

Paper SAS4492-2020
Power to the Report Viewers
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ABSTRACT

In this paper, we explore how you can take the guesswork out of creating reports by giving report consumers the ability to make reports their own. Based on the controls that you give consumers, they can change what they see, by doing things like toggling legends and changing chart types. With even more power, they can create self-service queries like filters, ranks, and custom groups, and even change business metrics—all with undo and redo. You'll learn the different levels of control report authors can provide and all the great ways you can customize a report you're reading just for you.

INTRODUCTION

You create a beautiful report. You curate every chart to meet your users' needs. You fine-tune the visibility of labels and totals to provide the best experience. Then you publish your report and find yourself bombarded with every manner of request from your users.

"This bar chart would be more useful as a pie chart."

"I can't use this report if you don't have labels enabled here."

"Can I see this as a list table?"

"I want to be able to see the profit and not just revenue in this chart!"

So, armed with valuable feedback, you go back to the drawing board. You make the bar into a pie, as much as it pains you to do so. You enable the labels. You switch the gorgeous graph to a list table. You put profit and revenue on the chart. Then you publish your report, hopeful that this time you've nailed it. You're bombarded with more new feedback

"I loved the bar chart. Why did you switch it to a pie? Have you not heard about Tufte?"

"The labels are distracting. Can you please turn them off on some of these charts?"

"I miss the cool chart. The list table isn't as enticing for our executives."

"The profit is distracting, can you go back to just showing revenue?"

The above is your life as a report author. The problem is that the two groups of people bombarding you with contradicting requests aren't the same people. Organizations, yours included, are filled with people with diverse needs, wants, and yes, tastes. A pie chart is a beautiful visual to some and a hideous and un-useful mess to others.

You can't design and build a report that is all things to all people. With SAS® Visual Analytics, you can let your people have a say in the design of the report with a new feature called *viewer customization*.

THE POWER OF VIEWER CUSTOMIZATION

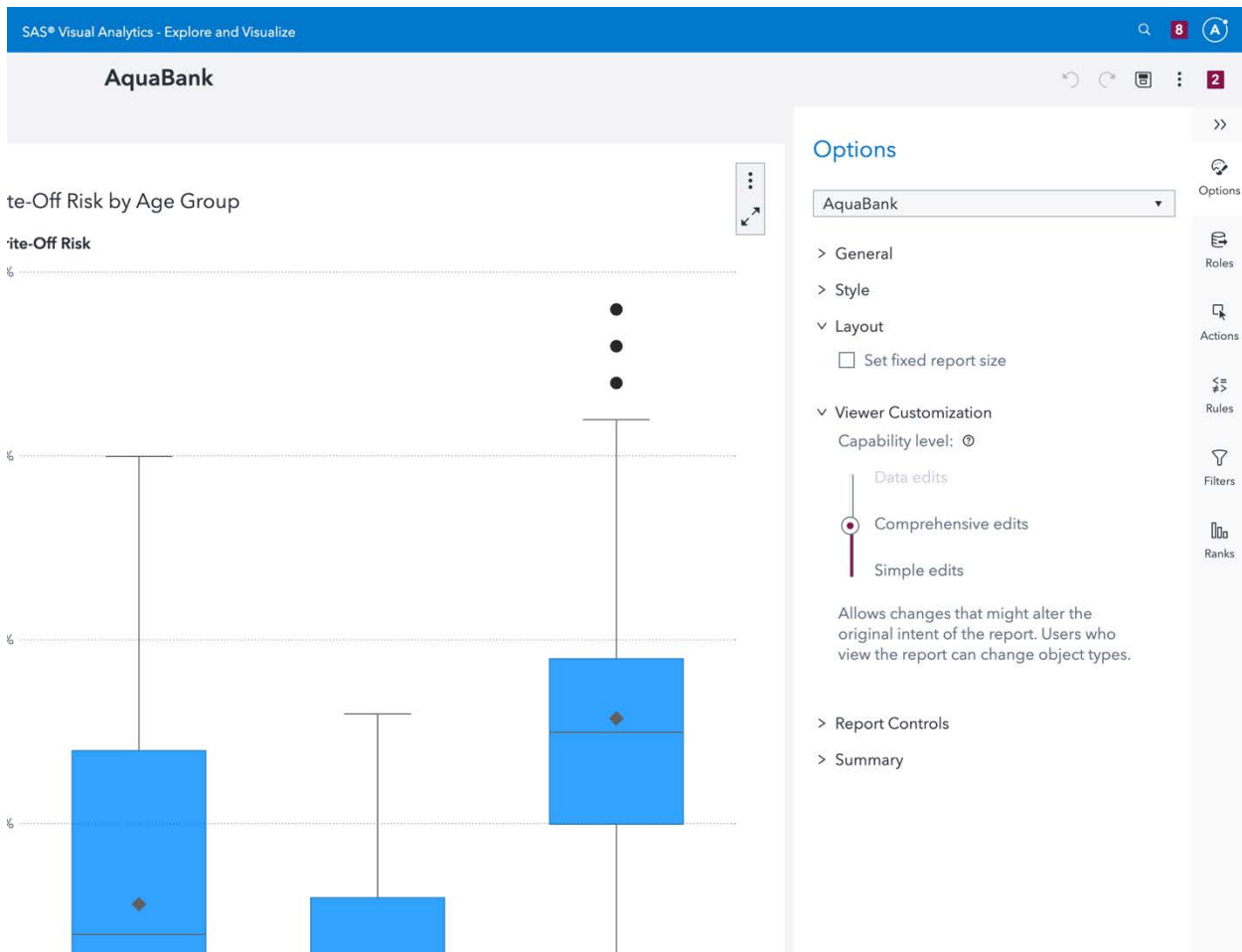
Viewer customization is a simple and governed way to overcome contradicting requirements from different users. Viewer customization decentralizes some report decisions down to the users themselves. It's a more robust self-service experience.

