offer insights into each country’s economic performance and potential market movements.

As demonstrated throughout this module, BQL is a powerful tool for macroeconomic analysis, enabling users to filter and retrieve critical financial events that influence global markets. Economic indicators such as central bank decisions, inflation reports, and employment data play a key role in shaping market trends and informing investment strategies. Mastering BQL queries allows users to extract the most relevant insights efficiently. As Mia advances her analysis, she customizes her queries to focus on the event types most aligned with her investment thesis, helping her filter out noise and prioritize meaningful data. Now it’s your turn—in the next exercise, you’ll modify the event query to return only economic releases. Let’s get started.

## Assessing Economic Surprises

As Mia concludes her analysis of current economic events, she poses a key question: which aspects of these economies are deviating from economists’ expectations, either positively or negatively? This perspective enables Mia to pinpoint unexpected strengths or weaknesses that may shape future policy decisions and influence market behavior. To investigate these surprises, Mia constructs a query that identifies events surpassing median economist estimates by more than two standard deviations within the past month.

To analyze recent economic surprises, Mia constructs a BQL query that retrieves high-relevance economic events from the past month. She begins by defining the universe of countries—United States, Canada, United Kingdom, and Australia—ensuring her analysis remains focused on key developed markets. She then refines the dataset using data filtering preferences, applying the `dropNA` function to exclude missing values for completeness. Next, Mia incorporates the `matches` function to filter for events meeting specific conditions and applies the `calendar` function to define a date range of one month up to today (`calendar.date = range(-1M, 0D)`). To capture only market-moving events, she includes the condition `relevancy = high`, and to target economic surprises, she adds `surprise > 2`. For consistency, she also ensures that the date filter used for surprises matches the overall calendar range. Finally, Mia enhances the output by adding an extra column showing the surprise values using `add columns = surprise`, allowing easy comparison between actual results and market expectations. You’ve now successfully completed the exercise. Click “Continue” to proceed or try building the query again for additional practice.

Mia’s analysis highlights key economic events where actual data exceeded expectations, indicating stronger-than-expected growth in major economies. For example, personal consumption in Q4 rose 4.2% versus the forecasted 3.2%, suggesting increased consumer spending. Employment surged to 76K, significantly above the 25K forecast, and GDP turned positive at 0.1% instead of the anticipated contraction. With these insights, Mia refines her query to examine downside surprises, aiming to identify weaker areas that could

influence future policy decisions and investment strategies.

In the United States, Mia observes weaker-than-expected consumer demand, with wholesale inventories falling from 0.2% to -0.5% and retail sales declining, as advance sales dropped from 0.4% to -0.9%. In the United Kingdom, she notes a slowdown in the services sector, highlighted by a drop in the S&P Global Services PMI from 51.1 to 50.8, along with a decline in construction activity. In Canada, signs of labor market strain appear, with the unemployment rate rising to 6.8%—above the 6.7% forecast—suggesting a cooling job market. Mia concludes that these downside surprises point to weaker consumer demand, slower growth in services and manufacturing, and a softening labor market. These trends may influence upcoming monetary policy decisions and investment strategies.

## **Constructing a Comprehensive Macro Query from Scratch**

Now that you’ve followed Mia at Summit Capital and learned how to retrieve macroeconomic data using BQL, it’s time to apply your skills. Imagine you’re an analyst at Summit Capital, tasked with constructing two BQL queries: one to analyze inflation trends and another to evaluate policy rate forecasts. As you build your queries, you’ll receive immediate feedback to help refine your approach. Think critically about the data you need and carefully structure your queries. Ready? Let’s get started!

**Task One:** Retrieve current inflation data for the United States. Construct a BQL query that defines the United States as the target universe and specifies inflation as the data to be retrieved. This query should allow you to analyze recent price trends by pulling the latest inflation figures.

## **Conclusion**

Armed with a comprehensive understanding of macroeconomic trends, economic events, and both upside and downside surprises, Mia prepares to present her findings to the team at Summit Capital. She compiles her insights into a summary report, outlining key strengths, risks, and opportunities. The U.S. shows signs of strong recovery amid easing inflation, while Canada and Australia exhibit steady growth. However, volatility in the U.K. raises concerns, and sectors such as U.S. manufacturing and Canadian construction are identified as potential opportunities. Mia joins Ritika, the Portfolio Manager, and Raj, the Trader, for a strategy meeting. At Summit Capital, collaboration is crucial for making informed investment decisions. Ritika refines the firm’s investment approach based on Mia’s macroeconomic analysis, while Raj prepares to execute trades in line with the team’s goals. The team aligns on incorporating Mia’s insights into the equities strategy, shifting focus toward undervalued sectors and companies with strong free cash flow. In the next module, the team will analyze equity data to uncover investment opportunities.