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**Capitalization and Consolidation: Analyzing the relationship between
Capital Raising and Merger Activity of Industrial Enterprises in The
Netherlands during the 1920s Merger Wave**

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Abstract

This study explores the relationship between capitalization, stock and bond emissions, and merger activity in industrial enterprises during the 1920s in the Netherlands. The aim of this study is to contribute to a deeper understanding of the dynamics of capitalization and consolidation in the industrial sector during the 1920s in the Netherlands. Through an in-depth analysis of historical financial data and literature, this study revealed several key findings. While confirming the positive association between merger activity and stock prices, the study challenges prior research by not establishing a direct link between stock and/or bond emissions and mergers. However, it is important to acknowledge a limitation of this study, namely the reliance on historical data and limited sample size, which may restrict the generalizability of the findings. Despite this limitation, the study contributes to knowledge by offering insights into capitalization and consolidation and their implications for investors, managers, and regulators.

Keywords: capitalization, consolidation, industrial enterprises, second merger wave, stock prices

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Introduction

Since the end of the 19th century, five periods of increased numbers of mergers and acquisitions (M&A) can be identified. This paper will focus on the second merger wave. The second merger wave occurred between 1919-1929 and has been extensively studied in the US and several European countries. In The Netherlands, research on the existence and drivers of this wave is less extensive.

On top of the clear scientific relevance, the study of this subject is relevant today for several reasons. Firstly, understanding the historical context of M&A activity can provide insights into current trends and patterns. In 2021, the global volume of M&A transactions exceeded \$5 trillion (McKinsey and Company, 2022). The study can help identify similarities and differences between the business environment of the past and present and highlight the factors that have shaped M&A activity over time. This knowledge can be useful for predicting future trends and making informed business decisions. Secondly, historical research into the second merger wave can contribute to broader debates on economic policy and regulation. By examining how the Dutch government and other regulatory bodies responded to the second merger wave, researchers can draw lessons on how to design effective regulations.

Through an examination of historical data and literature, the study aims to identify patterns and trends in merger and acquisition (M&A) activity during this period. This study explores the factors that influence capitalization and consolidation during this second wave of M&A activity of industrial enterprises in the Netherlands during the 1920s. This study will aim to answer the question:

What is the relationship between capital raising (stock and/or bond emissions) and merger activity in industrial enterprises in The Netherlands during the 1920s?

Based on existing literature suggesting potential links between capitalization and consolidation (Thorpe, 1931; Eddy, 1937; Markham, 1955; Weston, 1961; Holmstrom & Kaplan, 2001; Dong et al., 2003; Ang & Ceng, 2006), the following hypothesis is proposed: propose the following hypothesis: There is a significant positive relationship between capital raising, measured by stock and/or bond emissions, and merger activity in industrial enterprises during the 1920s in the Netherlands. This hypothesis suggests that an increase in capital raising will be positively

associated with higher levels of merger activity within the context of the Dutch industrial sector in the 1920s.

Additionally, this study extends its scope by delving into the strategic choices made by companies to scale their operations, providing insights into sectoral and size differentials. By examining these choices, a deeper understanding of the diverse approaches adopted by companies to expand their business activities is gained.

By exploring this research question and testing our hypothesis, this study aims at contributing to a deeper understanding of the dynamics of capitalization and consolidation in the industrial sector during the 1920s in the Netherlands.

Literature Review

Martynova and Renneboog (2008) review the literature on merger waves and discuss five waves. The first merger wave, the so-called Great Merger Wave, took place in the 1890s in the US. In the twentieth century, the United States witnessed a second merger wave in the 1920s, which extended into several European countries (Tilly, 1982). In 1993, Bishop and Kay observed that Britain encountered three periods of increased mergers, which occurred in the 1920s, 1960s, and 1980s.

The end of this second merger wave was caused by the market crash of 1929, which led to a worldwide economic crisis in the 1930s (Stigler, 1955). The first three waves all occurred during periods of economic boom and a flourishing stock market; the end of the waves was due to economic recessions usually preceded by a stock market crash (Sudi Sudarsanam, 2003).

While the first wave surpassed 15% of all assets in the US market, the second wave had a smaller effect, falling under 10% (Sudi Sudarsanam, 2003). The information on stock prices for 134 companies suggests that the M&A success in the 1920s was only moderate. Even though the economic circumstances were considerably different, the average profitability of an acquisition in the 1920s was similar to the profitability generated by mergers in the 1960s and 1970s (Borg et al., 1989).

The Netherlands has a small open economy and a long tradition of business activity including involvement in merger and acquisition activity (Van Zanden, 1997). Bouwens (2007) identifies a merger wave in The Netherlands in the 1920s.

Identifying Merger Waves

Although the concept that merger activity happens in waves is commonly accepted based on casual observation and general description, it is still valuable to formally examine and evaluate this notion. Numerous indirect tests of this notion have been developed (Shugart and Tollison, 1984; Clark et al., 1988; Golbe and White, 1988).

Golbe and White (1988) developed a powerful indirect test of the existence of merger waves. They regress the quarterly or annual number of mergers on a time trend variable. The error term from this regression is shown to be autocorrelated. Thus, the number of mergers tends to bunch together into periods of relatively high and low activity. In 1993 Golbe and White conducted a direct econometric test to validate the notion that mergers take place in waves. They did this by fitting a group of sine waves to the yearly time series data on mergers and observed that the sine curves generally had significant explanatory power.

One additional direct test has been developed (Guerard and McDonald, 1991). However, they were unable to find a significant trend or cyclical/wave component to the merger time series data.

Examining the Second Merger Wave

Thorpe (1941) made the first comprehensive statistical examination of mergers. This study examined the number of mergers in the manufacturing and mining sectors between 1919-1930. The study suffers from two big shortfalls: the absence of data on the size and the identification of timing difficulty¹.

Nelson (1959) improved on this literature by examining changes in quarterly merger activity, while providing more complete information on the industry, size, and type of merger, during the 1895-1920 period and found a high positive correlation between changes in merger activity and changes in stock prices.

¹ The original reports often failed to distinguish between agreement, ratification, or actual merging.

Following the study by Nelson, Weston (1961) examined annual changes in merger activity during the interwar period (between World War I and World War II). Using a multiple regression model, Weston found merger activity to be significantly related to stock prices.

Horizontal vs Vertical mergers

The first merger wave (1897-1904) was dominated in the US by horizontal mergers and ended with the implementation of the Sherman Act and Clayton Act (Lamoreaux, 1985). These laws prohibited industry monopolization and obstructed horizontal mergers - the consolidation of firms within the same industry. The Clayton Act in 1914 encouraged vertical mergers and the formation of oligopolies (Owen, 2006).

The direction of the mergers in the second wave has been subject to debate. According to Stigler (1950), the second wave of mergers was a shift towards an oligopolistic structure, as no longer was one massive company controlling industries, but instead, two or more corporations were in charge. Unlike the first wave, where horizontal mergers were primarily used to gain market power, the horizontal mergers and formation of holding companies or conglomerates in the 1920s focused on achieving economies of scale.

Markham (1955) has pointed to the apparent importance of vertical and diversified mergers in the second wave compared to the first wave. The perspectives of Butters, Lintner, and Cary², are vastly dissimilar. They argue that the merger wave of the 1920s resulted in a notable rise in concentration levels across industries, particularly in heavy industries, alongside secondary industries.

The 1969 study of Eis finds that between 1926 and 1930, mergers that were medium or large were sorted by the kind of integration they had achieved. These classifications show that horizontal mergers made up the majority, accounting for 50% to 53% of the total value of mergers in this category. This implies that the significance of vertical and diversified mergers may have been overestimated in the past.

