ОБЩЕСТВЕНИ КОМУНИКАЦИИ И ИНФОРМАЦИОННИ НАУКИ
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TRANSPARENCY IN THE COMMUNICATION OF THE BANKING REGULATORY CAPITAL REQUIREMENTS AND EQUITY AT SPARDA/ PSD/ VOLKS/ AND RAIFFEISEN BANKS IN BAVARIA

Bernhard Benz
University of Library Studies and Information Technologies

Abstract: *In the context of the empirical study, the disclosure reports on equity and capital requirements of all Bavarian cooperative banks for the fiscal year 2022 are extracted, analyzed, and presented in a condensed form through quantitative data analysis. The standardized disclosure reports in tabular form serve as the data basis and are publicly available on the homepage of the respective credit institution. The condensed presentation of results enables transparent communication of capital requirements and capital despite the large number of cooperative banks in Bavaria. The sometimes enormous ranges in statutory capital requirements and total capital ratios are particularly emphasized. Due to empirically documented and not insignificant ranges in both capital requirements and capital, the significance of already published average values from overarching banking associations is not representative. Despite very similar business models, the capital requirements and especially the total capital ratios of individual cooperative banks in Bavaria differ significantly.*
Keywords: *Disclosure, Capital Requirements, Equity, Communication, Transparency*

INTRODUCTION

As of December 31, 2022, the federal state of Bavaria in the Federal Republic of Germany has a total of 203 banks that are part of the cooperative sector. Alongside PSD banks and four Sparda banks, a further 197 independent Volks and Raiffeisen banks act as financial service providers in the Free State of Bavaria. In addition to numerous online services, a broad branch network is still offered, especially by the Volks- and Raiffeisenbanks. For all three banking groups, the cooperative movement initiated by Messrs. Schulze-Delitzsch and Raiffeisen in the 1860s, with the numerous founding of self-help institutions in the form of commercial cooperatives and self-help institutions, was very formative and the starting signal for business activity that is still successful today (see DZ-Bank 2023). Although the majority of banks in the cooperative sector in Bavaria are among the “less significant institutions”, the ambitious regulatory capital requirements must always be met. Historically, the Basel Committee on Banking Supervision, which was launched by the G10 central banks in 1974, played a crucial role in the development of capital requirements for credit institutions.

The heads of the national central banks, who now make up the above-mentioned committee, meet regularly at the Bank for International Settlements and define standards for the national banking supervisory authorities (cf. Deutsche Bundesbank 2023a). This specialist article will first describe the historical development of regulatory capital requirements. Compliance with the previously defined requirements will then be analyzed based on the legally required disclosure reports for all Bavarian cooperative banks for the reporting date of December 31, 2022. In particular, the range of capital requirements and the range of capital ratios should be examined. By analyzing, then condensing and graphically displaying all the banks mentioned, a high level of transparency can be achieved in the communication of regulatory capital requirements and equity at cooperative banks in Bavaria. Due to the very high number of banks in Germany and Bavaria compared to other European countries, it is not possible to transparently communicate the range of regulatory capital requirements and capital resources before the extensive analysis. The banking associations responsible for the banking groups mentioned only communicate consolidated values and average values in their public relations work. With the analysis at the individual bank level, transparent communication regarding bandwidths can be ensured for the first time.

But now let’s turn to the historical development of bank regulatory capital requirements. The first international agreement regarding necessary capital requirements for credit institutions was passed in 1988 under the name Basel-I. The aim of Basel-I was to create internationally comparable and valid capital requirements for credit institutions. Since the regulations on capital requirements from Basel-I influenced the national legislation of over 100 countries worldwide, the pre-set goal of implementing widespread standards was achieved. The main component of the Basel-I regulations was the mandatory backing of loans granted with 8% of equity capital. For the capital requirements, the following four risk classes with standardized risk weights were defined according to Table 1 (cf. Hölscher 2016, 37):

Table 1. Basel-I Risk Classes

Risk classes	**Risk weight**	**Basel-I-Factor**	**Equity capital with a loan amount of 100,000 euros**
Government debtors	0%	8%	0 Euro
Loans to banks	20%	8%	1.600 Euro
Real estate loans	50%	8%	4.000 Euro
All other loans	100%	8%	8.000 Euro

