

Credits core?

Lending by local credit cooperatives in the Netherlands, c.1900-1920

Johan van Hall

6403050

j.vanhall@students.uu.nl

MA thesis (GKMV17023)

Lecturer: Dr. Christiaan J. van Bochove

Date: 1 July 2023

Name document: MA THESIS - Johan van Hall - 6403050

Abstract

The common view is that the emergence and growth of credit cooperatives in the Netherlands is a success story. The explanation hereof is debated still. This research examines four early established credit cooperatives with a focus on their primary aim of existence, that is their lending business. The research question is which mechanisms explain the lending activities and resulting loan portfolios of local credit cooperatives in the Netherlands, c.1900-1920. The early established local banks in Borne, Bornerbroek, Heeze, and Westerbork, located in three different geographical regions of the country, are used as case studies for this purpose.

This research is performed in two stages. Firstly, the developments of the portfolios of these banks are compared with those of all credit cooperatives in the Netherlands using the annual reports of the central cooperatives over the period. Secondly, of these four credit cooperatives the governance, loan portfolio, and performance thereof are examined in depth using the archives of these local banks as sources.

The central cooperatives, *Centrale Banken*, offered a foundational framework with the governance, products, accounting, and oversight for all their local banks. Intentionally, the local banks all operated within a certain bandwidth thereof. Reality was very different; the narrative of the early credit cooperatives in the Netherlands was marked by diversity. The main drivers for this divergence were first and foremost, the fully autonomous local credit cooperatives all implementing their own interpretation of the cooperative structure without their *Centrale Banken* in the position of correcting this. Secondly, the framework was incomplete which urged the banks' boards to make critical choices about credit- and risk management issues. Finally, the local credit demand varied considerably amongst the banks. This resulted in very differently sized loan portfolios with each very dissimilar characteristics.

Though all banks examined pursued their main reason for existence, the common view of the success of the early credit cooperatives in the Netherlands must be nuanced. It was not one narrative of steady and successful growth, but many and very different local tales.

Table of contents

Acknowledgements	4
Introduction	5
Method and sources	12
- Method	12
- Sources	13
Running a local credit cooperative	17
- Products and accounting	17
- Managing credit risk	18
Financial developments of the credit cooperatives, c.1900-1920	21
- Growth! Credit cooperatives in the Netherlands	21
- Four local banks compared	24
The loan portfolios of Heeze, Borne, Bornerbroek, and Westerbork	29
- Four banks and their loan portfolios	29
o Heeze	29
o Borne	36
o Bornerbroek	41
o Westerbork	47
- Four loan portfolios: one practice? A comparison	55
Conclusion	65
Appendices	69
- Financials credit cooperatives in the Netherlands, c.1900-1920	70
- Loan portfolios of Heeze, Borne, Bornerbroek, and Westerbork	74
Bibliography	89

Acknowledgements

(Not public)

1. Introduction

In the second half of the nineteenth century local rural credit cooperatives became successful in Germany. These low-cost institutions offered credits to local farmers in their communities. The first wave of cooperatives was after its founder, called Schulze-Delitzsch banks. These banks focused on urban artisans and shopkeepers, had shareholders and paid out dividends. Raiffeisen's first rural credit cooperatives were established on the same principles. Later he revised their design; the rural cooperatives were autonomous, retained their earnings, and thus would not pay dividends. Also, the members accepted an unlimited joint liability in case the cooperative ran into financial difficulties. Compared with conventional credit institutions they used their superior information position for granting credits and if needed, for the enforcement thereof.¹

Inspired by the success in Germany the introduction of credit cooperatives for financing the agriculture sector was discussed in the Netherlands towards the end of that century.² The access to credits for farmers and the costs thereof were perceived as a structural issue by the state committee for agriculture, *Landbouwcommissie*, of 1886. Many farmers had no other option than to use traders, local shopkeepers, or notaries for financing their businesses, often against very unfavourable conditions. Furthermore, new technological developments like artificial fertilizers offered opportunities for higher yields, however, required higher upfront investments.³ Therefore, the establishment of local credit cooperatives, *boerenleenbanken*, in the Netherlands seemed a promising

¹ Abhijit V. Banerjee, Timothy Besley, and Timothy W. Guinnane, 'The neighbor's keeper: the design of a credit cooperative with theory and a test', *The Quarterly Journal of Economics* 109 (1994) 2, 491-515, here 492; Maitreesh Ghatak and Timothy W. Guinnane, 'The economics of lending with joint liability: theory and practice' *Journal of Development Economics* 60 (1999), 195-228, here 197, 217, 231; Timothy W. Guinnane, 'Cooperatives as information machines: German rural credit cooperatives, 1883-1914', *The Journal of Economic History* 61 (2001) 2, 366-389, here 368-369, 386; Timothy W. Guinnane, 'The early German credit cooperatives and microfinance organizations today: similarities and differences', in: Beatriz Armendáriz and Marc Labie (eds), *The handbook of microfinance* (Singapore 2011) here 85.

² Joh. De Vries, *De Coöperatieve Raiffeisen- en Boerenleenbanken in Nederland 1948-1973, van exponent tot component* (Utrecht 1973) here 11.

³ Ph. C. M. van Campen, P. Hollenberg, and F. Kriellaars, *Landbouw en landbouwcrediet 1891-1948. Vijftig jaar geschiedenis van de Coöperatieve Centrale Boerenleenbank Eindhoven* (Eindhoven 1948) here 12-15; Ronald Rommes, *Voor en door boeren? De opkomst van het coöperatieve in de Nederlandse landbouw voor de Tweede Wereldoorlog* (Hilversum 2014) here 241, 248-251; Keetie Sluyterman, et al., *Het coöperatieve alternatief. Honderd jaar Rabobank 1898-1998* (Den Haag 1998) here 22.

opportunity to many at that time. This led to the first credit cooperative inspired on the revised Raiffeisen-model in 1895 or 1896.⁴ In the annual report of the *Coöperatieve Centrale Boerenleenbank*, CCB of 1901 the basic principle of the unlimited liability was praised as this required from all members a mutual interest in each other's financial position, behaviour, and last but not least, religious notions. This encouraged an explicit purpose of the cooperative next to promoting credits to farmers, that is contributing to the improvement of the members' societal life. Instead of share capital and dividends, savings as funding source, the low-cost operations, and the unlimited joint liability were the pillars on which Christian charity in society was to be built in practice.⁵

Since then, many credit cooperatives were established with the aim to offer farmers credit for securing and growing their businesses. These local credit cooperatives were all based on these Raiffeisen-principles and successfully funded themselves by offering attractive interest rates on deposits to members and non-members of the cooperative. They affiliated them with and owned central cooperatives, so-called *Centrale Banken*, either the *Coöperatieve Centrale Boerenleenbank* (CCB) in Eindhoven or the *Coöperatieve Centrale Raiffeisen-Bank* (CCRB) in Utrecht. These central cooperatives firstly, functioned as the banker's bank, used by the local banks in case their savings were insufficient for their lending activities, secondly, provided education and knowledge networks, and finally, audited the local banks testing the adherence to the jointly agreed principles and procedures. In 1948, celebrating their fiftieth anniversary, the chair of the supervisory board of the CCRB concluded his speech with 'the cooperative was, is and will remain a blessing for the rural parts of the country; not least the cooperative credit'.⁶ Then, maybe his statement was justified. Whether it was true in the early years of their existence, is debated still.

The cooperative movement in the Netherlands of which credit cooperatives were the final chapter, received comprehensive and also, international attention in the last

⁴ Joke Mooij, *Gebouwd op vertrouwen. 120 jaar Rabobank* (Utrecht 2016) here 41; Joost Jonker, *Welbegrepen eigenbelang. Ontstaan en functie van boerenleenbanken in Noord-Brabant, 1900-1920* (Doctoraalscriptie, Amsterdam 1987) here 55; De Vries, *De Coöperatieve Raiffeisen- en Boerenleenbanken in Nederland*, 11-12.

⁵ *Coöperatieve Centrale Boerenleenbank* (CCB) Annual report 1901, 21 (Historical Archives Rabobank (HAR), <https://bedrijfshistorie.rabobank.com/bronnen-artikelen/jaarverslagen-article>).

⁶ Sluyterman, et al., *Het coöperatieve alternatief*, 18.

decades. In the literature three categories can be distinguished which discuss very different perspectives on the emergence of credit cooperatives in the Netherlands. Firstly, from the nineties of last century Guinnane as a pioneer in this field, sometimes with other scholars, explained why credit cooperatives in general and more specifically in Germany, became a success. The general finding was that the success was driven by the superior information position the cooperatives had. They simply made optimal use of their local in-depth knowledge to evaluate and monitor their credit risk.⁷ Additionally, other measures, mostly legal, but also, social - were used to control their risks. Firstly, co-signing of loans by signees to be accepted as trustworthy by the bank, was used as an effective additional collateral securing repayment of the loan in the case of defaulting borrowers.⁸ Secondly, the credit cooperatives had strong enforcement options against unable or unwilling defaulting borrowers. The close local communities offered best circumstances to monitor behaviour of borrowers permanently. Social sanctions, in the ultimate case exclusion of the community, were an effective enforcement threat.⁹ Thirdly, all members of the credit cooperative had accepted an unlimited joint liability. This implied that in case the borrower and the co-signees were unable to pay, the credit cooperative would collect the outstanding rest sum among all members.¹⁰ Finally, the credit cooperatives in Germany – and later in the Netherlands as well – operated with very low-costs. Only the cashier, *kassier*, was paid, and he often used his home for meeting clients.¹¹ As a consequence, the credit cooperatives offered lower credit rates

⁷ Banerjee, Besley, and Guinnane, 'The neighbor's keeper', 492; Ghatak and Guinnane, 'The economics of lending with joint liability', 214; Guinnane, 'Cooperatives as information machines', 366; Marvin Suesse and Nikolaus Wolf, 'Rural transformation, inequality, and the origins of microfinance', *Journal of Development Economics* 143 (2020), 1-20, here 2.

⁸ Banerjee, Besley, and Guinnane, 'The neighbor's keeper', 492; Amaury de Vicq and Christiaan van Bochove, 'Historical diversity in credit intermediation: cosignatory lending institutions in Europe and North America, 1700s-1900s', *Social Science History* 47 (2023) 1, 95-119, here 96-101; Ghatak and Guinnane, 'The economics of lending with joint liability', 214; Guinnane, 'The early German credit cooperatives', 87.

⁹ Ghatak and Guinnane, 'The economics of lending with joint liability', 197, 209; Guinnane, 'Cooperatives as information machines', 370-371.

¹⁰ Ghatak and Guinnane, 'The economics of lending with joint liability', 214; Guinnane, 'The early German credit cooperatives', 80-83.

¹¹ Guinnane, 'Cooperatives as information machines', 375.

than competitors could do.¹² Colvin, the leading scholar of the last decade, with others, challenged the view of many business historians discussed below. He revisited their 'idealistic view' by explaining the success of the credit cooperatives because they operated in niche markets with only few competitors.¹³ Subscribing the arguments discussed before, he added the following success factors. The emergence of the local banks was driven by firstly, high savings rates facilitating a stable source of funding, secondly, close integration vertically with their central credit cooperatives, *Centrale Banken*, and other cooperatives horizontally, and finally and most importantly, the pillarization of the Netherlands with the catholic clergy very active in establishing local banks.¹⁴

Secondly, in the literature describing the general history of the financial sector in the Netherlands Jonker labelled the emergence of cooperative banks financing farmers as the 'one truly important innovation' in the period 1814-1914.¹⁵ Remarkably, he only spent a couple of paragraphs on this new development and demonstrated that in 1913 the size of these cooperative banks was still modest compared with the traditional commercial banks.¹⁶ Van Zanden, Rommes, and Jonker focused on the emergence and the success of credit cooperatives in the Netherlands. They all positioned their conclusions within the agricultural developments of the Netherlands of the late nineteenth and the early twentieth century. They nuanced the common view among business historians discussed below that the need for credit to farmers was the main reason for the emergence of the credit cooperatives. In fact, the need for credit was

¹² Ibid., 386.

¹³ Christopher L. Colvin and Eoin McLaughlin, 'Raiffeisenism abroad: why did German cooperative banking fail in Ireland but prosper in the Netherlands?', *The Economic History Review*, 67 (2014) 2, 492-516, here 492, 499.

¹⁴ Colvin and McLaughlin, 'Raiffeisenism abroad', 494; Christopher L. Colvin, Stuart Henderson, and John D. Turner, 'The origins of the (cooperative) species: Raiffeisen banking in the Netherlands, 1898-1909', *European Review of Economic History* 24 (2020) 4, 749-782, here 750-751, 770-771.

¹⁵ Joost Jonker, 'The alternative road to modernity: banking and currency, 1814-1914', in: Marjolein 't Hart, Joost Jonker, and Jan Luiten van Zanden (eds), *A financial history of The Netherlands* (Cambridge 2010) here 120.

¹⁶ Jonker, 'The alternative road to modernity: banking and currency', 119, 121.

limited and if needed, for financing working capital like cattle, fodder, and fertilizer.¹⁷ All local banks were very successful in attracting savings, also from non-members, and the banks enjoyed a large and growing savings surplus. Jonker even added that the local banks in the south of the Netherlands should be characterised as savings banks.¹⁸ Except for Jonker who diligently examined two local banks, they did not include focused research on the lending activities of local cooperative banks.¹⁹

The third category of literature is written by business historians like De Vries, Sluyterman, Mooij, and Brusse. Their professional narrative is founded on the farmer's need for access to credit against fair market conditions after the agricultural crisis at the end of the nineteenth century and higher investments required for effective use of new technologies to improve yields.²⁰ A subcategory hereof are the attractively designed and illustrated books which described topics such as the founding members, the economic and social communities, the region with its agricultural sectors, the banks' branches, and the changing technology over a longer time period. Some quantitative information underpinning the positive developments of the bank was presented as well. Van den Heuvel as former manager of the local bank in Heeze shared an anecdotal overview of his bank, also in its early years. With many details he, also, presented a number of examples of early loans granted.²¹ As these books were the proud token of the banks'

¹⁷ Jonker, *Welbegrepen eigenbelang*, 102; Rommes, *Voor en door boeren?*, 274; Jan Luiten van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, 1800-1914* (Wageningen 1985) here 280-281; Jan Luiten van Zanden, 'The first green revolution: the growth of production and productivity in European agriculture, 1870-1914', *The Economic History Review* 44 (1991) 2, 215-239, here 216, 224, 232-234.

¹⁸ Jonker, *Welbegrepen eigenbelang*, 4, 19-20.

¹⁹ *Ibid.*, 61-76.

²⁰ Paul Brusse, *Leven en werken in de Lingestreek. De ontwikkeling van het platteland in een verstedelijkt gebied, 1850-2000* (Utrecht 2002) here 48-82; Paul Brusse, *De dynamische regio. Economie, overheid en ondernemerschap in West-Brabant vanaf 1850* (Utrecht 2008) here 158; Mooij, *Gebouwd op vertrouwen*, 10-11; Joh. Buursink, *Het boek van de Lonneker landbouw* (Enschede 1956) here 111-120; De Vries, *De Coöperatieve Raiffeisen- en Boerenleenbanken in Nederland*, 11-12; Sluyterman, et al., *Het coöperatieve alternatief*, 20; Staatscommissie voor de landbouw, *Rapport betreffende het landbouwcrediet in Nederland* ('s Gravenhage 1911) here 6-13; Aad van Holstein, *Koffie met gebak en een sigaar. 100 jaar Rabobank Midden-Westland* (De Lier 1995) here 1-183.

²¹ P.F. van den Heuvel, *Heeze en zijn Rabobank, 1897-1994* (Geldrop-Heeze-Sterksel 1996) here 50-52, 55-57.

successes, and were written for a wide audience of clients, notables in the region, and other colleague cooperative banks, the focus was on growth and positive achievements. The jubilee books of the central cooperative banks of 1948 by Van Campen and Weststrate are the most visible signs hereof.²² This also implies that the struggles, disappointments or even failures are virtually not present in this literature.

In sum, the first category of the literature seeks the success of credit cooperatives in the Netherlands in the institutional attributes of cooperatives positively exploiting the strong local social capital for selection of members and subsequently, enforcement of their loans. The second category describes the emergence of the credit cooperatives as the final stage of the rise of the cooperative movement in the Netherlands. The third category explains the success by the local accessible and low-cost fulfilment of farmers' credit needs for financing increasing investments and replacing usury practices. The explanation for the successful emergence of the credit cooperative banks in their early years is therefore, debated still. As said, remarkably, except for Jonker thorough research focusing on the core of their *raison d'être*, that is granting credits to their members, is lacking.

To fill this gap this research focuses on the activities of the credit cooperatives with a focus on their primary aim of existence, that is their lending business. In this sense, a contribution is made to the cooperative literature by adding perspectives and potentially new insights. Also, the current business history of cooperative banks in the Netherlands will be complemented with an in-depth case study of a small number of early established banks focused on their lending activities. The research question is therefore, which mechanisms explain the lending activities and resulting loan portfolios of local credit cooperatives in the Netherlands, c.1900-1920. The early established local banks in Borne, Bornerbroek, Heeze, and Westerbork, located in three different geographical regions of the country, will be used as case studies for this research. The start of the period is grounded with the establishment of the first local credit cooperatives around the turn of the twentieth century and the end of the period with the end of the high-growth phase thereof. Also, as Jonker considered the same period, my conclusions complement and potentially, contrast his results.

²² Van Campen, Hollenberg, and Kriellaars, *Landbouw en landbouwcrediet 1891-1948*; C. Weststrate and Th. J. Visser, *Gedenkboek van de Coöperatieve Centrale Raiffeisen-Bank* (Utrecht 1948).

The following sub-questions will be examined. Firstly, as there still is a debate about the size of the lending activities the first sub-question focuses on whether the four local banks examined, after an initial and necessary phase of acquiring funds, actively pursued their *raison d'être*, that is lending to farmers and their supporting organisations? So, did the banks actually do where they were established for? Secondly, the common view is that the growth of credit cooperatives in the Netherlands is a success story. In practice, the developments of local banks and their lending portfolios varied. The second sub-question focuses on examining these differences and seeks an explanation why this was the case? Was this a consequence of their individual risk appetites or were rather the local circumstances of their members the differentiator resulting in a higher or lower need for credit? So, is the emergence of the local credit cooperatives in the Netherlands one narrative or maybe many, with many different nuances?

The outline of this thesis is as follows. Firstly, the method and sources used will be described. Secondly, the designed controls to manage the risks of running a local credit cooperative, and more specifically, to manage its credit risks will be outlined. Thirdly, an evaluation of the developments of the lending portfolios of all credit cooperatives and the four local banks, will be presented resulting in an assessment whether these four banks were average credit cooperatives or outliers. Fourthly, after an introduction of the local communities the banks operated in, the lending activities of the four local banks will be described in separate sections. Subsequently, a comparison between the four will be offered. Finally, with reference to the research question and sub-questions concluding remarks will be made.

2. Method and sources

2.1. Method

This research will be performed in two stages: an overall analysis of the developments of the lending portfolios of all credit cooperatives (so-called level 1 analysis), and an in-depth study of four local credit cooperatives (so-called level 2 analysis).

The main method for the level 1 analysis is an evaluation of the developments of the lending portfolios of all credit cooperatives in the Netherlands. Three average types of local cooperative banks will be presented, for the Netherlands, for the CCB, and for the CCRB. This level 1 is needed to position the four local banks researched in detail in level 2 within these general developments. More specifically, whether these local banks researched in level 2 were an average or outlier bank, and if so, in which aspects. The results hereof position and colour the findings from the following step. This research is performed by drafting a for the period multilevel overview of the key-data for the four local banks examined, the CCB, CCRB and the Netherlands as a whole. To further analyse the data averages, ratios, and percentages are calculated to determine trends and possible exceptions.²³ All amounts are presented in nominal values, firstly, to compare with the literature also not adjusting for inflation, secondly, as loans were granted in nominal values to maintain the perspective between individual client transactions and the banking accounts, and finally, the banks with their low equity had a natural hedge against inflation risk as both sides of the balance sheet, loans and deposits, were equally affected.

The first step in the level 2 analysis is to present all four local banks in a case-study through a narrative including quantitative data. The following variables have been selected for this research. Firstly, the governance of the credit cooperative as the management bodies thereof were in the decisive position of approving or rejecting credit applications and subsequently, deciding on the enforcement strategies for defaulting borrowers. Therefore, these bodies had a material influence on the second and third variable, these were the resulting development of the loan portfolio per bank and the performance thereof. By researching more in depth, the development of the loan portfolio per bank over time the intent of financing farmers and their supporting

²³ Appendix 1 presents an integral overview of the data.

organisations can be validated. Furthermore, the effectiveness of the social capital of the cooperative will be evaluated by researching the performance of the loan portfolio per bank and the enforcement strategies for non-performing loans.

More specifically, for this purpose, firstly, the *governance of the credit cooperative* will be examined. Focus will be on the roles and responsibilities of the members, the general assembly, and the management – and supervisory board. More specifically, for the lending activities attention will be paid to the mandates of management bodies approving loans and the existence of formal loan policies or risk appetite statements. Also, part of this credit approval process is whether the unlimited joint liability of all members was a key-factor in the evaluation of loan applications or not. Secondly, the *development in the loan portfolio* per bank will be researched. The analysis will contain the volume of credits granted over the years, types of loan products, size of the loans, conditions (duration, interest rates, types of collateral), and purposes of the loans. Thirdly, the *performance of the loan portfolio* per bank will be evaluated. This analysis will include an evaluation of non-performing loans over the period and if applicable, the enforcement thereof. Furthermore, if any, specific credit policies for non-performing loans will be described. By examining the sources described below firstly, detailed tables are drafted showing the lending activities and loan portfolios of the banks over the period, and secondly, narratives per banks are created.²⁴ Subsequently and finally, a comparison with their similarities and differences between these four banks will be presented. Also, as Jonker selected two banks in the southern part of the country, the conclusions from this research will be mirrored with his.