For The Netherlands, Bouwens (2007) noted: during the second wave of mergers the market for corporate control was mostly dominated by mergers and acquisitions that were oriented

² Quoted by Eis (1969)

towards horizontal transactions. However, some mergers and acquisitions focused on vertical and conglomerate aspects.

Drivers of merger waves

As highlighted in the previous sections, it is generally accepted that merger waves do occur. Nonetheless, there is minimal research focused on clarifying the underlying factors that give rise to merger waves. In their renowned textbook, *Principles of Corporate Finance*, Brealey and Myers (1996) highlight the inability of financial theory to explain merger waves.

There are numerous hypotheses proposed to clarify the rationale behind M&As, and these can be broadly categorized into two groups: (1) neoclassical theories, which assume that managers aim to optimize profits or shareholder wealth, leading to mergers that increase market power or efficiency, (2) non-neoclassical or behavioral theories, which suggest alternative motivations for M&As and/or different outcomes. This article investigates four hypotheses that were introduced specifically to explain merger waves: the industry shocks hypothesis, the q-theory of mergers, as well as the overvaluation and managerial discretion hypotheses.

Neo-classical

I. The Industry Shocks Hypothesis

Numerous studies (Mitchell and Mullerin, 1996; Andrade, Mitchell, and Stafford, 2001; and Harford, 2005) have provided evidence indicating considerable differences in merger activity among various industries. The industry shock hypothesis (ISH) proposes that merger waves arise due to shocks in an industry's economic, technological, or regulatory environment, as stated by Harford (2005). For instance, these shocks could take the form of advancements in technology, the implementation of new fiscal or monetary policies, or the implementation of new laws. Mitchell and Mulherin (1996) provide support for this theory by demonstrating that industry-specific economic disturbances are intricately linked to interindustry restructurings and takeovers.

Changes in the prices of materials and products have been classified as an economic shock that leads to a merger wave (Sonenshine, 2019; Hsu et al, 2017). Sonenshine (2019) suggests that regulatory shocks can cause economic shocks by influencing prices and subsequently spurring merger waves.

II. The Q-Theory of Mergers

Tobin's Q theory proposes that the Q-ratio plays a significant role in firms' investment decisions (Tobin, 1969). Firms with high Q values are typically well-managed, able to generate a return on capital that surpasses the cost of capital and should invest in additional assets to enhance shareholder value (Tobin, 1969).

Jovanovic and Rousseau (2002) build upon Tobin's Q-theory and state that companies with high Q values are more likely to purchase companies with low Q values because the overall takeover returns, or the combined worth of the merging companies, are greater when the target firm has a low Q, and the acquiring firm has a high Q. Consequently, the Q-theory of mergers argues that merger waves stem from the efficient redistribution of assets that arises when poorly managed firms (i.e., those with a low Q) are acquired by better-managed firms (i.e., those with a high Q). Jovanovic and Rousseau (2002) are the sole researchers to have utilized the q-theory to explain mergers and to state that it offers an explanation for merger waves.

Behavioral

III. The Managerial-Discretion Hypothesis

According to the managerial discretion theory, merger waves arise as a result of a misalignment of interests between principals and agents, i.e., owners and managers. This line of research states that managers may expand their businesses by acquiring value-destroying companies without considering shareholder benefits, particularly when managers have a substantial amount of cash on hand (Rahman, 2022).

The managerial discretion theory proposes that managers obtain gratification from their companies' growth because their incomes are linked to growth, or they derive "psychic income" from managing a larger company. During a stock market boom, investors' willingness to view new information as positive news lowers the expense of announcing unprofitable mergers. Announcing such mergers under normal conditions would cause significant declines in the acquiring firms' share prices, which would prevent their managers from pursuing such mergers. Conversely, disclosing the same mergers during a stock market boom results in only minor declines in share prices, or perhaps even increases (Gugler et al., 2005).

Gugler et al. (2012) suggest that merger waves occur during stock market booms as bullish sentiments in the market enable growth-oriented managers to pursue more mergers that destroy wealth than they would during normal circumstances.

IV. The Overvalued Shares Hypothesis

The overvaluation hypothesis suggests that in some cases, the stock market may overvalue the shares of certain companies. In order to protect their shareholders from the eventual loss of wealth resulting from a correction in the market's evaluation, the managers of these companies may opt to exchange their overvalued shares for real assets through mergers (Shleifer and Vishny, 2003; Rhodes-Kropf and Viswanathan, 2004; Rhodes-Kropf, Robinson and Viswanathan, 2005).

Various measures of overvaluation have been used to support the Overvaluation Hypothesis (OVH) in several studies (Ang and Cheng, 2003; Dong et al., 2003; Rhodes-Kropf, Robinson and Viswanathan, 2005). These measures usually involve the ratio of market value to book value of equity or its reciprocal, which is highly correlated with Tobin's Q, the ratio of a firm's market value to the replacement value of its assets. However, discriminating between the OVH and QH can be difficult since the key variables in each hypothesis are highly correlated.

Some researchers (Holmstrom & Kaplan, 2001; Dong et al., 2003; Ang & Ceng, 2006), have also explored the overvaluation hypothesis as an explanation for merger waves. These studies support the idea that long-term market fluctuations in the valuation of companies and the number of takeovers is positively related.

Role of the Promoter and Stock Emissions

The literature highlights another aspect of the rise of the merger wave of the 1920s: the role of the promoter/investment banker. Except for a few cases of vertical integrations in the chemical industry and chain stores that resulted in actual cost savings in production or distribution, it seems that the mergers that took place in the late 1920s were mainly influenced by professional promoters (Markham, 1955).

According to Thorpe (1931), a significant number of mergers, and occasionally acquisitions, involve the creation of new securities. When there is high demand for securities, such as during the period of 1928 and early 1929, the merger trend is likely to thrive. The primary supporter of this trend is the investment banker. Established business entities that continue to operate under their existing structures provide minimal opportunities for the banker to manage new securities. However, if these entities can be merged into a new organization, it could result in a substantial issuance of stocks.

He continues: "During 1928 and 1929 some investment houses employed men on commission who did nothing but search for potential mergers. One businessman told me that he regarded it as a loss of standing if he was not approached at least once a week with a merger proposition. A group of businessmen and financiers in discussing this matter in the summer of 1928 agreed that nine of ten mergers had the investment banker at the core." (p.86).

The rise in the stock market that lasted for an extended period due to economic success in the 1920s allowed for the issuance of securities at a level crucial for a significant merger trend, as noted by Markham (1955). A US study of 2,110 new investments showed that about two-thirds of new capital raised was not actually used for new investments, but instead for financial purposes, similar to the ways of the investment trusts. Most of the new capital was issued in order to bring about mergers or change the structure of industries for financial gain, rather than for productive purposes (Eddy, 1937).

The literature describes the substantial role the promoters and bankers play in all five merger waves of the last 150 years. Markham (1955) states the primary reason for merging during the peak periods of merger movements, both in 1897-1899 and 1926-1929, was to gain profits through promotion.

During the first merger wave only one in twelve was instigated by the industry itself (Du boff and Herman, 1989). Navin and Sears (1955) highlight the immense scale of J.P. Morgan's mergers, with the U.S. Steel merger in 1901 being valued at \$1.4 billion. During the fourth wave of mergers (1978-1988), investment banks and other financial institutions were heavily involved in promoting and providing support for the mergers. This period was again characterized by huge investment banker gains: the top one hundred highest-paid individuals on Wall Street included executives from all major investment banking firms, such as Goldman

Sachs, Shearson Lehman Bros., Morgan Stanley, Salomon, and Bear Stearns (Financial World, 1987). These exorbitant earnings were generated through enormous merger fees, with three investment banking houses earning a total of \$63 million from the 1984 Socal-Gulf merger (Petre, 1986).