A key criticism of the regulations from Basel-I was that regardless of the creditworthiness of a debtor, banks always had to hold the same amount of equity. For example, a cooperative bank had to maintain 4,000 euros in equity for the provision of a real estate loan secured by property in the form of a residential mortgage for a private customer amounting to 100,000 euros. The creditworthiness of the borrower, i.e., the ability of the debtor to repay the loan to the bank, did not play a role in the blanket equity requirement for credit institutions under the Basel-I regulations. This situation led to borrowers with a higher risk of default often not being adequately covered by equity, which was generally intended to absorb losses, by the bank. For this reason, a new draft for the equity requirement was presented by the Basel Committee in 1999 (cf. Everling et al. 2012, 4–8). After several years of discussion and consultation, the Basel-II framework for improved equity requirements was adopted in June 2004. A significant goal in introducing Basel-II or in revising Basel-I was the reduction of bankruptcies in credit institutions, and the further strengthening and standardization of the global financial system. The key innovations from Basel-II were the three interrelated pillars of minimum capital requirements, supervisory review process, and enhanced disclosure (cf. Federal Ministry of Finance 2023). Due to the limited scope of this article, the following discussion will focus solely on Pillar 1 in the form of regulatory capital requirements. The blanket credit risk weighting factor of 8% remained unchanged during the implementation of Basel-II. However, since Basel-II, the risk weights based on Basel-I have been dependent on the creditworthiness of the debtors in their respective exposure classes. The creditworthiness must be determined by a recognized external rating agency. In the following Table 2, the risk weights per rating and exposure class are shown (cf. Deutsche Bundesbank 2023b, 17–21):

Table 2. Risk Weights Basel-II

Rating/ Creditworthiness		**Banks**	**Non-banks**	**Loans under 1 million euro Creditworthiness**
AAA to AA-		20%	20%	75%
A+ to A-		50%	50%	75%
BBB+ to BBB-		100%	100%	75%
BB+ to BB-		100%	100%	75%
B+ to B-		100%	150%	75%
Under B-		150%	150%	75%
Without Rating		100%	100%	75%

The majority of financings by cooperative banks under the Basel-II regime fell into the 75% or 100% risk weight category according to Table 2. Private and corporate customer loans under 1 million euros per borrower were generally assigned a 75% risk weight and an equity factor of 8% under Basel-II. Private and corporate customer loans over 1 million euros per borrower were mostly assigned a 100% risk weight and the constant equity factor of 8%, as external ratings for private and corporate customers of a cooperative bank were rarely available. Thus, the line “Without rating” in the previous Table 2 is relevant for these cases. There were also exemptions for loans secured by real estate. These were to be assigned a 35% risk weight under Basel-II. For commercial real estate collateral, a higher risk weight of 50% was applicable. Even with these exemptions, all risk weights were, of course, to be supported by the constant equity factor of 8%. This factor of 8%, which had to be maintained in relation to the total risk amount, did not change from Basel-I to Basel-II. An increase in this factor was only implemented with Basel-III. The Basel-II framework was generally justified until 2008 when another global financial and economic crisis erupted. Due to this crisis, extensive improvements were once again to be implemented by the Basel Committee to further enhance the stability of the financial system. Key elements of the Basel-III framework, which became effective on January 1, 2013, included higher capital requirements and additional regulations for liquidity provision at credit institutions. The increased capital requirements were bindingly supplemented by additional buffers in the form of the capital conservation buffer and the countercyclical buffer (cf. Deutsche Bundesbank 2023 c. 1–18). For the fiscal year 2022 relevant to this article, the capital conservation buffer of 2.5% had to be fully complied with. The countercyclical buffer, capped at a maximum of 2.5%, was set by the Federal Financial Supervisory Authority for Germany at 0.75% on February 1, 2022 (cf. BaFin 2023).

According to the general decree on the quota of the domestic countercyclical capital buffer pursuant to § 10d of the Banking Act, the buffer of 0.75% was only mandatory to be supported with equity as of February 1, 2023, and is therefore not relevant for this article. Another relevant tightening from Basel-III, applicable for the reporting date of December 31, 2022, and thus for this article, arises from Pillar 2 with the SREP process. Here, the supervisory authority evaluates areas such as the viability of the business model, governance and risk management, capital adequacy, and liquidity. The process is initiated by the banking supervision at least every three years depending on the complexity and size of the credit institutions. With this additional requirement for capital adequacy, all risks not covered in Pillar 1 should be adequately supported with equity through Pillar 2. A significant driver for cooperative banks in Bavaria is interest rate risk in the investment portfolio. The SREP surcharge is generally capped at a maximum of 9.5% by the banking supervisory authority (cf. Strobel 2022). The following Table 3 illustrates exemplary the capital requirements for a Bavarian cooperative bank in the fiscal year 2022 under the regulatory framework of Basel-III:

Tabelle 3. Equity capital requirement under Basel-III in 2022

Equity capital requirement factor	8%	**Identical since Basel-I/II and III**
Capital Conservation Buffer	2,5%	**To be fully complied with since 2019**
Countercyclical Buffer	0%	**To be complied with at 0.75% starting February 2023.**
SREP-Surcharge	25%	**Bank-specific**
Total Capital Requirement	**13,0%**	**Increase by 62.5% compared to Basel-II**

