Build a Heat Map

Use heat maps to compare categorical data using color.

In Tableau, you create a heat map by placing one or more dimensions on the **Columns** shelf and one or more dimensions on the **Rows** shelf. You then select **Square** as the mark type and place a measure of interest on the **Color** shelf.

You can enhance this basic heat map by setting the size and shape of the table cells.

To create a heat map to explore how profit varies across regions, product sub-categories, and customer segments, follow these steps:

1. Connect to the **Sample - Superstore** data source.

2. Drag the **Segment** dimension to **Columns**.

   Tableau creates headers with labels derived from the dimension member names.

3. Drag the **Region** and **Sub-Category** dimensions to **Rows**, dropping **Sub-Category** to the right of **Region**.

   Now you have a nested table of categorical data (that is, the **Sub-Category** dimension is nested within the **Region** dimension).

4. Drag the **Profit** measure to **Color** on the **Marks** card.

   Tableau aggregates the measure as a sum. The color legend reflects the continuous data range.
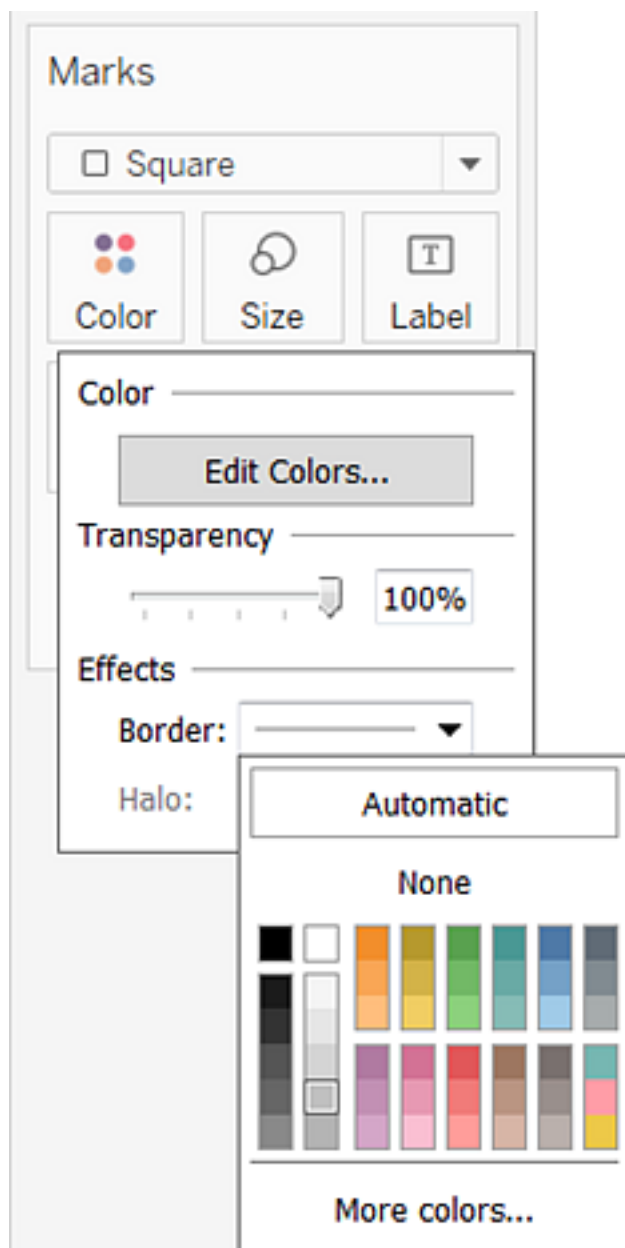
5. Optimize the view format:

   ○ On the **Marks** card, select **Square** as the mark type.