A substantial amount of literature has been published that the role of investment banks in the merger waves was questionable. One of the key functions of investment banks during this period was to identify potential merger partners and facilitate negotiations between them. Investment banks provided strategic advice and financial analysis to help companies evaluate the benefits and risks of a potential merger, and structure the deal in a way that would maximize shareholder value. This power could have been abused and could have played a significant role in the second merger wave in The Netherlands.

Methodology

Theoretical Framework

Stock Emissions

According to Thorpe's 1931 analysis, mergers often involve the creation of new securities. This trend is primarily driven by investment bankers who are seeking new opportunities to manage and issue securities. The merger trend is likely to thrive when there is high demand for securities, as was the case in the 1920s. The rise in the stock market during the 1920s allowed for the issuance of securities at a crucial level to fuel the significant merger trend.

The issuance of new capital raised in the stock market during the 1920s was not used for new investments. Instead, it was used for financial purposes similar to the ways of the investment trusts. About two-thirds of the new capital was issued to bring about mergers or change the structure of industries for financial gain, rather than for productive purposes (Eddy, 1937). This suggests that the primary motivation behind many mergers was to generate financial gain through restructuring and the issuance of new securities, rather than to create value through productive activities.

The Managerial-Discretion Hypothesis and Overvalued-shares hypothesis

The Managerial Discretion Hypothesis and the Overvalued Shares Hypothesis can potentially lead to a larger number of stock emissions in different ways. This, in turn, could see a higher number of mergers and acquisitions.

The Managerial Discretion Hypothesis suggests that managers may expand their businesses through mergers without considering shareholder benefits, particularly when they have a substantial amount of cash on hand. Managers may prefer to invest in mergers rather than using the available cash for share buybacks or dividend payouts. This preference for mergers can result in a larger number of stock emissions as the acquiring firm needs to issue new shares to finance the acquisition.

Similarly, the Overvalued Shares Hypothesis suggests that managers may pursue mergers to protect shareholders from the potential loss of wealth resulting from overvaluation in the stock market. In such a scenario, managers may prefer to issue new shares to the target firm's shareholders as a means of payment for the acquisition. This issuance of new shares can result in a larger number of mergers.

Moreover, the Overvalued Shares Hypothesis suggests that managers may choose to exchange their overvalued shares for real assets through mergers to protect their shareholders from the eventual loss of wealth resulting from a correction in the market's evaluation. In this scenario, the acquiring firm may need to issue new shares to the target firm's shareholders as a means of payment for the acquisition.

Therefore, both the Managerial Discretion Hypothesis and the Overvalued Shares Hypothesis suggest that stock emissions can potentially result in a larger number of mergers, as the acquiring firm needs to issue new shares to finance the acquisition or use them as a means of payment.

Data Collection

Period Selection

This paper focuses on examining the relationship between stock emissions and merger activity in the Netherlands during the second merger wave. Therefore, the period from 1918 to 1929, starting with the end of the first world war and closing with the 1929 stock market crash, is examined.

Van Oss' Effectenboeken 1918-1929

The Van Oss' Effectenboek is a well-known publication that provides comprehensive information about securities and the stock market in The Netherlands. The book has been published annually since 1896 and is considered a reliable source of information for investors, brokers, and researchers.

The book contains information on all Dutch listed companies, bonds, and other securities, including their current prices, dividend payments, and other relevant financial data. Additionally, it includes articles and analysis of trends in the Dutch stock market and the wider economy. Mergers and stock emissions, paramount for this paper, are also registered in the books of Van Oss.

The Van Oss' Effectenboek has played a significant role in the history of the Dutch stock market, providing investors and analysts with essential information to make informed decisions about investments. It is often cited in academic research and is still published today as a useful resource for those interested in the Dutch stock market. The book has become an important source of historical financial data and will be used to collect the data on stock emissions and mergers.

CBS/LIFE Stock price index

The CBS/LIFE stock price index reflects the value development of a stock portfolio that is constantly composed in accordance with the market. This means that, based on the price value, the relative importance of each fund in this portfolio is equal to the fraction of that fund in the total market. This data can provide valuable insights and inferences. Using this, one can gain a deeper understanding of market dynamics and investor sentiment. This information can complement the analysis and interpretation of the relationship between stock emissions,

mergers, and broader market conditions during the 1920s. The data is transformed to show the stock price index of 1918 as one hundred.

Data Entry and Organization

To collect the data, a systematic approach was employed. First, a thorough reading of the Van Oss' *Effectenboeken* (1918-1929) was conducted to identify the relevant information pertaining to company names, acquisition events, and financial variables such as raising stocks, raising bonds, and the occurrence of acquisitions. Careful attention was given to ensure the accurate selection and recording of the data points.

The collected data were then manually entered into a Microsoft Excel spreadsheet. This process involved creating separate columns for each variable, including the year, company name, acquisition indicator, raising stocks, and raising bonds. From the CBS, the stock price index was included in the data spreadsheet. The Excel spreadsheet served as the primary tool for organizing and storing the data.

To ensure data integrity, rigorous quality control measures were implemented. Cross-checking was performed to verify the accuracy of the data entries against the information presented in the book. Additionally, data validation checks were conducted to identify any inconsistencies in the dataset.

By following this systematic approach, the dataset was compiled, organized, and quality-checked, ready for further analysis. The manual collection of data from the book and its subsequent organization in Excel allowed for a comprehensive examination of the relationship between raising stocks, raising bonds, and the occurrence of acquisitions. All data collected can be accessed in the Appendices.

The data was transformed into panel data to capture the temporal and cross-sectional dimensions of the relationship. This transformation allows for the analysis of within-company correlation, accommodating repeated observations over multiple time periods.

Research Design

Visual Analysis

To analyze the trends in our study variables, a visual analysis approach was employed. This method involves the examination and interpretation of graphical representations to identify patterns, relationships, and trends.

To conduct the visual analysis, the collected data were imported into appropriate data visualization software (STATA18), allowing for the creation of clear and informative graphs. The trends in the number of mergers and the other variables were plotted on Double Vertical-axis graphs, with the x-axis representing the time period (years) and the y-axis representing the corresponding values. The resulting graphs were carefully examined, paying close attention to the shape, direction, and magnitude of the plotted data points.

By visually examining the graphs, significant trends and patterns were identified, including any peaks, troughs, or changes in the variables over time. These observations were then compared to the existing literature and theoretical expectations to gain insights into the relationship between the number of mergers and capital raising variables.

It is important to note that this visual analysis method serves as an exploratory tool to gain an initial understanding of the trends in the data. It provides a foundation for further quantitative analysis and hypothesis testing. Additionally, the visual analysis approach offers a visual representation that enhances the interpretability and communicability of the findings.

Overall, by visually representing the data over time, this methodology allows for the identification of patterns and insights, which serve as a basis for further analysis and interpretation in the subsequent stages of our research.

Multi-way Fixed Effects Models: Emissions as a way of Funding Mergers

The model specification for this study will involve the utilization of a multi-way fixed effects model to examine the relationship between raising capital (through stocks and bonds) and the

number of acquisitions undertaken by companies. This approach will allow for a comprehensive analysis that accounts for both individual company-specific effects and time-specific effects.