2.2. Sources

As sources for the level 1 analysis will be used the annual reports of the two central cooperatives, *Centrale Banken* (CCB and CCRB) until 1920; in appendices the key-figures of their affiliated local banks were included. The annual accounts were audited by professional external auditors, the results thereof presented in the annual report and discussed in the general assemblies of the central cooperatives.²⁵ Therefore, these reports are considered as a reliable basis for my research.

²⁴ Appendix 2 presents an integral overview of the data.

²⁵ Audit opinions in the annual reports of CCB and CCRB

(<https://bedrijfshistorie.rabobank.com/bronnen-artikelen/jaarverslagen-article>).

As sources for the level 2 analysis, the in-depth analysis of the developments in the local banks, the archives of these local banks will be used. Essential documents for the purpose of my research are firstly, the minutes of the management board, *Bestuur*, which in practice discussed and decided on loan applications, the supervisory board, *Raad van Toezicht*, which authorised loans above the threshold the general assembly had set for the management board, and the annual general assembly of all members of the credit cooperative, *Algemeene Vergadering*. Depending on the frequency of the meetings and the number of loan applications discussed in a meeting, over the research period these records contain hundreds of handwritten pages per bank.

Secondly, the ledgers contain essential information about the loan portfolio of the banks. When the loan was approved and paid out an entry in these ledgers was made. For every loan two pages were reserved for booking the instalments and interest paid. The header contained the name of the borrower, *schuldenaar*, his place of residence, the names of his co-signee(s) and their places of residence, the principal amount, interest rate, and in case of a fixed term loan the amortisation schedule of the loan. In case of a mortgage the word *hypotheek* was added after the principal amount or on the line where the names of the co-signees were filled in. If a deferral of payment was authorised by the management board, the new amortisation schedule was written in the header.²⁶ The size of these sources considerably varies per bank depending on the number of loans the banks managed in their portfolio.

Thirdly, the annual audit reports, *Inspectierapporten*, are useful sources as well. These concise reports contained the auditors' opinions and if applicable, recommendations about a number of predefined items testing the adherence of the local banks with the detailed instructions.²⁷ Finally, the specific instructions in the CCB's *Meededelingen* and CCRB's *Raiffeisen-Bode* will be used. Both publications were used for practical education (for example interest calculation) and instructions (for example

²⁶ For example Borne, General ledger 2, 17 May 1920 (HAR - *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13, archive numbers 106-109).

²⁷ For example Borne, Audit reports, *Inspectierapporten* (archive number 137).

signing of contracts by illiterate clients).²⁸ These publications contained several hundreds of pages each, however, only parts thereof are relevant for my research.

With the oversight by the auditors of the *Centrale Banken*, the sources used represent the true and fair view of the banking activities performed by these local banks, and therefore, offer a reliable basis for this research.

The primary criteria used for selecting the local banks are, firstly, a distribution over the two central cooperatives as they possibly used different credit policies in practice. Secondly, the local banks selected had to operate in different geographical areas of the country as local (agricultural) conditions may have led to different lending practices and portfolios. Thirdly, the banks had to be established in 1915 latest, to have sufficient sources available for this research. As secondary criterium, obviously, the archives of the original local credit cooperative banks and the central cooperatives should give access to the critical sources described. These archives owned by the legal successor of these banks, the current Rabobank, however, create some limitations in the selection of the specific local banks. Not of all early established banks the archives are available still. Also, from the available archives, in some cases not all critical sources needed still exist or are only available for too limited part of the research period.

The possible banks for this research have been discussed with the archivist of the Historical Archives of Rabobank (HAR). Particularly, the combination of both management board minutes and the ledgers are available for a limited number of banks only. This constraint and the primary selection criteria described has led to the following framework and selection of local banks, including their year of establishment.

	Location in country	
	North	South
Central cooperative		
CCB, Eindhoven	Bornerbroek (1913)	Heeze (1897)
CCRB, Utrecht	Westerbork (1912) Borne (1904)	

²⁸ *Meededelingen*, nr. 3, April 1908; nr. 8, December 1911; nr. 22, June 1914; nr. 27, May 1915; nr. 30, February 1916 (HAR – Central library); *Raiffeisen-Bode*, nr. 5, April 1914; nr. 6, March 1915; nr. 4, October 1919 (HAR – Central library).

Not surprisingly, all selected banks, of which their communities will be introduced in section 5, were in small, rural dominated areas, the breeding ground of the early established credit cooperatives. With these banks, the first primary criterium, balance between the two central cooperatives, is fully met. For the geographical spread, the second criterium, concessions must be accepted as unfortunately, of the local CCRB-banks in the southern part of the country no archives are available containing the critical sources needed for this research. All banks were established before 1915, so satisfying the third criterium. As in several locations as well the CCB as the CCRB had affiliated local banks, Borne and Bornerbroek have been selected to examine this aspect in more detail. In sum, with the criteria used only these banks are despite the compromises also, the optimal selection for this research.

The table below presents an overview of the available sources used.

Sources	Borne	Bornerbroek	Heeze	Westerbork
Establishment of the bank			177-178	1
Management board: minutes		162	190 (till 1916)	5
Supervisory board: minutes		162	191-192	5
General assembly: minutes		172	214	137
Ledger 2: fixed term loans	106-109	184	236-238	162-164 (from 1915)
Ledger 3: current account loans	119-121	193	253-254	
Audit reports	137	E1_083	269	196 (1912-1914)

Table 1 – reference of sources from Historical Archives of Rabobank (HAR):

- Borne: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13;
- Bornerbroek: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13; audit reports from archive *Coöperatieve Centrale Boerenleenbank*;
- Heeze: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Dommelseek*, RABO-2.09;
- Westerbork: *Inventaris van het archief van Rabobank Westerbork*, RABO-2.06.

The numbers in the table refer to the archive numbers within these local bank archives. If no years are added between brackets the sources cover the whole research period.

In sum, despite some compromises made, this selection of local banks offers a sufficient basis for this research. As a first step the challenges of running a local bank will be described now.

3. Running a local credit cooperative

Establishing a local credit cooperative already required many activities from taking the initiative, finding supporters, recruiting the future boards, to actually officially forming it. These persons were all unexperienced bankers and the subsequent running of their bank was a challenge. The originators of the movement for establishing these credit cooperatives obviously were aware of that and they offered these local non-professionals a concise set of tools for controlling the risks of their banks.

3.1 Products and accounting

The framework was based on two pillars, that is a limited number of simple banking products and consequently, a straightforward instruction for accounting the financial transactions of the bank.

The banks offered three products only. Firstly, members and non-members of the cooperative could deposit their savings at the banks against a competitive interest rate. The most popular savings account offered full flexibility to withdraw the deposited sums at any time the client wished to do so. The client could also opt for slightly higher rates if he would accept a notice of six or twelve months. Secondly, lending was possible by either a fixed term loan, *voorschot*, in which a redemption scheme was agreed between the client and the bank, or a current account loan, *lopende rekening*, in which a credit or overdraft limit was agreed, offering the client more flexibility.

For the proper accounting of all banking transactions and controlling the risks thereof internal controls were implemented at the local bank level and controls performed by the *Centrale Banken*. Both central cooperatives, tasked with among others the oversight over their affiliated member banks, issued very similar detailed instructions how to run their banks. In regularly updated accounting manuals, *Handleiding voor het beheer en de boekhouding* (CCB) and *Modellen voor de boekhouding* (CCRB), in around 60 pages the standardised forms and procedures were described and with examples illustrated.²⁹ The banks' operations were to be accounted in four prescribed ledgers, large books on folio format. These were the daily ledger, *dagboek*, for

²⁹ CCB, *Handleiding voor het beheer en de boekhouding der Boerenleenbanken door Georgius*, second improved edition, 1902 (HAR-Coöperatieve Centrale Boerenleenbank, archive number E68_010); CCRB, C.F.G.W. van der Hurk, *Handleiding en modellen voor de administratie en boekhouding van de banken*

all incoming and outgoing transactions, and three ledgers for the three products the banks offered. In ledger 1, *grootboek 1*, per client an entry for their savings was opened. *grootboek 2* was used for the accounting of their fixed term loans, and *grootboek 3* for their current accounts. For all these and the other forms examples were presented in the accounting manuals.

After a few years and having almost 200 member banks the CCB published their *Meededelingen* for their local banks from September 1906 onwards, initially with an irregular frequency, later bimonthly. The CCRB only started with their *Raiffeisen-Bode* in December 1911, when it had nearly 400 banks as members. Both publications were used for practical education (for example interest calculation) and instructions (for example signing of contracts by illiterate clients).³⁰

3.2 Managing credit risk

The only source of funds for the lending business of the banks were savings. The banks traditionally had very low capital ratios, that is the percentage of equity to the loan portfolio, as retained earnings were the only form of equity. Therefore, for running their bank in the long term a savings surplus, that is the positive result of the total deposits minus total lending, was a prerequisite as this formed the buffer against credit losses and clients withdrawing their savings. As said, most deposits could be withdrawn without any notice whilst the loan portfolio had a much longer duration. Adequately managing the credit risk of the loan portfolio was therefore, critical for the continuity of the bank.

For the local banks the general controls for managing the risks of running the bank were described in the articles of association of the credit cooperative and detailed through rules of procedures. These controls entailed the following. Firstly, the segregation of duties among the cashier, the management board, and the supervisory board guaranteed that by design all bodies could not one-sidedly have access to the cash- or securities assets of the bank or authorise cash-out for, as an example, the

aangesloten bij de Coöp. Centr. Raiffeisen-Bank te Utrecht, Second improved and expanded edition, (HAR-Coöperatieve Centrale Raiffeisen-Bank, archive number U002_001).

³⁰ CCB, *Meededelingen*, nr. 3, April 1908; nr. 8, December 1911; nr. 22, June 1914; nr. 27, May 1915; nr. 30, February 1916 (HAR – Central library); CCRB, *Raiffeisen-Bode*, nr. 5, April 1914; nr. 6, March 1915; nr. 4, October 1919 (HAR – Central library).

disbursement of a loan.³¹ Secondly, the cashier – often the local headmaster of the school or the municipal clerk – was selected on his trustworthiness and authority in the community.³² Finally, the cashier used a high-quality safe for storing the cash, securities, ledgers, and forms of the bank.

The following measures were implemented to specifically control credit risk. Firstly, and inherently incorporated in the cooperative structure, the banks were only active in a limited geographical area, in a community where the borrowers were well-known to the boards of the bank. Secondly, as additional collateral for the loan in case the borrower could not repay his debt, most times one or two known persons co-signed the loan and were contractually bound to repay the loan in case the borrower defaulted. Also, a set of specific measures were used to further decrease the credit risk. These were, thirdly, the limited mandate of the boards of the bank for granting loans. Notably, the maximum principal sum and the interest rate, were detailed in the rules of procedures and had to be annually approved by the local general assembly of members. Loans above these limits had to be approved by the *Centrale Bank* first before the local bank could grant the loan to the client.³³ Fourthly, for the credit process, dedicated forms were designed for among others the credit request, approval, payment reminder (the so-called forms 12 to 15). For example, before disbursement of the principal amount of the approved loan, form 12 for the promissory note had to be signed by the borrower and the co-signee(s) including a prescribed text to be handwritten accepting the principal amount, interest, and costs.³⁴ Fifthly, the *Meededelingen* and *Raiffeisen-Bode* often covered credit specific issues like explaining mortgage products, passing away of the borrower or co-signee, and offering model deeds.³⁵ Sixthly, the audits

³¹ *Huishoudelijk Reglement der Coöperatieve Raiffeisen-Bank, gevestigd te Utrecht*, for example articles 3a-6 (HAR – Central library); *Statuten en huishoudelijk reglement der Coöperatieve Centrale Boerenleenbank te Eindhoven, 1908*, for example 6, 7,10, 11, 21-26 (HAR – Central library).

³² Guinnane, 'Cooperatives as information machines', 375; Rommes, *Voor en door boeren?*, 272.

³³ CCB, *Statuten en huishoudelijk reglement der Coöperatieve Centrale Boerenleenbank*; CCRB, *Huishoudelijk Reglement der Coöperatieve Raiffeisen-Bank*.

³⁴ CCB, *Handleiding voor het beheer en de boekhouding der Boerenleenbanken*; CCRB, *Handleiding en modellen voor de administratie en boekhouding*.

³⁵ CCB, *Meededelingen*, for example: nr. 1, September 1906; nr. 2, February 1907; nr. 3 April 1908; nr. 4, July 1909; nr. 11, June 1912; nr. 15, April 1913; nr. 16, June 1913; nr. 18, October 1913; nr. 20, February 1914; nr. 31, April 1916; CCRB, *Raiffeisen-Bode*, for example: nr. 3, March 1913; nr. 4, November 1913;

performed by their *Centrale Bank* obviously assessed the management of credit risk by the bank also. Finally, and as backstop if all other preceding measures failed, because of the Raiffeisen form of cooperative chosen, in case of severe credit losses the unlimited joint liability which all members had accepted, would guarantee the continuity of their bank.

In sum, the boards of the local banks and the *Centrale Banken* were not naïve. They understood that protecting the banks' reputation was of critical importance. Therefore, they had designed and implemented an extensive system of internal controls. With this framework described the four banks will be analysed now.

nr. 4, October 1915; nr. 5, November 1915; nr. 9, March 1916; 3 nr. September 1917; nr. 4, October 1917; nr. 4, October 1919; nr. 8 February 1919.

4. Financial developments of the credit cooperatives, c.1900-1920

In the following level 1 analysis the financial developments of the credit cooperatives in the Netherlands in general, and subsequently, the four local credit cooperatives in Borne, Bornerbroek, Heeze, and Westerbork are presented. The source of all data are the annual reports 1899-1920 of the CCB and CCRB.³⁶ The totals shown are the addition of already longer active - and thus larger - banks, and very recently established - and therefore very small - ones. Based on these annual reports appendix 1 shows an integral view over this period.

4.1 Growth! Credit cooperatives in the Netherlands

In the first two decades of the twentieth century the credit cooperatives firmly established themselves within the financial sector of the Netherlands. As presented in Table 2, the number of local banks grew from 73 in 1900, to 599 in 1910, and 1.159 in 1920.

In the early years, until 1904, the CCB had the highest number of local member banks. In the second decade of the century the CCRB outpaced the CCB resulting in 658 banks for the CCRB against 501 for the CCB in 1920. From almost 4.000 members of the local credit cooperatives in 1900, all banks already had over 140.000 in 1920. Also here, in the first decade more members joined the CCB banks, the CCRB gained more in next ten years resulting in more than 84.000 members against 56.000 for the CCB banks.

The growth in savings was even more remarkable. After a hesitant start in the first years, in 1905 the banks had over 24.000 savings accounts with a total volume of 8,5 million guilders. In 1920 the number of accounts had risen to 252.000 with 224 million guilders deposited. The increase in loan volume with products as fixed term loans and current accounts was impressive as well. In 1905 the outstanding of the around 9.000 loans were a little over 5 million guilders. In 1920 the banks' credit portfolios had risen to over 81.000 loans with a total volume of 154 million. The higher number of CCRB members also resulted in more banking business for these banks. In 1920 they had accumulated almost 132 million in deposits and their loan portfolio

³⁶ Annual reports of *Centrale Coöperatieve Boerenleenbank* (CCB), Eindhoven, and *Centrale Coöperatieve Raffeyen-Boerenleenbank* (CCRB), Utrecht.

reached 113 million. That year the CCB banks managed 92 millions of savings and a loan portfolio of 41 million.

		1900	1905	1910	1915	1920
Totaal	Number of local banks	73	323	599	929	1.159
	Number of members	3.947	22.414	51.377	89.454	140.720
	Savings accounts					
	> Number	3.237	24.738	66.170	132.660	251.795
	> Volume	822.849	8.476.681	28.484.067	76.252.592	224.111.031
	> Average balance	254	343	430	575	890
	> Percentage savings accounts to members	82%	110%	129%	148%	179%
	Fixed term loans					
	> Number	1.175	8.546	23.718	40.206	58.617
	> Volume	274.021	4.513.940	15.740.523	31.370.827	95.318.936
	> Average balance	233	528	664	780	1.626
	> Percentage loans to members	30%	38%	46%	45%	42%
	Current accounts					
	> Number	51	715	2.960	9.032	22.654
	> Volume	22.437	758.855	3.630.605	12.004.452	58.536.480
	> Average balance	440	1.061	1.227	1.329	2.584
> Percentage current accounts to members	1%	3%	6%	10%	16%	
		1900	1905	1910	1915	1920
CCB	Number of local banks	46	154	283	409	501
	Number of members	3.947	11.919	24.586	38.806	56.109
	Savings accounts					
	> Number	3.237	10.961	29.121	54.152	103.721
	> Volume	649.074	4.201.303	12.938.577	29.982.957	92.187.949
	> Average balance	201	383	444	554	889
	> Percentage savings accounts to members	82%	92%	118%	140%	185%
	Fixed term loans					
	> Number	1.175	3.874	10.864	18.319	23.860
	> Volume	219.121	2.240.756	7.003.578	12.592.443	31.091.390
	> Average balance	186	578	645	687	1.303
	> Percentage loans to members	30%	33%	44%	47%	43%
	Current accounts					
	> Number	51	193	735	1.915	4.504
	> Volume	22.437	336.106	798.186	3.322.505	9.952.051
	> Average balance	440	1.741	1.086	1.735	2.210
> Percentage current accounts to members	1%	2%	3%	5%	8%	
		1900	1905	1910	1915	1920
CCRB	Number of local banks	27	169	316	520	658
	Number of members		10.495	26.791	50.648	84.611
	Savings accounts					
	> Number		13.777	37.049	78.508	148.074
	> Volume	173.775	4.275.378	15.545.490	46.269.635	131.923.082
	> Average balance		310	420	589	891
	> Percentage savings accounts to members		131%	138%	155%	175%
	Fixed term loans					
	> Number		4.672	12.854	21.887	34.757
	> Volume	54.900	2.273.184	8.736.945	18.778.384	64.227.546
	> Average balance		487	680	858	1.848
	> Percentage loans to members		45%	48%	43%	41%
	Current accounts					
	> Number		522	2.225	7.117	18.150
	> Volume		422.749	2.832.419	8.681.947	48.584.429
	> Average balance		810	1.273	1.220	2.677
> Percentage current accounts to members		5%	8%	14%	21%	

Table 2 – Data of credit cooperatives in total, CCB-, and CCRB-banks, 1900-1920.

Source: annual reports CCB and CCRB.

Numbers are absolute, volume and average balance in nominal Dutch guilders. Average balances and percentages calculated by author.

The banks had been successful in attracting deposits from non-members over time. In 1920 around 80 percent of clients were not member of the cooperative. In 1905 at the CCRB this percentage was only 31 whilst at the CCB not all members even had a savings account at their bank. For loans membership was a prerequisite and over the period around 40 percent of the members in the CCB and in the CCRB banks borrowed with fixed term loans at their credit cooperative.

The average balance on a savings account grew from 343 guilders in 1905 to 890 in 1920. The CCB- and CCRB banks showed a very similar trend. For loans a very different pattern became visible over time. The average fixed term loan for the CCB banks grew from about 578 in 1905 to 1.303 guilders in 1920; for loans on current accounts also the average loan size increased from 1.741 to 2.210 guilders in this period. However, in 1920 the average fixed term loan for the CCRB banks grew to 1.848 guilders and an average current account loan was 2.677 guilders.

This also resulted for the CCB- and CCRB banks, as shown in Table 3, in very different loans-to-deposits ratios representing the relative size of the loan portfolios compared with the volume of savings deposited. From 1910 onwards the ratio of the CCRB banks was consistently higher and therefore, there savings surplus was consistently lower than that of the CCB banks. This is in line with the literature which presented the savings in credit cooperatives in the southern part of the Netherlands, the regions dominated by the CCB banks, as significantly higher than in the northern part of the country.³⁷

³⁷ Jonker, *Welbegrepen eigenbelang*, 4, 19-20; Rommes, *Voor en door boeren?* 274, 278; Sluyterman, et al., *Het coöperatieve alternatief*, 30.

		1900	1905	1910	1915	1920
Total	Savings surplus	526.391	3.203.886	9.112.939	32.877.313	70.255.615
	Loans-to-deposits ratio	36%	62%	68%	57%	69%
CCB	Savings surplus	407.516	1.624.441	5.136.813	14.068.009	51.144.508
	Loans-to-deposits ratio	37%	61%	60%	53%	45%
CCRB	Savings surplus	118.875	1.579.445	3.976.126	18.809.304	19.111.107
	Loans-to-deposits ratio	32%	63%	74%	59%	86%

Table 3 – Data of credit cooperatives in total, CCB-, and CCRB-banks, 1900-1920.

Source: annual reports CCB and CCRB.

Savings surplus in nominal Dutch guilders, loans-to-deposits ratio as percentage. Loans-to-deposits ratio calculated by author.