   ○ Make the columns wider by pressing Ctrl + Right arrow (on a Mac, the combination is z"). Hold down Ctrl (or z) and continue pressing the Right arrow key until the headings for **Segment** are displayed in full:

   ○ Increase the mark size by pressing Ctrl + Shift + B (on a Mac: ñzB). Hold down Ctrl + Shift (ñz) and continue to press B until the squares are large enough.
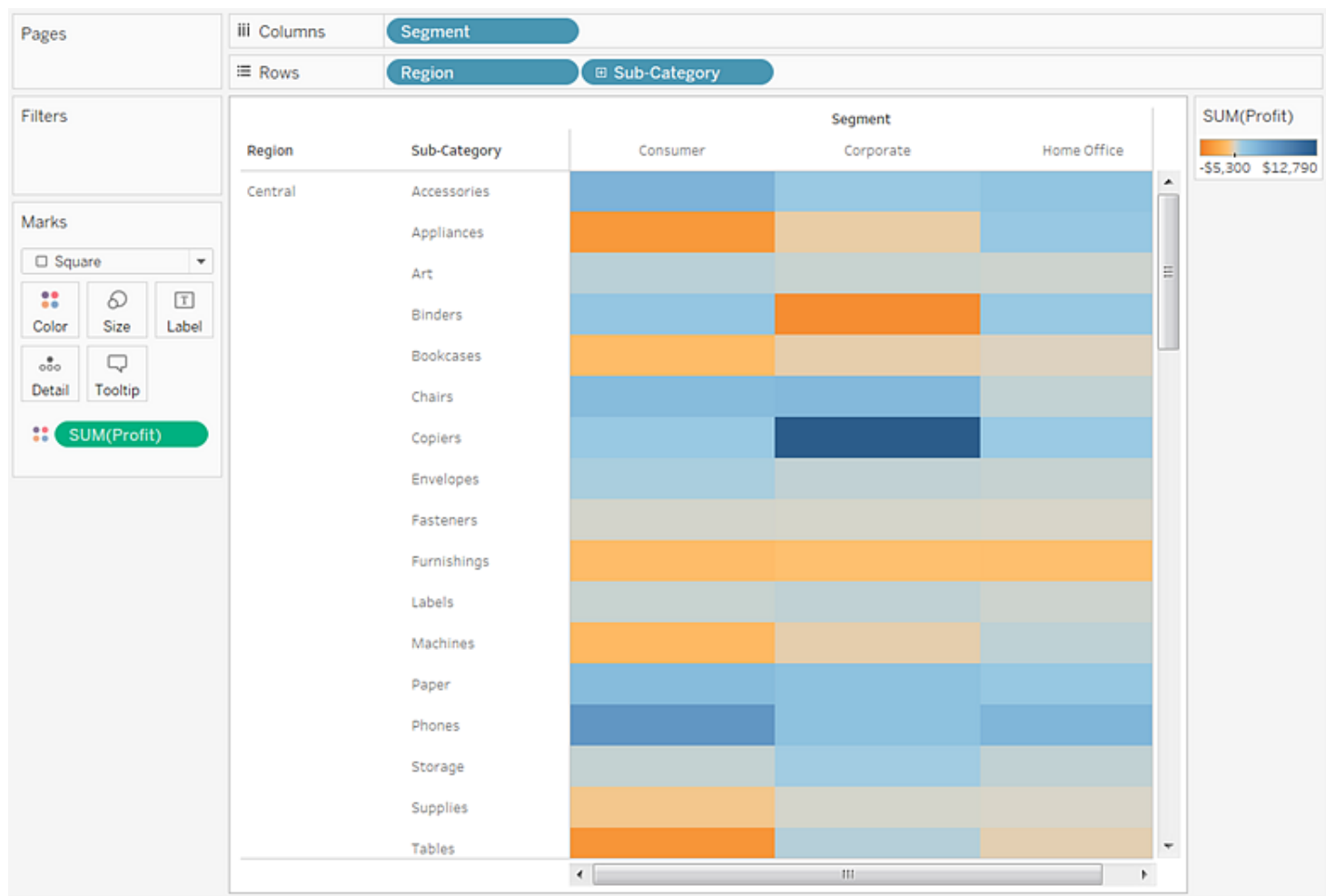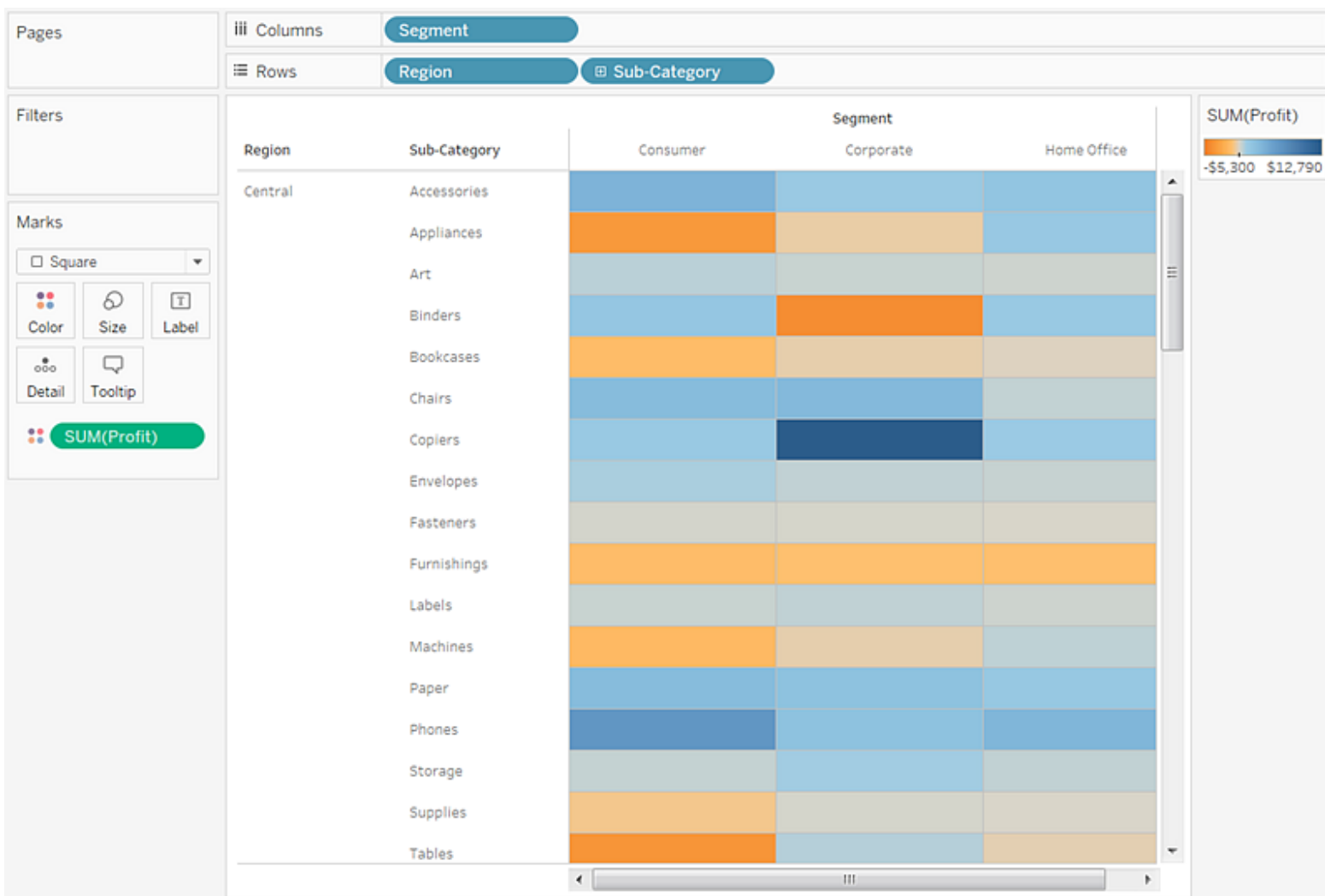
In this view, you can see data for only the Central region. Scroll down to see data for other regions.