Using a multi-way fixed effects model in this context offers several advantages. Firstly, it allows for the control of both entity-specific and time-specific unobserved heterogeneity, addressing potential omitted variable bias. Secondly, by including fixed effects for both entities (companies) and time periods, the model accounts for time-invariant characteristics of companies and common time trends that may influence both capital raising and acquisition decisions. This helps to isolate the specific impact of raising capital on acquisitions. Overall, the multi-way fixed effects model provides a rigorous approach to analyze the relationship while controlling for various sources of confounding and unobserved heterogeneity. This model can be expressed as follows:

$$Acquisitions = \beta_0 + \beta_1 * Raise\ Stocks + \beta_2 * Raise\ Bonds + Fixed\ effects + \epsilon$$

The dependent variable in this model is the number of acquisitions undertaken by each company, which represents the outcome of interest. The key independent variables are the amount of capital raises through stocks ("Raise Stocks") and the amount of capital raises through bonds ("Raise Bonds"). These variables capture the extent of capital raising activities conducted by companies.

The error term in the model represents the unobserved factors that affect acquisitions but are not captured by the included variables. It accounts for random variation and any unexplained variation in the dependent variable.

The model includes fixed effects for both individual companies and time periods (years). The inclusion of individual fixed effects helps to control for unobserved heterogeneity or company-specific characteristics that may affect both capital raising and acquisition decisions. By incorporating time fixed effects, the model captures time-specific factors or trends that may impact acquisition activity across all companies in the sample. For a comprehensive analysis of the fixed effects, four models will be examined. These four models include: no fixed effects, Year fixed effects, Company fixed effects and both Year and Company fixed effects.

This results in the following regression formulas:

Model 1. No Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise Stocks + \beta_2 * Raise Bonds + \epsilon$$

Model 2. Year Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise Stocks + \beta_2 * Raise Bonds + Y_t + \epsilon$$

Model 3. Company Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise Stocks + \beta_2 * Raise Bonds + C_i + \epsilon$$

Model 4. Year and Company Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise Stocks + \beta_2 * Raise Bonds + Y_t + C_i + \epsilon$$

Y_t denotes the year fixed effects and C_i denote the company fixed effects. The estimation of the models will be conducted using Stata18.

Overall, the model specification outlined above allows for the examination of the relationship between raising capital and acquisition activity while controlling for individual-specific effects and time-specific effects. These models examine the Managerial Discretion Hypothesis and the previous work, highlighted in the literature review. This approach allows for a comprehensive analysis of the financing and growth strategies of firms, contributing to a deeper understanding of the dynamics between capital raising and acquisitions in the studied context.

Company Level Analysis

After conducting a thorough visual analysis and regression analysis, this paper takes an additional step by delving into the individual companies to explore the intricate relationship between raising capital and acquisition activity. While the initial analyses will provide valuable insights at an aggregate level, examining individual firms allows for a more granular understanding of how different companies navigate the dynamics of capital raising and acquisitions.

This will be done by examining the companies that merged and looking at their capital raising activities. An overview will be created of companies that both were a part of acquisitions and raised capital through the market for the entire period (1918-1929). The motives for the emissions of stocks and bonds are listed in the Van Oss' Effectenboeken. These motives will be analyzed to provide insight into the incentives of capital raising.

This individual-level analysis will complement the earlier visual analysis and regression analysis, adding depth to the overall findings. It will offer valuable insights into the specific contexts and circumstances under which the relationship between capital raising and acquisition activity may be strengthened or weakened. The findings from this individual company exploration will help validate the broader trends observed in the combined analysis.

Size and Sector Analysis

To assess sectoral differences, tables were created to highlight the distribution between groups and categories. Trends were identified by examining the proportion of companies in each sector that were acquired, went bankrupt or ceased operations, and engaged in emissions. The analysis also focused on size-specific effects by considering the total balance amounts reported by 103 companies in the sample. Companies without reported total balance amounts were excluded from the size analysis.

The findings provide insights into the representation of separate groups and categories within sectors, acquisition activity, bankruptcy risks, emission practices, and the average size of companies in 1918.

Examining Findings Using Multinomial Logit Regression

A detailed analysis of the collected data using the multinomial logit regression model will be performed. This statistical approach allows for a comprehensive exploration of the relationships between the dependent variable and multiple independent variables. By employing the multinomial logit regression, this study aims to uncover patterns and associations that can provide valuable insights into the observed outcomes. This section serves as an additional test to validate and expand upon the findings obtained from previous analyses, offering a deeper understanding of the factors influencing the outcome variable (group).

Dataset

The following table, Table 1, presents a summary of key data related to mergers and emissions in the Netherlands between the years 1918 and 1929. The information contained in this table has been sourced from the Van Oss' Effectenboeken, a prominent historical record of financial transactions during this period. During the period 1918-1929 around 150 industrial enterprises were listed on the Amsterdam stock exchange.

The table provides insights into the number and value of mergers, as well as bond and stock emissions during the specified period. These data points serve as indicators of economic activity, corporate financing decisions, and market trends during the interwar period in the Netherlands. The number of mergers, totaling 57, reflects the level of corporate consolidation and strategic partnerships that occurred during this era. Additionally, the table reveals the total value and count of bond emissions, highlighting the significant amount of capital raised through bond offerings. Similarly, the data pertaining to stock emissions reveals the value and count of stock issuances, indicating the extent to which companies sought to raise equity capital from investors.

By drawing on the comprehensive information found in the Van Oss' Effectenboeken, this table provides a valuable snapshot of the financial landscape and investment activities in the Netherlands between 1918 and 1929. These data points serve as the foundation for further analysis and exploration of the relationship between mergers, bond- and stock-emissions during this dynamic period in Dutch economic history.

Summary of Van Oss' Effectenboeken (1918-1929)

| | |
|--------------------------------|----------------------|
| Number of mergers | 57 |
| Total Value of Bond Emissions | 166.745.600 <i>f</i> |
| Total Number of Bond Emissions | 61 |
| Total Value of Stock Emissions | 222.022.180 <i>f</i> |
| Total Count of Stock Emissions | 196 |

Table 1. Summary of mergers and emissions 1918-1929

Analysis of Trends: Understanding Patterns and Dynamics

Shown below are the trends of: Total value of Bond Emissions (f), Total value of Stock Emissions (f), GDP per Capita, Stock Price index and number of mergers. All the tables illustrating the trends discussed in this paragraph can be accessed in Appendix A.

