NEED FOR ADJUSTMENTS IN THE LEGAL DISCLOSURE REQUIREMENTS FOR BANKS

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Abstract: This article provides empirical evidence that there is an urgent need to revise the legally required disclosure for banks. A sample of 203 Bavarian cooperative banks showed that hidden liabilities caused by the sharp rise in interest rates in the 2022 fiscal year resulted in significant differences between the published equity capital and equity ratios and the equity capital and equity ratios that were adjusted for hidden liabilities. The significance and credibility of the disclosure reports are severely limited by sharp differences in the two key figures mentioned above. Additional publication of hidden liabilities in the legally required disclosure is essential for the further provision of appropriate information management for financial market participants and stakeholders.

Keywords: Disclosure, CRR, Pillar 3, equity capital, equity ratio.

Introduction

The aim of the introduction of Basel I was to create internationally comparable and valid capital requirements for credit institutions. The corresponding regulations from Basel I have found influence in the national legislation of 100 countries worldwide. A correspondingly large-scale implementation could therefore be achieved. The main component of Basel I was the mandatory backing of loans granted with 8% of equity capital [1]. The main point of criticism in the Basel I regulations was that, regardless of a debtor's creditworthiness, banks always had to maintain the same capital. After several years of discussion and consultation, the Basel II framework for improved capital requirements was passed in June 2004. The main innovations introduced by Basel II were the three interrelated pillars – that of minimum capital requirements, of banking supervisory review process and of expanded disclosure[1].

For this article, Pillar 3, regarding expanded disclosure, is of utmost importance. Due to the disclosure regulations since Basel II, credit institutions and banks must, among other things, publish their equity capital and capital requirements in a detailed and standardized form annually on their homepage[2].

The legal basis for this can be found in Article 433b paragraph 2 of the Capital Requirements Regulation (CRR). The reportable key parameters are listed in Article 447 of the aforementioned set of regulations. Apart from the composition of equity capital, other parameters that must also be disclosed annually are the total risk exposure amount, the composition of the additional

equity capital, the combined capital buffer requirements and the leverage ratio. This legal obligation for credit institutions provides all financial market participants and all bank stakeholders with a deep and objective insight into, among other things, the capital and risk situation of each credit institution. The uniform tabular form of the disclosure enables objective comparability of all credit institutions[3].

Table 1. Excerpt from the Pillar 3 disclosure

	Description	**Record Day 1**	**Record Day 2**
1	Common Equity Tier 1 (CET1)	31.12.2022	31.12.2021
2	Tier 1 capital	31.12.2022	31.12.2021
3	Total Capital	31.12.2022	31.12.2021
4	Total Risk Amount	31.12.2022	31.12.2021
5	CET1 Capital Ratio	31.12.2022	31.12.2021
6	Core Tier 1 Capital Ratio	31.12.2022	31.12.2021
7	Total Capital Ratio	31.12.2022	31.12.2021
8	Total Capital Requirement	31.12.2022	31.12.2021

From a historical perspective, 2022 saw an unprecedented rise in interest rates in the euro area. The following figure shows the European Central Bank's 2012 – 2022 interest rate for the deposit facility:

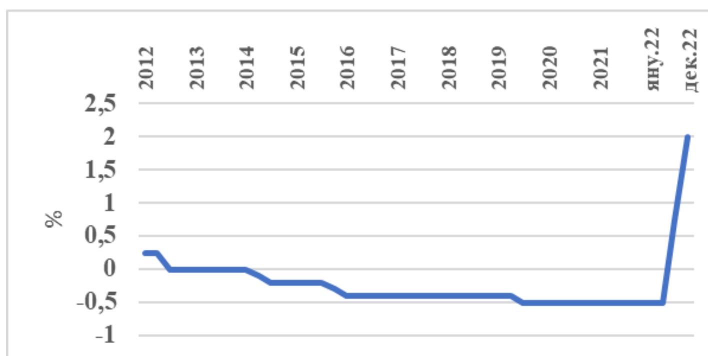

Figure 1. Interest rate deposit facility

With the deposit facility, banks can park or invest excess funds in the form of overnight deposits for one business day at the Deutsche Bundesbank[4]. Figure 1 shows that the increase in interest rates in 2022 was extremely rapid and extremely pronounced. The years 2012 – 2021, however, were characterized by a stagnating low and negative interest rate policy. A rise in interest rates generally has a negative impact on the valuation of banks' own securities. However, by reallocating securities to the bank's fixed assets, a large part of the losses caused by the rise in interest rates can be hidden in the form of a

permissible balance sheet policy measures. The losses do not have to be recorded or shown openly in the profit and loss statement.