In the Central region, copiers are shown to be the most profitable sub-category, and binders and appliances the least profitable.

6. Click **Color** on the **Marks** card to display configuration options. In the **Border** drop-down list, select a medium gray color for cell borders, as in the following image:

Marks

☐ Square ▼

Color	Size	Label

Color

Edit Colors...

Transparency

100%

Effects

Border: ▼

Halo:

Automatic

None

More colors...

Now it's easier to see the individual cells in the view:

7. The default color palette is Orange–Blue Diverging. A Red–Green Diverging palette might be more appropriate for profit. To change the color palette and to make the colors more distinct, do the following:

- Hover over the **SUM(Profit)** color legend, then click the drop-down arrow that appears and select **Edit Colors**.

- In the **Edit Colors** dialog box, in the **Palette** field, select **Red–Green Diverging** from the drop-down list.

- Select the **Use Full Color Range** check box and click **Apply** and then click **OK**.
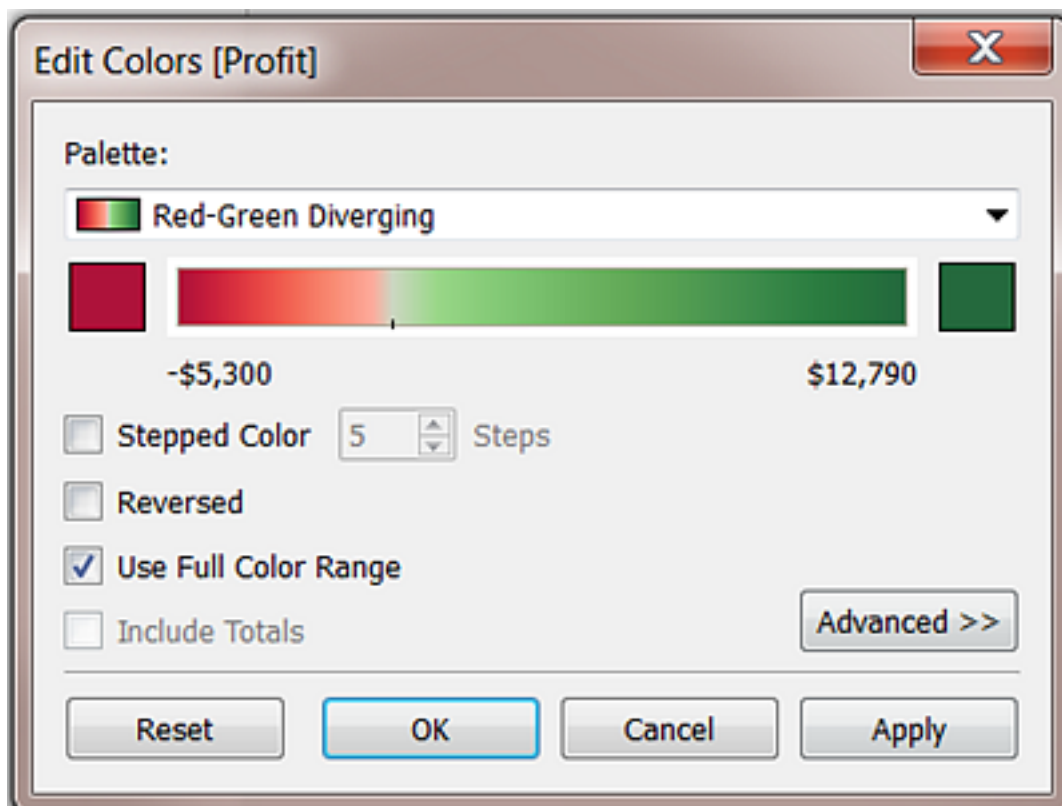
When you select this option, Tableau assigns the starting number a full intensity and the ending number a full intensity. If the range is from –10 to 100, the color representing negative numbers changes in shade much more quickly than the color representing positive numbers.

When you do not select **Use Full Color Range**, Tableau assigns the color intensity as if the range was from –100 to 100, so that the change in shade is the same on both sides of zero. The effect is to make the color contrasts in your view much more distinct.