In sum, the local banks of the CCB and CCRB were very comparable for attracting deposits, however, their loan activities and the size of their loans shown a very different trend.

4.2 Four local banks compared

Not surprisingly, the four banks were located in small municipalities, the typical breeding ground for the credit cooperatives serving the rural communities in those areas.

Heeze had with its year of establishment of 1897 one of the first credit cooperatives in the Netherlands. Table 4 shows that the bank slowly grew over the years, from 71 members in 1900 to 117 in 1920. Also, in 1920 it only had 191 savings accounts, however, the average balance with almost 1.300 guilders was high. The loan portfolio remained relatively small in numbers and average outstanding. The percentage members borrowing at their cooperative decreased over time and particularly for current account loans, was significantly lower than their CCB peers. This also resulted in a high savings surplus over the period; after 1916 the loans-to-deposits ratio was well under 30 per cent and decreasing.

	1900	1905	1910	1915	1920
Number of members	71	94	90	111	117
Savings accounts					
> Number	43	62	76	126	191
> Volume	12.770	36.622	56.918	89.918	246.071
> Average balance	297	591	749	714	1.288
> Percentage savings accounts to members	61%	66%	84%	114%	163%
Fixed term loans					
> Number	21	32	56	60	41
> Volume	3.991	14.991	21.044	25.926	35.729
> Average balance	190	468	376	432	871
> Percentage loans to members	30%	34%	62%	54%	35%
Current accounts					
> Number	1			1	2
> Volume	605			11.067	3.490
> Average balance	605			11.067	1.745
> Percentage current accounts to members	1%			1%	2%
Savings surplus	8.174	21.631	35.874	52.925	206.852
Loans-to-deposits ratio	36%	41%	37%	41%	16%

Table 4 – Data of Heeze, 1900-1920.

Source: annual reports CCB.

Numbers are absolute, volume, average balance, and savings surplus in nominal Dutch guilders, loans-to-deposits ratio as percentage. Average balances, percentages, savings surplus, and loans-to-deposits ratio calculated by author.

The municipality of Borne even had two cooperative banks; the bank in Borne was established in 1904, the one in its hamlet Bornerbroek in 1913. Both banks were affiliated with different central cooperative banks; Borne was a CCRB bank, Bornerbroek a CCB bank. As shown in Tables 5 and 6, in 1920 Borne had with 261 around three times more members than Bornerbroek. Also, in that year the average savings account balance there was 50 percent higher than in Bornerbroek. The bank in Borne attracted a very high number of savings clients which were not a member of the cooperative. Compared with their peers of their *Centrale Bank* the average balances on these accounts were in Borne clearly higher and in Bornerbroek lower. For loans the differences were even much more significant. In 1920 the average fixed term loan in Borne was 2.126 guilders compared with in Bornerbroek only 428. For current accounts loans the gap was even larger. Whilst in Borne the average outstanding was 6.396 guilders in 1920, in Bornerbroek it was 976 only. Strikingly, the percentage of current account loans per member in Bornerbroek was surprisingly high. The reason, a local innovation, will be described later.

	1904	1905	1910	1915	1920
Number of members	38	49	77	134	261
Savings accounts					
> Number	55	87	204	303	547
> Volume	12.947	33.133	124.286	219.920	608.024
> Average balance	235	381	609	726	1.112
> Percentage savings accounts to members	145%	178%	265%	226%	210%
Fixed term loans					
> Number	11	18	52	79	154
> Volume	7.000	7.555	33.380	95.298	327.393
> Average balance	636	420	642	1.206	2.126
> Percentage loans to members	29%	37%	68%	59%	59%
Current accounts					
> Number		1	2	3	5
> Volume		198	-	1.257	31.971
> Average balance		198	-	419	6.394
> Percentage current accounts to members		2%	3%	2%	2%
Savings surplus	5.947	25.380	90.906	123.365	248.660
Loans-to-deposits ratio	54%	23%	27%	44%	59%

Table 5 – Data of Borne, 1904-1920.

Source: annual reports CCRB.

Numbers are absolute, volume, average balance, and savings surplus in nominal Dutch guilders, loans-to-deposits ratio as percentage. Average balances, percentages, savings surplus, and loans-to-deposits ratio calculated by author.

	1913	1915	1920
Number of members	67	69	94
Savings accounts			
> Number	46	81	144
> Volume	17.949	46.616	111.438
> Average balance	390	576	774
> Percentage savings accounts to members	69%	117%	153%
Fixed term loans			
> Number	10	12	24
> Volume	4.165	8.658	10.260
> Average balance	417	722	428
> Percentage loans to members	15%	17%	26%
Current accounts			
> Number	5	4	20
> Volume	-	31.278	19.518
> Average balance	-	7.820	976
> Percentage current accounts to members	7%	6%	21%
Savings surplus	13.784	6.680	81.660
Loans-to-deposits ratio	23%	86%	27%

Table 6 – Data of Bornerbroek, 1913-1920.

Source: annual reports CCB.

Numbers are absolute, volume, average balance, and savings surplus in nominal Dutch guilders, loans-to-deposits ratio as percentage. Average balances, percentages, savings surplus, and loans-to-deposits ratio calculated by author.

The banking activities in Westerbork showed a very different picture. As shown in Table 7, the number of members grew from 100 in the year of its establishment, 1912, to 343 at the end of that decade. Though the average savings balance grew over the years, with in 1920 734 guilders it was on the low side still. Also, not all members deposited their savings at their bank and therefore, the bank was unsuccessful in attracting savings from non-members. However, the bank's lending business was fast-growing. In 1920, only eight years after its establishment, the on average fixed term loan was 888 guilders and a current account loan reached the average of the remarkable sum of 3.618 guilders. From 1916 onwards the bank had very high loans-to-deposits ratios.

	1912	1915	1920
Number of members	100	195	343
Savings accounts			
> Number	42	178	329
> Volume	22.276	79.462	241.641
> Average balance	530	446	734
> Percentage savings accounts to members	42%	91%	96%
Fixed term loans			
> Number	14	81	180
> Volume	3.700	26.089	159.785
> Average balance	264	322	888
> Percentage loans to members	14%	42%	52%
Current accounts			
> Number		14	28
> Volume		19.188	101.314
> Average balance		1.371	3.618
> Percentage current accounts to members		7%	8%
Savings surplus	18.576	34.185	(19.458)
Loans-to-deposits ratio	17%	57%	108%

Table 7 – Data of Westerbork, 1912-1920.

Source: annual reports CCRB.

Numbers are absolute, volume, average balance, and savings surplus in nominal Dutch guilders, loans-to-deposits ratio as percentage. Average balances, percentages, savings surplus, and loans-to-deposits ratio calculated by author.

Comparing the banks, all, except for Westerbork, started with a small number of members, for example in Borne as few as 38. In 1920 Westerbork and Borne had more than 250 members whilst the cooperative banks in the Netherlands had on average 121. Also benchmarked against the average CCRB bank with 129 members these banks were sizable. With its numbers of members Heeze was a bank in size comparable with the

CCB-average, and the late established Bornerbroek clearly was smaller with 94 members only.

In sum, in 1920 none of the four banks examined matched the average credit cooperative in the Netherlands or that of the *Centrale* they were affiliated with. Borne clearly was in all aspects larger than the average CCRB bank. Westerbork as relatively young bank and fast-grower showed a mixed picture. Its average current account loan was above the average of its CCRB peers and also, its loans-to-deposits ratio was exceptional high. On all other aspects the late establishment of the bank resulted in still below average figures for this bank. The in 1913 established Bornerbroek was in all aspects smaller than the average CCB bank. Only in the number of current account loans it clearly scored above average. Heeze as the oldest of the four enjoyed a higher average savings balance per account, but its loan portfolio was relatively smallest reflected in a very low loans-to-deposits ratio of 16 per cent in 1920.

Therefore, none of the banks came close to the average cooperative bank in the Netherlands or of their *Centrale Banken*. Apart of the fact such bank ever existed, all banks were on certain aspects an outlier. Borne was on all aspects larger, Bornerbroek smaller. Heeze had a relatively small loan portfolio for the size of its deposits, and Westerbork formed its opposite. Still, for none of the banks the variances were that comprehensive that they cannot be compared amongst themselves and with the average credit cooperative of those years. Therefore, the variances between the four banks offer intriguing cases for further examination in the following level 2 analysis.

5. The loan portfolios of Heeze, Borne, Bornerbroek, and Westerbork

In this section for the four banks a detailed analysis of their lending activities will be presented after which these will be compared. The four credit cooperatives described below operated in three municipalities with the purpose to advance the economic activities of their members, that is the farmers and their supporting organisations. As a matter of introduction firstly, the local community in which the bank operated, is sketched.³⁸

5.1 Four early credit cooperatives and their loan portfolios

Heeze: Poorly managed, underperforming though socially engaged loan portfolio

Heeze was part of the Noord-Brabant province and located in the eastern part thereof. Vast heathlands laid west of the village with poor and sandy soils which were used for farming. To the east Heeze castle dominated the countryside in a valley along a small stream with some wetlands. As might be expected in the Brabant heartlands the population of nearly 2.200 in 1909 were almost without exception roman catholics. Farming was the dominant economic activity and employed half of the working population in the village. Through the paved road to Geldrop the city of Eindhoven was a journey of about ten kilometres.³⁹

The bank in Heeze was one of the earliest established credit cooperatives in the Netherlands. The deed of incorporation was signed by the mayor, the headmaster, the

³⁸ Appendix 2 presents an integral overview of all data per bank with specifications for size, duration, purpose of fixed term loans including mortgages, size of current account loans, approval and rejections of loans, and number of extension requests and reminders sent.

³⁹ Local history Heeze, <https://www.kasteelheeze.nl/kasteel-heeze/geschiedenis/vanaf-de-18e-eeuw>; Thijs Caspers et al., *Grote Historische topografische Atlas* (Tilburg 2006), Volume Noord-Brabant, c.1894-1914, map 708/Valkenswaard, image of 1898, issue 1901; Census of the Netherlands, 1909 with

- Professions per municipality
<http://volkstelling.nl/nl/volkstelling/imageview/BRT190901T/index.html>
- Occupied and unoccupied houses per municipality
<http://volkstelling.nl/nl/volkstelling/jaartellingdeelview/VT190901/index.html>
- Religious affiliation per municipality
<http://volkstelling.nl/nl/volkstelling/imageview/VT190903SUPPLT/index.html>

municipal clerk, and seven farmers, and in this sequence.⁴⁰ In the catholic heartland of Brabant obviously the local parish priest was member of the supervisory board and reelected therein in 1904.⁴¹ Subsequently, for all involved, implementing an effective and efficient governance of their bank turned out to be more challenging than it seemed on paper.

The general assemblies most times were formal events only and, except for 1916 and 1917, were not opened with the in this region usual prayers and closed with the so-called Christian salute, *Geloofd zij Jezus Christus*. Remarkably, in the general assembly of 1907 all members voted in favour of a resolution of sanctioning the cashier and members of the management board with a fine of 25 guilders for every time they breached their professional secrecy.⁴² This for these persons embarrassing item will not have been put on the agenda if there would have not been a sound reason for. Also, the general assembly sometimes approved 'competitive' interest rates. The 1914 assembly agreed on a 3,96 interest rate for borrowing instead of the usual 4 percent. This must have been a nightmare for the cashier to calculate for every loan.⁴³

From the start the management board struggled with managing the bank in an orderly manner though in 1900 the auditor – notably, Father Van den Elzen, the pioneer in establishing many credit cooperatives in the southern part of the country -, 'expressed his satisfaction with the tidy' ledgers.⁴⁴ In subsequent years his colleagues would complain numerous times about severe shortcomings in the operating effectiveness of the bank. They reported items like a fixed term loan not recorded in the minutes, lists of co-signees lacking, purposes of the loans often not mentioned in the minutes, promissory notes not signed according to the instructions, loans granted beyond the statutory rules, and a client, the *Coöperatieve Geitenfokvereniging*, already disbursing the loan whilst the association had not been approved as member by the CCB yet.⁴⁵

⁴⁰ *Nederlandsche Staatscourant*, no. 214, 12/13 September 1897.

⁴¹ Heeze, General assembly, 30 April 1904 (HAR - *Inventaris van het archief van de rechtsvoorgangers van Rabobank Dommelstreek*, RABO-2.09, archive number 214).

⁴² Heeze, General assembly, 31 May 1907.

⁴³ *Ibid.*, 14 October 1914.

⁴⁴ Heeze, Management board, 1 May 1900 (archive number 190).

⁴⁵ Heeze, Audit reports, *Inspectierapportages*, 12 November 1903, 24 August 1906, 21 April 1908, 31 October 1912, 12 November 1913, 8 September 1914, 13 July 1917, 22 June 1921 (archive number 269).

Furthermore, multiple times they reiterated that redemption schedules were an essential part of the loan as otherwise clients had to repay the loan at the end date, which possibly they were not able to do. In such cases clients continued to be in debt which was not in their best interest.⁴⁶ The auditors' reports were never discussed in the management board and their recommendations apparently not listened to.

The supervisory board did not compensate for these deficiencies. On the contrary, almost every year the auditors reported that they 'had to exercise more control' and that the 'situation was very unsatisfactory'. The supervisory board allowed breaches like lending without their required pre-approval and misusing the general assembly as a credit approval committee for a large loan to the steam dairy plant, *Stoomzuivelfabriek Heeze/Leende*.⁴⁷ Furthermore, the cashier was conflicted as he was also treasurer of the local farmers' association, *Boerenbond*, the cattle and horse fund, and the cream butter factory, *Roomboterfabriek*, which were in part also clients of the bank.⁴⁸ In sum, the boards ran their bank not professionally. Over the period they continued to struggle with an effective implementation of the designed and instructed governance of their credit cooperative.

The bank was originally established for granting credits to farmers and their supporting organisations. The evaluation of loan applications was therefore a standard agenda item on the agenda of the management board. It took some time, until 9 July 1898, before the first fixed term loan was approved. Since then, as shown in Table 8, the number of loans remained modest with only three loans approved in 1917.

⁴⁶ Heeze, Audit reports, 12 November 1903, 24 August 1906, 16 December 1914.

⁴⁷ Ibid., 12 November 1903, 23 November 1905, 24 August 1906, 14 February 1907, 21 April 1908, 21 May 1909, 29 November 1910, 31 October 1912, 11 November 1913.

⁴⁸ Ibid., 21 April 1908, 29 November 1910.

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1897								
1898	3	2	2	1				8
1899	2		1	2	1			6
1900	1	1	3	1	1	2	1	10
1901	2		3	1		2	1	9
1902	1	1	3		2			7
1903	2	6	8		3	1		20
1904		3	1	1	1	2	2	10
1905	3		2	1	1	1	1	9
1906		2	1	1	2	4		10
1907	1	2	2		2	3	2	12
1908		1	4	2	2	2	1	12
1909		1	4	3	3	4		15
1910		1	1	3		2		7
1911			1		1	1		3
1912	1	4	1		4	2	3	15
1913		3	5		2	1	1	12
1914		1	1	3	5	1	1	12
1915		1	1	1		1	1	5
1916		1			2	1	2	6
1917		1		1		1		3
1918						2	2	4
1919					1	1	3	5
1920						2	5	7

Table 8 - Heeze, Fixed term loans origination, including mortgages – size.

Source: archive of Heeze. Amounts in nominal Dutch guilders, numbers are absolute.

With only 207 loans for the period up to 1920 the bank's loan production remained insignificant.

Though most of the fixed term loans were above 500 guilders, in 1920 the average loan still was only 871 guilders, clearly lower than the loan size of the average credit cooperative affiliated with the CCB. Though the number of mortgages in the loan portfolio was sizable with 46, the average size with 983 guilders was low. In rare cases and particularly the early years, loan applications were rejected. Sometimes the loan applicant did not offer co-signees or if so, the management board dismissed these as non-solid.⁴⁹ The bank's portfolio contained a few current account loans. Next to some smaller loans to in most cases private borrowers, only two clients needed larger sums, that is the local farmers' association with 15.000, and the steam dairy plant with 20.000 guilders.⁵⁰

A formulated policy about the duration of loans was non-existent. Over the period a shift in the duration of the loans granted was visible. In the years until 1906 twelve

⁴⁹ Heeze, Management board, 11 September 1898, 15 December 1898, 1 June 1899, 4 January 1900, 7 May 1901, 25 July 1902.

⁵⁰ Ibid., 17 February 1915, 23 December 1917.

months or less was frequently offered. From 1910 onwards loans with a duration shorter than three years were the exception and in later years ten years or longer became the norm. Remarkably, over the period the board accepted seven mortgages with no end date, so-called perpetuums on which only interest had to be paid by the borrower. The minutes do not disclose why the board decided this way in such cases. The auditors complained that the duration of many loans was too long and specifically, mentioned these perpetual mortgages and another one with an end date in 96 years.⁵¹

The auditors, *Inspecteurs*, explicitly confirmed that except for 1903, the purposes of the loans granted were in line with the statutory rules and the mission of the bank.⁵² As expected, the bank financed cattle, horses, and to a lesser extent fodder. These loans were more surprisingly, only 13 percent of the total number of loans for which the purpose of the loan was recorded in the management board's minutes. Almost 45 percent of all fixed term loans over the period were for the acquisition or improvement of farms and land. Surprisingly, as it formally violated the statutory rules, for nine percent of loans approved over the period, debt redemption, '*schulddelging*', was accepted as legitimate purpose.⁵³ Most of these loans were less than 500 guilders, still, also two loans of 1.400 and even 1.500 guilders for new members were granted. The duration of these loans was at least four years, but more common ten years. As the auditors confirmed that, with some exceptions, all loans were within the statutory boundaries, the bank therefore, restructured debts of its members with most likely, shopkeepers, cattle traders, or notaries to better conditions at the bank.

The management board multiple times approved loan applications for relieving acute distress of its members. A 70 guilders loan for urgent repairs of a widow's house, a small loan of 40 guilders co-signed by the chair of the management board, 60 guilders because of an ill son, and 100 guilders for paying the local physician's bill were all examples thereof.⁵⁴ Also, for a mortgage of 1.500 guilders they agreed, because of 'his

⁵¹ Heeze, Audit report, 21 May 1909.

⁵² Ibid., 12 November 1903.

⁵³ Heeze, Management board, 17 July 1898, 2 November 1899, 6 August 1900, 7 May 1901, 9 February 1903, 11 October 1903, 21 February 1904, 15 May 1904, 30 January 1905, 25 May 1905, 31 August 1905, 19 March 1906, 24 May 1906, 21 January 1912, 4 February 1912, 13 December 1912, 23 January 1914, 14 October 1914, 10 March 1915, 10 April 1916.

⁵⁴ Ibid., 30 December 1898, 11 August 1903, 30 May 1907, 4 February 1912.

little children', that a redemption in the first five years of only five guilders was the maximum the bank could demand.⁵⁵ In this sense, though the total number of loans for the bank in Heeze was limited, the management board showed high attention and priority for supporting their community in line with the original intentions of their credit cooperative.

From the start of the bank the quality of its loan portfolio was doubtful. Already in 1900, but also in subsequent years, in the general assembly the chair called upon the members to 'redeem regularly' and mentioned that several borrowers 'badly honoured their obligations'.⁵⁶ The reasons for repaying late like a disappointing harvest or low discipline, were not disclosed in the board's minutes. Despite these arrears, borrowers did not request an extension of their redemptions. As Table 9 shows, only from 1905 onwards occasionally the management board discussed and always approved these.

Year	Extensions		Reminders
	Approvals	Rejections	
1897			
1898			
1899			
1900			
1901			
1902			
1903			
1904			
1905	2		6
1906	1		10
1907	1		4
1908			21
1909	3		18
1910			8
1911			8
1912			5
1913	1		?
1914	4		6
1915	2		6
1916	3		26
1917			
1918			
1919			
1920			

Table 9 - Heeze, number of extensions and reminders per year.

Source: archive of Heeze. Numbers are absolute.

Note: in 1913 reminders were sent; the exact number cannot be retrieved from the minutes of the management board as they were in this period in disorder. Furthermore, no minutes are available from 1917 onwards. Therefore, numbers of extensions and reminders are missing.

⁵⁵ Ibid., 14 March 1912.

⁵⁶ Heeze, General assembly, 29 May 1900, 31 May 1902, 31 May 1907, 12 June 1908, 14 April 1909.

From that year onwards the management board had to frequently engage themselves with these arrears. In fact, over the period this issue became though inadvertently, a constant item on the board's agenda. The borrowers were reminded in writing of their obligations. The co-signees were informed when repeated reminders did not have the envisaged effect, also in case of small open amounts. To discuss the financial situation of the borrower they were invited by the cashier at his office or management board members personally visited them.⁵⁷ Whether the co-signees actually paid part of the debts in the end, was not visible in the board's minutes or ledgers.