By using this accounting policy measure, banks build up hidden liabilities in their books. It can be assumed that the immense increase in interest rates in the 2022 fiscal year has caused significant hidden liabilities in some cases. These, however, are not evident in the disclosure of equity capital and capital requirements. From the author's point of view, bank stakeholders may be given a false picture of equity and equity ratios. In cases when customer money is outflowed and the associated liquidity requirements arise, hidden liabilities that have been lying dormant in the bank books can actually become apparent in the form of losses within a few days. International banks such as Silicon Valley Bank had to realize their hidden liabilities within a few days and file for bankruptcy due to the outflow of customer deposits and the sale of their own securities to compensate for liquidity [2].

With the disclosure of equity capital and capital requirements, the legislative authorities strive to provide all financial market participants and stakeholders with maximum transparency about a bank’s situation. The author of this article believes that in order to achieve this goal the hidden liabilities must also be published in the disclosure in cases where there are significant differences between the total capital ratio adjusted for hidden liabilities and the published total capital ratio.

Research methodology

For the purpose of empirical evaluation of the respective outcome from the 2022 fiscal year, all 203 cooperative banks from the Free State of Bavaria have been analyzed as of the balance sheet date of December 31, 2022. Based on the annual financial statements published in the company register of each bank and the disclosure published on the homepage of the respective bank, extensive data has been obtained for the evaluation of the following inferential statistics. The t-test for paired values (total capital ratio 2022 and adjusted total capital ratio 2022) was selected as the statistical method. The main assumptions for this are the normal distribution of the variables, the absence of outliers and the metric scaling of both variables. Normal distribution is often checked using the Shapiro-Wilk test. However, the absence of outliers can be confirmed graphically using box plots. If one or more assumptions are violated, the Wilcoxon test can be calculated accordingly. This is a non-parametric alternative to the first-mentioned t-test. Missing normal distribution or outliers do not distort the image in this method. It goes without saying, however, that the significance of the Wilcoxon test does not have the same quality as the original t-test.

Results

As part of the inferential statistics, it was demonstrated for the sample of 203 cooperative banks in Bavaria that the total capital ratio adjusted for hidden liabilities differs significantly from the total capital ratio published by the banks in the 2022 fiscal year. For this purpose, a t-test for paired values (dependent t-test) was calculated in the SPSS statistics program. The first requirement of the normal distribution assumption of the data had to be refuted using the Shapiro-Wilk test ($p < .05$). The corresponding histograms in the SPSS program also confirm the situation. Although this t-test with a sample size of $n = 203$ is robust against non-normally distributed data structures, the non-parametric alternative to the t-test is later calculated using the Wilcoxon test to validate the results. The Wilcoxon test is often used in statistics when one or more requirements of the t-test are not met. The absence of outliers, a further requirement of the t-test, could also not be confirmed by examining the graphical box plots. For two cooperative banks (No. 88 and No. 149), strong outliers in the total capital ratio can be observed in the boxplot.

