

Financial Econometrics 871 Practical Exam 2022: Question 3

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Abstract

To answer this question, I use the information on the ALSI (J200) and SWIX (J400) top 40 Indexes and compare the SWIX and ALSI methodologies by looking at the performance of different sector exposures and stock concentrations over time. The findings show that the (uncapped) ALSI has performed relatively better since the onset of COVID-19 than the SWIX and can be attributed to a higher weight assigned to the better-performing Resources sector. In addition, through analysing the impact that 6% and 10% capping levels would have had on both the SWIX and ALSI, it is apparent that a 6% cap on the ALSI would have significantly reduced its performance in the past few years due to slicing the weights on the higher returning Resources sector. On the other hand, the 10% cap on SWIX would have improved its return since the onset of COVID, likely due to a reduction in weighted contribution from the weaker-performing Industrial and Financial sectors.

1. ALSI and SWIX (uncapped) Weighted Portfolio Returns

Figure 1.1 plots the weighted (uncapped) cumulative returns series for the ALSI and SWIX indexes. The cumulative weighted returns for the ALSI and SWIX indexes are strikingly similar, however, since the onset of COVID-19, the ALSI has achieved higher returns.

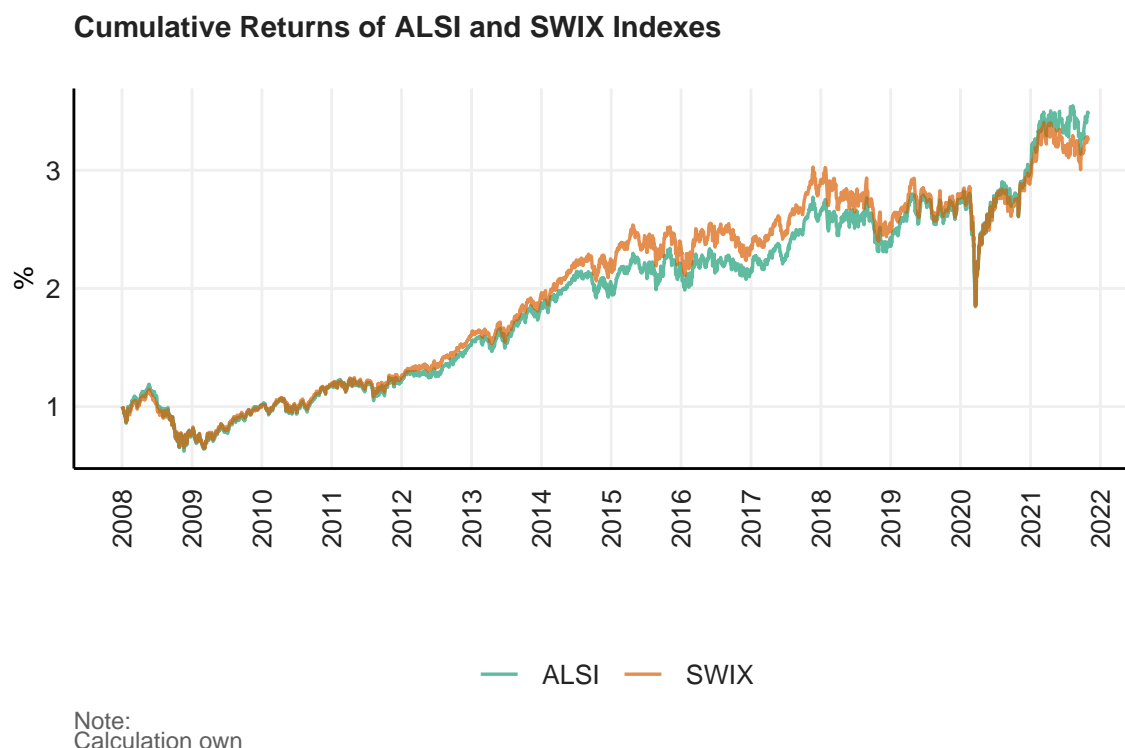


Figure 1.1: Cumulative Returns of ALSI and SWIX Indexes Per Sector.

2. Weighted Return Contribution per Sector

In order to shed some light on SWIX's relatively weaker performance since the onset of COVID, I analyse the dynamic weighted contribution of each sector to the indexes. Figures 2.1 and 2.2 shows the dynamic weight contribution to the ALSI and SWIX portfolios, respectively.

In considering the ALSI in Figure 2.1, a capping of 10% has virtually the same cumulative returns as when uncapped, with significantly lower returns when capped at 6%. This is likely due to this 6% capping most of the relatively higher returns generated from the Resources sector. On the other hand, from the SWIX in Figure 2.2, the 10% cap would have improved its return since the onset of COVID, most likely due to a reduction in weighted contribution from the weaker performing Industrial and Financial sectors.