In case these discussions did not lead to a for the bank satisfactory outcome, the debt collection process was further escalated. This could take the form of demanding new, more wealthy co-signees, or rarely, using a clause from the signed promissory note reclaiming the outstanding to be repaid in full at short notice.⁵⁸ In the end, if social capital did not work legal proceedings against the borrower were considered a necessary step. Though over the period only in one case used, after unsuccessfully engaging the borrower's father, the bank's lawyers in Eindhoven were instructed to collect the debt. The process ended, because the brother of the borrower repaid the debt and a potential write-off had been avoided by refinancing the debt to a more creditworthy borrower.⁵⁹

Despite the board's efforts the quality of the loan portfolio did not improve. More so, every year in the audit reports the board was criticised that they had to do more. Already in 1903, and repeated every year since, the auditors urged the board to take more firm action against borrowers with arrears.⁶⁰ From 1911 the *Inspectie* started to use more direct wordings in their reports as 'other measures' were deemed necessary and 'most importantly, the cashier must oversee timely redemptions'.⁶¹ The auditors also, complained that the list of the defaulting borrowers was considerably longer than the reminders the board sent. In 1915 they reported well over twenty arrears of the principal amount of which in 1912 six already were on this list as well. Moreover, many

⁵⁷ Heeze, Management board, 24 February 1902, 25 March 1903, 21 May 1906, 22 November 1908, 12 October 1910.

⁵⁸ Ibid., 23 August 1908, 26 March 1909.

⁵⁹ Ibid., 1 February 1911, 12 May 1911, 19 June 1911, 20 November 1911, 21 January 1912.

⁶⁰ Heeze, Audit reports, 12 November 1903, and subsequent years.

⁶¹ Ibid., 1 December 1911, 8 September 1914.

new credits already showed late payments which was of even more concern.⁶² Though the board took action, they could not convince their auditors thereof. As a result, the quality of the loan portfolio was not something the boards could be proud of, and the development therein did not show any improvement over time.

To summarise, on the one hand over the whole period the bank in Heeze was managed in a non-professional or put less politely, in a sloppily way. Recommendations from the auditors urging to improve the governance of the credit cooperative were structurally ignored. As well, the bank had a small loan portfolio of only very mediocre quality in which timely repayment of loans remained a struggle the boards did not overcome. On the other hand, up to 1920 despite the quality of the loan portfolio no write-offs were necessary. Also, signed off by the auditors, on the credit side of all balance sheets of those years the line-item doubtful receivables, '*onzekere vorderingen onder het actief*', remained empty. Furthermore, the management board showed a highly sensitive social mindset evidenced by granting credits to the members who experienced personal hardship.

Borne: A seemingly well-run bank neglecting its risks

Borne and its hamlet Bornerbroek, were located in the east of the country, the Twente region as part of the province of Overijssel. It was well connected with the nearby cities of Almelo, Hengelo, and Enschede. Multiple paved roads and the railroad connected the village to its surroundings. A textile entrepreneur, nicknamed 'God of Borne', employed more workers than the farmers in the village. In 1909 over 60 percent of the population of about 5.700 were roman catholics.⁶³

⁶² Ibid., 7 September 1915.

⁶³ The name of this entrepreneur was Jacob Spanjaard II, <https://www.borneboeit.nl/index.php?id=107479&searchstr=Jacob+Spanjaard>; Caspers et al., *Grote Historische topografische Atlas*, Volume Overijssel, c.1905, map 379/Borne, image of 1882, revisited in 1903 and 1910, issue 1912; Local history Borne, <https://www.borneboeit.nl/index.php?id=19877&searchstr=Historie+van+Borne>; Census of the Netherlands, 1909; Jan Luiten van Zanden, 'Industrialisatie en inkomensverdeling in Overijssel, 1750-1875', *Bijdragen en mededelingen betreffende de geschiedenis der Nederlanden (BMGN)* 109 (1994) 3, 434-449, here 436, 447, 449.

After its establishment in 1904 the loan portfolio of the bank in Borne rapidly grew. As shown in Table 10 the number of new fixed loans increased to over 20 annually until 1907. After that year it would take another about ten years before this level would be reached again, and the bank experienced a next wave of growth in its loan production.

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1903	3	2			1			6
1904	3		2	4	1		1	11
1905	5	5	1	3	3	2	1	20
1906	3	3	8	4	3	2	2	25
1907		4	5	1	8	3	5	26
1908	1	3	2	3	5		2	16
1909		4	1	2	3	3	1	14
1910	2	6	1		2	3	1	15
1911	2	2	4	2	1		6	17
1912		1	5	1	1	1	6	15
1913		3	4		4	1	3	15
1914	1	1	3	1	5		5	16
1915	1	1	2	2	2	2	5	15
1916		5	2		3	3	10	23
1917		2	3	2	5	3	32	47
1918			1	2	4	2	17	26
1919		2		2	3	6	16	29
1920			2	1	5	5	27	40

Table 10 - Borne, fixed term loans origination, including mortgages – size.

Source: archive of Borne. Amounts in nominal Dutch guilders, numbers are absolute.

From 1916 onwards the size of the loans significantly increased. Were loans above 1.000 guilders in the period before only a relative minor part of the annual new loans production, after that year these large loans formed the majority. For smaller loans, under 300 guilders, the opposite was the case; after 1916 these became rare. The regular practice for collateral was the reliance on one or two co-signees. From 1915 onwards mortgages were offered more and therefore, property was accepted as collateral. Exceptionally, other options were used as in one case the shares of the Canadian Pacific Railway Company for a three-year loan of 10.000 guilders.⁶⁴

Loans above 1.000 guilders were granted for two types of purposes. Firstly, disregarding five smaller mortgages of less than that threshold, the average mortgage for financing farm and land were relatively large with 3.742 guilders. Secondly, the local agricultural cooperatives in Borne were supported with over time increasing current

⁶⁴ Borne, General ledger 2, 17 May 1920 (HAR - *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13, archive numbers 106-109).

account loans and fixed term loans. Amongst others, the local farmers' association, *Boerenbond*, had a credit limit of 15.000 guilders, the cream butter factory, *Roomboterfabriek*, initially 1.000 guilders which over time increased to 20.000, and the procurement cooperative, *Coöperatieve Landbouw Aankoopvereniging*, had a limit of even 35.000 guilders.⁶⁵ In addition to these current account loans these cooperatives took out fixed term loans as well. Over the period the cream butter factory had three ten-years loans between 3.000 and 7.500 guilders which they quickly redeemed.⁶⁶ In 1920 the procurement cooperative had on top of its current account facility a loan of 37.000, making the total exposure for the bank on this client a for the time staggering 72.000 guilders.⁶⁷ Put into a different perspective, this single-client exposure was twelve percent of savings and more than ten times the equity of the bank in that year.

The biggest loans were however, granted to the municipality. These were not booked under loans in the balance sheet but presented as an investment. Initially in 1911 only 9.000 guilders, over time this exposure grew to an amazing 166.500 guilders in 1919.⁶⁸ The auditors strongly criticised these loans as 'doubtful in respect to the statutory rules' and 'irregular'.⁶⁹ Furthermore, they complained that limit increases were not as required pre-authorized by the CCRB and drew attention to the instructions that loans to municipalities 'had to disappear' as banks needed their savings for their primary objective, that is financing farmers and their supporting organisations.⁷⁰

The duration of the fixed term loans is presented in Table 11. Also in this bank, the management board did not ground its decisions on an agreed policy in this respect. Until 1908 the loans had a very short maturity, most times with a maximum of twelve months. From that year on the duration increased, yet until 1911 most loans had a maturity of 2 years as maximum. From 1912 onwards a duration of ten years became very common.

⁶⁵ Borne, General ledger 3, 5 September 1904, 10 February 1906, 12 June 1914, 10 December 1915, 9 June 1916, 14 June 1918, 9 September 1919, 10 February 1920 (archive numbers 119-121).

⁶⁶ Borne, General ledger 2, 31 December 1914, 3 November 1916, 23 November 1917.

⁶⁷ Ibid., 28 September 1920.

⁶⁸ Borne, Audit reports, *Inspectierapporten*, 22 April 1911, 18 May 1914, 25 April 1916, 22 June 1918, 3 December 1919 (archive number 137).

⁶⁹ Borne, Audit reports, 4 July 1910, 14 May 1912.

⁷⁰ Ibid., 25 April 1916, 24 December 1920; *Raiffeisen-Bode*, nr. 5, November 1920.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1903		3		2				1			6
1904	4	6						1			11
1905	8	5		3	1	1	1	1			20
1906	6	9	1	2	2			5			25
1907	3	8	5		1	2	3	4			26
1908	1	2	3		1	3		5		1	16
1909	3	1		1		2		7			14
1910	1	6	2	1	1	1	1	2			15
1911	1	3	1	2	1	2	2	5			17
1912	1	1		1		2		10			15
1913		1		1	1	3		9			15
1914	3	1		4	1			7			16
1915	1	2		1	1	3		7			15
1916	1	3	1			3	1	12	1		23
1917	2	1		3	1	1	1	24	14		47
1918		1		1		2		15	7		26
1919	1	1		1		3	2	18	2	1	29
1920	2	1		3	1		6	17	10		40

Table 11 - Borne, fixed term loans, including mortgages – duration.

Source: archive of Borne. Numbers are absolute.

Towards 1920 this trend only continued. In 1917 already 30 percent of the loans were perpetuums, so loans for which no fixed end date was agreed between the bank and the borrower. Three years later 43 percent of the new loans had a maturity of 10 years or longer and in addition to that already surprisingly high percentage, 25 percent of these loans were perpetuums.

With the change to longer durations, ten years or more, also in 1915 the practice of repayment at the end date of the loan was introduced. This implied that borrowers only rarely redeemed earlier and if so, only very limited amounts. The bank, therefore, introduced a high credit risk, that is the high uncertainty the borrower could redeem the principal amount in full at the end date of the loan. Obviously, this risk further increased by granting perpetual mortgages for which no repayment was due at all. For several clients these practices were even combined. They received a perpetual mortgage and a ten-year loan which only had to repaid at the end date.⁷¹ In a brief hand-written note added to the audit report of 1918, the chief-auditor alerted the management board ‘not to commit too much money’ with long durations and to remain sufficiently liquid as otherwise ‘a bank may crash’.⁷² This serious warning had no effect; these practices as the figures showed, continued and even increased.

The percentage of non-performing loans was very limited. Until 1912 the number of approved extensions was high but caused by the relative short duration of the loans

⁷¹ Borne, General ledger 2, 17 September 1917, 18 September 1917, 19 September 1917, 5 April 1920.

⁷² Borne, Audit report, 22 June 1918.

granted. In the early years almost 50 percent of the loans granted in those years needed deferral of payments and many multiple times. These extensions shifted the end dates to five or even ten years.⁷³ As the duration of the loan portfolio considerably grew over the years, extensions became a less frequent event. In the audit reports no findings were reported about the quality of the board's arrear management or the quality of the loan portfolio. Also, in the ledgers no entries were made of write-offs. So, for the size of the portfolio the quality thereof was a remarkable strong achievement by the boards of the bank.

Managing the loan portfolio was an important task of the boards of the bank and its cashier. The auditors many times expressed a 'word of praise', '*woord van lof*', for all his good work and qualified him as 'truly exemplary'.⁷⁴ Indeed, examining his records today still gives an impression of well-organised and tidy accounting and even a passion for this profession. However, running a bank also in those years, was more than accounting its transactions in an orderly manner. The auditors repeatedly complained that the management board operated beyond its mandate. The boards approved large loans as to the cream butter factory without the pre-approval of the *Centrale Bank*, and thus they violated the procedure that first the central cooperative had to approve these loans above a limit set. Also, the balance of this client showed unauthorised overdrafts and they had not offered co-signees as collateral. Furthermore as said, the loans to the municipality were considered above and beyond the statutory rules.⁷⁵ Finally, for mortgages more attention had to be paid to the timely entry in the public register and having copies in the files of the fire insurance policies.⁷⁶

In sum, the large bank in Borne was from the contemporary view flourishing and well-run. It enjoyed a growing client base and sourced this in their own limited area of the municipality; it had not to compete with its sister bank in Bornerbroek for that. Despite the fair criticism of the auditors, its loan portfolio was of high quality and its records well kept. However, the bank in Borne also showed the limitations of the standard framework offered by the *Centrale Bank* to run a local bank well. Attention to

⁷³ Borne, General ledger 2, 25 November 1905, 17 May 1906, 18 October 1906, 29 April 1907, 11 February 1908.

⁷⁴ Borne, Audit reports, 19 December 1907, 29 September 1909.

⁷⁵ Ibid., 21 June 1905, 20 September 1906, 4 July 1910, 22 June 1918.

⁷⁶ Ibid., 29 September 1909, 22 April 1911, 25 April 1916, 3 December 1919.

risk management of the bank was limited, and actually, insufficient. The credit risk of the bank's loan portfolio dramatically increased with the practices of perpetual loans and loans with a ten-year tenure on which no redemptions were due before the end date. In 1915 equity only was four percent of the loan portfolio and decreased to two percent in 1920. Considering the very limited retained earnings of the young credit cooperative the risks involved of an extremely low capitalised bank with a very long duration in their loan book becomes utterly clear.⁷⁷ Moreover, the bank introduced a high and neglected liquidity risk. The boards seemed to have been unaware that these long loans funded with short savings introduced a severe continuity risk for their bank. Even with a savings surplus of almost 250.000 guilders and a loans-to-deposits ratio of 59 percent in 1920 in case of a loss of trust resulting in many clients withdrawing their savings, the bank would not survive without massive liquidity support from the CCRB.⁷⁸

Bornerbroek: The parish priest's project

Bornerbroek took a stiff walk of over an hour from Borne. It was a small but lively roman catholic dominated community and for its size, it surprisingly had a school and a roman catholic church.⁷⁹

The bank in Bornerbroek fits well in the traditional narrative of the role of the roman catholic church in society in the early years of the twentieth century. In this case, the local parish priest was the major catalyst of establishing the bank in his 'small

⁷⁷ See appendix 2, table 2.2.9.

⁷⁸ In comparison with the current Rabobank the figures seem to be very low. End of 2022 the loans-to-deposits ratio of the Rabobank was 110 percent. However, Rabobank also had a Common Equity Tier 1 Ratio of 16 percent and a Total Capital Ratio of 21,1 percent, whilst in 1920 the bank in Borne only had equity for 2 percent of its loans. Furthermore, modern banks like Rabobank use proactively asset and liability management processes to manage and if necessary, hedge their liquidity risks. Therefore, compared with the present, the bank in Borne had an extremely high-risk profile, whilst not managing these risks actively (Source: Rabobank, annual report 2022, 9).

⁷⁹ Caspers et al., *Grote Historische topografische Atlas*, Volume Overijssel, c.1905, map 379/Borne, image of 1882, revisited in 1903 and 1910, issue 1912; Local history Borne, <https://www.borneboeit.nl/index.php?id=19877&searchstr=Historie+van+Borne>; Census of the Netherlands, 1909.

parish'.⁸⁰ For many years he was an esteemed member of the supervisory board. Also, he chaired the general assembly multiple times though this was the task of the chair of the board which he was not.⁸¹ Obviously, in these annual meetings the mandatory decisions, such as the interest rates for saving and borrowing, were voted on. Moreover, he let all members feel that the bank was not an earthly enterprise only; the general assemblies were opened with prayers and often closed with the so-called Christian salute, *Geloofd zij Jezus Christus*.

The management board met monthly and in periods when no credit applications were to be discussed, bimonthly. The instructions from the accounting manuals to check the ledgers were faithfully performed every month. Also, the central cooperative in Eindhoven was regularly consulted and their decisions adhered to. Despite their diligent work the board showed that running a bank was a challenge. The first year, 1913, showed many signs of exploring their tasks. The board's minutes were in disarray; duration of fixed terms approved were not recorded, many times differed from the entries in the ledger, or no co-signee was mentioned.⁸² Though some improvements were noticeable over time, the minutes were in many cases a negligent record of what had been decided and had to be recorded. Even in 1920 the approved minutes showed a mortgage of 10.000 guilders for which an annual instalment of 25 guilders was recorded.⁸³ This would have implied a maturity of 400 years; only the ledger showed the correct 40 years duration. The management board continued to struggle with their fiduciary duties of managing a bank. The supervisory board did not perform its oversight role in this respect; in practice, they did not take any corrective action.

The annual audit reports, *Inspectierapporten*, confirmed this view. They complained about the quality of the records of the management board. Large loans as to the farmers' association, *Aartsdiocesane Boeren en Tuinders Bond (A.B.T.B)* of 35.000

⁸⁰ Bornerbroek, General assembly, 1 June 1914, 13 June 1915 (HAR - *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13, archive number 172).

⁸¹ Bornerbroek, General assembly, 13 June 1915, 22 July 1917, 17 August 1919.

⁸² Bornerbroek, Management board, 4 March 1913, 8 April 1913, 15 October 1913, 13 November 1913 (archive number 162).

⁸³ *Ibid.*, 23 July 1920.

guilders were omitted in the board's minutes.⁸⁴ Also, the names of newly admitted members, who were henceforth also unlimitedly liable for the cooperative were not adequately recorded. Furthermore, promissory notes as the core document in which the borrower accepted his obligations, were not always signed by the borrower and the co-signee(s) as required.⁸⁵ Moreover, the auditors reported, that despite consulting the *Centrale Bank*, the management board frequently acted beyond its mandate. Mortgages above 2.500 guilders were not pre-approved by the Centrale, a loan to the roman catholic deaconry, *RK Armenbestuur*, was disapproved as they could not be a member of the cooperative, and the chair of the board was co-signee of a loan which was not authorised by the supervisory board. Moreover, many clients showed - though small - unauthorised overdrafts of their credit limits, a deadly sin in banking.⁸⁶ With the very best intentions the quality of the governance was not up to standard as instructed by the CCB, not in the early stages after the establishment of the bank and not in the later years. The requirements of running a bank, including all its formalities, remained a challenge for the boards in Bornerbroek.

The ledgers of the bank show that the management board only irregularly had to discuss a loan application for a fixed term loan. As shown in Table 12 already in the first year of the bank seven loans were approved. This was not a bad start, yet the numbers never really grew.

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1913		2	3	1	1			7
1914		1	1	2			3	7
1915		1						1
1916	1		2				1	4
1917	2	2	3	1				8
1918	1		1	1	2			5
1919	1		2	1	1	3	1	9
1920			1		3		6	10

Table 12 - Bornerbroek, fixed term loans origination, including mortgages – size.

Source: archive of Bornerbroek. Amounts in nominal Dutch guilders, numbers are absolute.

⁸⁴ Bornerbroek, Audit reports, *Inspectierapporten*, 25 March 1915, 18 May 1915, 13&27 August 1919 (HAR - *Coöperatieve Centrale Boerenleenbank*, archive number E1_083).

⁸⁵ Bornerbroek, Audit reports, 3 April 1916, 26 January 1914, 25 March 1915, 18 May 1915, 13 April 1916, 5&9 July 1917.

⁸⁶ *Ibid.*, 26 January 1914, 5&9 July 1917, 3&27 August 1919, 29&30 September 1921.

In 1915 when the management board met bimonthly, only one loan of 100 guilders was approved.⁸⁷ Also in the fall of 1918 loan production virtually came to a halt. In the general assembly of 1919, all members were called upon to make '*propaganda*' for taking out loans or mortgages.⁸⁸ The result must have been disappointing as only ten fixed term loans were approved in 1920. Not only the number of loans was small, the size of these loans was also; 37 out of a total of 51 loans granted until 1921 were less than 500 guilders. Not surprisingly, these loan applications came from men and their co-signee(s) were men as well. Only seldomly, the board – all men – discussed a loan application of a woman and when approved, she was recorded under the name of 'the widow of' her late husband.⁸⁹ Small current account loans to frequent borrowers were encouraged. This avoided the for the member and his co-signee(s) cumbersome process of every time making a loan application and signing the promissory note.⁹⁰

However, not all loans were small. In 1914 three loans of 2.000 guilders each were conditionally approved. The 'very reverend father' personally travelled for these members to Eindhoven and got the required sign-off.⁹¹ The first mortgage was approved in 1916; from 1919 onwards, large mortgages with the for the time amazing average sum of 4.725 guilders were granted.⁹² Moreover, the local agricultural cooperatives enjoyed high credit limits on their current accounts from the start. Already in 1913, the steam dairy plant, *Stoomzuivelfabriek 'Concordia'*, was approved a credit limit of 30.000 guilders which was increased to 35.000 guilders in later years. Other examples were the farmers' association '*Ons Belang*' with 15.000, the farmers' association of Bornerbroek with 35.000, and the *A.B.T.B.* with 35.000 guilders.⁹³

Though the minutes not always revealed the purpose of the loans the vast majority thereof complied with the statutory rules, that is improvement of farmers' life or support of agricultural associations, often cooperatives. When recorded, cattle,

⁸⁷ Bornerbroek, Management board, 18 March 1915, 17 May 1915, 9 July 1915, 19 October 1915.

⁸⁸ Bornerbroek, General assembly, 17 August 1919.

⁸⁹ Bornerbroek, Management board, 31 July 1916.

⁹⁰ Bornerbroek, General assembly, 4 June 1916.

⁹¹ Bornerbroek, Management board, 9 November 1914.

⁹² See appendix 2, table 2.3.6.

⁹³ Bornerbroek, Management board, 23 February 1914, 9 September 1913, 14 December 1917, 4 January 1918, 21 January 1919.

horses, fodder, farm equipment, and in 1920 six loans for the acquisition of a farm and or land, were all clear signs thereof.⁹⁴ In every audit report the auditor confirmed 'to the extent this could be determined' that loans were granted within these rules. Only once they complained that a loan for establishing a shop was not acceptable and 'without any delay' had to be recalled.⁹⁵ Still, in practice, the boards were flexible with their interpretation of these statutory rules. They did not see any problem of financing wood for a clog maker, disbursement of a bequest, inheritance tax due, and the outfits of the members' daughters.⁹⁶ More surprisingly, and not complained by the auditors, were the loans granted to the roman catholic church. A first advance of 5.000 guilders for the new church building and an interest-free loan of 1.000 guilders for its tower clearly were not in line with the objectives of the bank and its statutory rules.⁹⁷ The parish priest made his mark in every aspect of the cooperative.