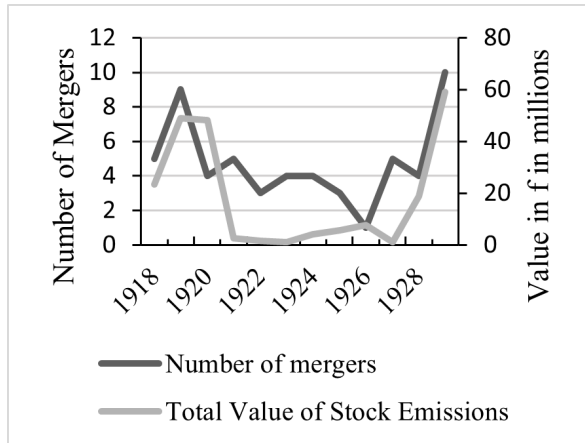


Figure 1.1. Number of mergers per annum and total value of stock emissions

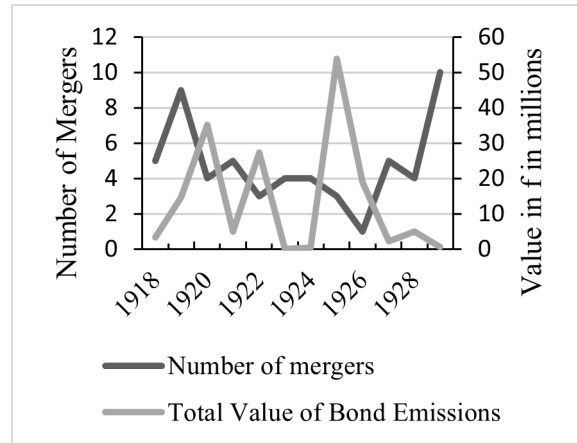


Figure 1.2. Number of mergers per annum and total value of bond emissions

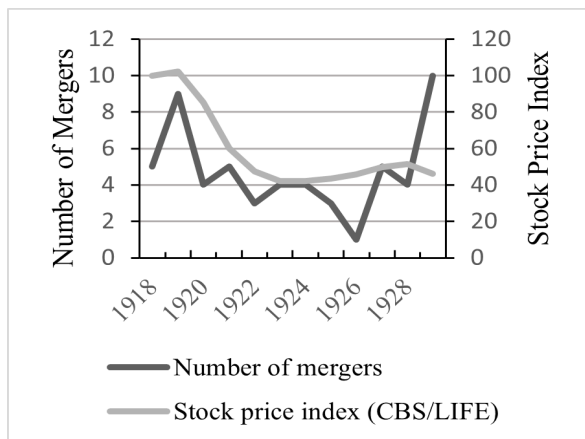


Figure 1.3. Number of mergers per annum and stock price index

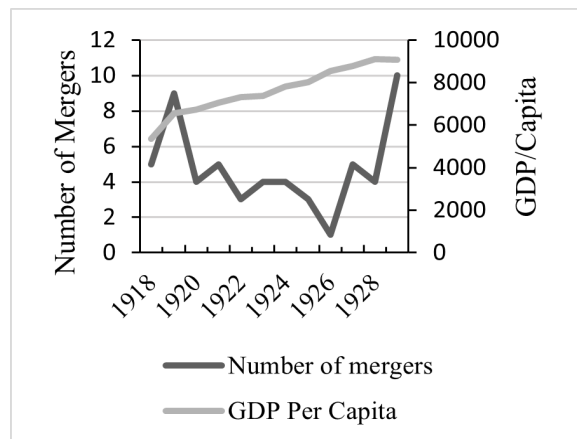


Figure 1.4. Number of mergers per annum and GDP per capita

As depicted in Figure 1.1, both variables display a similar trend over the observed period. The number of mergers exhibits two peaks in 1919 and 1929, indicating a rise in corporate consolidation activity. The number of mergers in the years between 1919-1929 is significantly lower. Concurrently, the total value of stock emissions demonstrates a similar trajectory, suggesting a positive correlation between the two variables. The visual alignment of these trends substantiates the need for further investigation into the potential relationship between the number of mergers and stock market performance.

The examination of trends depicted in Figure 1.2. sheds light on the relationship between the number of mergers and the total value of bond emissions. In contrast to the number of mergers, the total value of bond emissions exhibits substantial fluctuations throughout the observed period, with prominent peaks occurring in 1920, 1922, and 1925. These peaks highlight significant periods of bond issuance activity. The divergent patterns between the two variables emphasize the complex dynamics of the financial landscape during this time. Understanding the factors driving these trends is crucial for comprehending the interplay between mergers and bond market activities.

Figure 1.3. shows that the number of mergers exhibits two notable peaks, one in 1919 and another in 1929. Conversely, the stock price index experienced a significant peak in 1919, followed by a comparatively smaller rise in 1929. Although the congruence observed in the graphical representation is less pronounced than seen between number of mergers and total value of stock emissions, the relationship cannot be disregarded.

The graphical analysis in Figure 1.4. reveals intriguing trends in the number of mergers and GDP per capita. In contrast, the GDP per capita displays a steady upward trajectory throughout the observed period, signifying continuous economic growth. These trends appear to show that there is little relationship between GDP per capita and number of mergers.

To further investigate the trends discussed in this section, this paper will employ regression analysis. These regression analyses allow for a more in-depth examination, compared to visual analysis of the relationship between the number of mergers, total value of stock emissions, GDP per capita, and total value of bond emissions.

Regression Results

Four models were estimated, each accounting for various levels of fixed effects. The standard errors in the regression model are adjusted for clustering at the company level by utilizing the companyID variable. The companyID variable represents a unique identifier assigned to each company in the dataset. This clustering approach enhances the accuracy and reliability of our estimation, allowing for more robust statistical inference in examining the relationship between the explanatory variables and acquisition activity.

Model 1. No Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise\ Stocks + \beta_2 * Raise\ Bonds + \epsilon$$

Model 2. Year Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise\ Stocks + \beta_2 * Raise\ Bonds + Y_t + \epsilon$$

Model 3. Company Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise\ Stocks + \beta_2 * Raise\ Bonds + C_i + \epsilon$$

Model 4. Year and Company Fixed Effects

$$Acquisitions = \beta_0 + \beta_1 * Raise\ Stocks + \beta_2 * Raise\ Bonds + Y_t + C_i + \epsilon$$

The results from the Multi-Way Fixed effects models, presented in Table 2, provide insights into the relationship between raising capital (stocks and bonds) and acquisition activity, considering different fixed effects specifications.

| Variable | Acquisition | | | |
|----------------|-------------------|--------------------|-----------------------|------------------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| | No fixed effects | Year fixed effects | Company fixed effects | Company & Year fixed effects |
| Stock Emission | 0.20* (0.09) | 0.19* (0.08) | 0.22* (0.10) | 0.21* (0.09) |
| Bond Emission | 0.23 (0.19) | 0.26 (0.19) | 0.25 (0.21) | 0.29 (0.20) |
| Constant | 0.08*** (0.00) | 0.07*** (0.00) | 0.07*** (0.00) | 0.07*** (0.00) |
| Observations | 684 | 684 | 684 | 684 |
| R ² | 0.02 | 0.05 | 0.02 | 0.05 |

Note: Standard errors are in parentheses, clustered on company-level.

* $P < 0.10$, ** $P < 0.05$, *** $P < 0.01$

Table 2. Regression results, multi-way fixed effects models

In Model 1, which lacks fixed effects, the coefficient estimate for Stock Emission is 0.20 (SE = 0.09). This positive coefficient suggests a potential positive association between raising stocks and acquisition activity. However, it is crucial to interpret this result cautiously as it does not control for entity-specific or time-specific effects that could influence the relationship.

To address time-specific factors, Model 2 introduces year fixed effects. Remarkably, even after accounting for these effects, the coefficient estimate for Stock Emission remains positive at 0.19 (SE = 0.08). This implies that raising stocks continues to exhibit a positive relationship with acquisition activity. Moreover, the improved R-squared value of 0.05 indicates that the inclusion of year fixed effects enhances the model's explanatory power.

Incorporating company fixed effects in Model 3 aims to capture time-invariant characteristics specific to each company. The coefficient estimate for Stock Emission slightly increases to 0.22 (SE = 0.10), further reinforcing the positive relationship. However, the R-squared value remains at 0.02, suggesting that the inclusion of company fixed effects alone does not enhance the model's explanatory power compared to Model 2.

Finally, Model 4 combines both company and year fixed effects, effectively accounting for both time-invariant and time-specific effects. The coefficient estimate for Stock Emission in this model is 0.21 (SE = 0.09), consistently demonstrating a positive relationship with acquisition activity. Notably, the R-squared value increases to 0.05, indicating that the inclusion of both fixed effects enhances the model's ability to explain the variation in acquisition activity.

