Data Cleaning Process in Excel for Market Movement Model

1. Separation of Indices:

   - I started by separating the data for each index (Nifty 50, Bank Nifty, SPX, NDX) into different sheets for better management. This allowed easier processing and analysis for each index individually.

2. Extracting Date and Time:

   - I separated the date and time from the data using Excel's text-to-columns feature. This helped me focus on specific time intervals for each trading day.

3. Calculating 5-Minute Changes:

   - For each index, I calculated the percentage change between two 5-minute intervals. The formula I used was:

   (D3 - D2) / D2 * 100

   This gave me the percentage change between two consecutive 5-minute intervals in a new column, which helped track market movement.

4. Creating 1-Hour Changes:

   - Using the VLOOKUP function, I created a similar process to calculate the 1-hour change for each index. The formula helped filter and display the change in the indices' values over a 1-hour period, providing a larger-scale trend view.

5. Adding Filters:

   - For better data visualization and filtering, I added new columns for day, month, and year. I used Excel's TEXT() function:

```
=TEXT(B2, "ddd")  // Day

=TEXT(B2, "mm")   // Month

=TEXT(B2, "yy")   // Year
```

These filters allowed me to easily slice the data for analysis on different timeframes.

6. Creating Serial Numbers for Queries:

   - To organize and append queries later, I created a serial number column, which helped in combining and appending data across different indices for both 5-minute and 1-hour intervals.

7. Final Organization:

   - Once the calculations and filtering were complete, I organized the data into a total of 8 sheets: 4 sheets for the 5-minute changes and 4 sheets for the 1-hour changes. This setup made it easier to visualize trends for specific time intervals.