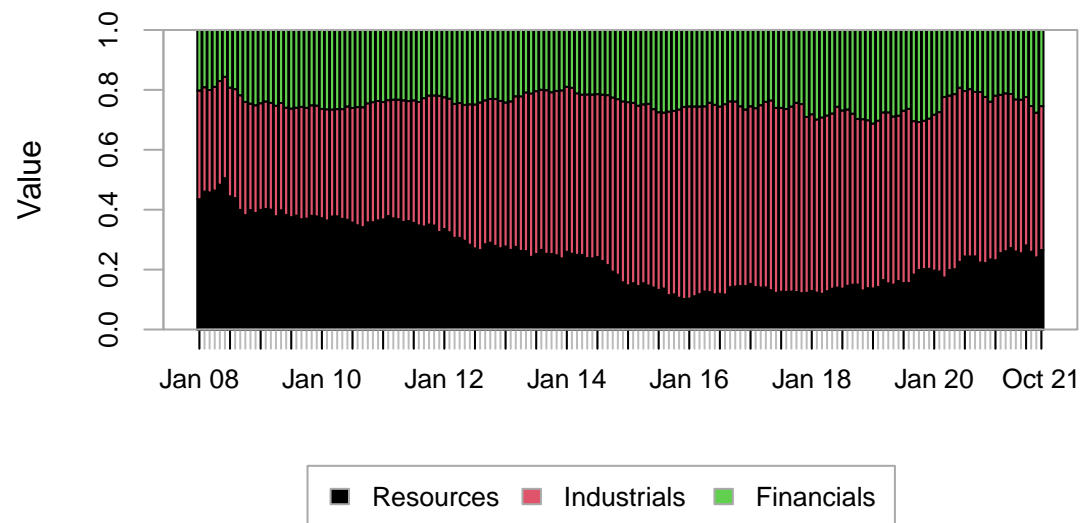


Figure 2.1: Dynamic Weight Contribution to ALSI Portfolio Per Sector.

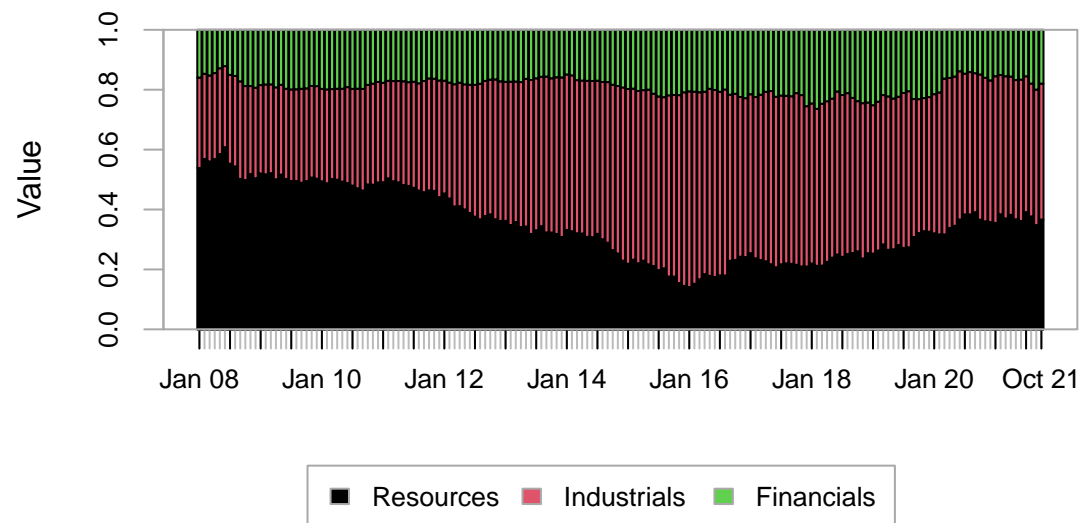


Figure 2.2: Dynamic Weight Contribution to SWIX Portfolio.

Figures 2.3 and 2.4 confirms the analyses above.

