

How do I find the first business day of month in Excel?

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Navigating financial reporting, payroll calculations, or project deadlines often requires identifying the exact start of the working cycle--the **first business day of the month**. While this seems straightforward, manually checking calendars and accounting for weekends and national holidays across large datasets in a spreadsheet program like Microsoft Excel can be time-consuming and error-prone. Organizations depend on precise scheduling, making a reliable, automated method essential for maintaining operational efficiency and compliance. This comprehensive guide, authored by expert content writers and editors, will demonstrate how to construct a robust, dynamic formula that automatically calculates the first business day for any given month, ensuring your data analysis is accurate and efficient.

The challenge lies in the fact that the first day of the calendar month (the 1st) often falls on a Saturday or Sunday, necessitating a shift to the next Monday or, potentially, a later date if a holiday intervenes. We will leverage a powerful combination of two specialized date and time functions provided within the Excel environment: **EOMONTH** and **WORKDAY**. By chaining these functions together, we create a single, elegant solution that reliably determines the required date, regardless of the year or the specific day on which the month begins. This dynamic approach saves significant time and effort, replacing tedious manual checks with instant, automated results.

Understanding the logic behind this formula is crucial for anyone working extensively with date-based calculations. We aim to establish a framework that first identifies a reliable anchor point--the last day of the preceding month--and then uses this point to project forward to the very next working day. This methodical application of **Excel functions** transforms complex scheduling rules into a simple, reusable formula. Before diving into the practical steps, let us first dissect the components of the core formula that makes this calculation possible.

Understanding the Core Excel Formula

To find the **first business day of the current month** based on a date reference in cell A2, we utilize a nested function structure. This structure combines two distinct, highly specialized date functions to achieve the desired result. The formula is designed to be fully dynamic, requiring only a single date entry (A2 in this context) to perform the necessary calculation for the beginning of that month. This approach is highly recommended over fixed date references because it adapts automatically when the source date is updated or dragged down across multiple rows of data.

The fundamental formula used in this process, which we will analyze in detail, is as follows. It is designed to first determine the end of the previous month and then immediately jump forward one working day into the new month:

=WORKDAY(EOMONTH(A2,-1), 1)

This formula, when implemented correctly, will return the exact date corresponding to the first business day of the month to which the date in cell **A2** belongs. It represents a powerful example of how nested functions can solve complex date logic problems within the spreadsheet environment. We will now break down the role of each component, starting with the inner function, **EOMONTH**, which sets the crucial starting point for our calculation.

It is important to emphasize the significance of the arguments used within this formula. The input date (A2) serves as the anchor, while the specific numerical arguments (-1 and 1) dictate the direction and magnitude of the date calculations. This careful selection of parameters ensures that the calculation is always performed relative to the beginning of the desired month, providing a high degree of precision necessary for rigorous data analysis and reporting.

Deconstructing the **EOMONTH** Function: Finding the Preceding Month End

The initial and internal component of our solution is the EOMONTH function. This function, which stands for "End of Month," is specifically designed to return the serial number for the last day of a month that is a specified number of months before or after a given start date. In the context of our formula, it plays the critical role of establishing a consistent reference point right before the desired start month begins. Its syntax is typically `EOMONTH(start_date, months)`.

In our particular formula, `EOMONTH(A2, -1)`, the **start_date** is the reference date found in cell **A2**. The key argument here is `-1` for the **months** parameter. Specifying `-1` instructs Excel to look back exactly one month from the month of the date in A2 and return the very last day of that preceding month. For instance, if A2 contains 1/15/2024, **EOMONTH(A2,-1)** will return 12/31/2023. This date--the last day of the previous month--is crucial because it provides a reliable, non-working day boundary just before the month we are analyzing begins. By utilizing the end of the previous month as our starting point, we ensure that the next function in the chain always projects forward into the first available dates of the target month.

The output of the EOMONTH function is always a serial date value, which is then seamlessly passed as the starting date argument to the outer function, **WORKDAY**. This functional nesting demonstrates the power of modular calculation, where the result of one function serves as the input for the next, building a complex calculation from simple, reliable steps. This intermediate result, though not visible directly to the user initially, is the foundation upon which the final determination of the first business day rests.

The **WORKDAY** Function Explained: Calculating the Next Business Day

The second and outer component of the formula is the WORKDAY function. This function is designed specifically for calculating future or past dates by excluding weekends (Saturday and Sunday) and, optionally, any specified holidays. The primary goal of WORKDAY is to determine a

date a certain number of working days away from a start date. Its syntax is typically `WORKDAY(start_date, days,)`.

In our final formula, `WORKDAY(EOMONTH(A2,-1), 1)`, the **start_date** is the result provided by the **EOMONTH** calculation--the last day of the previous month. The second argument, **days**, is set to **1**. This instructs the **WORKDAY** function to look forward exactly one **business day** from the last day of the preceding month. Because the EOMONTH result (e.g., December 31st) is not typically a business day (it often falls on a weekend or holiday), the WORKDAY function immediately searches for the next available working day in the new month. If January 1st is a Monday, and thus a business day, it returns January 1st. If January 1st is a Saturday, it skips Saturday and Sunday, returning January 3rd (Monday) as the first available business day. This systematic skipping of non-working days is the mechanism that fulfills our core objective.