SETTING UP VIEWER CUSTOMIZATION

It's easy to set up viewer customization. As a report author, open the report that you've created, and with the report selected, open the Options pane on the right. Under the Viewer Customization section, you'll see a slider with three levels of viewer customization. By default, SAS Visual Analytics sets your report to the second level, Comprehensive edits.

- Simple edits lets report viewers make changes that do not change the report designer's original intent for the report content. For example, report viewers can change how the data is sorted or change legends and value labels.
- Comprehensive edits (default) lets report viewers make changes that might alter the original intent of the report. For example, the report viewers can change object types.
- Data edits lets report viewers change the data for the objects in the report. For example, they can modify data assignments, filters, ranks, and display rules.

Each subsequent level builds on the permissions from the last. So, Data edits give viewers all the abilities from Simple edits and Comprehensive edits.



Display 1. The Viewer Customization Option in the Options Pane.

Viewer customization always works within the security and governance framework that your organization has set up. So, for example, giving viewers the ability to make Data edits still relies on table permissions and row-level security. Viewer customization never lets your users go beyond the higher security model.

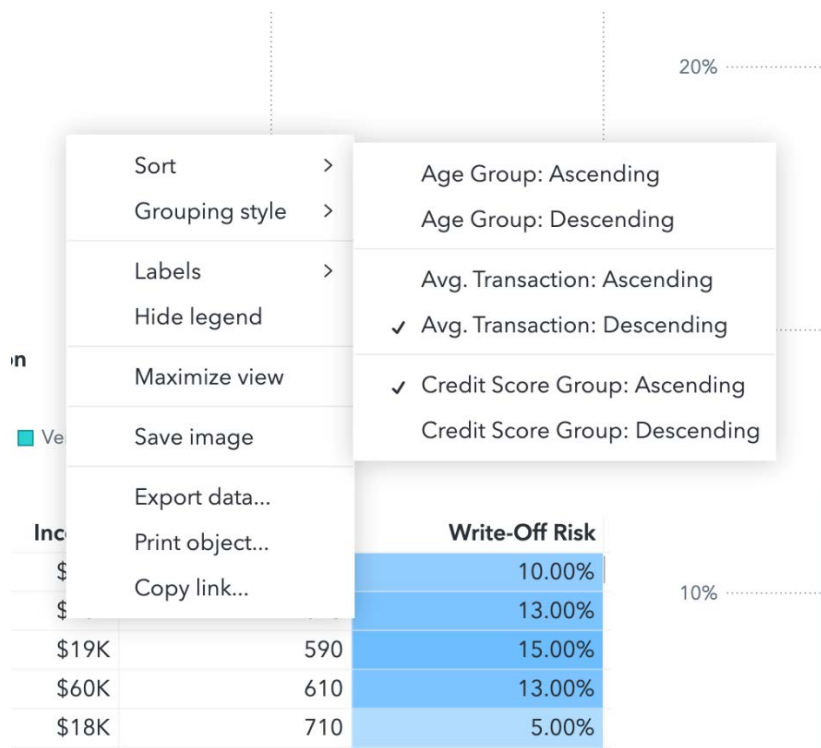
Viewers also can't overwrite the original report with their customizations. Every change they make is part of their personal user state. When they leave a report and come back, the changes will persist. Viewers can save a copy of the report with their customizations.

USING VIEWER CUSTOMIZATION

With just a right-click, viewers can quickly customize their report, based on the level of customizations set by the author. In addition to right-click context menus, viewers can also use the right-hand pane when viewing to modify elements of the report. The right-hand pane is visible when the user hovers over the right edge of the application. Any customizations the viewer makes can be undone and redone with Undo and Redo.

With viewer customization set to Simple edits, here are some of the things report viewers can do:

- Change the sort on visualizations
- Change grouping styles on bars from stacked to cluster
- Hide and show legends
- Maximize the view
- Use abbreviated numeric values on tables
- Hide and show totals in tables
- Freeze columns in tables
- Enable cell graphs in tables
- Hide and show overview axes
- Change diagnostic and assessment charts in analytic composites in the report. For example, changing a residual plot to a PRESS plot.
- Subscribe to alerts on any alert display rules in the report.