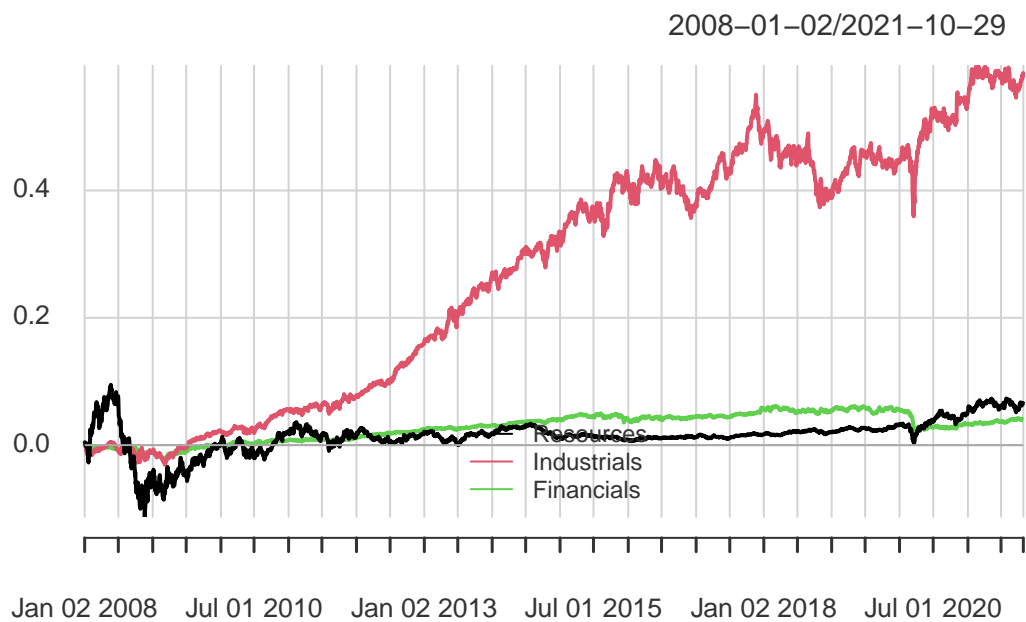


Figure 2.3: Dynamic Weighted Return Contribution to SWIX Portfolio Per Sector.

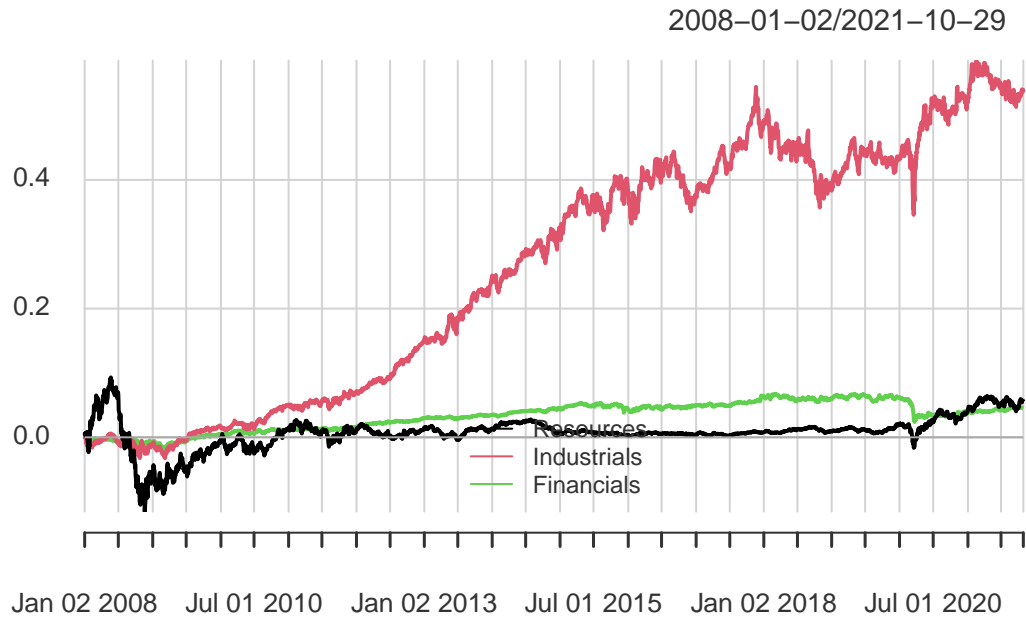


Figure 2.4: Dynamic Weighted Return Contribution to SWIX Portfolio Per Sector.

3. Counterfactual 6% and 10% Capped ALSI and SWIX Returns

Figures 3.1 and 3.2 shows the counterfactual impact that 6% and 10% capping levels would have had on both the SWIX and ALSI, respectively. In investigating these figures, it is apparent that a 6% cap on the ALSI would have significantly reduced its performance in the past few years due to slicing the weights on the higher returning Resources sector. On the other hand, the 10% cap on SWIX would have improved its return since the onset of COVID, likely due to a reduction in weighted contribution from the weaker-performing Industrial and Financial sectors.