In the first five years the bank almost fully relied on co-signing as collateral. The number varied between one and two and was independent of the size of the loan. The decisions of the management board to require two co-signees in certain cases cannot be reconciled from the minutes. Only from 1919 onwards mortgages became more popular and thus, property as collateral. Still, the board had to familiarise themselves with this very different loan process as they for example used an appraisal of the underlying value of the property from 1914 for approving a mortgage of 10.000 guilders in 1919.⁹⁸ When loan applications were rejected the reasons were occasionally recorded in the minutes. These varied from a 'very unreliable person', to insolvent co-signees, insufficient value of the underlying property, or for the financing of timber no relationship with farming.⁹⁹ A request of the municipality for a loan was after consulting the CCB rejected as the purpose of the loan was not in line with the primary task of the bank.¹⁰⁰

⁹⁴ See appendix 2, table 2.3.3.

⁹⁵ Bornerbroek, Management board, 14 November 1919; Audit report, 28&29 September 1920.

⁹⁶ Ibid., 7 June 1918, 12 April 1918, 18 December 1919, 20 February 1920.

⁹⁷ Ibid., 14 August 1919, 18 July 1919, 5 October 1920; General Assembly, 17 August 1919.

⁹⁸ Ibid., 9 May 1919.

⁹⁹ Ibid., 4 March 1913, 15 October 1913, 23 August 1913, 11 January 1917, 11 December 1913, 8 February 1918.

¹⁰⁰ Ibid., 12 September 1919, 6 October 1919.

The duration of the fixed term loans is presented in Table 13. Despite again, no formal policy as the benchmark for the management board's decisions, on first sight this shows a balanced portfolio with loans of various durations.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1913		2		1		1	2	1			7
1914		3			1	2	1				7
1915						1					1
1916	3								1		4
1917	5	1			1	1					8
1918	2	1		1			1				5
1919	4	1	1		1		2				9
1920		1	1	1			2	2	3		10

Table 13 - Bornerbroek, fixed term loans, including mortgages – duration.
Source: archive of Bornerbroek. Numbers are absolute.

When taking a closer look, the relationship between size of the loan and its duration is not clear cut. On the one hand small sized loans, often for fodder, had as expected a short duration; most times, they had to repaid within six months. Also, all mortgages had a duration of at least thirty years, of which one of 120 years.¹⁰¹ Four even were perpetual loans of which the auditors strongly urged the management board to amend this condition.¹⁰² On the other hand, many smaller loans had a long, sometimes very long duration. In 1913 a loan of 200 guilders was only to be repaid in twenty years, in 1914 many borrowers of loans up to 250 guilders were granted five and six years, and in 1920 more than ten years was permitted to a borrower of 500 guilders.¹⁰³ In all these cases the management board did not disclose their arguments for these decisions in the minutes of their meetings.

The management board regularly discussed the quality of the loan portfolio. Though only very few borrowers requested an extension, if so, the board showed their social consideration as in practice they always approved these.¹⁰⁴ A borrower was granted to repay his overdue debt of 88 guilders in six years.¹⁰⁵ In case of repeated arrears the board took firm action. These borrowers were frequently reminded of their obligations and occasionally, the co-signees were informed when the borrower was late

¹⁰¹ Ibid., 17 September 1920.

¹⁰² Ibid., 31 July 1916, 9 April 1920, 9 July 1920; Audit report, 28&29 September 1919.

¹⁰³ Bornerbroek, Management board, 7 January 1914, 17 February 1914, 11 December 1914, 17 September 1920.

¹⁰⁴ See appendix 2, table 2.3.8.

¹⁰⁵ Bornerbroek, Management board, 14 December 1917.

with repaying his debt.¹⁰⁶ In the end, if social pressure on the debtor and his co-signees did not have the envisaged effect, the board did not hesitate to order a bailiff to collect a debt of a little over 200 guilders.¹⁰⁷ The result was full repayment of the loan, including interest. With their approach the boards enjoyed a high-quality loan portfolio in which no write-offs were necessary.

In sum, the bank served their own neighbourhoods of the municipality and was not in competition with the earlier established bank in Borne for clients. Its loan portfolio remained small though of good quality. It was characterised by sizable loans to the local agricultural cooperatives and at the end of the 1910s by a rising number of large mortgages financing farms and land. The figurehead was the parish priest.¹⁰⁸ He was one of the initiators of the bank, active in its supervisory board for over eight years, and multiple times chaired the general assemblies. He also took care that the bank's culture and activities were closely connected to his church. As well, he co-signed loans and for a short period of time, as a client he took out a current account loan against depositing Dutch securities as collateral.¹⁰⁹ First and foremost, he was the bank's personal ambassador by arranging loans for members of the cooperative and moreover, for his own dream of a new church in Bornerbroek. The bank was the parish priest's project; he gave it its soul and business.

Westerbork: Banking is lending

Westerbork was centrally located in the sparsely populated province of Drenthe. Around the turn of the century in this province agriculture remained the dominant economic

¹⁰⁶ Ibid., 9 November 1917.

¹⁰⁷ Ibid., 20 February 1920, 12 March 1920, 14 May 1920.

¹⁰⁸ The name of this remarkable priest was Father Antonius Josephus Longinus Osse (1874-1927) who after several postings in 1912 became the parish priest of Bornerbroek. He co-established next to the local credit cooperative, the cream dairy factory, the fire insurance cooperative, and the local farmers' association. He sat on all their boards or was advisor to these. Furthermore, he chaired the provincial committee for agricultural education and co-initiated the so-called agricultural winter school. His new church was consecrated in 1921. In 1925 he was appointed knight in the Order of *Oranje Nassau*. The main road in Bornerbroek - with also his church - is still named after him. Source:

<https://www.sintmarcellinus.nl/index.php?site=over&sub=geschiedenis>.

¹⁰⁹ Bornerbroek, Management board, 17 August 1916, 15 October 1919, 18 December 1919.

sector and still employed one out of two.¹¹⁰ Sixty percent of its population lived in one-room dwellings.¹¹¹ The heathlands used for sheep and cattle grazing, were empty, in summer dry and hot, in winter grey and foggy. In general, farmers had to make a living from poor soils. The village of Westerbork with its 3.000 inhabitants was surrounded with these heathlands; only in the south some pastureland was available. A paved road connected the village to Beilen, a little town about six kilometres away. Three out of four of the working population made their living in agriculture. Most of the inhabitants were protestants and member of the Dutch reformed church.¹¹²

The first management board's minutes from 5 July 1912 made clear for which purpose the bank had been established. Already two loans were approved for which still insufficient funding through local deposits, '*inlagen*', was available. Therefore, the *Centrale Bank* would be requested for temporary liquidity support.¹¹³ The next weeks it turned out that the bank attracted enough savings to fund these first loans themselves.¹¹⁴ The many loans the bank granted in the following years would be, with a few exceptions, for men only. The borrower of one of the first two loans remarkably, was Ms. Hillegien Smit, unusually recorded with her own family name.¹¹⁵

The bank had not only energetically started its lending operations, it also showed a high production of new loans in the years to come. In the early years the board met

¹¹⁰ Mathieu Vliegen and Bart Spee, 'De elf provinciën op de drempel van de twintigste eeuw. Een statistische beschrijving' in: J.G.J.S. van Maarseveen and P.K. van Doorn (eds), *Nederland een eeuw geteld. Een terugblik op de samenleving rond 1900* (Amsterdam 2001) 249-276, here 253, 259; Edwin Horlings, 'Werkgelegenheid en economische modernisering. De structuur van de beroepsbevolking', in: J.G.J.S. van Maarseveen and P.K. van Doorn (eds), *Nederland een eeuw geteld. Een terugblik op de samenleving rond 1900* (Amsterdam 2001) 227-248, here 235.

¹¹¹ R.J. van der Bie, "'Licht, lucht en vrijheid". De kwaliteit van de huisvesting (1899-1947)', in: O.W.A. Boonstra et al. (eds), *Twee eeuwen Nederland geteld. Onderzoek met de digitale Volks-, Beroeps, en Woningtellingen 1795-2001* (Den Haag 2007) 129-152, here 132.

¹¹² Caspers et al., *Grote Historische topografische Atlas*, Volume Drenthe, c.1898-1928, map 205/Westerbork, image of 1899, issue 1903, 6; Census of the Netherlands, 1909.

¹¹³ Westerbork, Management board, 5 July 1912 (HAR - *Inventaris van het archief van Rabobank Westerbork*, RABO-2.06, archive number 5).

¹¹⁴ Westerbork, Management board, 1 August 1912.

¹¹⁵ *Ibid.*, 5 July 1912.

weekly to accept new members and at the same time approve their loan applications.¹¹⁶ As shown in Table 14 already in 1913 43 new fixed term loans were granted and except for 1918, the production of new loans further grew over the years. In 1920 an amazing number of almost a hundred new loans were originated. Since its establishment, in nine years, the bank's board approved the stunning number of 550 new fixed term loans.

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1912	3	5	3	2	1			15
1913	2	9	9	9	6	4	4	43
1914	5	9	11	10	3	6	4	48
1915	5	15	12	8	7	7	4	58
1916	7	9	16	19	16	7	12	86
1917	4	21	14	17	11	7	4	78
1918	1	5	13	9	11	6	3	48
1919	3	8	9	11	16	13	16	76
1920	4	2	12	15	20	22	23	98

Table 14 - Westerbork, Fixed term loans origination, including mortgages – size.

Source: archive of Westerbork. Amounts in nominal Dutch guilders, numbers are absolute.

Though over the period until 1920 the relative size of larger loans clearly increased, loans under 300 guilders remained a considerable part of the loans granted in any year. From 1916 onwards also 12 mortgages were part of the fixed term loan portfolio; the principal amount was rather modest with 1.900 guilders on average. Also, from already 1913 onwards, current account loans were granted. These new loans with occasionally subsequent limit increases could be as small as 300 guilders, but also as sizable as 15.000 guilders.¹¹⁷

The duration of the loan portfolio was and remained, as Table 15 presents, quite balanced over the years despite the management board not using a formal policy for these decisions. In the early years, until 1915 loans with a duration of up to one year were the majority. Still, in all years these loans remained an important part of the portfolio. Only from 1919 onwards the relative size of loans with a term of five years and longer increased.

¹¹⁶ Ibid., for example 1 March 1916, 20 September 1916, 18 October 1916, 15 February 1917, 4 April 1917, 11 July 1917.

¹¹⁷ Ibid., 3 November 1913, 18 August 1915.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1912		8	3	1			2			1	15
1913	10	23	3	3	2	1	1				43
1914	12	16	2	7	2	5	4				48
1915	13	10	2	9	5	4	9	3		3	58
1916	12	21	7	9	4	13	11	7		2	86
1917	9	27	13	10	3	7	5	4			78
1918	7	16	5	3	5	3	3	4		2	48
1919	6	17	10	5	5	9	12	11	1		76
1920	25	9	1	5	3	13	25	15		2	98

Table 15 - Westerbork, fixed term loans, including mortgages – duration.

Source: archive of Westerbork. Numbers are absolute.

Long durations were traditionally approved for financing farms and land. For these mortgages obviously longer terms were agreed; one had a longer duration than thirty years and one was a perpetual mortgage.¹¹⁸

There was no clear relationship between size of the loan and its duration. The board's minutes did not disclose why on certain smaller loans long durations were agreed and vice versa. The bank in Westerbork financed 29 horses over the period. The relationship between size of the loan and duration, as shown in Table 16, has been more closely examined. An important assumption here is that the size of the loan represented the price of the horse and not only a part thereof.

Amount	≤ 6 months	≤ 1 year	≤ 2 years	≤ 3 years	≤ 5 years	≤10 years	> 10 years
≤ 100							
≤ 200		1	2				
≤ 300	1	3	3	3	2		
≤ 500	2	1	1	1	1	1	
≤ 750		1				1	
≤ 1000		2	1				1
> 1000			1				

Table 16 - Westerbork, Financing horses: size of loans related to duration of loans.

Source: archive of Westerbork. Numbers are absolute. Amounts in nominal Dutch guilders.

Smaller loans not necessarily had shorter durations and large loans not always longer durations. Therefore, the board's considerations remained enigmatic in this respect.

The purpose of most loans was financing farmers and their supporting organisations. Until 1915 the board diligently recorded these purposes in their minutes, later for many approved loans not. As Table 17 shows, the members applied for loans to finance cattle, fertilizer for the poor soils, to a somewhat lesser extent fodder, and as discussed, horses.

¹¹⁸ See appendix 2, table 2.4.6.

Year	Cattle	Horse	Fodder	Fertilizer	Cultivation	Farm/Land	Misc.	Not specified	Total
1912	6			2	4	3			15
1913	26	4	2	4	5	4	6		51
1914	22	5	1	7	3	3	2	5	48
1915	3						2	53	58
1916	13	6	1	7	1	1	1	56	86
1917	9	1	7	4		1	1	55	78
1918	13	5	1	2		2	1	24	48
1919	15	6		4		5	1	45	76
1920	13	2		10		12	1	70	98

Table 17 - Westerbork, Purpose of loans.

Source: archive of Westerbork. Numbers are absolute.

Also, loans for cultivating the heathlands in the surroundings of the village and the acquisition or improvement of farms and land were often reasons for borrowing at the bank.

The borrowers were not farmers only. Their supporting organisations like the cooperative agriculture association, *Coöperatieve Landbouw Vereeniging*, the steam dairy factory, and the bull farming cooperative, *Coöperatieve Stierhouderij*, were important clients taking out large current account loans.¹¹⁹ The bank financed on a limited scale however, also other members. The bank's client base included some local artisans like the carpenter and the tailor, the reformed school association, *Gereformeerde Schoolvereeniging*, the local hearse association, *Lijkwagenvereeniging*, the deaconry of the Dutch reformed church in Westerbork, and the vicar thereof as well.¹²⁰ In the auditor's reports no remarks were made about financing these members outside the mandate of the statutory rules.¹²¹

The largest exposure was the loan to the municipality which in stages increased to 37.500 guilders in 1919. The last redemptions on this loan were scheduled for 1957.¹²² In 1920 the CCRB actively discouraged these types of loans and instructed their member banks to actively wind down these. No exceptions would be made, and they even threatened not to offer funding lines anymore in case these loans were not repaid

¹¹⁹ Westerbork, Management board, 18 March 1913, 3 November 1913, 14 April 1914, 12 September 1917.

¹²⁰ Ibid., 22 February 1913, 14 May 1913, 29 September 1920, 15 May 1918, 17 January 1917, 15 February 1917, 17 November 1920.

¹²¹ Westerbork, Audit reports, *Inspectierapporten*, 17 September 1912, 2 August 1913, 14 September 1914 (archive number 196).

¹²² Westerbork, Management board, 19 June 1919, 26 June 1919.

in full by year-end.¹²³ For the credit cooperative in Westerbork with their very high loans-to-deposits ratio this was a serious risk. Unfortunately must have been that the municipality had just applied for a further increase of their credit limit with 5.000 guilders. Therefore, the board discussed this pressing issue several times and requested dispensation. After the *Centrale Bank's* rejection thereof, she disapproved the further limit increase and convinced the municipality to redeem a large part that year.¹²⁴ Still, in 1924 the bank 's outstanding was well over 20.000 guilders.¹²⁵

The bank's board most times relied on co-signees as main collateral for their loans. From mid 1916 they accepted one co-signee as standing practice; only for large loans occasionally two co-signees were demanded as additional surety. For evaluating the suitability of the co-signee(s) offered by the loan applicant, the board used, as required by the accounting manual, a dedicated form listing the co-signees already accepted so far. As mentioned, in only a few cases property was used as collateral. In such cases, the cashier or a board member surveyed the farm and land to determine whether it had the required surplus in value for the mortgage requested.¹²⁶ Remarkably compared with current banking practices, for large loans with a duration of ten years or more, the board considered co-signees as superior collateral.¹²⁷ Another explanation might be that these borrowers all were tenants who obviously could not offer property as collateral. For the number of these large loans this seems however, unlikely.

Rejections of loan applications were an exception; until 1920 this percentage was well under 10 percent. If disclosed in the minutes, reasons were mentioned like poor payer with debts elsewhere, insufficient property value for the mortgage requested, applicants living outside the municipality, and redeeming debt as purpose was a violation of the statutory rules.¹²⁸ Only in that year 24 percent of requests were disapproved for several reasons. Firstly, the bank experienced a relative high outflow of

¹²³ *Raiffeisen-Bode*, nr. 5, November 1920.

¹²⁴ Westerbork, Management board, 19 June 1920, 26 June 1920, 30 June 1920, 14 July 1920, 29 December 1920.

¹²⁵ Westerbork General ledger 2 (archive number 162-164).

¹²⁶ Westerbork, Management board, 18 April 1918, 27 August 1919.

¹²⁷ *Ibid.*, 17 November 1915, 22 November 1917, 16 July 1919, 15 October 1919, 21 April 1920, 23 October 1918, 16 June 1920, 1 December 1920, 8 December 1920.

¹²⁸ *Ibid.*, 1 October 1912, 14 December 1914, 20 December 1916, 6 March 1918, 14 August 1918, 22 November 1920.

savings making the board cautious to grant long term loans.¹²⁹ Secondly, many offered co-signees were rejected as either considered financially weak or being already too many times co-signee for other loans.¹³⁰ Finally, one of these co-signees was a notary who by offering this service to his clients also boosted his business. The board clearly opposed these practices and decided to reject him as co-signee.¹³¹

With the size of the bank's loan portfolio clients with arrears obviously, were an issue the board had to deal with. Many clients interpreted their redemption schedule liberally and sometimes repaid a little earlier and more often, a month or so later. This seemed not to concern the board; they simply not even discussed it. Extensions were regularly requested by the borrowers, though relative to the size of the portfolio, in limited numbers. Most times the board approved these requests with an additional six to twelve months, and occasionally with new durations from up to five years.¹³² Notably, the Dutch reformed church received an extension of two years for redeeming their 1.800 guilders loan.¹³³ Generally, like for all the banks, in the ledger entries it cannot be retrieved who, the borrower or the co-signee(s), actually paid the redemptions and interest on the loan. Only in one case in the ledger the cashier noted that the co-signee paid, and in another case a little note revealed that the son of the borrower redeemed one third of the principal amount.¹³⁴ Strikingly, up to 1919 the minutes showed no sign that the board periodically discussed in detail the borrowers with arrears. Only from that year onwards the board reminded those clients with formal notices.¹³⁵ In one case the co-signees were invited to a board meeting to discuss how the remaining debt would be repaid.¹³⁶ Arrears, therefore, were an issue the board could not ignore.

Another time after repeated reminders it was decided to use 'stricter measures', including informing the co-signees. In the close community of Westerbork, a wider circle became aware of the financial problems of the borrower which must have been a threat

¹²⁹ Ibid., 14 July 1920, 25 August 1920.

¹³⁰ Ibid., 11 February 1920, 21 April 1920, 12 May 1920, 2 June 1920, 25 August 1920, 29 September 1920, 27 October 1920, 3 November 1920, 10 November 1920, 24 November 1920.

¹³¹ Ibid., 12 May 1920.

¹³² Ibid., 22 December 1915, 23 February 1916.

¹³³ Westerbork, Management board, 11 June 1919.

¹³⁴ Westerbork, General ledger 2, pages 364, 489.

¹³⁵ See appendix 2, table 2.4.8.

¹³⁶ Westerbork, Management board, 20 November 1919.

of social exclusion. In the end, the board engaged their lawyers, and this led to legal proceedings against this client, who finally and to the satisfaction of the board paid.¹³⁷ The board's policies on debt collection were firm as demonstrated with a letter to the editor of the *Raiffeisen-Bode* in 1916. It stated almost proudly that they had sent registered letters to three debtors, had charged an additional 30 guilders debt collection costs, and initiated legal pressure through lawyers. The overriding principle was summarised with 'a first requirement is not to let a single day pass between a day once set [...] and using all means to bring the debtor to reason'.¹³⁸ Strangely enough, the board's minutes showed a very different impression by their generally lenient attitude for extending the redemption schedules for borrowers with arrears. The result of these policies and attitudes must have been quite satisfactory for the board; no formal write-offs over the period were necessary.

To evaluate the volume of loan applications the bank's management board often met weekly instead of the statutory monthly requirement. Only after outbreak of the war when the demand for loans decreased significantly, the board enjoyed a longer period of meeting in a lower frequency. Also, in Westerbork, occasionally the minutes omitted the redemption schedule or the names of the co-signee(s) and left room for interpretation whether a loan application had been approved or not.¹³⁹ Still, most times the minutes and the ledgers were well-organised and met the professional standards of the CCRB.

To summarise, the bank in Westerbork was a lending machine. Already from the start their levels of production were high compared with its peers. This resulted in exceptional high loans-to-deposits ratios, in some years of more than 100 percent. Over the period up to 1920 the loan portfolio showed a balanced view though the relationship between size of the loans and its duration remained intriguing. The quality of the loan portfolio was very satisfactory. Arrears were effectively managed including firm debt collection with regular legal proceedings if the social capital proved insufficient. The bank actively did where it was established for, that is lending though to a wider client base than the original circle of farmers and their supporting organisations. Put even more concise, for the board in Westerbork banking was lending.