In summary, the regression results consistently indicate a positive association between raising stocks and acquisition activity, irrespective of the fixed effects specification. However, it is important to note that the coefficient estimates for Bond Emission are not statistically significant across all models, suggesting that raising bonds may not significantly impact acquisitions in this context. These findings underscore the significance of considering different fixed effects specifications to account for unobserved heterogeneity and time-specific factors when examining the relationship between raising capital and acquisition activity. The result provides some evidence for Managerial Discretion Theory and the Overvalued Shares Hypothesis.

Company Level Results

Stock Emissions

The regression results from the previous analysis revealed a consistent positive association between raising stocks and acquisition activity across different fixed effects models. However, the impact of raising bonds on acquisitions was found to be statistically insignificant. By shifting our focus to the individual company level, this study attempts to gain a more nuanced understanding of the intricate dynamics and unique circumstances that influence the relationship between capital raising and acquisitions. The result of this shift in focus will be examined in this section.

The 57 mergers that have been recorded in the period 1918-1929 have been performed by 50 different companies (Appendix B.). Of that 50 companies, 18 also show up on the list of companies raising capital through stock emissions. These companies are listed in Table 3.

| Number | Company M&A | Years Stock Emission | Year of M&A activity |
|---------------|--|-----------------------------|---------------------------------|
| 1 | Centrale Suiker Maatschappij | 1920 | 1919 |
| 2 | De Vereenigde Blikfabrieken | 1920 | 1924 |
| 3 | Koninklijke Nederlandse Edelmetaal bedrijven van Kempen, Begeer en Vos | 1919 | 1919, 1927 |
| 4 | Koninklijke Stoomschoenenfabriek A. H. van Schijndel | 1920 | 1929 |
| 5 | Lettergieterij "Amsterdam" | 1919 | 1919 |
| 6 | Maatschappij tot Exploitatie van Steenfabrieken "Udenhout" | 1919 | 1928 |
| 7 | Machinefabriek "Breda" | 1929 | 1929 |
| 8 | Machinefabriek "Reineveld" | 1920 | 1925 |
| 9 | N.V. voorheen G. van Voornveld & Co. | 1920 | 1922 |

| | | | |
|----|--|------------|------------|
| 10 | Nederlandsche Springstoffenfabrieken Te Amsterdam | 1926 | 1925 |
| 11 | Nederlandse Gist en Spiritus Fabriek | 1924 | 1918 |
| 12 | Philips Gloeilampenfabriek | 1928 | 1924, 1929 |
| 13 | Stoom-Meelfabriek "Holland" | 1919 | 1922 |
| 14 | Unie van IJsfabrieken | 1924 | 1923 |
| 15 | Van Den Bergh's Fabrieken | 1920 | 1919, 1929 |
| 16 | Vereenigde Hollandse Sigarenfabrieken | 1920, 1929 | 1920 |
| 17 | W.A. van Hoek Machine en Zuurstoffabriek | 1920 | 1921 |
| 18 | Rotterdamse Droogdok Maatschappij | 1925 | 1925 |

Table 3. Companies engaging in both stock emissions and acquisitions

In the prospectus, in the back of Van Oss' Effectenboeken, the stocks and bonds open for emission are listed. In these Prospecti, the reasons for raising capital are stated in most cases. While the book presents the reason provided by the companies, it is advisable to approach the stated reasons with caution, acknowledging the possibility of undisclosed agendas or incomplete information. The reasons for the stock emissions have been collected, summarized, and translated and have been shown in Table 4.³

| Company name | Reason for stock emission listed in Prospecti |
|--------------------------------|--|
| 1 Centrale Suiker Maatschappij | Not mentioned |
| 2 De Vereenigde Blikfabrieken | Rising prices, growing of business, and purchasing of machines |

³ Full statements from the prospecti in Dutch can be found in Appendix C.

| | | |
|----|--|--|
| 3 | Koninklijke Nederlandse Edelmetaal bedrijven van Kempen, Begeer en Vos | Change of business operations, made possible by the merger, and need for expanded Working capital. |
| 4 | Koninklijke Stoomschoenenfabriek A. H. van Schijndel | High material prices, growing payroll expenses and growing of business |
| 5 | Lettergieterij "Amsterdam" | Expansion of factories, higher working capital requirements. |
| 6 | Maatschappij tot Exploitatie van Steenfabrieken "Udenhout" | Not mentioned |
| 7 | Machinefabriek "Breda" | Raising of capital, new distillery purchased with liquid assets |
| 8 | Machinefabriek "Reineveld" | High costs of materials, raised wages and inventory |
| 9 | N.V. voorheen G. van Voornveld & Co. | Not mentioned |
| 10 | Nederlandsche Springstoffenfabrieken Te Amsterdam | Steady growth of the company |
| 11 | Nederlandse Gist en Spiritus Fabriek | Need for capital for important renovations |
| 12 | Philips Gloeilampenfabriek | Rapid expansion of our business at home and abroad. |
| 13 | Stoom-Meelfabriek "Holland" | Building of factory on own grounds |
| 14 | Unie van Ijsfabrieken | To strenghten its own assets |
| 15 | Van Den bergh's Fabrieken | Closing of a deal with "de Margarine Industrie" which gives great opportunities for profitable investments |

| | | |
|----|---|---|
| 16 | Vereenigde Hollandse Sigarenfabrieken | 1929: Reserves cannot provide in the growth of assets 1920: expect expansion of business and the desirability for our companies to have substantial inventories |
| 17 | W.A. van Hoek Machine en Zuurstoffabriek | Planned expansions of bottle-park, purchasing transport and requirements for assets. |
| 18 | Rotterdamse Droogdok Maatschappij | To combat the purchase price of all the stock in Scheepsbouw-maatschappij "Nieuwe Waterweg" |

Table 4. Reasons for stock emissions listed in the prospecti

Upon analyzing the table, it is evident that most stock emissions were not justified by the companies as merger related. However, there are notable instances where reasons stated imply a potential correlation with merger activity. For example, Koninklijke Nederlandse Edelmetaalbedrijven Kempen Begeer en Vos mentions a change in business operations made possible by a merger, indicating a clear connection between the stock emissions and the merger. A link between the stock emission and the merger as described in the literature, however, is not shown (Thorpe, 1931; Eddy, 1937; Markham, 1955).

Similarly, the prospectus for the 1920 Van Den Bergh's Fabrieken emission highlights the closing of a deal with "De Margarine Industrie," which presents profitable investment opportunities. While not explicitly stated, this suggests that a merger or acquisition might have facilitated the deal, leading to the need for stock emissions.

The only case where a stock emission is shown to pay for a merger is the case of the Rotterdamse Droogdok Maatschappij (RDM) and Scheepsbouw-Maatschappij "Nieuwe Waterweg" (SMNW). When the RDM purchased the SMNW in the beginning of 1925, they in parallel did a stock and bond emission on the 11th of May 1925. This is a clear example of an emission funded merger.

The analysis of the table reveals that two out of the 18 companies (Koninklijke Nederlandse Edelmetaalbedrijven Kempen Begeer en Vos and RDM) explicitly mentioned a merger or

acquisition in relation to their stock emissions. This suggests that there might be a potential association between stock emissions and merger activity in certain cases, but it was not as widespread as described in the literature.