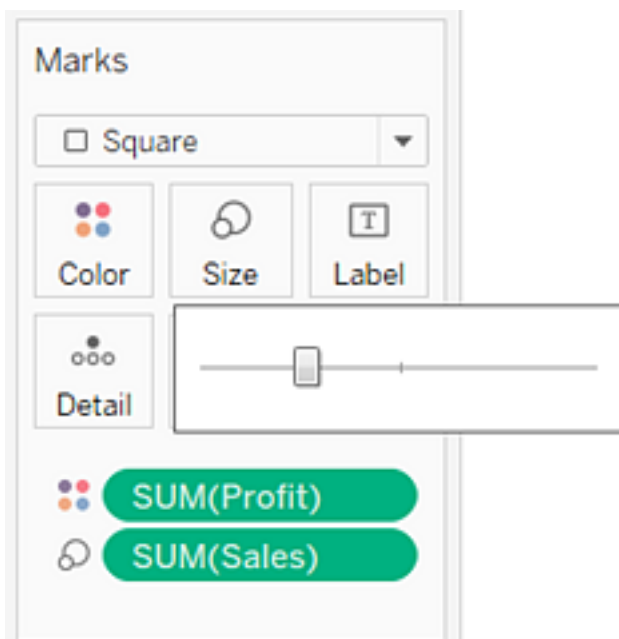For more information about color options, see Color Properties.
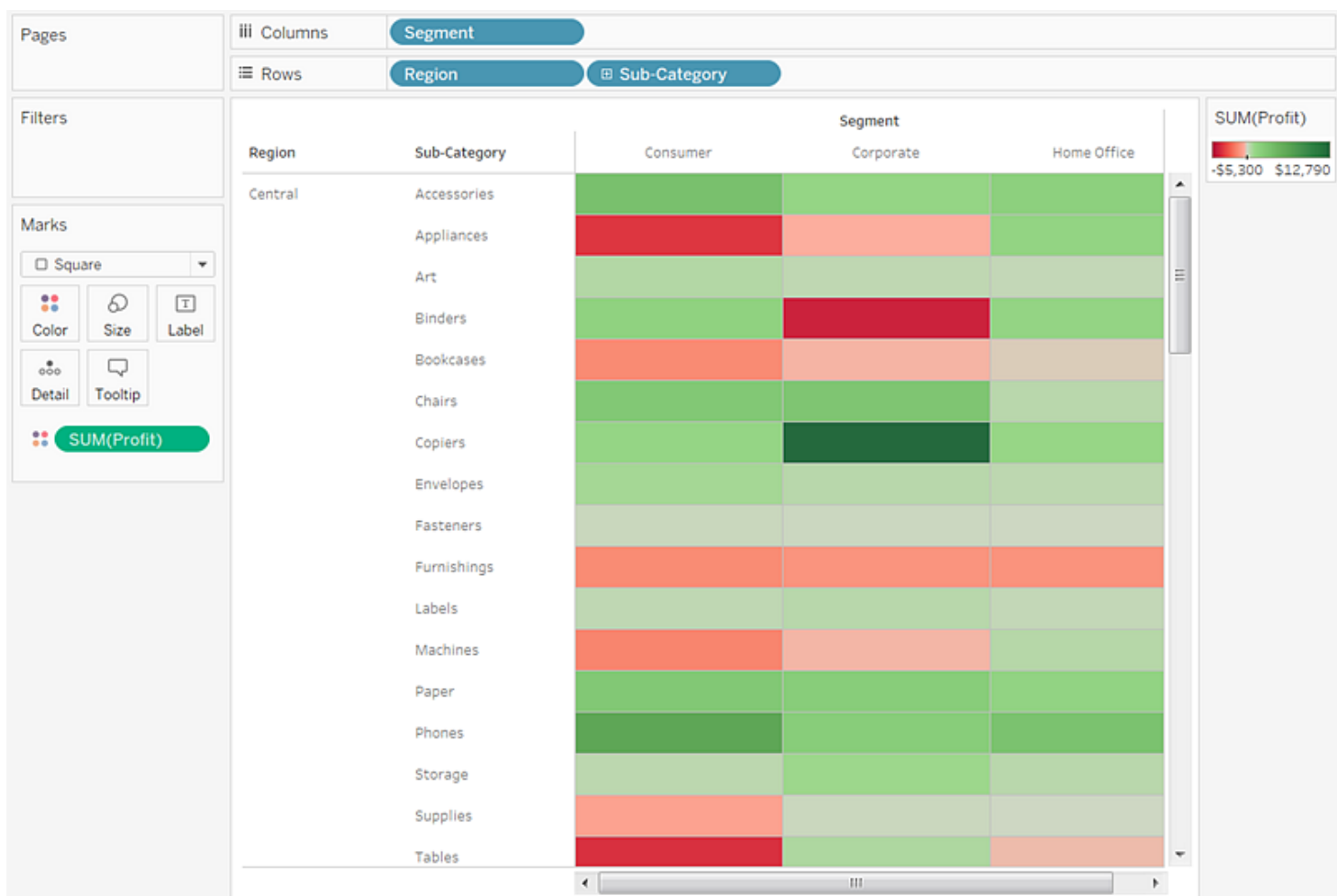
8. Drag the **Sales** measure to **Size** on the **Marks** card to control the size of the boxes by the Sales