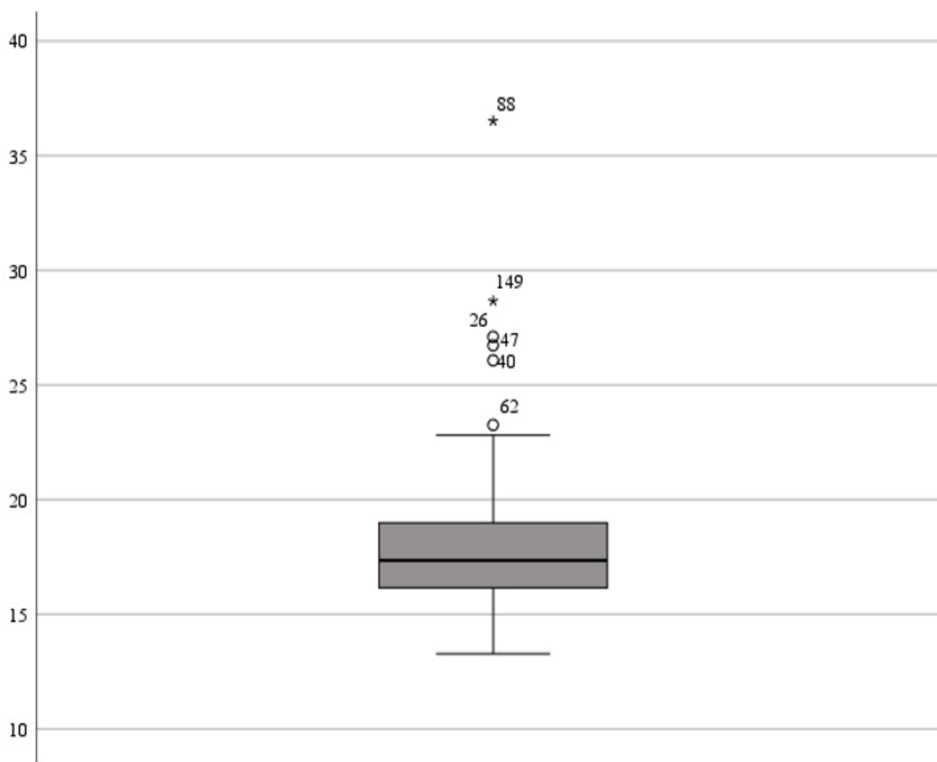

Figure 2. Boxplot total capital ratio 2022

Only one outlier (bank no. 88) can be observed in the boxplot of the adjusted total capital ratio.

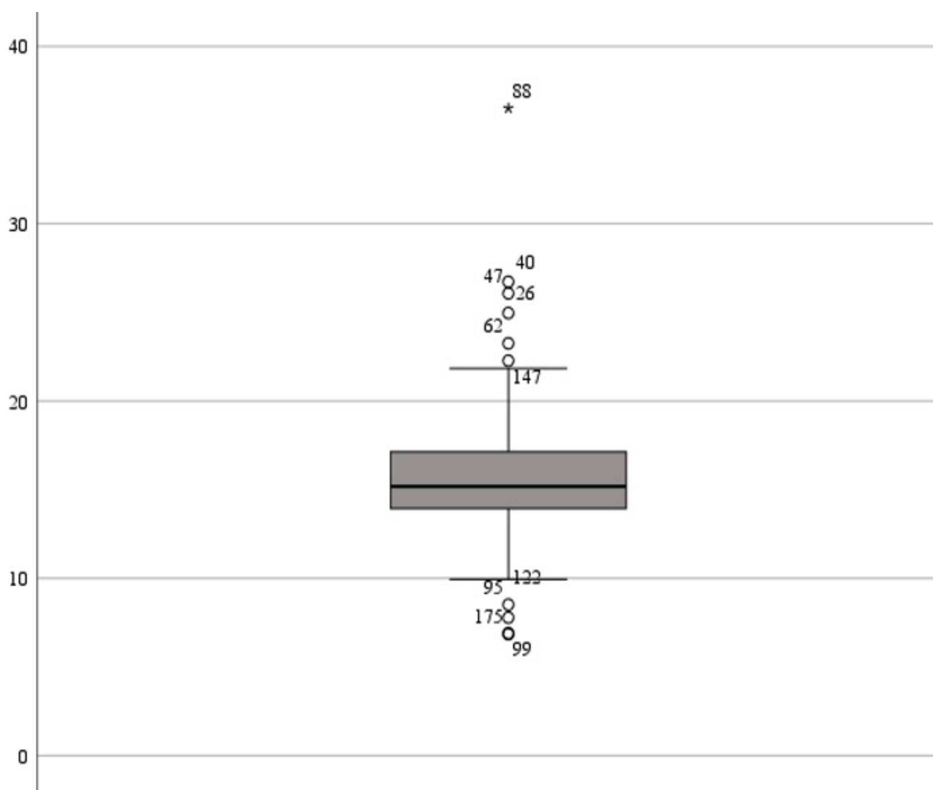

Figure 3. Boxplot adjusted total capital ratio 2022

The outliers listed can distort the mean value and thus the result of the t-test for paired values. For this reason, the two outlier banks No. 88 and No. 149 were excluded from the calculation of the t-test and the sample in this case was thus reduced to $N = 201$. The absence of outliers can therefore be confirmed after this step. The final requirement that both variables are metrically scaled can be confirmed here.

Using the t-test it can now be proven that there is a significant difference between the published total capital ratio and the adjusted total capital ratio for the 2022 fiscal year with $t\ (200) = 14{,}745$, $p < .001$ and $d = 1{,}040$. The significant difference between the two values is mainly confirmed by the two-tailed $p < .001$.

As part of the descriptive parameters, it should also be noted that the total capital ratio ($M = 17.66$, $SD = 2.39$) is significantly higher than the adjusted total capital ratio ($M = 15.55$, $SD = 2.89$).

Finally, the application of the Wilcoxon test for paired values, which represents a non-parametric alternative without a normal distribution assumption and was additionally calculated for validation, could further confirm that there was a significant difference between the total capital ratio and the adjusted total capital ratio for the 2022 financial year with e.g = -11.175 and $p < .001$.