Bond Emissions

The purpose of this section is to examine the company specific relationship of bond emissions and acquisitions, considering the results derived from the regression analysis. While stock emissions have demonstrated a consistent positive association with acquisition activity, the results suggest that the effect of bond emissions on acquisitions is not statistically significant. Out of the 50 companies performing acquisitions, only 5 are present on the bond emission list for the 1918-1929 period. These companies are listed in Table 5.

| Number | Company M&A | Years Bond Emission | Year of M&A activity |
|---------------|---|----------------------------|---------------------------------|
| 1 | Anton Jurgens' Vereenigde Fabrieken | 1922 | 1929 |
| 2 | Bierbrouwerij en azijnmakerij "De gekroonde valk" | 1927 | 1927 |
| 3 | Centrale Suiker Maatschappij | 1922, 1925 | 1919 |
| 4 | Coöperatieve Suikerfabriek en Raffinaderij „Dinteloord” | 1925 | 1928 |
| 5 | De Rotterdamse Droogdok Maatschappij | 1925 | 1925 |

Table 5. Companies performing both bond emissions and an acquisition

As with the stock emissions, the reasons for bond emissions are stated in the Prospecti. Compared to stock emissions, the bond emissions tell a similar story. Table 6. shows the reasons that were collected from the Van Oss' Effectenboeken, summarized, and translated.

| Company name | Reason stated in Prospecti |
|---|--|
| 1 Anton Jurgens' Verenigde Fabrieken | Pay off purchases of previously bought enterprises |
| 2 Bierbrouwerij en azijnmakerij "De gekroonde valk" | Rising inventory, increased taxes, and debtors |
| 3 Centrale Suiker Maatschappij | 1922: Steady growth of business and new installations in the factory |
| 4 Coöperatieve Suikerfabriek en Raffinaderij „Dinteloord” | 1929: Participating in a new factory, which will be built |
| 5 De Rotterdamse Droogdok Maatschappij | Needed for growth of processing capacity |
| 5 De Rotterdamse Droogdok Maatschappij | To combat the purchase price of all the stock in Scheepsbouw-maatschappij “Nieuwe Waterweg.” |

Table 6. Reasons for bond emissions listed in the prospecti

Company 1, Anton Jurgens' Verenigde Fabrieken, stated in the prospectus of 1922 that the bond emission was intended to pay off purchases of previously bought enterprises. This indicates a clear connection between the bond emission and merger activity, suggesting that the funds raised were used to finance prior acquisitions.

De Rotterdamse Droogdok Maatschappij, stated that the bond emission (in parallel with the stock emission of 1925) aimed to combat the purchase price of all the stock in Scheepsbouw-maatschappij “Nieuwe Waterweg.” This statement explicitly indicates an acquisition activity, reinforcing the connection between bond emissions and merger-related financial transactions.

Again, there is some evidence of instances where bond emissions were used to finance mergers and acquisitions in the industrial sector in the Netherlands in the 1920s. However, the excessive tendency for companies to raise capital for the sole purpose of consolidating, as described by the US Congress (1934) and the SEC (1942), has not been observed in The Netherlands.

Size and Sector Analysis

Scaling the economic activities of a company can be done in several ways. Issuing stock/bonds can be an effective way of achieving operational growth for a company. Alternatively, a company could opt to be acquired by a larger entity in the market, leading to potential growth and expansion opportunities. This section delves into the strategic choices made by companies to scale their operations, providing insights into sectoral and size differentials. By examining these choices, a deeper understanding of the diverse approaches adopted by companies to expand their business activities can be gained. The analysis sheds light on the dynamics of scaling strategies, uncovering sector-specific patterns and size-related effects, and contributing to a comprehensive exploration of organizational growth.

In the Van Oss' Effectenboek 142 companies listed in 1918, out of those 107 still exist in 1929 and 35 have disappeared as listed companies. The 142 companies are classified in one out of five categories: Agriculture/ Food-Processing, Manufacturing/ Industry, Construction/ Building, Clothing/ Textiles and Energy/ utilities. The companies are also assigned to one of four groups. These groups are shown in Table 7.

| Group | Number of companies (142) |
|--|--------------------------------------|
| A Does not exist anymore in 1929, purchased by other company | 13 |
| B Does not exist anymore in 1929, bankrupt or cease to operate | 22 |
| C Still exists in 1929, did emissions | 53 |
| D Still exists in 1929, did not do emissions | 54 |

Table 7. Status of Companies in 1929: Existence, Acquisitions, Bankruptcies, and Emissions

Of the 142 companies in our sample, 103 have stated their total balance amount. This is used for the analysis of size-specific effects of raising capital and merger activity. In Tables 8+9, the distribution between groups and categories are highlighted.

| Group | Sector | | | | | Total |
|------------------|------------------------------------|-----------------------|---------------------------|----------------------|----------------------------|-------|
| | Agriculture/ Food Processing | Clothing/ Textiles | Construction/ Building | Energy/ Utilities | Manufacturing/ Industry | |
| A (Purchased) | 5 | 0 | 0 | 1 | 7 | 13 |
| B (Bankrupt) | 8 | 0 | 4 | 6 | 4 | 22 |
| C (Emissions) | 13 | 6 | 5 | 6 | 23 | 53 |
| D (No Emissions) | 13 | 2 | 9 | 3 | 27 | 54 |
| Total | 39 | 8 | 18 | 16 | 61 | 142 |

Table 8. Sector Distribution of Groups A, B, C, and D

| Group | Sector | | | | | Average % per group |
|-----------------|------------------------------------|-----------------------|---------------------------|----------------------|----------------------------|---------------------|
| | Agriculture/ Food Processing | Clothing/ Textiles | Construction/ Building | Energy/ Utilities | Manufacturing/ Industry | |
| A (Purchased) | 12.8% | 0 | 0 | 6.3% | 11.5% | 7.9% |
| B (Bankrupt) | 20.5% | 0 | 22.2% | 37.5% | 7.0% | 17.8% |
| C (Emissions) | 33.3% | 75% | 27.8% | 37.5% | 37.7% | 42.3% |
| D (No emission) | 33.3% | 25% | 50.0% | 18.8% | 44.3% | 34.3% |
| Total | 100% | 100% | 100% | 100% | 100% | |

Table 9. Sector Distribution percentage of Groups A, B, C, and D

Sectoral Differences

Analyzing the distribution in the provided tables, one can identify trends and assess the over or under-representation of groups within different sectors. First, looking at Table 8., one can see that the majority of companies still existed in 1929. About 50% of the companies still in operations at the end of the period, have engaged in stock or bond emissions. An important observation is the lack of disappearing firms in the Clothing and Textiles sector. The following section will analyze the additional differences that can be identified.

Being Acquired

The percentage of companies in each sector being purchased by other companies is an important indicator of market dynamics and consolidation within industries. In the provided data, the agriculture sector shows a purchasing rate of 12.8%, suggesting a moderate level of acquisition activity. This indicates a potential trend of companies seeking to expand their operations or gain a competitive edge through acquiring agricultural businesses. The Manufacturing sector also displays an above average rate of purchased companies at 11.5% of the 1918 number of companies. In the Clothing, Construction and Energy sectors, lower rates of consolidation are displayed.

Bankruptcy Risk

When considering bankruptcy rates, the Energy and Utilities sector stands out with a significant percentage of 37.5%, indicating a higher risk of bankruptcy or ceasing operations within this sector. The Construction and Building sector follows closely behind at 22.2%, while the Manufacturing/Industry sector displays a relatively lower rate at 7.0%. The Clothing/Textiles sector lacks companies going bankrupt or ceasing operations in the period; all the Clothing and Textiles companies existing in 1918 were present in 1929, with three quarters of them raising capital through emissions.

Emissions

Comparing the percentages of companies per sector that engaged in emissions and those that did not sheds light on the variations in emission practices within different industries. Big differences can be observed in the tendency of companies to raise capital through the emission of stock and/or bonds.