measure. You can compare absolute sales numbers (by size of the boxes) and profit (by color).
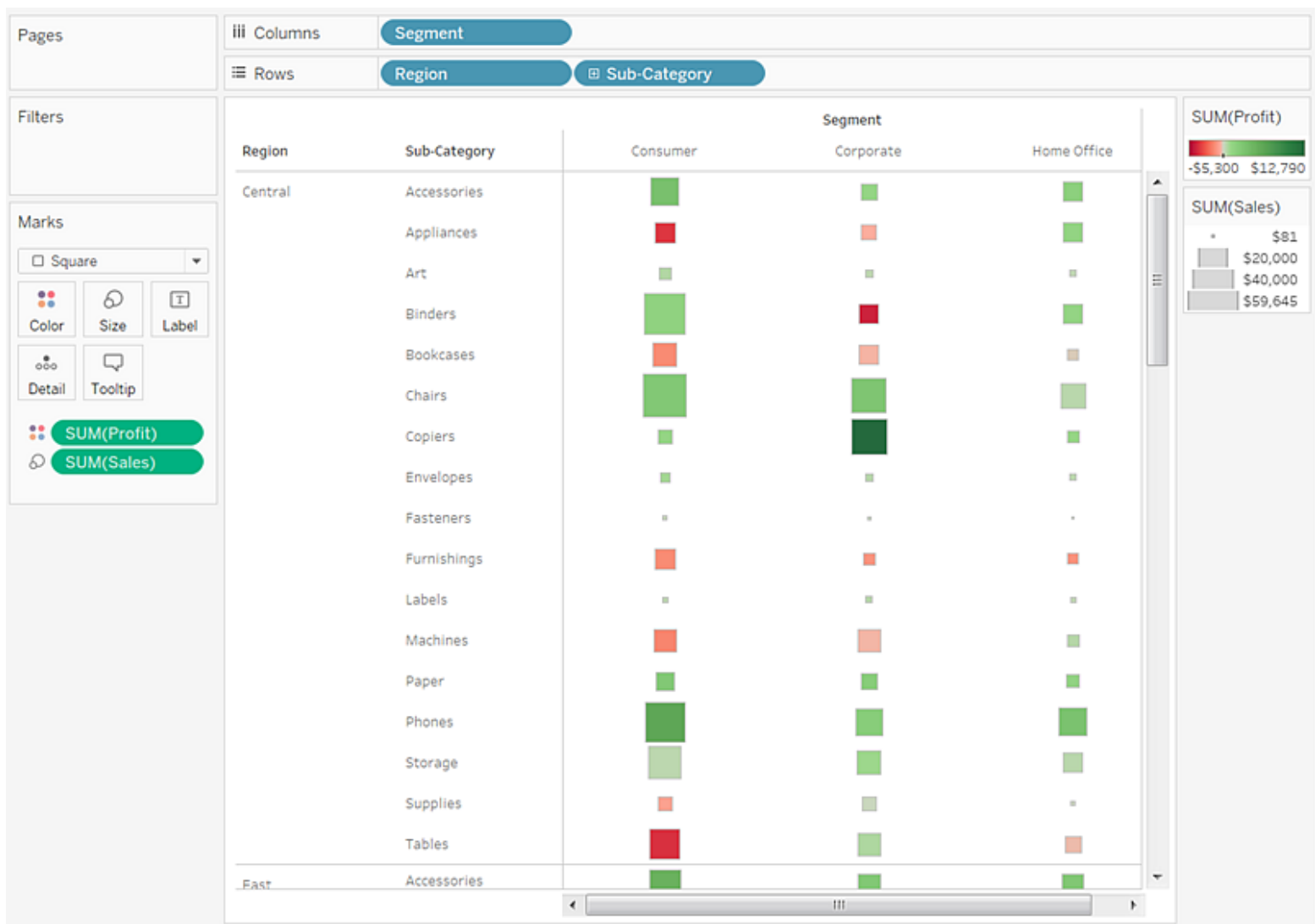
Initially, the marks look like this:
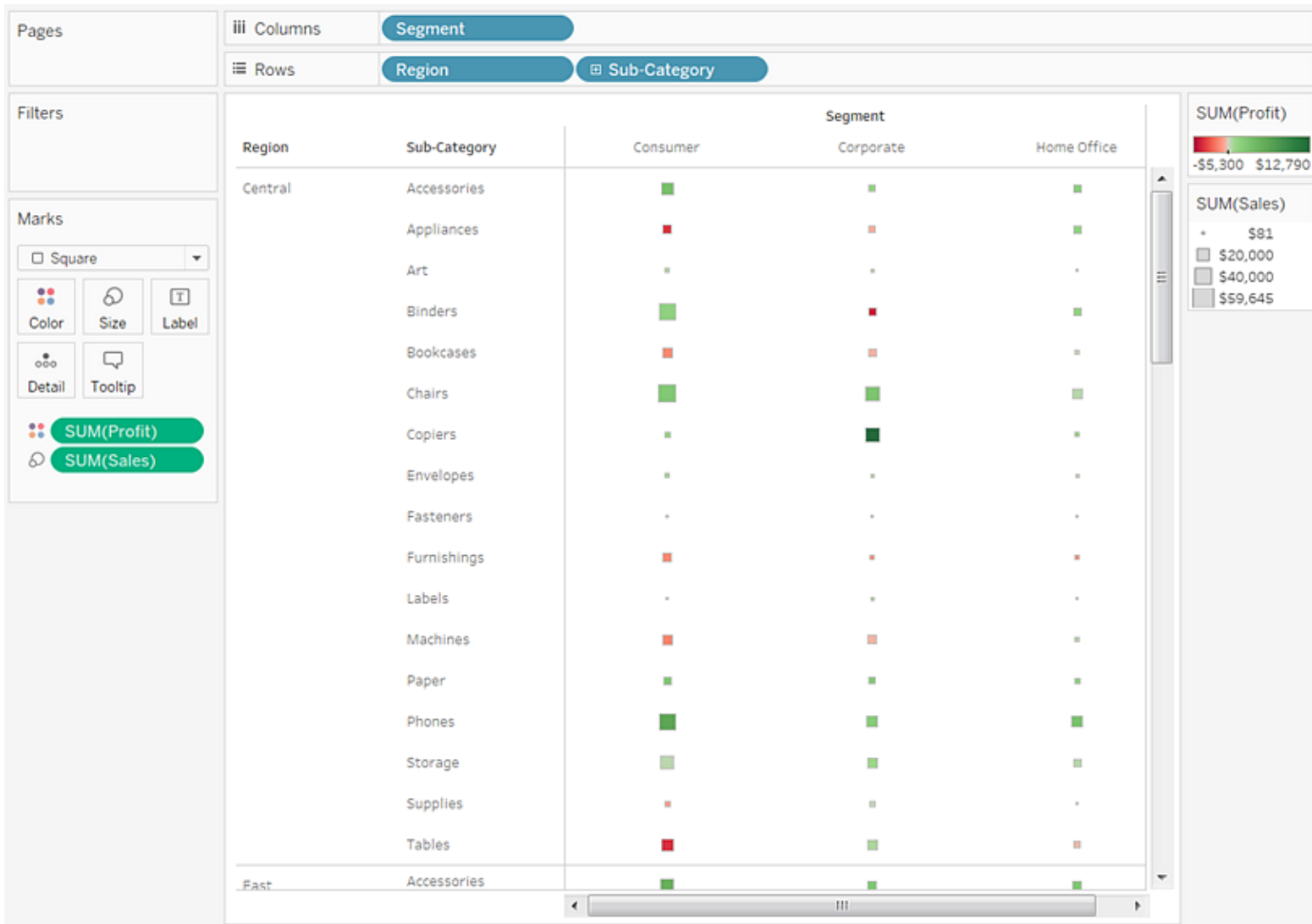
9. To enlarge the marks, click **Size** on the **Marks** card to display a size slider:

10. Drag the slider to the right until the boxes in the view are the optimal size. Now your view is complete:

11. Use the scroll bar along the right side of the view to examine the data for different regions.