¹³⁷ Ibid., 14 August 1918, 7 May 1919, 14 May 1919, 30 July 1919.

¹³⁸ *Raiffeisen-Bode*, nr. 3, September 1916.

¹³⁹ Westerbork, Management board, 14 April 1914, 13 January 1915, 14 April 1915, 15 March 1916.

5.1 Four loan portfolios: one practice? A comparison: similarities and differences

For the banks' boards maintaining the trust of the local community was of the utmost importance. The savings of their neighbours were deposited at the banks, and these were to be protected at all costs to avoid the negative personal and social consequences of mismanaging the bank. The banks, also the ones in Borne, Bornerbroek, Heeze, and Westerbork, were active in a small geographical area in which the members knew each other and thus, the banks possessed social capital as essential asset. All banks offered the same simple products, managed their cooperative with the same governance structures, and used the same accounting and control system.

To be considered a strength, the foundational framework for all credit cooperatives was the same, irrespective of their *Centrale Bank*, CCB or CCRB. This one foundational framework for the banks suggests that the local banks all operated within a certain bandwidth thereof. Reality was very different. The following comparison analyses this variety from the perspectives of governance of the bank, the loan portfolios of the credit cooperatives, and the performances thereof. Subsequently these findings will be mirrored with Jonker's research. Subsequently, this comparison seeks to explain the mechanisms behind this diversity.

Perspectives for comparison

- Governance

Though in the framework the tasks of the management board as the most important management body were well described, the implementation thereof was not a given. Besides some minor deficiencies the management boards of the CCRB-affiliated banks in Borne and Westerbork showed that the standards in the framework could be met, also, by non-professionals. From the perspective of governance, they ran their banks well. However, the management boards of Bornerbroek and Heeze struggled and showed little signs of willingness and determination to improve the governance of their banks. Their attitude neglected the crucial attention to governance as the starting point for managing their risks. As these banks had small loan portfolios, with hindsight for them maybe luckily as otherwise possibly they would have been confronted with severe credit

losses, the consequences of these shortcomings were more formal than material in practice.

In all four banks the role of the supervisory board as countervailing power and monitoring instrument over the management board was virtually non-existent. In Heeze they hardly met and in the other banks with a very low frequency. If they met, they often joined the meetings of the management board which made their role even more challenging to fulfil in practice. Their function in such cases was degraded to simply endorsing the loan applications above the mandated limits of the management board. In not a single case the supervisory boards of any of the banks ever rejected such a proposal of the management board. Also, the general assemblies were rather formal events only, approving the proposals, sometimes after some discussion, the supervisory board made. In practice, the supervisory boards and general assemblies as crucial governance bodies did not perform their duties as designed.

- *Development of the loan portfolios*

Credit policies named as such were not used by the banks; still, the foundational framework offered the boards a relatively simple to use tool to grant credits and manage these. Following the instructions of the framework was not for all banks a similar challenge. Only the bank in Westerbork showed that besides some minor issues, they could meet these standards structurally. The boards in Borne, Bornerbroek, and Heeze regularly exceeded their credit mandates and multiple times recorded their credit decisions poorly.

All banks granted loans primarily to farmers and their supporting organisations. They all financed farmers' working capital with by granting loans for cattle, horses, fertilizer, and fodder. Over time, long term financing farms and land became the dominant purpose for lending at the banks. This in itself was an – intended – concentration risk as a downturn in the sector would hit all the banks with such an undiversified portfolio hard. Still, this was not the whole story. The bank in Heeze uniquely accepted a major part of its loan origination for the borrowers' redemption of debts elsewhere. Furthermore, they granted small sums to their members for relieving acute distress which had no direct relation with farming. On a limited scale the banks in Bornerbroek and Westerbork had no issue in granting loans to local artisans, which in such case also became members of the cooperative. Clearly outside the mandate of the

boards were the large loans to the municipality by the CCRB-banks in Borne and Westerbork. Also, the bank in Bornerbroek exceeded its primary purpose with their loans for building a new church and its tower. The banks fulfilled their primary task, however, to various extents they all went clearly beyond, yet differently.

The portfolios of fixed term loans of the four banks up to 1920 developed very dissimilarly. On the one side of the spectrum, the earliest established bank in Heeze, the portfolio remained small and relatively stable in size with an average fixed term loan of only 871 guilders in 1920, significantly lower than its average peers. On the other side, Westerbork, a young bank, enjoyed a spectacular growth with relatively large current account loans of 3.618 guilders in that year. In Borne by far the largest bank of the four, various members took out large perpetual loans combined with fixed term loans creating the unique client exposures there. The size of their loans was higher than their peers with particularly, on current account loans a balance of 6.394 guilders in 1920. Furthermore, Bornerbroek had many, smaller current account loans compared with its peers, and which were granted to private individuals to avoid the repeated paperwork of the borrower and his co-signee(s).

The four banks clearly preferred co-signees for securing their loans. Still, also here the practices amongst the banks varied. Up to 1920 in Heeze 22 percent of loans were mortgages, collateralised by property; in Bornerbroek, Borne, and Westerbork these percentages were 12, 11, and only 2 respectively. The banks most times used two co-signees in their early years and gradually moved to one co-signee in later years. Still, when one co-signee became the rule occasionally two were still required, and not for large loans only. Though irreducible from the minutes, the boards exploited their social capital to sufficiently secure their loans. The banks favoured people with their incomes and wealth over the value of property with its cumbersome enforcement procedures.

- *Performance of the loan portfolios*

The bank in Heeze with its poor-quality loan portfolio positively decided on every though small number of extension requests. The board in Westerbork not, they regularly rejected these requests from clients with, if recorded in the minutes, reasons as repeated request or an additional co-signee needed first. The boards in Bornerbroek, Heeze, and from 1919 onwards Westerbork actively sent reminders, however, with a very different attitude. As the banks in Bornerbroek and later Westerbork regarded this

as an integral and essential part of their management tasks, the board in Heeze, pushed by its auditors, performed this task reluctantly and insufficiently to improve the quality of the portfolio.

The collection of bad debt rested on exploiting the social capital the credit cooperatives had. Only if repeated pressure on the borrower did not have the envisaged effect, the co-signee(s) were approached. In Heeze and Westerbork the minutes showed that borrowers were visited personally or were invited with their co-signee(s) to attend a board meeting. The Westerbork ledgers showed that occasionally the co-signee(s) redeemed parts of the borrower's debts in practice. However, exploiting the boards' social capital did not always lead to the envisaged outcome. If needed, they initiated traditional legal proceedings against their borrowers to convince unwilling clients to fulfil their obligations.

Still, as strong indicator of the overall quality of their loan portfolios stood out that up to 1920 no bank showed in their minutes or ledgers that write-offs of any loan, full or in part, were necessary. With our current views the procedures and management information gave room for many improvements. Some boards were less active in managing their bad debt, still in the end, they all enjoyed a loan portfolio without any credit losses. In this sense, they all were successful bankers.

- *Mirroring Jonker's results*

Jonker's research focused on examining the claim that the credit cooperatives were vital for the economic development of farmers. Therefore, he reviewed the loan portfolios of the banks in Haaren and Oirschot for that purpose. These banks affiliated with the CCB, located in the province Noord-Brabant, were small. As very early established credit cooperatives they only had 43 and 245 fixed term loans up to 1920 and their savings surplus was high. Compared with the four banks examined in this research, they resembled from the perspectives of geographical region and loan portfolio the bank in Heeze most.¹⁴⁰

This research shows that all four banks - from the CCB and CCRB - were very different. The variety in loan portfolios between the credit cooperatives was much larger than the banks Jonker examined, the loans-to-deposits ratios were not for all

¹⁴⁰ Jonker, *Welbegrepen eigenbelang*, 67-75.

banks low, and loans and very large ones as well, were granted outside the target group of farmers and their supporting organisations. Therefore, his conclusions should be nuanced. Furthermore, he did not research the credit policies and – management, the quality of the loan portfolios including the management of the non-performing loans, and the enforcement thereof. A remarkable difference is that the banks in Haaren and Oirschot both had one foreclosure.¹⁴¹ Whether that resulted in an actual write-off he did not mention. For the four banks examined no loans had to be written off. To summarise, the findings presented here, cannot be fully mirrored with his research.

In sum, this research shows that the local banks examined varied in many aspects from each other to a much larger extent than the banks Jonker examined. In fact, their differences go far beyond their similarities. For the governance of the cooperative and the management of the loan portfolios the distinction between the CCB and the CCRB is remarkable. Still, the sample of four banks is too limited to ground that the central credit cooperatives were the cause thereof. This leaves the question open why these differences occurred and what mechanisms triggered these.

Mechanisms for divergence

The one foundational framework, the converging mechanism, aimed at standardisation in structures and practices. The following three drivers, the diverging mechanisms, explain the diversity between the banks examined. All factors played a role and the combination thereof determined the specific outcomes per local bank.

- Local credit demand varied

The four banks operated in distinct geographical areas serving a small local community. All banks granted loans as envisaged, primarily to farmers and their supporting organisations. For lending they did not compete with other financial institutions in their community. Even in Borne and Bornerbroek this research showed no rivalry between these banks; both were within the same municipality active in very distinct geographical areas and communities. To which extent other sources for credit were available remains an open question, still, the favourable interest rates and like in Heeze the refinancing of

¹⁴¹ Ibid., 74.

debt elsewhere presumably will have driven out usury credit practices. Therefore, the loan portfolios of the banks examined will have reflected the real local demand for credit.

All banks offered short term credits for financing fodder, fertiliser, and cattle, though only Westerbork on a large scale. Over the period however, the main purpose for borrowing by individual farmers became the long-term financing of acquired farms and or land. The large loans, which in the loan portfolios of the banks took a relatively major part, were not granted to the farmers, but to their local agricultural cooperatives. These organisations pooled resources to make the farmers of the community economically independent and for that they needed large sums. Here laid the impact of the local banks; obviously, they supported the farmers, but moreover their supporting organisations.

- *Framework offered room for interpretation*

Though the foundational framework was thorough, and prescribed many topics in great detail, in practice, many choices, particularly in the fields of credit and risk management, were left open. The boards' choices in this respect could materially impact the borrower and the quality of the loan portfolio. For example, undefined were the duration of loans related to their size and or purpose, and in which cases one or two co-signees were required or a mortgage was the preferred collateral. Moreover, the credit policies did not cover what is now called the risk appetite of a bank. Topics like the maximum one single obligor exposure, that is the maximum credit risk on an individual client, prohibition of perpetual loans, and the maximum loans-to-deposits ratio to control the bank's liquidity risk were all not described. Therefore, on the one hand the boards of the banks had room to manoeuvre and to tailor their decisions to the individual clients' needs, on the other hand they had many critical topics to consider without specific guidance from the framework.

In the areas for which no policies were stated in the framework, the banks diverged in their practices. Firstly, in none of the examined banks the joint unlimited liability of the members was used as an argument to reject loan applications. If such a decision was made, the records showed arguments about the insufficient creditworthiness of the member or his co-signee(s). In case of the enforcement of loans the primary aim was to force the borrower to fulfil his obligations, and only if

unsuccessfully, to rely upon the co-signee(s). Write-offs were to be avoided at all costs, but not because the boards were afraid to claim a remaining balance from all the members under the unlimited joint liability. Strikingly, the records of the banks showed that not in a single case the topic was discussed in the boards' meetings and general assemblies; in practice, it was non-existent. Secondly, none of the banks had a policy on the duration of the loans granted and this had consequences. The most striking example was the bank in Borne; in a few years it built up a large portfolio of perpetual loans and long-term loans with only repayment at the end date thereof. By doing so, this bank's credit – and liquidity risk dramatically increased without the boards being aware thereof. Thirdly, the choices when to use one or two co-signees or to use property as collateral led two very different profiles of the loan portfolios as discussed. Finally, the one single obligor exposures differed significantly per bank. In this respect the bank in Borne was a true outlier with some single client exposures compared with total deposits of 12 and 27 percent!¹⁴²

The credit policies prescribed the forms to be used for redemption extensions by clients and payment reminders the bank sent to bad debtors. Also, the management board was to remind these members with arrears regularly. However, what that in practice implied, how precisely the boards were expected to enforce the collection of arrears, to react leniently or firmly on requests for payment extensions, when to approach the co-signees for redemption, and if necessary, to take additional measures were all left open. This led, not surprisingly, to varying practices amongst the four banks. More importantly, a regular report of non-performing loans which was as a standard item frequently to be discussed in the management board, was not foreseen in the framework. Without doubt the banks could not neglect this issue; in practice, as the records of the banks showed, borrowers - in all cases private individuals - did not honour their obligations always timely. However, the attitude of the banks' boards to actively manage bad debt varied considerably.

With our current risk management practices, it remains intriguing why these early credit cooperatives and their *Centrale Banken* did not quickly formulate policies in these

¹⁴² Loans to the procurement cooperative of 72.500 guilders in 1920 and to the municipality of 166.500 guilders in 1919. To put these numbers into perspective with its successor, the current Rabobank this would imply single client exposures of 48 billion and 107 billion (Source: Rabobank, annual report 2022, deposits from customers at year-end 396 billion, 9).

areas and particularly, the duration of loans and the credit limit for an individual client relative to the size of the bank. The explanation lies in the driver discussed below, that is the autonomy of the local credit cooperative.

- *Cooperative structure in practice*

All credit cooperatives examined enjoyed a high degree of local autonomy. Not only in the legal sense, also in their culture the banks operated as independent institutions. The bedrock of the cooperative was, as many times stressed in the literature, its members who had all accepted the potential heavy burden of the joint unlimited liability. The general assembly with its statutory powers to elect and dismiss board members and to decide on all critical issues the members concerned, was the forum at the core of the cooperative. In practice, these meetings were formal events only. The members, sometimes after some debate, approved all proposals the boards made, including their (re)appointments. Many showed little interest in their cooperative and did not attend the general assemblies, even if they were held in the roman catholic communities on Sundays directly after mass. The fines the members had to pay for their absence was never collected.

The boards of the bank, and particularly the management board, were the determining force within the cooperative. This small group of men decided within the framework their *modus operandi*. As the supervisory board did not fulfil its duties, the management board decided on all loan applications and the enforcement of non-performing loans. In this sense they had an enormous social and economic impact on their community. The board members often were re-elected multiple times which on the one hand was an important sign of continuity and trust from the members, but on the other hand a limiting factor in learning and improving the practices in the bank. This explains why in some banks, notably, *Bornerbroek* and *Heeze*, the governance of the bank remained an issue, and vice versa, why in *Borne* and *Westerbork* the bank was well managed over the period.

The CCB and CCRB were established for amongst others monitoring the quality of operations within their affiliated banks. The regular audits and the instructions in their *Meededelingen* or *Raiffeisen-Bode* were implementations thereof. Also, local banks were required to receive a pre-approval of their central cooperative before admitting

agricultural cooperatives as a member or granting credits above a certain threshold.¹⁴³ So, it seemed that the *Centrale Banken* had a strong position; they were the principal and the local banks their agents. Though formally the case, materially the impact of the *Centrale Banken* on their affiliates was limited. The CCB and CCRB were cooperatives themselves of which the local banks – in daily practice their agents – were the owner. This meant that audit recommendations, interest rate instructions, and other publications were all interpreted as guidance only. The consequences were that frequently the banks these simply ignored – all banks exceeded their mandates more or less regularly – or decided what was in their best interest – as deviating from the proposed interest rates locally -. In the annual general assembly of the *Centrale Bank* all local banks had the joint interest of maintaining their local autonomy and they let the boards of the central cooperative then feel that they were the principal and not the agent. In the end, the boards of the Centrale Bank were (re)elected by its members, these were their affiliates.

Therefore, the collaboration between the *Centrale Bank* and their local banks was a balancing act which firstly, hindered necessary quality improvements or risk mitigation of the loan portfolio in specific banks, if the local boards were not willing to implement these. This explains the surprisingly accumulation of credit- and liquidity risk in Borne and the structural poor-quality of operations and loan portfolio in Heeze. Secondly, the highly valued local autonomy with relative weak *Centrale Banken* explains the limited learning capabilities amongst the banks. The central cooperatives were not in the position to enforce further standardisation and best practices. As an example, the

¹⁴³ In Poeldijk the chief-auditor of the CCRB attempted to persuade the audience to establish a CCRB affiliated bank next to the already existing CCB credit cooperative. In his presentation he only mentioned the audit of the accounts as task of the central cooperative. In practice, they would enjoy full freedom in their entrepreneurial activities. Obviously, he knew that this was not correct as he regularly complained that the local banks exceeded their mandates. Back then too was selling the art of telling a message the audience was receptive to.

Westlandsche Courant, 24 January 1917,

<https://www.delpher.nl/nl/kranten/view?coll=ddd&query=%28%28Westlandsche+Courant%29+or+westlandsche%29&cql%5B%5D=%28date+ gte +%2224-01-1917%22%29&cql%5B%5D=%28date+ lte +%2224-01-1917%22%29&redirect=true&identifier=MMAAS01:210189009:mpeg21:p00002&resultsidentifier=MMAAS01:210189009:mpeg21:a00020&rowid=1>.

innovative practice in Bornerbroek to grant current account loans to frequent borrowers was nowhere copied.

6 Conclusion

The banks examined all pursued their main reason for existence. They all granted loans to farmers and moreover, to their supporting organisations, though not to the same extent. This resulted in very differently sized loan portfolios for the banks in Borne, Bornerbroek, Heeze, and Westerbork with each dissimilar characteristics. From on the one side of the spectrum the bank in Heeze with a relatively small and stable portfolio and on the other side Westerbork with a large and rapidly growing portfolio, all banks showed that in their limited geographical area, they were serving their primary target group and - also between Borne and Bornerbroek - did not compete with each other. Their loan portfolios contained varying numbers of fixed term loans with ever longer durations and current account loans with sometimes remarkably high credit limits. The local demand for credit was the main differentiator leading to these differing loan portfolios amongst the banks. Also, they offered, again in varying degree, loans to members outside this primary target group. In some banks loans to artisans, their municipalities, or the church were accepted, in others not.

Maintaining trust in their banks was of primary concern for the banks' boards. As deposits were the only source of funding for the banks, and all only had very limited equity accumulated by their retained earnings, a considerable savings surplus was therefore, a prerequisite to react responsively on additional credit demand and to remain resilient against clients withdrawing their savings in a short timeframe. In this aspect on the one hand the bank in Heeze showed a very low loans-to-deposits ratio. On the other hand, Westerbork with its consistently very high ratios would certainly need the CCRB to bail them out in case of a loss of trust and a subsequent bank run. The bank in Borne showed a decent loans-to-deposits ratio, however, her loan portfolio contained the for the boards of the bank hidden credit - and liquidity risk caused by the growing number of perpetual loans and loans with long durations. The challenge of operating a credit-cooperative with non-professionals was not to be underestimated and the banks examined were evidence thereof.

A foundational framework with the governance of the credit cooperative, banking products, accounting of transactions, and the oversight from the *Centrale Bank* including annual audits was therefore, offered to all credit cooperatives irrespective whether they were affiliated with the CCB or CCRB. This framework was solid from the perspective of running a bank by non-professionals. This converging mechanism intended that the

local banks all operated within a certain bandwidth thereof. Reality was very different, the mechanisms for divergence were much stronger than those for convergence. The narrative of the early credit cooperatives in the Netherlands was marked by diversity. The divergence was first and foremost, driven by the fully autonomous local credit cooperatives all implementing their own interpretation of the cooperative structure. The banks' management boards were the decisive body in the cooperative and this small group of most times long-serving men took all critical decisions. Instructions and well-intended recommendations by their central cooperative were considered guidance only, which also, could be ignored. As the local banks owned their *Centrale Bank* the position thereof was and remained relatively weak. Secondly, the foundational framework was incomplete in critical areas of credit- and risk management. The duration of loans, preferred collateral, single obligor exposures, and management of non-performing loans were all choices the banks' boards had to make. These led to, unintendedly or deliberately, wide variances amongst the banks which significantly influenced their risk profiles. Finally, as discussed, the local credit demand varied considerably amongst the banks resulting in very different loan portfolios.

This implies that the common view of the success of the early credit cooperatives in the Netherlands must be nuanced. This narrative often based on the annual reports of the *Centrale Banken* including data of their affiliates, suggests over the period up to 1920 steady and successful growth for all. However, this research shows that in fact, there were many local narratives, not surprisingly, with these mechanisms for divergence. This diversity is not to be considered negatively which we with our current views on converging and ever stricter banking regulations may do. On the contrary, it explains despite the very different operational quality levels amongst the banks, their local adaptability in practice. They fully exploited their social capital when evaluating loan applications and managing their loan portfolio, resulting in the remarkable achievement of no actual write-offs up to 1920.

Consequently, some of the arguments and conclusions in the literature which explain why credit cooperatives became successful in the Netherlands, are to be reconsidered. Firstly, some of the differentiators of the credit cooperative mentioned, were not as crucial as presented. The unlimited joint liability played no role whatsoever in practice, not in loan approval decisions, not in the collecting of bad debts, and not for

the continuity of the banks.¹⁴⁴ Also, the social capital in case of defaulting clients surely created strong enforcement threats against these.¹⁴⁵ However, in the end, persistent defaulters were, before calling the co-signee(s), effectively forced to redeem their debts by traditional debt collection procedures including legal proceedings. Secondly, roman catholicism 'arguably provided the crucial social capital' on which the bank was built.¹⁴⁶ In itself not incorrect, it was not true for all of the Netherlands as suggested. In flourishing CCRB-banks like Westerbork the religious affiliation was irrelevant. Thirdly, though the banks to various extents financed working capital like cattle, fodder, and fertilizer, granting long term loans for the acquisition of farms and or land became more important over the period.¹⁴⁷ Finally, the argument that the cooperative banks were savings bank only in their early years is misleading.¹⁴⁸ The banks only had this source of funding, and creating and maintaining a savings surplus was therefore essential. Furthermore, some of the banks examined, showed that they already very shortly after their establishment granted loans on a large scale resulting in high loans-to-deposits ratios.