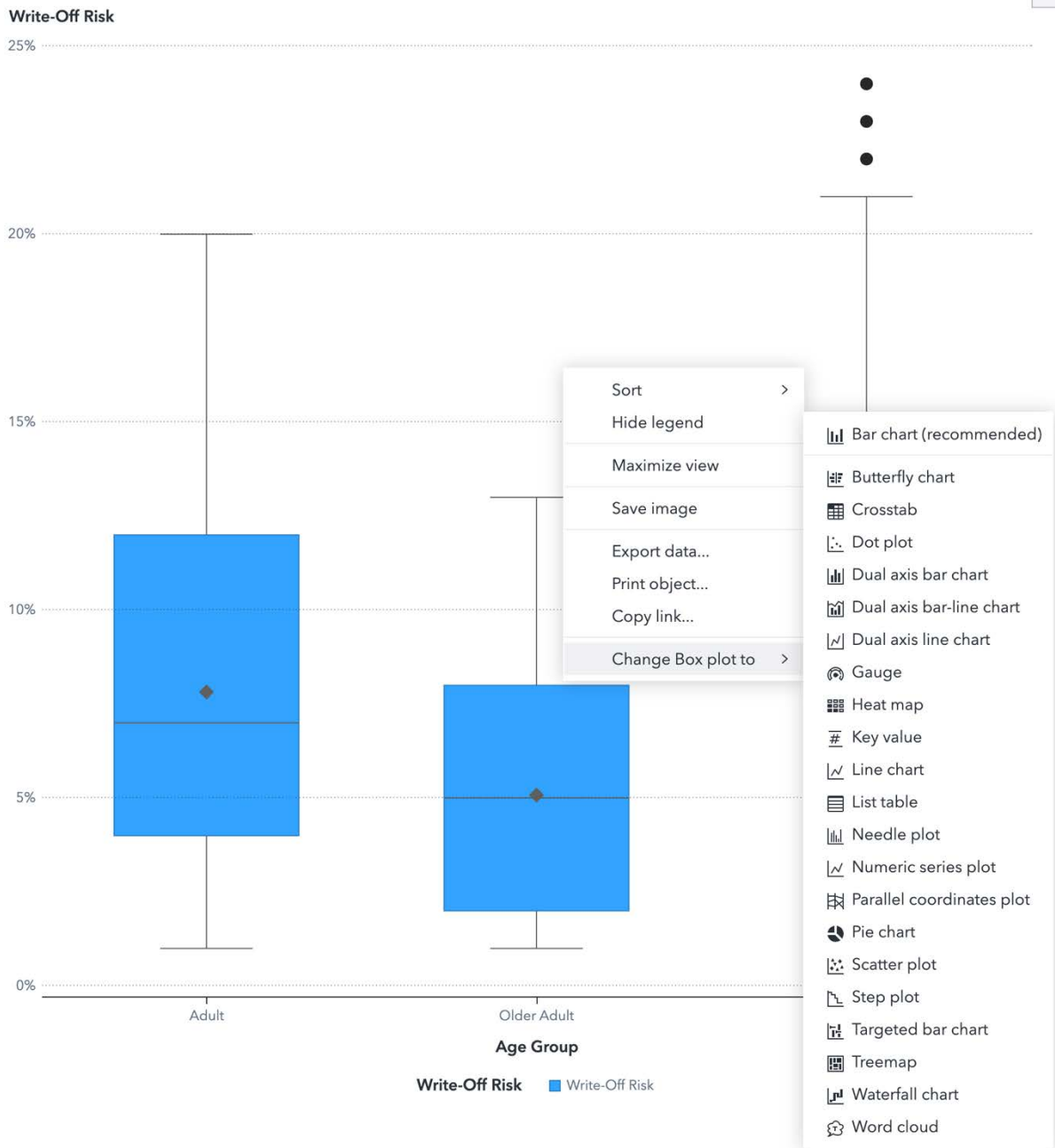
Display 2. Example of Viewer Customizations Available with Simple Edits.



Display 3. Example of Viewer Customizations Available on Analytic Composites with Simple Edits.

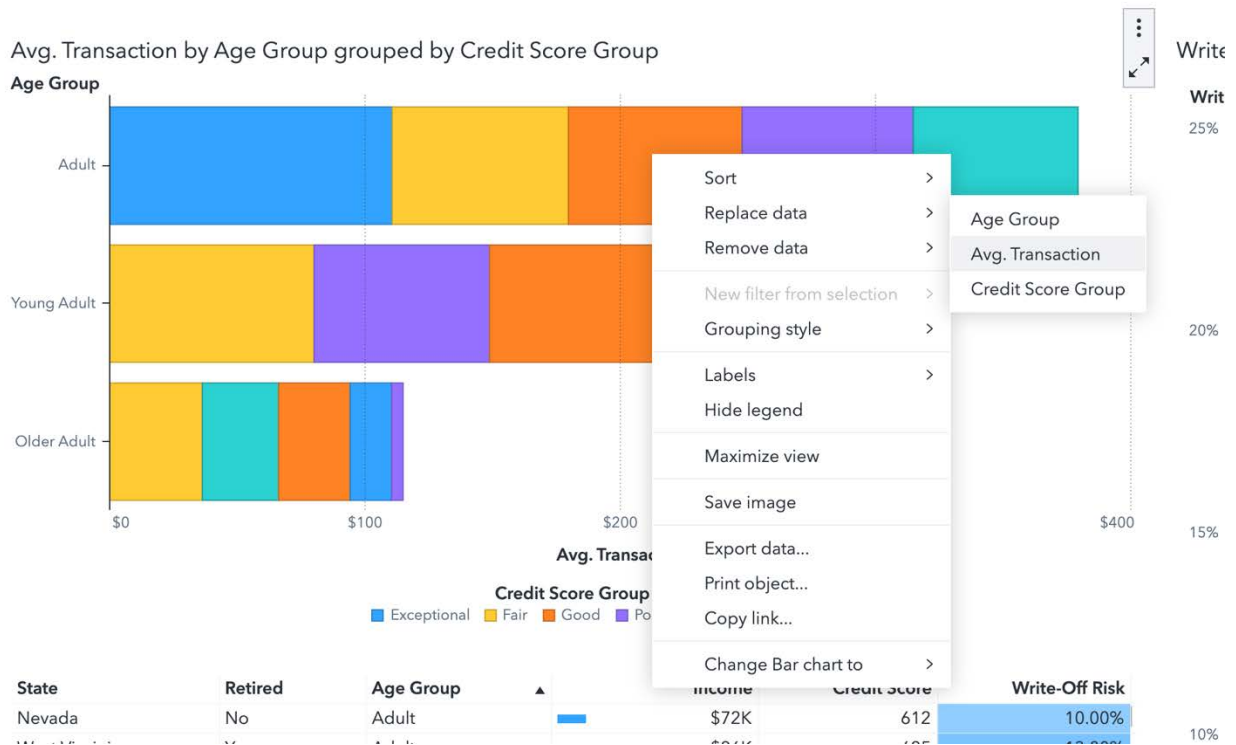
With viewer customization set to the default Comprehensive edits, viewers gain the ability to change chart types while viewing the report. They can change the chart type to any visualization that can support all the roles assigned to the original chart.