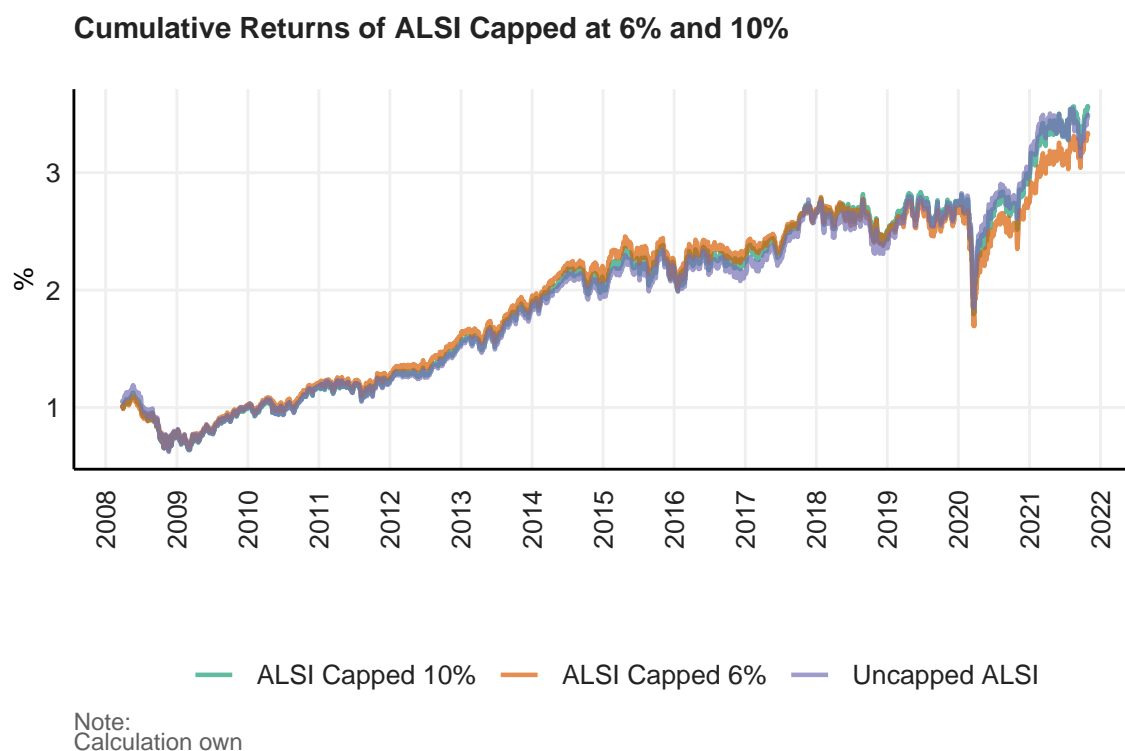
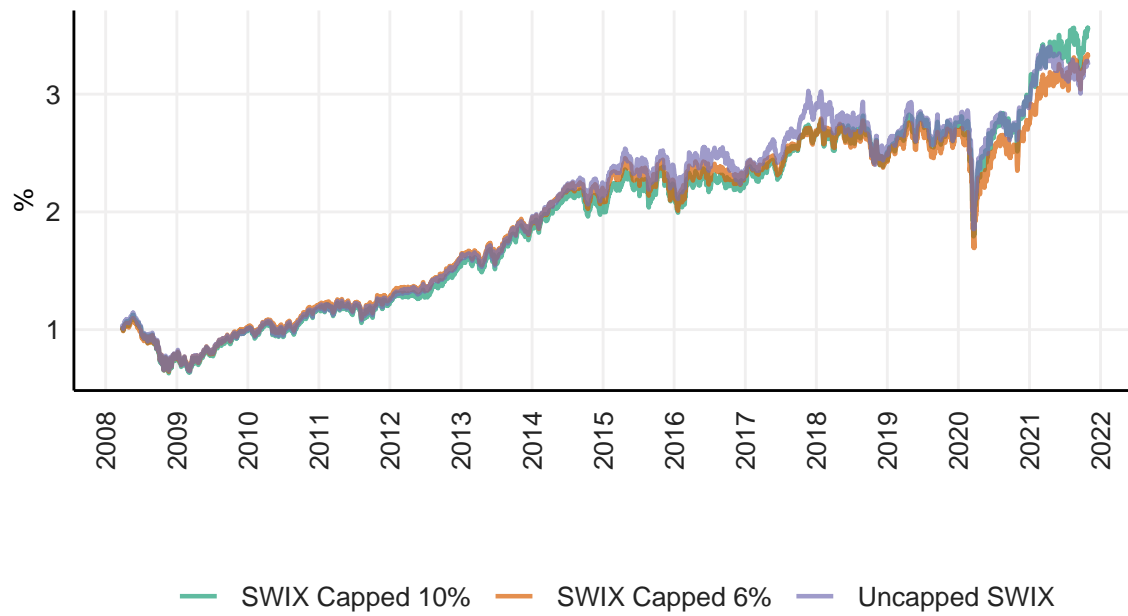


Figure 3.1: Cumulative Returns of ALSI Capped at 6 and 10 Percent.

Cumulative Returns of SWIX Capped at 6% and 10%

Note:
Calculation own

Figure 3.2: Cumulative Returns of SWIX Capped at 6 and 10 Percent.

References

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