More and detailed research is suggested about other local banks to further examine the observed diversity and to better understand the strengths and weaknesses of the cooperative model. Also, to confirm or nuance the view presented here that the emergence of the credit cooperatives in the Netherlands is a narrative with many different tales. Other parts of the country with different agricultural activities like Aalsmeer with floriculture and Naaldwijk or Poeldijk with horticulture are possible options. In this respect, the role of the management board as the decisive management body in practice, deserves focus. The availability of its records in the archives is

¹⁴⁴ Ghatak and Guinnane, 'The economics of lending with joint liability', 199, 225; Guinnane, 'The early German credit cooperatives', 87; Sluyterman, et al., *Het coöperatieve alternatief*, 25.

¹⁴⁵ Guinnane, 'Cooperatives as information machines', 366, 370-371, 386.

¹⁴⁶ Colvin, Henderson, and Turner, 'The origins of the (cooperative) species', 22; Jonker, *Welbegrepen eigenbelang*, 100.

¹⁴⁷ Jonker, *Welbegrepen eigenbelang*, 102; Rommes, *Voor en door boeren?*, 274; Van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw*, 280-281; Van Zanden, 'The first green revolution', 237.

¹⁴⁸ Jonker, *Welbegrepen eigenbelang*, 19-20; Van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw*, 281.

therefore, critical. Though for the research presented here the lending ledgers were considered essential, they are not. The loan portfolio of the local banks can be reconstructed with the minutes of the management board's meetings. This opens opportunities to examine banks for which the board's minutes are archived and the ledgers are missing. Also, the research of these local banks in later periods would be of interest with questions whether they remained stable and resilient, and if, and to what extent and why, the framework was adapted. Furthermore, an international comparison to mirror this thesis with findings from other countries would also add valuable perspectives.

Cooperatives have not lost their appeal over the years. On the contrary, they are as vibrant today as in their early years. They have proven - against the current beliefs of economies of scale driven by standardisation, centralisation, and globalisation - that local diversity is a strength and a source of resilience. The banks in Borne, Bornerbroek, Heeze, and Westerbork shown us that despite all weaknesses as well, with dedication and perseverance non-professionals can achieve a remarkable performance, for their cooperative, and moreover, for their community.

Appendices

1. - Financials credit cooperatives in the Netherlands, c.1900-1920

- Total - CCB - CCRB
- CCB - Heeze - Bornerbroek
- CCRB - Borne - Westerbork

2. - Loan portfolios of:

- Heeze
- Borne
- Bornerbroek
- Westerbork

Appendix 1. - Financials credit cooperatives in the Netherlands, c.1900-1920

1.1 Total – CCB – CCRB

1.2 CCB – Heeze – Bornerbroek

1.3 CCRB – Borne – Westerbork

For all tables:

Numbers are absolute. Volume, average balance, and savings surplus in nominal Dutch guilders. Loans-to-deposits ratio in percentage.

Average balances, savings surplus, percentages, and loans-to-deposits ratio calculated by author.

Source: annual reports CCB and CCRB

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
CCB	Number of local banks	33	46	62	80	104	132	154	190	216	237	263	283	310	346	363	386	409	423	436	469	490	501	
	Number of members		3.947	5.406		6.928	9.679	11.919	14.691	16.880	19.166	21.942	24.586	27.639	31.878	35.564	37.663	38.806	41.163	44.726	47.104	51.685	56.109	
	Savings accounts																							
	>Number		3.237	4.597		6.366	9.109	10.951	14.255	17.523	20.720	24.381	29.121	34.825	38.794	44.374	48.691	54.152	62.060	70.664	80.335	90.106	103.721	
	>Volume		649.074	1.037.881	1.755.142	2.399.387	3.229.086	4.201.303	5.661.995	6.930.123	8.425.076	10.353.710	12.938.577	15.646.797	18.450.564	21.561.462	22.871.099	29.982.957	41.570.633	55.405.889	77.143.471	89.551.956	92.187.949	
	>Average balance		201	226		376	354	383	397	395	407	425	444	449	476	486	470	554	670	784	960	994	889	
	>Percentage savings accounts to members		82%	85%		92%	94%	92%	97%	104%	108%	111%	118%	126%	122%	125%	129%	140%	151%	158%	171%	174%	185%	
	Fixed term loans																							
	>Number		1.175	1.446		2.307	3.037	3.874	5.045	6.421	7.708	9.413	10.864	12.353	14.734	17.354	18.766	18.319	18.297	16.836	17.615	19.501	23.860	
	>Volume		219.121	364.277	684.215	974.835	1.539.546	2.240.756	3.121.446	4.413.629	5.307.608	6.120.914	7.003.578	8.017.719	9.731.613	12.032.607	13.070.699	12.592.443	13.306.706	14.324.953	15.504.812	22.315.975	31.091.390	
	>Average balance		186	252		423	507	578	619	687	689	650	645	649	660	693	697	687	727	851	880	1.144	1.303	
	>Percentage loans to members		30%	27%		33%	31%	33%	34%	38%	40%	43%	44%	45%	46%	49%	50%	47%	44%	38%	37%	38%	43%	
	Current accounts																							
	>Number		51	56		76	118	193	260	317	437	575	735	921	1.185	1.565	1.725	1.915	2.310	2.612	2.958	3.638	4.504	
	>Volume		22.437	25.475		61.408	118.632	336.106	508.814	798.571	1.255.969	589.031	798.186	1.127.757	1.456.583	2.067.440	2.928.473	3.322.505	3.700.082	4.349.309	4.839.884	6.193.600	9.952.051	
	>Average balance		440	455		808	1.005	1.741	1.957	2.519	2.874	1.086	1.224	1.229	1.321	1.698	1.735	1.602	1.636	1.636	1.702	2.210	2.210	
>Percentage current accounts to members		1%	1%		1%	1%	2%	2%	2%	2%	3%	3%	3%	4%	4%	5%	5%	6%	6%	6%	7%	8%		
Savings surplus		407.516	648.129	1.070.927	1.357.144	1.570.908	1.624.441	2.031.735	1.717.923	1.861.499	3.643.765	5.136.813	6.501.321	7.262.368	7.461.415	6.871.927	14.068.009	24.563.845	36.731.627	56.798.775	61.042.381	51.144.508		
Loans-to-deposits ratio		37%	38%	39%	43%	51%	61%	64%	75%	78%	65%	60%	58%	61%	65%	70%	53%	41%	34%	26%	32%	45%		
Heeze																								
Number of members		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Savings accounts			71	73		77	81	94	92	96	90	90	90	93	98	99	106	111	113	115	112	112	117	
>Number			43	47		53	54	62	65	64	64	66	76	90	97	108	118	126	136	153	163	182	191	
>Volume			12.770	16.350	24.102	25.865	25.246	36.622	36.617	34.757	32.629	34.194	56.918	58.715	68.712	72.082	73.272	89.918	121.298	162.564	213.280	256.026	246.071	
>Average balance			297	348		488	473	591	563	543	510	518	749	652	708	667	621	714	892	1.063	1.308	1.407	1.288	
>Percentage savings accounts to members			61%	64%		69%	67%	66%	71%	67%	71%	73%	84%	97%	99%	109%	111%	114%	120%	133%	146%	163%	163%	
Fixed term loans																								
>Number			21	22		33	33	32	39	47	50	59	56	50	61	63	63	60	45	43	43	40	41	
>Volume			3.991	6.331	6.160	7.752	13.257	14.991	16.627	21.090	20.663	23.922	21.044	19.788	27.480	24.963	27.651	25.926	20.815	19.923	19.910	21.125	35.729	
>Average balance			190			235	402	468	426	449	413	405	376	396	450	396	439	432	463	463	528	871		
>Percentage loans to members			30%	30%		43%	41%	34%	42%	49%	56%	66%	62%	54%	62%	64%	59%	54%	40%	37%	38%	36%	35%	
Current accounts																								
>Number			1	1		1										3	1	1	2	2	3	2	2	
>Volume			605	405		427										9.759	11.067	11.516	11.516	5.504	23.205	6.809	3.490	
>Average balance			605	0		427										9.759	11.067	5.758	2.752	7.735	3.405	1.745		
>Percentage current accounts to members			1%	1%		1%										3%	1%	1%	2%	2%	3%	2%	2%	
Savings surplus			8.174		17.942	17.686	12.289	21.631	19.990	13.667	11.966	10.272	35.874	38.927	41.232	47.119	35.862	52.925	88.967	137.137	170.165	228.092	206.852	
Loans-to-deposits ratio			38%		26%	32%	52%	41%	45%	61%	63%	70%	37%	34%	40%	35%	51%	41%	27%	16%	20%	11%	16%	
Bornerbroek																								
Number of members		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Savings accounts																								
>Number																	67	72	69	76	80	81	89	
>Volume																								
>Average balance																								
>Percentage savings accounts to members																								
Fixed term loans																								
>Number																								
>Volume																								
>Average balance																								
>Percentage loans to members																								
Current accounts																								
>Number																								
>Volume																								
>Average balance																								
>Percentage current accounts to members																								
Savings surplus																								
Loans-to-deposits ratio																								

Table 1.2 – Credit cooperatives affiliated with the CCB and the members Heeze and Bornerbroek, 1899-1920.

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
CCRB	Number of local banks	17	27	39	55	77	129	169	208	234	267	288	316	385	439	475	500	520	564	587	621	632	658	
	Number of members						7.712	10.495	13.583	15.372	19.858	22.499	26.791	32.098	38.452	40.816	45.776	50.648	56.736	59.210	68.471	77.027	84.611	
	Savings accounts																							
	> Number						9.656	13.777	18.407	23.734	25.972	31.230	37.049	43.739	50.750	56.885	67.142	78.508	92.360	105.591	120.490	136.278	148.074	
	> Volume	70.485	173.775	442.270	797.922	1.538.325	2.791.078	4.275.378	5.729.556	7.218.332	10.293.981	13.155.556	15.545.490	19.343.921	23.002.793	26.977.408	29.849.445	46.269.635	64.142.235	84.266.001	107.744.220	124.784.267	131.923.083	
	> Average balance						289	310	311	304	396	421	420	442	453	474	445	589	694	798	894	916	891	
	> Percentage savings accounts to members						125%	131%	136%	154%	131%	139%	138%	136%	132%	139%	147%	155%	163%	178%	176%	177%	175%	
	Fixed term loans																							
	> Number						3.185	4.672	6.243	8.296	8.929	10.899	12.854	15.408	17.803	20.496	21.838	21.887	23.538	23.383	25.646	30.598	34.757	
	> Volume	26.800	54.900	96.450	146.350	1.060.484	1.695.178	2.273.184	3.303.725	4.963.032	5.632.256	6.748.227	8.736.945	10.953.977	13.610.167	17.267.392	17.996.205	18.778.384	22.009.069	25.680.469	33.945.127	51.150.010	64.227.546	
	> Average balance						532	487	529	598	631	619	680	711	764	842	824	858	935	1.098	1.324	1.672	1.848	
	> Percentage loans to members						41%	45%	46%	54%	45%	48%	48%	48%	48%	46%	50%	48%	43%	41%	39%	37%	40%	41%
	Current accounts																							
	> Number						282	522	927	1.091	1.393	1.707	2.225	3.026	4.010	5.171	5.986	7.117	8.674	10.544	12.049	15.488	18.150	
> Volume						276.727	422.749	840.094	1.115.174	1.675.828	2.094.691	2.832.419	3.564.029	4.825.733	6.803.203	7.161.819	8.681.947	12.575.196	15.054.128	21.401.909	37.497.110	48.584.429		
> Average balance						981	810	906	1.022	1.203	1.227	1.273	1.178	1.203	1.316	1.196	1.220	1.450	1.428	1.776	2.421	2.677		
> Percentage current accounts to members						4%	5%	7%	7%	7%	8%	8%	9%	10%	13%	13%	14%	15%	18%	18%	20%	21%		
Savings surplus						43.685	118.875	345.820	651.572	477.841	819.173	1.579.445	1.585.737	1.140.126	2.985.897	4.312.638	3.976.126	4.825.915	4.566.893	2.906.813	4.691.421	18.809.304	29.557.960	
Loans-to-deposits ratio						38%	32%	22%	18%	69%	71%	63%	72%	84%	71%	67%	74%	80%	89%	84%	59%	54%	48%	86%
		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Borne	Number of members						38	49	57	67	73	75	77	82	91	105	126	134	146	190	203	234	261	
	Savings accounts																							
	> Number						55	87	125	161	153	180	204	222	245	269	275	303	338	372	447	481	547	
	> Volume					5.796	12.947	33.133	48.949	58.171	85.174	108.513	124.286	148.078	157.633	179.040	184.236	219.920	267.099	323.885	473.979	598.447	608.024	
	> Average balance						235	381	392	361	557	603	609	667	643	666	670	726	790	871	1.060	1.244	1.112	
	> Percentage savings accounts to members						145%	178%	219%	240%	210%	240%	265%	271%	269%	256%	218%	226%	232%	196%	220%	206%	210%	
	Fixed term loans																							
	> Number						11	18	31	41	8	52	52	54	58	67	75	79	91	114	123	137	154	
	> Volume					1.100	7.000	7.555	18.140	27.910	32.685	32.775	33.380	47.677	65.042	75.518	86.578	95.298	106.908	117.646	215.388	239.004	327.393	
	> Average balance						636	420	585	681	4.086	630	642	883	1.121	1.127	1.154	1.206	1.175	1.032	1.751	1.745	2.126	
	> Percentage loans to members						29%	37%	54%	61%	11%	69%	68%	66%	64%	64%	60%	59%	62%	60%	61%	59%	59%	
	Current accounts																							
	> Number						1	3	3	3	3	2	2	2	2	4	2	3	3	3	8	5	5	
	> Volume						198	1.895	2.437	363	5.107	363	5.107	-	-	500	1.573	504	1.257	2.486	9.876	19.397	40.878	31.971
> Average balance						198	632	812	121	2.554	-	-	-	-	250	393	252	419	829	3.292	2.425	8.176	6.394	
> Percentage current accounts to members						2%	5%	4%	4%	3%	3%	2%	2%	2%	4%	2%	2%	2%	2%	2%	4%	2%	2%	
Savings surplus						4.696	5.947	25.380	28.914	27.824	52.126	70.631	90.906	100.401	92.091	101.949	97.154	123.365	157.705	196.363	239.194	318.565	248.660	
Loans-to-deposits ratio						19%	54%	23%	41%	52%	39%	35%	27%	32%	42%	43%	47%	44%	41%	39%	50%	47%	59%	
		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Westerbork	Number of members														100	134	165	195	231	255	264	319	343	
	Savings accounts																							
	> Number														42	83	117	178	209	233	279	314	329	
	> Volume														22.276	30.612	36.332	79.462	85.728	114.146	202.753	260.753	241.641	
	> Average balance														530	369	311	446	410	490	727	830	734	
	> Percentage savings accounts to members														42%	62%	71%	91%	90%	91%	106%	98%	96%	
	Fixed term loans																							
	> Number															14	42	62	81	135	124	129	116	180
	> Volume															3.700	11.665	19.550	26.089	55.444	61.200	61.408	121.250	159.785
	> Average balance															264	278	315	322	411	494	476	1.045	888
	> Percentage loans to members															14%	31%	38%	42%	58%	49%	49%	36%	52%
	Current accounts																							
	> Number																3	8	14	22	26	28	30	28
	> Volume																18.348	20.586	19.188	38.545	44.385	25.138	99.357	101.314
> Average balance																6.116	2.573	1.371	1.752	1.707	898	3.312	3.618	
> Percentage current accounts to members																2%	5%	7%	10%	10%	11%	9%	8%	
Savings surplus															18.576	599	(3.804)	34.185	(8.261)	8.561	116.207	40.146	(19.458)	
Loans-to-deposits ratio															17%	98%	110%	57%	110%	92%	43%	85%	108%	

Table 1.3 - Credit cooperatives affiliated with the CCRB and the members Borne and Westerbork, 1899-1920.

Appendix 2. - Loan portfolios of:

2.1 Heeze

2.2 Borne

2.3 Bornebroek

2.4 Westerbork

Per bank the following tables are presented:

1. Fixed term loans origination, including mortgages – size
2. Fixed term loans, including mortgages – duration
3. Fixed term loans, including mortgages – purpose
4. Current account loans – new loans and increase of limits
5. Fixed term loans: financing of horses - size of loans and duration
6. Mortgages - size of loans and duration
7. Fixed term loans, including mortgages and current account loans – approvals and rejections
8. Fixed term loans, including mortgages – payment extension requests by clients and reminders sent by the bank.

For Borne a table with its equity relative to the loan portfolio is added.

2.1 Heeze

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1897								
1898	3	2	2	1				8
1899	2		1	2	1			6
1900	1	1	3	1	1	2	1	10
1901	2		3	1		2	1	9
1902	1	1	3		2			7
1903	2	6	8		3	1		20
1904		3	1	1	1	2	2	10
1905	3		2	1	1	1	1	9
1906		2	1	1	2	4		10
1907	1	2	2		2	3	2	12
1908		1	4	2	2	2	1	12
1909		1	4	3	3	4		15
1910		1	1	3		2		7
1911			1		1	1		3
1912	1	4	1		4	2	3	15
1913		3	5		2	1	1	12
1914		1	1	3	5	1	1	12
1915		1	1	1		1	1	5
1916		1			2	1	2	6
1917		1		1		1		3
1918						2	2	4
1919					1	1	3	5
1920						2	5	7

Table 2.1.1 - Heeze, Fixed term loans origination, including mortgages – size.

Source: archive of Heeze. Amounts in nominal Dutch guilders, numbers are absolute.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1897											
1898	1			4		1	2				8
1899	1	1					2	2			6
1900	1	2		1			3	2		1	10
1901	1			2	1	2	1	1	1		9
1902	1	1		1		2	2				7
1903	1	3	1	1	1	5	5	1	1	1	20
1904					1	1	2	4	1	1	10
1905	1	1		1		1	2	3			9
1906						1	3	5		1	10
1907				1			5	6			12
1908						3	2	6	1		12
1909		1		1			3	10			15
1910								7			7
1911							2	1			3
1912						2	3	7	2	1	15
1913						4	1	6	1		12
1914		2				1		9			12
1915						2	1	2			5
1916						2		4			6
1917						2		1			3
1918						2		2			4
1919		1				1		3			5
1920								5		2	7

Table 2.1.2 - Heeze, Fixed term loans, including mortgages – duration.

Source: archive of Heeze. Numbers are absolute.

Year	Cattle	Horse	Fodder	Fertilizer	Cultivation	Farm/Land	Debt repayment	Farm equipment	Misc.	Not specified	Total
1897											
1898	1					3	1			3	8
1899							1			5	6
1900	2					2	1			5	10
1901		1				5	1			2	9
1902						4				3	7
1903	2	1				8	2	1	1	5	20
1904		1				6	2			1	10
1905						4	3			2	9
1906						7	2			1	10
1907						6			1	5	12
1908						6				6	12
1909		2				9				4	15
1910						3				4	7
1911		1				2					3
1912	1	1		1		7	3			2	15
1913	1					3				8	12
1914	1					4	2			5	12
1915						3	1			1	5
1916	1					4	1				6
1917										3	3
1918						1				3	4
1919						2				3	5
1920						3			1	1	7

Table 2.1.3 - Heeze, Fixed term loans, including mortgages – purpose.
Source: archive of Heeze. Numbers are absolute.

Year	New		Increase limit	
	Number	Volume	Number	Volume
1897				
1898				
1899				
1900				
1901	1	1.000		
1902				
1903	1	400		
1904				
1905				
1906				
1907				
1908				
1909				
1910				
1911				
1912				
1913				
1914				
1915			1	5.000
1916	1	200		
1917	1	20.000		
1918				
1919				
1920	1	2.500		

Table 2.1.4 - Heeze, Current account loans - new loans and increase of limits.
Source: archive of Heeze. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 6 months	≤ 1 year	≤ 2 years	≤ 3 years	≤ 5 years	≤10 years	> 10 years
≤ 100							
≤ 200			1		4		
≤ 300						1	
≤ 500							
≤ 750							
≤ 1000							
> 1000							

Table 2.1.5 - Heeze, Fixed term loans: financing of horses - size of loans and duration.
Source: archive of Heeze. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 1 year	≤ 3 years	≤ 5 years	≤ 10 years	≤ 15 years	≤ 20 years	≤ 30 years	≤ 40 years	≤ 50 years	> 50 years	Perpetual
≤ 300							1	1			
≤ 500				3	4		2	1			1
≤ 1.000				2	1	1	5	5	3		4
≤ 1.500		1				1	1		1		1
≤ 2.500				1	1			1	1	1	1
≤ 3.500							1				
≤ 5.000											
> 5.000											

Table 2.1.6 - Heeze, Mortgages - size of loans and duration.
Source: archive of Heeze. Amounts in nominal Dutch guilders, numbers are absolute.