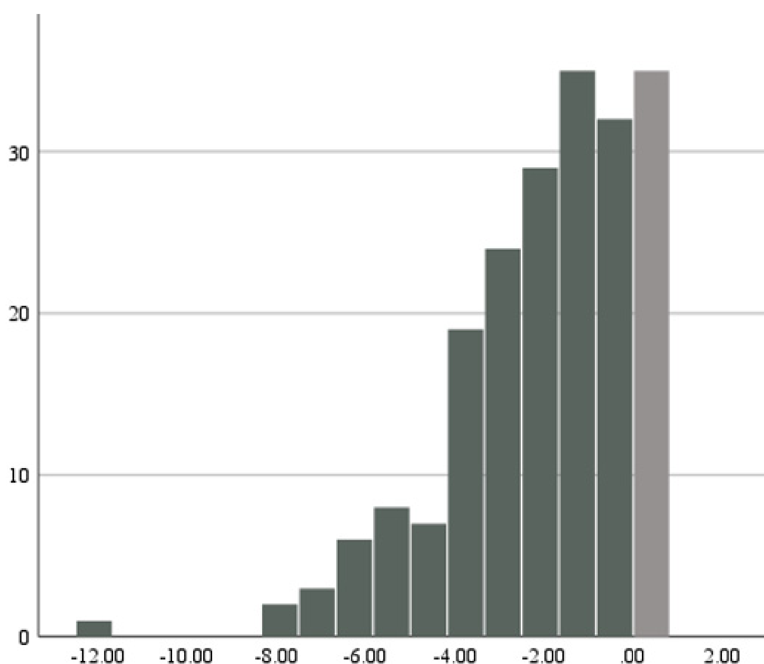

Figure 4. Wilcoxon test

Negative differences were observed at 166 banks (82.59%). Here, the published total capital ratio in the 2022 financial year was higher than the adjusted total capital ratio. Furthermore, no bank could be observed with positive differences, in which case the reverse situation would have been relevant. There are only 35 banks in which the two observation variables hardly differ from each other. Only for this small part of the sample do the disclosure reports reflect the actual situation of the banks.

Conclusion

In summary, it can be stated here that all 203 cooperative banks in Bavaria complied with the legal disclosure obligation for the 2022 fiscal year and the necessary variables were able to be evaluated accordingly by the author. It was

proven that the published equity and equity ratios were significantly higher than the equity or equity ratios adjusted for hidden liabilities. At Silicon Valley Bank, the hidden liabilities materialized within a few days in the 2022/2023 fiscal year and had to be recorded in the form of losses. The losses could not be absorbed by the bank's existing equity capital. As a result, the bank in question had to file for bankruptcy within a few days. From the author's point of view, the legal basis for disclosure must be adjusted so that the hidden liabilities in the bank books are shown in the legal disclosure. This is the only way financial market participants and stakeholders can derive the right control impulses from the legally required disclosure. Within a few days, hidden liabilities can lead to actual losses or even bankruptcies. The Silicon Valley Bank undoubtedly confirmed this effect in 2022.

Notes

[1] Federal Ministry of Finance. (2023) Basel II [Online]. Available at https://www.bundesfinanzministerium.de/Content/DE/Glossareintraege/B/001_Basel_II.html?view=renderHelp (Accessed on December 15, 2023).

[2] German Bundesbank. (2023) Monthly Report April 2001: The new Basel Equity Accord (Basel II) [Online]. Available at https://www.bundesbank.de/resource/blob/691922/4c4a7f4ba2cf4427784de7a8543875cc/mL/2001-04-basel-data.pdf (Accessed on December 15, 2023).

[3] German Bundesbank. (2023) Disclosure [Online]. Available at https://www.bundesbank.de/de/ Tasks/bankensupervised/einzelaspekte/offenlegen/offenlegen-598510 (accessed on December 15, 2023).

[4] German Bundesbank. (2023) Standing Facilities [Online]. Available at https://www.bundesbank.de/de/fragen/geldpolitik/staendige-fazilitaeten/staendige-fazilitaeten-602400 (accessed on December 29, 2023).

References

1. **Panagopoulos**, Yannis. From Basel I to Basel III in the banking system: A brief theoretical presentation, Greek Economic Outlook, Band 53, 2024, Seiten 54 – 78.
2. **Metrick**, Andrew. The Failure of Silicon Valley Bank and the Panic of 2023, Journal of Economic Perspektives, Band 1, 2024, Seiten 133 – 152.

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