In essence, it can be noted that credit risks under Basel-II have become significantly higher in terms of capital requirements since the introduction of Basel-III. While until Basel-II, 8.0% equity capital was sufficient for the total risk exposure of banks, as of 2022, the exemplary cooperative bank needs to hold 13.0% in equity capital. This represents a substantial increase of 62.5% compared to Basel-II. The basis for the 13.0% equity capital requirement factor is always the total risk exposure, which is to be annually disclosed in the respective regional bank's transparency report. By multiplying the total risk exposure by the total capital requirement, the minimum amount of equity capital that must be held in the respective cooperative bank is derived. The ranges of regulatory equity capital requirements and total capital ratios are extensively presented in this article. At the time of writing, the Basel Committee on Banking Supervision is once again reviewing the Basel-III regulations. The next framework, referred to as Basel-IV or Basel-III finalization, is expected to be implemented bindingly as of January 1, 2025. Key innovations in Basel-IV are rooted in adjustments to the credit risk standard approach, which serves as the basis for calculating capital requirements for credit risks. There are also expected to be numerous changes in the calculation of capital requirements for operational risks (cf. Giersch 2022). As this article pertains to the fiscal year 2022, detailed discussion of the new Basel-IV regulations, which are only to be complied with from 2025 onwards, is not provided.

RESEARCH METHODOLOGY

For the analysis of the ranges of equity capital requirements and equity ratios, only quantitative values were collected. All disclosure reports of the total of 203 cooperative banks in Bavaria were accessed online and subsequently analyzed. An evaluation and analysis were conducted for 100% of the defined population. Since equity and equity capital requirements have been required to be published on the homepage of each bank in standardized tabular form since Basel-II, the disclosure reports are audited by independent auditors, and an analysis was conducted for 100% of the defined population, a maximally representative result can be expected.

RESULTS

The results of the comprehensive data analysis, the graphical representation, and the condensation of the enormous amount of data are presented in the following Figures 1 and 2. From Figure 1, it can be observed that the highest regulatory capital requirement for cooperative banks in Bavaria is at 14.02% as of December 31, 2022. The minimum value is at 10.50%. This minimum value corresponds to the equity capital requirement factor of 8% plus the capital conservation buffer of 2.5%. The bank with the lowest capital requirement thus has no additional equity burden from the SREP process. The average total capital requirement of all banks in the sample is 11.93%. Despite the comparable business models of all Bavarian cooperative banks, the difference between the maximum and minimum values is over 3.5 percentage points. The distribution of total capital requirements is highly heterogeneous across all cooperative banks in Bavaria.

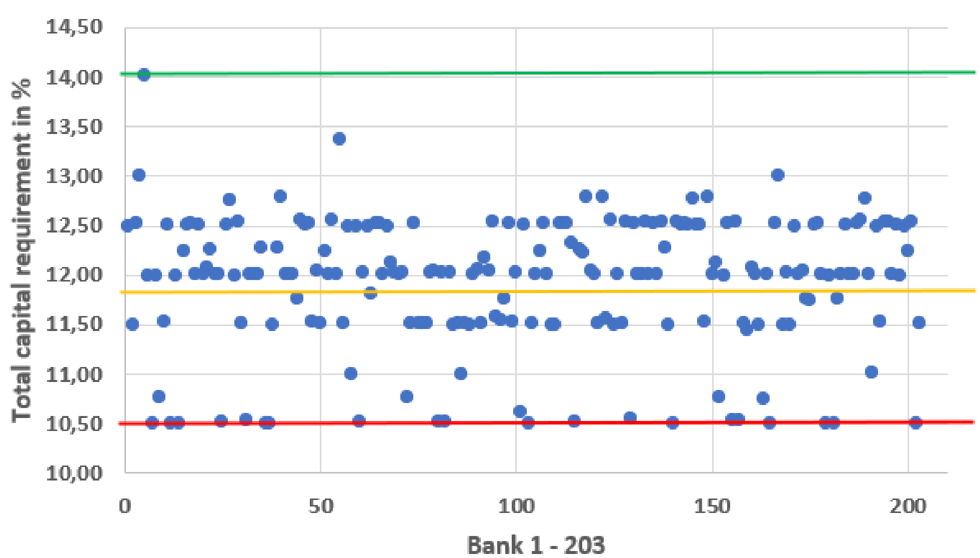

Fig. 1. Range of Total Capital Requirements 2022

The disparity in the total capital ratios among the individual regional banks is even more pronounced. The undisputed leader is a regional bank with a total capital ratio of over 36%. The minimum value reported as of December 31, 2022, is 13.28%. The difference between the maximum and minimum values is over 23 percentage points, indicating a significant spread. It is also noteworthy that the average values published by overarching banking associations do not allow for conclusions about individual banks. Due to the wide range, the published average values are neither representative nor meaningful.