Year	Fixed term loans		Current accounts	
	Approvals	Rejections	Approvals	Rejections
1897				
1898	8	1		1
1899	6	1		
1900	10	1		
1901	9	1	1	
1902	7	2		
1903	20		1	
1904	10			
1905	9			
1906	10			
1907	12	1		
1908	12			
1909	15			
1910	7			
1911	3			
1912	15			
1913	12			
1914	12	1	1	
1915	5	1	1	
1916	6	2	1	
1917	3			
1918	4			
1919	5			
1920	7		1	

Table 2.1.7 - Heeze, Fixed term loans, including mortgages and current account loans – approvals and rejections.
Source: archive of Heeze. Numbers are absolute.

Year	Extensions		Reminders
	Approvals	Rejections	
1897			
1898			
1899			
1900			
1901			
1902			
1903			
1904			
1905	2		6
1906	1		10
1907	1		4
1908			21
1909	3		18
1910			8
1911			8
1912			5
1913	1		?
1914	4		6
1915	2		6
1916	3		26
1917			
1918			
1919			
1920			

Table 2.1.8 - Heeze, Fixed term loans, including mortgages – payment extension requests by clients and reminders sent by the bank.

The records of the management board for parts of 1913 are in disarray. The minutes evidence that reminders were sent, however, unclear how many.

Source: archive of Heeze. Numbers are absolute.

2.2 Borne

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1903	3	2			1			6
1904	3		2	4	1		1	11
1905	5	5	1	3	3	2	1	20
1906	3	3	8	4	3	2	2	25
1907		4	5	1	8	3	5	26
1908	1	3	2	3	5		2	16
1909		4	1	2	3	3	1	14
1910	2	6	1		2	3	1	15
1911	2	2	4	2	1		6	17
1912		1	5	1	1	1	6	15
1913		3	4		4	1	3	15
1914	1	1	3	1	5		5	16
1915	1	1	2	2	2	2	5	15
1916		5	2		3	3	10	23
1917		2	3	2	5	3	32	47
1918			1	2	4	2	17	26
1919		2		2	3	6	16	29
1920			2	1	5	5	27	40

Table 2.2.1 - Borne, Fixed term loans origination, including mortgages – size.

Source: archive of Borne. Amounts in nominal Dutch guilders, numbers are absolute.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1903		3		2				1			6
1904	4	6						1			11
1905	8	5		3	1	1	1	1			20
1906	6	9	1	2	2			5			25
1907	3	8	5		1	2	3	4			26
1908	1	2	3		1	3		5		1	16
1909	3	1		1		2		7			14
1910	1	6	2	1	1	1	1	2			15
1911	1	3	1	2	1	2	2	5			17
1912	1	1		1		2		10			15
1913		1		1	1	3		9			15
1914	3	1		4	1			7			16
1915	1	2		1	1	3		7			15
1916	1	3	1			3	1	12	1		23
1917	2	1		3	1	1	1	24	14		47
1918		1		1		2		15	7		26
1919	1	1		1		3	2	18	2	1	29
1920	2	1		3	1		6	17	10		40

Table 2.2.2 - Borne, Fixed term loans, including mortgages – duration.

Source: archive of Borne. Numbers are absolute.

Table 2.2.3 is missing as the minutes of the management board meetings from Borne containing amongst others the purposes of the fixed term loans granted are not archived.

Year	New		Increase limit	
	Number	Volume	Number	Volume
1903				
1904	1	200		
1905				
1906	2	1.300		
1907				
1908			2	8.300
1909				
1910				
1911			1	1.000
1912				
1913				
1914			1	2.500
1915	2	16.000	1	7.000
1916			1	5.000
1917	1	4.000		
1918			2	15.000
1919	1	1.000	1	10.000
1920			2	14.000

Table 2.2.4 - Borne, Current account loans - new loans and increase of limits.

Source: archive of Borne. Amounts in nominal Dutch guilders, numbers are absolute.

Table 2.2.5 is missing as the minutes of the management board meetings from Borne containing amongst others the purposes of the fixed term loans granted, in this case financing of horses, are not archived.

Amount	≤ 1 year	≤ 3 years	≤ 5 years	≤ 10 years	≤ 15 years	≤ 20 years	≤ 30 years	≤ 40 years	≤ 50 years	> 50 years	Perpetual
≤ 300				1							
≤ 500				1							
≤ 1.000				3							2
≤ 1.500											3
≤ 2.500											8
≤ 3.500											7
≤ 5.000				2							8
> 5.000	1			1							6

Table 2.2.6 - Borne, Mortgages - size of loans and duration.

Source: archive of Borne. Amounts in nominal Dutch guilders, numbers are absolute.

Year	Fixed term loans		Current accounts	
	Approvals	Rejections	Approvals	Rejections
1903	6			
1904	11		1	
1905	20		2	
1906	25			
1907	26			
1908	16		2	
1909	14			
1910	15			
1911	17		1	
1912	15			
1913	15			
1914	16		1	
1915	15		3	
1916	23		1	
1917	47		1	
1918	26		2	
1919	29		2	
1920	40		2	

Table 2.2.7 - Borne, Fixed term loans, including mortgages and current account loans – approvals and rejections.

Source: archive of Borne. Numbers are absolute.

Year	Extensions		Reminders
	Approvals	Rejections	
1903			
1904	4		
1905	8		
1906	10		
1907	11		
1908	15		
1909	13		
1910	7		
1911	10		
1912	9		
1913	8		
1914	9		
1915	9		
1916	9		
1917	9		
1918	5		
1919	4		
1920	5		

Table 2.2.8 - Borne, Fixed term loans, including mortgages – payment extension requests by clients and reminders sent by the bank.

As no minutes of the management board are archived no data of reminders is available. Approved extensions retrieved from the lending ledgers.

Source: archive of Borne. Numbers are absolute.

	<u>Loans</u>	<u>Savings</u>	<u>Equity</u>	<u>Equity/Loans</u>
1915	109.969	219.920	3.992	4%
1920	327.393	608.024	6.892	2%

Table 2.2.9 – Equity relative to the loan portfolio.

All amounts in nominal Dutch guilders. Loans are the sum of fixed term loans and current account loans at year-end. Equity is the sum of retained earnings of previous years and the net result of the current year. Percentages calculated by the author.

Source: Annual reports CCRB 1916, 1921, *Meededelingen – Afd. II*.

2.3 Bornerbroek

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1913		2	3	1	1			7
1914		1	1	2			3	7
1915		1						1
1916	1		2				1	4
1917	2	2	3	1				8
1918	1		1	1	2			5
1919	1		2	1	1	3	1	9
1920			1		3		6	10

Table 2.3.1 - Bornerbroek, Fixed term loans origination, including mortgages – size.

Source: archive of Bornerbroek. Amounts in nominal Dutch guilders, numbers are absolute.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1913		2		1		1	2	1			7
1914		3			1	2	1				7
1915						1					1
1916	3								1		4
1917	5	1			1	1					8
1918	2	1		1			1				5
1919	4	1	1		1		2				9
1920		1	1	1			2	2	3		10

Table 2.3.2 - Bornerbroek, Fixed term loans, including mortgages – duration.

Source: archive of Bornerbroek. Numbers are absolute.

Year	Cattle	Horse	Fodder	Fertilizer	Cultivation	Farm/Land	Outfit daughter	Farm equipment	Misc.	Not specified	Total
1913		2								5	7
1914				1				1		5	7
1915			1								1
1916						1		1		2	4
1917		1	6							1	8
1918	1					1	1		1	1	5
1919		2	1				1	1	3	1	9
1920						6			3	1	10

Table 2.3.3 - Bornerbroek, Fixed term loans, including mortgages – purpose.

Source: archive of Bornerbroek. Numbers are absolute.

Year	New		Increase limit	
	Number	Volume	Number	Volume
1913	5	33.200		
1914			1	5.000
1915	1	500		
1916	10	10.300	2	1.600
1917	7	49.500	1	1.000
1918	2	18.000	1	4.000
1919	4	41.000		
1920	2	2.500		

Table 2.3.4 - Bornerbroek, Current account loans - new loans and increase of limits.

Source: archive of Bornerbroek. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 6 months	≤ 1 year	≤ 2 years	≤ 3 years	≤ 5 years	≤10 years	> 10 years
≤ 100		1	1				
≤ 200			1				
≤ 300		1		1			
≤ 500							
≤ 750							
≤ 1000							
> 1000							

Table 2.3.5 – Bornerbroek, Fixed term loans: financing of horses - size of loans and duration.

Source: archive of Bornerbroek. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 1 year	≤ 3 years	≤ 5 years	≤ 10 years	≤ 15 years	≤ 20 years	≤ 30 years	≤ 40 years	≤ 50 years	> 50 years	Perpetual
≤ 300											
≤ 500											
≤ 1.000											
≤ 1.500											1
≤ 2.500											2
≤ 3.500									1		
≤ 5.000											
> 5.000								1			1

Table 2.3.6 - Bornerbroek, Mortgages - size of loans and duration.

Source: archive of Bornerbroek. Amounts in nominal Dutch guilders, numbers are absolute.

Year	Fixed term loans		Current accounts	
	Approvals	Rejections	Approvals	Rejections
1913	7	8	5	
1914	7	2	1	
1915	1	3	1	
1916	4	1	12	5
1917	8	4	8	5
1918	5	1	3	
1919	9	2	4	
1920	10	1	2	

Table 2.3.7 - Bornerbroek, Fixed term loans, including mortgages and current account loans – approvals and rejections.

Source: archive of Bornerbroek. Numbers are absolute.

Year	Extensions		Reminders
	Approvals	Rejections	
1913			
1914			1
1915			2
1916	1		1
1917	4		3
1918	1		2
1919			4
1920	1		3

Table 2.3.8 - Bornerbroek, Fixed term loans, including mortgages – payment extension requests by clients and reminders sent by the bank.

Source: archive of Bornerbroek. Numbers are absolute.

2.4 Westerbork

Year	0-50	51-100	101-200	201-300	301-500	501-1.000	>1.000	Total
1912	3	5	3	2	1			15
1913	2	9	9	9	6	4	4	43
1914	5	9	11	10	3	6	4	48
1915	5	15	12	8	7	7	4	58
1916	7	9	16	19	16	7	12	86
1917	4	21	14	17	11	7	4	78
1918	1	5	13	9	11	6	3	48
1919	3	8	9	11	16	13	16	76
1920	4	2	12	15	20	22	23	98

Table 2.4.1 - Westerbork, Fixed term loans origination, including mortgages – size.

Source: archive of Westerbork. Amounts in nominal Dutch guilders, numbers are absolute.

Year	≤ 6 months	≤ 12 months	≤ 18 months	≤ 2 years	≤ 3 years	≤ 5 years	< 10 years	≥ 10 years	Interest only	Unknown	Total
1912		8	3	1			2			1	15
1913	10	23	3	3	2	1	1				43
1914	12	16	2	7	2	5	4				48
1915	13	10	2	9	5	4	9	3		3	58
1916	12	21	7	9	4	13	11	7		2	86
1917	9	27	13	10	3	7	5	4			78
1918	7	16	5	3	5	3	3	4		2	48
1919	6	17	10	5	5	9	12	11	1		76
1920	25	9	1	5	3	13	25	15		2	98

Table 2.4.2 - Westerbork, Fixed term loans, including mortgages – duration.

Source: archive of Westerbork. Numbers are absolute.

Year	Cattle	Horse	Fodder	Fertilizer	Cultivation	Farm/Land	Misc.	Not specified	Total
1912	6			2	4	3			15
1913	26	4	2	4	5	4	6		51
1914	22	5	1	7	3	3	2	5	48
1915	3						2	53	58
1916	13	6	1	7	1	1	1	56	86
1917	9	1	7	4		1	1	55	78
1918	13	5	1	2		2	1	24	48
1919	15	6		4		5	1	45	76
1920	13	2		10		12	1	70	98

Table 2.4.3 - Westerbork, Fixed term loans, including mortgages – purpose.

Source: archive of Westerbork. Numbers are absolute.

Year	New		Increase limit	
	Number	Volume	Number	Volume
1912				
1913	4	24.500		
1914	3	3.800		
1915	6	10.300	1	
1916	8	25.000	1	4.000
1917	6	12.500	1	
1918	3	4.800	1	1.000
1919	5	21.000	6	10.000
1920	4	14.000	7	34.000

Table 2.4.4 - Westerbork, Current account loans - new loans and increase of limits.
Source: archive of Westerbork. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 6 months	≤ 1 year	≤ 2 years	≤ 3 years	≤ 5 years	≤10 years	> 10 years
≤ 100							
≤ 200		1	2				
≤ 300	1	3	3	3	2		
≤ 500	2	1	1	1	1	1	
≤ 750		1				1	
≤ 1000		2	1				1
> 1000			1				

Table 2.4.5 - Westerbork. Fixed term loans: financing of horses - size of loans and duration.
Source: archive of Westerbork. Amounts in nominal Dutch guilders, numbers are absolute.

Amount	≤ 1 year	≤ 3 years	≤ 5 years	≤ 10 years	≤ 15 years	≤ 20 years	≤ 30 years	≤ 40 years	≤ 50 years	> 50 years	Perpetual
≤ 300											
≤ 500											
≤ 1.000				1							
≤ 1.500					2	1	1				
≤ 2.500						2	2	1			
≤ 3.500					1						1
≤ 5.000											
> 5.000											

Table 2.4.6 - Westerbork, Mortgages - size of loans and duration.
Source: archive of Westerbork. Amounts in nominal Dutch guilders, numbers are absolute.

Year	Fixed term loans		Current accounts	
	Approvals	Rejections	Approvals	Rejections
1912	15			
1913	43	3	4	
1914	48	2	3	1
1915	58	1	7	
1916	86	2	9	
1917	78	2	7	
1918	48	1	4	1
1919	76	6	11	
1920	98	24	11	2

Table 2.4.7 - Westerbork, Fixed term loans, including mortgages and current account loans – approvals and rejections.

Source: archive of Westerbork. Numbers are absolute.

Year	Extensions		Reminders
	Approvals	Rejections	
1912			
1913	6		
1914	13	7	
1915	8		
1916	16	2	
1917	16	2	
1918	9	5	
1919	22	1	12
1920	21	9	11

Table 2.4.8 - Westerbork, Fixed term loans, including mortgages – payment extension requests by clients and reminders sent by the bank.

Source: archive of Westerbork. Numbers are absolute.

Bibliography

- Primary sources

The archives of

- Borne: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13;
- Bornerbroek: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Centraal Twente*, RABO-2.13; audit reports, archive *Coöperatieve Centrale Boerenleenbank*, archive nr. E1_083;
- Heeze: *Inventaris van het archief van de rechtsvoorgangers van Rabobank Dommelstreek*, RABO-2.09;
- Westerbork: *Inventaris van het archief van Rabobank Westerbork*, RABO-2.06

located at the Historical Archives of Rabobank (HAR) in Utrecht and Best.

Annual reports of

- *Centrale Coöperatieve Boerenleenbank*, Eindhoven
- *Centrale Coöperatieve Raiffeisen-Boerenleenbank*, Utrecht

located at the Historical Archives of Rabobank, Utrecht,

<https://bedrijfshistorie.rabobank.com/bronnen-artikelen/jaarverslagen-article>.

Announcements to local banks by

- *Meededelingen of Centrale Coöperatieve Boerenleenbank*, Eindhoven
- *Raiffeisen-Bode of Centrale Coöperatieve Raiffeisen-Boerenleenbank*, Utrecht

located at the Historical Archives of Rabobank, Utrecht, central library.

Census of the Netherlands, 1909 with

- Professions per municipality
<http://volkstelling.nl/nl/volkstelling/imageview/BRT190901T/index.html>
- Occupied and unoccupied houses per municipality
<http://volkstelling.nl/nl/volkstelling/jaartellingdeelview/VT190901/index.html>
- Religious affiliation per municipality
<http://volkstelling.nl/nl/volkstelling/imageview/VT190903SUPPLT/index.html>.

- Literature

Banerjee, Abhijit V., Timothy Besley, and Timothy W. Guinnane, 'The neighbor's keeper: the design of a credit cooperative with theory and a test', *The Quarterly Journal of Economics* 109 (1994) 2, 491-515.

Brusse, Paul, *Leven en werken in de Lingestreek. De ontwikkeling van het platteland in een verstedelijkt gebied, 1850-2000* (Utrecht 2002).

Brusse, Paul, *De dynamische regio. Economie, overheid en ondernemerschap in West-Brabant vanaf 1850* (Utrecht 2008).

Buursink, Joh., *Het boek van de Lonneker landbouw* (Enschede 1956).

Caspers, Thijs, Anoenk van der Leest, Theo Spek, and Huib Stam, *Grote Historische topografische Atlas* (Tilburg 2006).

Colvin, Christopher L., and Eoin McLaughlin, 'Raiffeisenism abroad: why did German cooperative banking fail in Ireland but prosper in the Netherlands?', *The Economic History Review*, 67 (2014) 2, 492-516.

Colvin, Christopher L., Stuart Henderson, and John D. Turner, 'The origins of the (cooperative) species: Raiffeisen banking in the Netherlands, 1898-1909', *European Review of Economic History* 24 (2020) 4, 749-782.

De Vicq, Amaury, and Christiaan van Bochove, 'Historical diversity in credit intermediation: cosignatory lending institutions in Europe and North America, 1700s-1900s', *Social Science History* 47 (2023) 1, 95-119.

De Vries, Joh., *De Coöperatieve Raiffeisen- en Boerenleenbanken in Nederland 1948-1973, van exponent tot component* (Utrecht 1973).

Ghatak, Maitreesh, and Timothy W. Guinnane, 'The economics of lending with joint liability: theory and practice' *Journal of Development Economics* 60 (1999), 195-228.

Guinnane, Timothy W., 'Cooperatives as information machines: German rural credit cooperatives, 1883-1914', *The Journal of Economic History* 61 (2001) 2, 366-389.

Guinnane, Timothy W., 'The early German credit cooperatives and microfinance organizations today: similarities and differences', in: Beatriz Armendáriz and Marc Labie (eds), *The handbook of microfinance* (Singapore 2011).

Horlings, Edwin, 'Werkgelegenheid en economische modernisering. De structuur van de beroepsbevolking', in: J.G.J.S. van Maarseveen and P.K. van Doorn (eds), *Nederland een eeuw geteld. Een terugblik op de samenleving rond 1900* (Amsterdam 2001) 227-248.

Jonker, Joost, *Welbegrepen eigenbelang. Ontstaan en functie van boerenleenbanken in Noord-Brabant, 1900-1920* (Doctoraalscriptie, Amsterdam 1987).

Jonker, Joost, 'The alternative road to modernity: banking and currency, 1814-1914', in: Marjolein 't Hart, Joost Jonker, and Jan Luiten van Zanden (eds), *A financial history of The Netherlands* (Cambridge 2010).

Mooij, Joke, *Gebouwd op vertrouwen. 120 jaar Rabobank* (Utrecht 2016).

Rommes, Ronald, *Voor en door boeren? De opkomst van het coöperatiewezen in de Nederlandse landbouw voor de Tweede Wereldoorlog* (Hilversum 2014).

Sluyterman, Keetie, Joost Donkers, Jos van der Linden, and Jan Luiten van Zanden, *Het coöperatieve alternatief. Honderd jaar Rabobank 1898-1998* (Den Haag 1998).

Staatscommissie voor de landbouw, *Rapport betreffende het landbouwcrediet in Nederland* ('s Gravenhage 1911).

Suesse, Marvin, and Nikolaus Wolf, 'Rural transformation, inequality, and the origins of microfinance', *Journal of Development Economics* 143 (2020), 1-20.

Vliegen, Mathieu, and Bart Spee, 'De elf provinciën op de drempel van de twintigste eeuw. Een statistische beschrijving' in: J.G.J.S. van Maarseveen and P.K. van Doorn (eds), *Nederland een eeuw geteld. Een terugblik op de samenleving rond 1900* (Amsterdam 2001) 249-276.

Van Campen, Ph. C. M., P. Hollenberg, and F. Kriellaars, *Landbouw en landbouwcrediet 1891-1948. Vijftig jaar geschiedenis van de Coöperatieve Centrale Boerenleenbank Eindhoven* (Eindhoven 1948).

Van den Heuvel, P.F., *Heeze en zijn Rabobank, 1897-1994* (Geldrop-Heeze-Sterksel 1996).

Van der Bie, R.J., "'Licht, lucht en vrijheid". De kwaliteit van de huisvesting (1899-1947)', in: O.W.A. Boonstra et al. (eds), *Twee eeuwen Nederland geteld. Onderzoek met de digitale Volks-, Beroeps, en Woningtellingen 1795-2001* (Den Haag 2007) 129-152.

Van Holstein, Aad, *Koffie met gebak en een sigaar. 100 jaar Rabobank Midden-Westland* (De Lier 1995).

Van Zanden, Jan Luiten, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, 1800-1914* (Wageningen 1985).

Van Zanden, Jan Luiten, 'The first green revolution: the growth of production and productivity in European agriculture, 1870-1914', *The Economic History Review* 44 (1991) 2, 215-239.

Van Zanden, Jan Luiten, 'Industrialisatie en inkomensverdeling in Overijssel, 1750-1875', *Bijdragen en mededelingen betreffende de geschiedenis der Nederlanden (BMGN)* 109 (1994) 3, 434-449.

Weststrate, C., and Th. J. Visser, *Gedenkboek van de Coöperatieve Centrale Raiffeisen-Bank* (Utrecht 1948).