For advanced scenarios, the Excel **WORKDAY** function also allows for an optional third argument, `intervals`, which references a range of dates to be excluded from the calculation. While the basic formula shown above assumes a standard 5-day work week (Monday to Friday), if your business requires accounting for specific public holidays, you would simply define a list of these dates in a separate range and include that range as the third argument. This ensures maximum accuracy, accommodating regional variations in non-working days and making the formula robust for complex global operations.

Step-by-Step Implementation: Preparing the Data

To effectively utilize this powerful date calculation, we must first organize our data within the spreadsheet. This initial preparation involves setting up a clear and identifiable dataset that contains the dates for which we wish to determine the corresponding first business day. Establishing a well-organized dataset is the foundation of any reliable spreadsheet analysis, ensuring that the formulas can reference the necessary inputs consistently. We will start by entering a sample list of dates into column A of your worksheet, which will serve as our primary reference points for the calculation.

As illustrated below, we begin by entering the dates into column A, labeling column A as "Reference Date" and setting aside column C for our calculated results, labeling it "First Business Day." This structure makes the input and output clearly distinguishable and facilitates easy review and verification of the formula's results.

=WORKDAY(EOMONTH(A2,-1), 1)

The following example dataset shows the required setup. Notice that the dates in column A are diverse, spanning multiple months and years, which demonstrates the formula's adaptability across

different time periods. Ensuring the data in Column A is correctly formatted as a date is critical; otherwise, Excel will treat the input as text or a generic number, leading to an inevitable `#VALUE!` error when the date functions attempt to process the information. Always confirm the formatting of your source data before proceeding to the calculation phase.

	A	B	C	D	E
1	Date	Sales			
2	1/4/2022	23			
3	2/15/2022	40			
4	3/23/2022	34			
5	4/15/2022	39			
6	4/18/2022	25			
7	5/1/2022	19			
8	8/7/2022	14			
9	10/31/2022	14			
10	11/4/2022	20			
11	12/19/2022	22			
12					
13					
14					
15					
16					
17					
18					

Once the dataset is entered and correctly formatted, we are prepared to move on to the actual calculation phase. This meticulous data preparation minimizes potential errors down the line, allowing the subsequent formula application to proceed smoothly and efficiently, generating reliable results for every date listed in your reference column.

Applying the Dynamic Formula

With our reference data in place in column A, the next step is to input the combined **EOMONTH** and **WORKDAY** formula into the target output cell. For the first calculation, we will focus on cell **C2**, which corresponds to the reference date in **A2**. This single entry will serve as the template for calculating the first business day for all subsequent rows in the dataset.

Type the following complete formula directly into cell **C2**:

=WORKDAY(EOMONTH(A2,-1), 1)

After entering the formula and pressing Enter, Excel will execute the calculation. Initially, the output in cell C2 might appear as a numeric value, such as 44563, rather than a conventional date format. This is perfectly normal; Excel stores all dates as serial dates (the number of days elapsed since January 1, 1900). We will address this display issue in the next step. However, the numeric value confirms that the formula executed successfully and calculated the correct underlying date.

To quickly apply this calculation to every date in your dataset, utilize Excel's fill handle--the small square at the bottom-right corner of cell C2. Click and drag this handle downwards to populate the formula across the entire range of cells corresponding to your reference dates in column A (e.g., from C2 down to C11). This action automatically adjusts the cell reference (A2 becomes A3, A4, and so on) for each row, ensuring that the calculation is performed accurately for every date in your list, producing a comprehensive list of the first business day for each respective month.

	A	B	C	D	E
1	Date	Sales	First Business Day of Month		
2	1/4/2022	23	44564		
3	2/15/2022	40	44593		
4	3/23/2022	34	44621		
5	4/15/2022	39	44652		
6	4/18/2022	25	44652		
7	5/1/2022	19	44683		
8	8/7/2022	14	44774		
9	10/31/2022	14	44837		
10	11/4/2022	20	44866		
11	12/19/2022	22	44896		
12					
13					
14					
15					
16					
17					

Handling Output: Converting Serial Dates to Standard Format

As noted previously, the raw output of date-specific functions in Excel is often displayed as a large integer, known as a serial date value. This numeric representation is technically correct--it represents the number of days elapsed since January 1, 1900--but it is impractical for human reading and reporting. Therefore, the final critical step in our process involves converting these

numeric values back into a recognizable date format, allowing for immediate verification and usability of the results.

To initiate the conversion, first highlight the entire range of cells in column C that contain the calculated serial dates (e.g., **C2:C11**). Once the range is selected, navigate to the **Home** tab on the Excel ribbon. Within the **Number** group, locate the dropdown menu that currently displays "General" or "Number." Click this dropdown menu to access various formatting options.