Write-Off Risk by Age Group



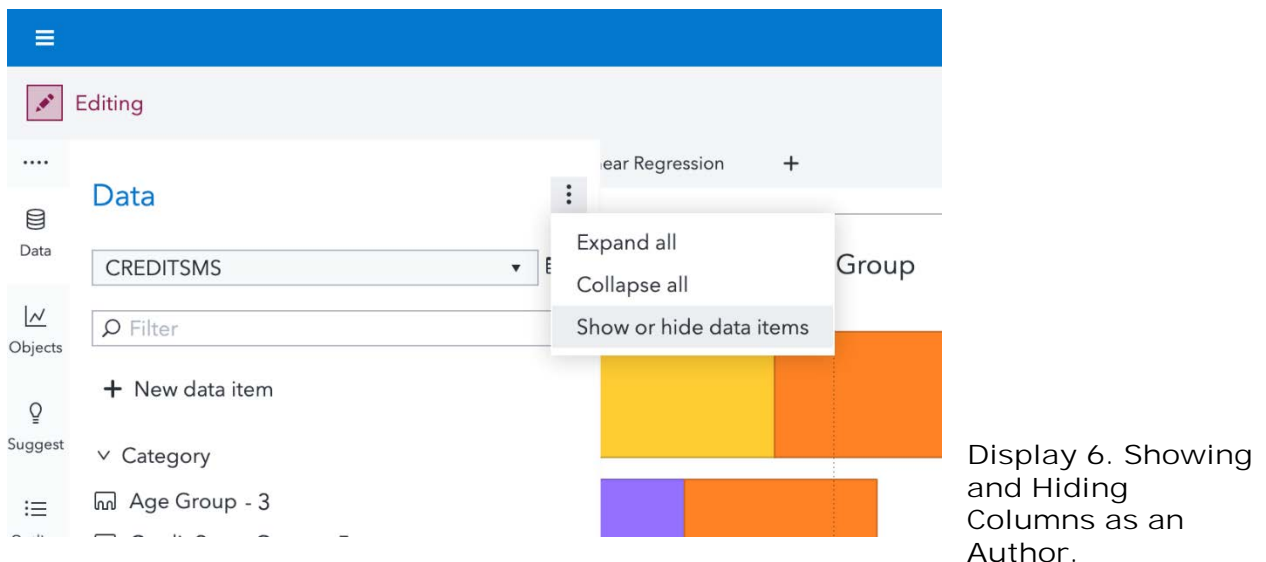
Display 4. Viewers Can Change Chart Types When the Viewer Customization Level Is Set to Comprehensive Edits.