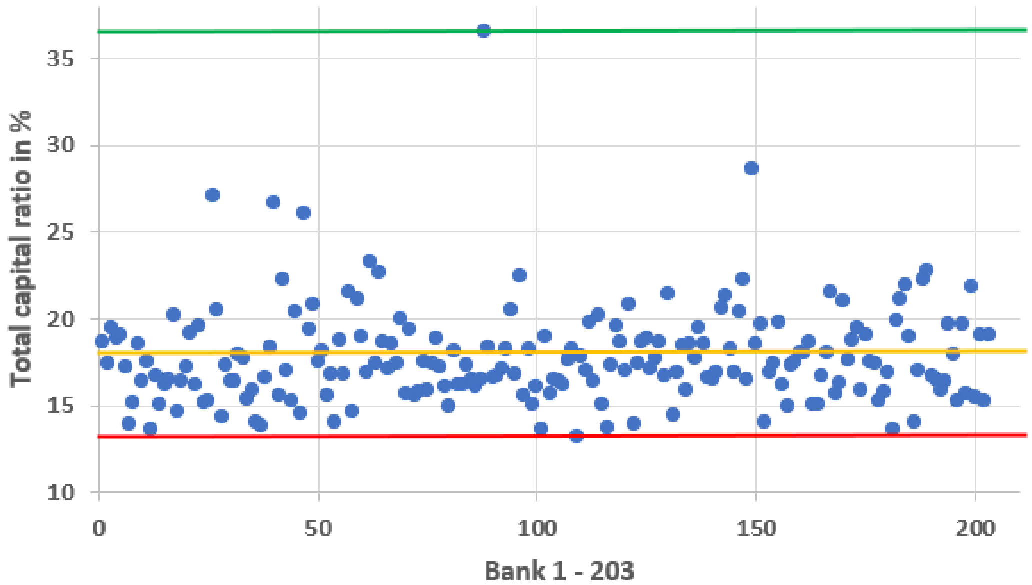

Fig. 2. Range of Total capital ratio 2022

CONCLUSION

Finally, it can be summed up that regulatory capital requirements have been steadily increasing for years. The disparity among Bavarian cooperative banks in terms of equity capital requirements and total capital ratios persists despite their comparable business models. Average values published by banking associations are therefore not representative for individual banks. Through extensive data analysis, transparent communication of the ranges of equity capital requirements and equity capital for cooperative banks in Bavaria as of December 31, 2022, was made possible. The bank-specific indicators can be accessed at any time on the homepage of the respective regional bank. Stakeholders of cooperative banks should always monitor the individual disclosures of each bank, and use average values from banking associations in decision-making only to a limited extent as part of their information management. The individual equity capital requirements and total capital ratios are good indicators of a regional bank's risk position and financial strength. With these metrics, sound information management for decision-making by stakeholders is possible.

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ПРОЗРАЧНОСТ ПРИ КОМУНИКАЦИЯТА НА РЕГУЛАТОРНИТЕ КАПИТАЛОВИ ИЗИСКВАНИЯ И СОБСТВЕНИТЕ СРЕДСТВА В ШПАРДА-/ ПСД-/ ФОЛКС-/ И РАЙФАЙЗЕНБАНК В БАВАРИЯ

Резюме: *Емпиричното изследване представя под формата на количествен анализ данни от докладите за оповестяване на капиталовите изисквания и собствените средства на всички баварски кооперативни банки за финансовата 2022 г. Стандартизираните в табличен вид доклади за оповестяване служат като база данни и са публично достъпни на интернет страниците на съответната кредитна институция. Обобщеното представяне на резултатите дава възможност за прозрачна комуникация на капиталовите изисквания и собствените средства въпреки големия брой кооперативни банки в Бавария. Особено правят впечатление понякога огромните диапазони в законовите изисквания за собствения капитал и коефициента на общия капитал. Поради емпирично доказаните немалки диапазони както за капиталовите изисквания, така и за собствените средства значимостта на вече публикуваните от банковите асоциации от по-високо ниво средни стойности не е представителна. Въпреки много сходния бизнес модел капиталовите изисквания и най-вече коефициентът на общия капитал на отделните кооперативни банки в Бавария се различават значително.*

Ключови думи: *оповестяване, изисквания за собствен капитал, собствен капитал, комуникация, прозрачност*

Бернхард Бенц, докторант
Университет по библиотекознание и информационни технологии
E-mail: bernhard.benz92@gmx.de