From the list of available formats, select **Short Date** (or **Long Date**, depending on your reporting requirements). The **Short Date** format is generally preferred for succinctness, typically displaying the date in the format MM/DD/YYYY or DD/MM/YYYY, based on your local system settings. Applying this format instantly transforms the numeric output into clearly legible dates, completing the practical implementation of the formula.

The screenshot displays the Microsoft Excel interface. The Home tab is active, showing the Font and Alignment groups. The Number group dropdown menu is open, showing various formatting options. The formula bar shows the formula `=WORKDAY(EOMONTH(A2,-1), 1)`. The spreadsheet shows column C with the header "First Business Day of Month" and values 44564, 44593, 44621, 44652, 44652, 44683, 44774, 44837, 44866, 44896. The Number format dropdown menu is open, showing options like General, Number, Currency, Accounting, Short Date (selected), Long Date, Time, Percentage, Fraction, and Scientific.

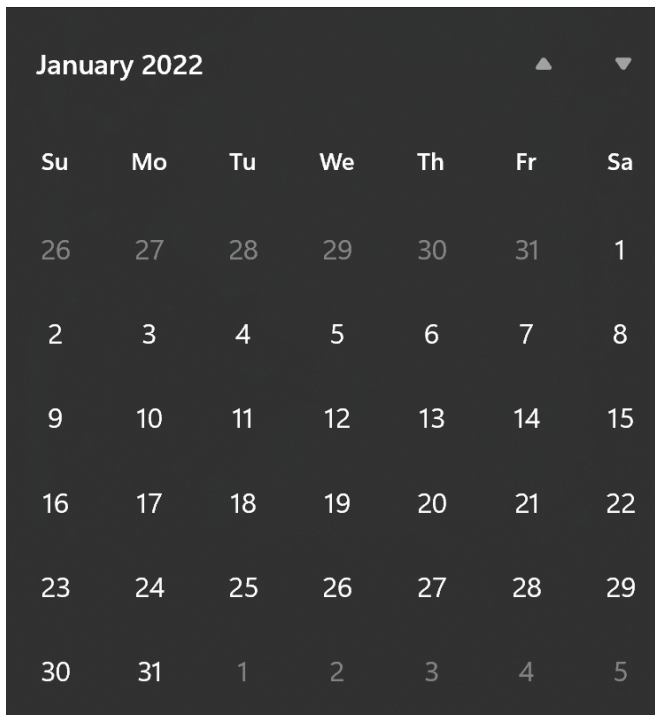
This formatting step ensures that the final output is not only accurate but also user-friendly, ready for immediate use in financial reports, scheduling documents, or further calculations. The resulting column C now shows the precise first business day corresponding to the month of the reference date in column A, providing a clean and definitive dataset for analysis.

	A	B	C	D	E
1	Date	Sales	First Business Day of Month		
2	1/4/2022	23	1/3/2022		
3	2/15/2022	40	2/1/2022		
4	3/23/2022	34	3/1/2022		
5	4/15/2022	39	4/1/2022		
6	4/18/2022	25	4/1/2022		
7	5/1/2022	19	5/2/2022		
8	8/7/2022	14	8/1/2022		
9	10/31/2022	14	10/3/2022		
10	11/4/2022	20	11/1/2022		
11	12/19/2022	22	12/1/2022		
12					
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Verification and Practical Applications

The completion of the conversion reveals the final, usable results in Column C. This column now accurately displays the first business day of the respective month for every date listed in Column A. To ensure the reliability of our complex nested formula, it is always beneficial to verify a few sample results against a calendar. This process confirms that the combined use of **EOMONTH** and **WORKDAY** has correctly handled weekends and implicitly excluded non-working days.

Consider the first example from our data where the reference date is 1/4/2022. The formula in C2 returns 1/3/2022. By consulting a calendar for January 2022, we observe that January 1st (Saturday) and January 2nd (Sunday) were weekend days. Therefore, the first working day, or business day, of that month was indeed Monday, January 3rd. This verification confirms the functionality of our formula: it correctly identified the end of the preceding month (12/31/2021) and then calculated the date exactly one business day later, bypassing the weekend.



The image shows a calendar for January 2022. The days of the week are listed as Su, Mo, Tu, We, Th, Fr, Sa. The dates are arranged in a grid. The first business day of the month is the 3rd of January, which is a Monday.

Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

The ability to reliably calculate the first business day has numerous practical applications across various industries. In finance, it is essential for calculating interest periods or compliance deadlines based on the start of the working month. For human resources, it is used to determine payroll cycles or the effective start dates for new employees who begin on the first available working day. Furthermore, project management offices rely on this calculation to set project milestones and reporting schedules that align precisely with working cycles, ensuring accurate tracking and resource allocation across large-scale projects.

By mastering this specific application of nested Excel functions, users gain a sophisticated tool for date manipulation that significantly enhances spreadsheet automation and data integrity. This technique is fundamentally superior to manual methods, providing consistent and immediate results essential for high-level data analysis and operational reporting.