When viewing a report where viewer customization has been set to Data edits, viewers can make changes to filters, ranks, and data role assignments in the report. They can even remove these filters and ranks to get a different perspective on the data.



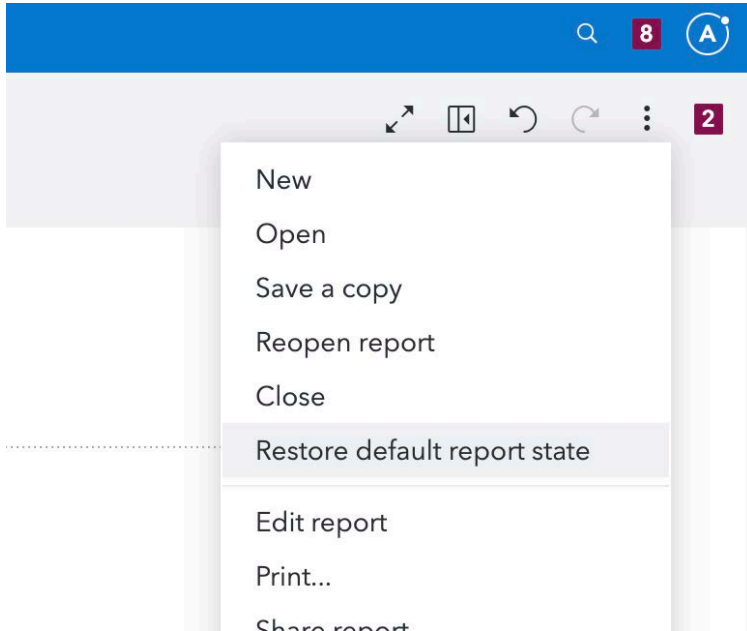
Display 5. Viewers Can Replace or Remove Data Roles When the Viewer Customization Level Is Set to Data Edits.

As a report author, you can control the data columns available to viewer customizations by showing and hiding the columns in the Data pane for the production report.



Display 6. Showing and Hiding Columns as an Author.

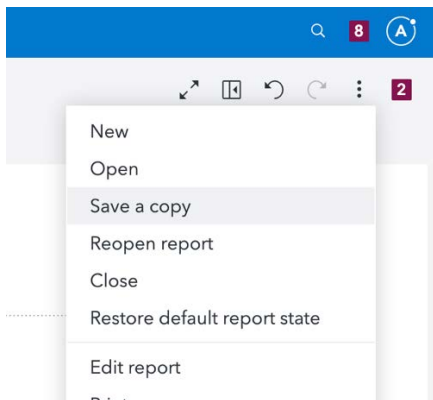
Every change that the viewer makes will be saved as part of their user-state. The next time they log in, they can pick up where they left off. At any time, they can reset their customizations to the original report as created by the author by restoring the default report state in the top-right menu.



Display 7. Viewers Can Restore the Default Report State at Any Time.

SAVING A CUSTOMIZED REPORT AS A COPY

A viewer may want to preserve their customizations for future use. Or they may want to save multiple versions of the report that they can come back to or share with other users or teams. At any time, they can save a copy of the report through the top-right menu. SAS Visual Analytics timestamps the copy and saves it to the viewer's "My Folder." The copy will act like any other report except in one way. SAS Visual Analytics names the copy as a copy of the original source report.



Display 8. Viewers Can Save a Copy of the Report with Their Customizations.

CONCLUSION

With viewer customization in SAS Visual Analytics you can take the guesswork out of building reports. You can't make everyone happy with one report, but you can give your users the option to customize what they see in the report so that they are pleased with their custom version.

Viewer customizations helps your teams develop a richer body of insights. It decentralizes and democratizes the process of developing insights with governance built in.

Now, anyone in the organization has the self-service power to go beyond the report they see and find new insights to consume and share.

RECOMMENDED READING

[SAS® Visual Analytics Learn & Support](#)

CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

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