For the Agricultural Sector, the number of surviving companies that did and did not do an emission is exactly the same. There is a notable contrast when comparing the Clothing and Manufacturing Sectors. While the amount of emission performing companies in the Clothing Sector is about 75% of the surviving companies, the percentage in the Construction Sector is around 35% of surviving companies. For the Energy Sector, about 2/3 of surviving firms performed emissions. In conclusion, there are big sectoral differences in stock/bond emission activity, with the clothing Sector and the Energy Sector being the most inclined to perform

emissions. The Construction Sector was found to be the least represented in emission rates of surviving companies.

Size

Of the 142 companies in our sample, 103 have stated their total balance amount (Guilders) in the Van Oss' Effectenboeken. For the analysis related to the size of the companies, the observations without listed total balance sheet amounts are removed. Table 10. shows the average size of companies in 1918 per group and sector.

| Group | Sector | | | | | Total average size (1918) |
|----------------------------|------------------------------|--------------------|------------------------|-------------------|-------------------------|---------------------------|
| | Agriculture/ Food Processing | Clothing/ Textiles | Construction/ Building | Energy/ Utilities | Manufacturing/ Industry | |
| A | - | - | - | - | 2.493.796 | 2.493.796 |
| (Purchased) | (0) | (0) | (0) | (0) | (4) | (4) |
| B | 4.611.519 | - | 1.538.017 | 1.407.566 | 1.355.032 | 2.277.537 |
| (Bankrupt) | (4) | (0) | (3) | (5) | (3) | (15) |
| C | 16.085.696 | 2.547.601 | 3.937.868 | 4.318.373 | 5.918.317 | 7.594.092 |
| (Emissions) | (11) | (5) | (5) | (5) | (20) | (46) |
| D | 6.325.591 | 1.697.407 | 8.245.627 | 3.878.286 | 4.057.302 | 5.117.505 |
| (No Emissions) | (9) | (2) | (6) | (3) | (18) | (38) |
| Total | 10.513.294 | 2.304.688 | 5.269.797 | 3.097.247 | 4.565.290 | 5.708.074 |
| average size (1918) | (24) | (7) | (14) | (13) | (45) | (103) |

Note: number of observations are in parentheses

Table 10. Sector Distribution and Average Size of Groups A, B, C, and D (1918)

A clear size difference is noted between the disappeared companies and the surviving companies. The average size of the companies in 1918 in group C and D are significantly higher than group A and B. In contrast to this observation, the Clothing industry shows a 100% survival rate, in combination with a relatively low average size. This could indicate that there are big sectoral differences in the size effect on survival. The sectoral differences are also easily noticed, with the size of Agricultural companies being more than four times higher than the

size of Clothing companies. Construction companies rank second in Average size, followed by the Manufacturing sector.

The companies that went bankrupt or ceased to operate have the smallest average total balance and companies that have survived and performed emissions have the highest average total balance. The size of purchased companies is relatively small in this sample (2.4 million Guilders), which could indicate a relationship between size and probability of being acquired. In all sectors, except the Construction Sector, the average size of group C is bigger than group D, which implies that bigger surviving firms are more likely to do stock and bond emissions.

Examining Findings using Multinomial Logit Regression

This section presents the examination of the collected data utilizing the multinomial logit regression model. This statistical approach enables a comprehensive exploration of the interrelationships among the dependent variable and multiple independent variables. By employing multinomial logit regression, the aim is to uncover meaningful patterns and associations that offer valuable insights into the observed outcomes. This section serves as an additional validation and expansion of previous analyses, contributing to a deeper understanding of the factors influencing the outcome variable (group).

Two models were constructed to validate the findings and expand the previous analysis. The first model is designed to evaluate the sectoral differences. Size is included in the second model to assess the potential influence of the variable on the outcome variable and to examine its significance in explaining variations across the different groups.

Multinomial Logit Model: Sector

$$\begin{aligned} \text{Logit}(\text{Group} = x) & \\ &= \beta_0 + \beta_{1x} * \text{Agriculture} + \beta_{2x} * \text{Clothing} + \beta_{3x} * \text{Construction} \\ &+ \beta_{4x} * \text{Energy} + \beta_{5x} * \text{Manufacturing} + \epsilon \end{aligned}$$

Multinomial Logit Model: Sector and Size

$$\begin{aligned} \text{Logit}(\text{Group} = x) & \\ &= \beta_0 + \beta_{1x} * \text{Agriculture} + \beta_{2x} * \text{Clothing} + \beta_{3x} * \text{Construction} \\ &+ \beta_{4x} * \text{Energy} + \beta_{5x} * \text{Manufacturing} + \beta_{6x} * \text{Size} + \epsilon \end{aligned}$$

The multinomial logistic regression model was conducted to analyze the relationship between the dependent variable, the four groups listed in Table 7, and the independent categorical variables: Agriculture, Clothing, Construction, Energy and manufacturing. The Manufacturing category, which represents a binary variable indicating whether a company is involved in manufacturing or not, was omitted from the multinomial logistic regression model due to collinearity with the other binary categorical variables. Including it would have resulted in perfect multicollinearity, as the presence or absence of manufacturing can be perfectly predicted from the other categories, rendering the variable redundant for model estimation. Therefore, to avoid issues of multicollinearity and ensure reliable coefficient estimates, the Manufacturing category was omitted from the analysis.

| Variables | Group | | | |
|----------------------------|----------------------|----------------------|-------------------|-----------------|
| | 1 Purchased | 2 Bankrupt | 3 Emissions | 4. No emissions |
| Agriculture | 0.394 (0.676) | 1.424** (0.699) | 0.160 (0.484) | - |
| Clothing | -14.43 (1.887) | -13.34 (1.451) | 1.259 (0.864) | - |
| Construction | -14.83 (1.087) | 1.099 (0.805) | -0.427 (0.626) | - |
| Energy | 0.251 (1.230) | 2.603*** (0.887) | 0.854 (0.762) | - |
| Manufacturing (Omitted) | - | - | - | - |
| Constant | -1.350*** (0.424) | -1.910*** (0.536) | -0.160 (0.284) | - |

Note: Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 11. Sector Multinomial Logit Model (N=142)

The results of the Sector Multinomial Logit Model are shown in Table 11. The overall model performance was assessed using the log likelihood value, which improved across iterations. The final log likelihood was -164.72 indicating that the model fits the data reasonably well. The LR chi-square test yielded a statistically significant result ($p < 0.05$), suggesting that the model as a whole provides a better fit than an intercept-only model. The pseudo-R-squared value of 0.067 indicates that the independent variables explain approximately 6.7% of the variation in the dependent variable.

Examining the coefficient estimates, it is important to note that the omitted category (the “Still exists in 1929, did not do an emission” group) serves as the reference category against which the effects of the other categories are compared. In this multinomial logit regression, the coefficients represent the log-odds ratios associated with each category compared to the reference category.

For the “Does not exist anymore in 1929, purchased by other company” group, the agriculture variable has a coefficient of 0.394, which is not statistically significant ($p = 0.560$). Similarly, the coefficients for Clothing, Construction, and Energy are not significant either. The intercept term ($_cons$) for the “Does not exist anymore in 1929, purchased by other company” group is -1.349, which is statistically significant ($p = 0.001$), suggesting that the log odds of the “Does not exist anymore in 1929, purchased by other company” group differ significantly from the reference category 4.

The agriculture variable has a coefficient of 1.424, indicating a statistically significant positive relationship with the log odds of being in the “Bankrupt or cease to operate” group ($p = 0.042$) for the “bankrupt or cease to operate” group. The Energy variable also has a significant positive effect on this group, with a coefficient of 2.602 ($p = 0.003$). The intercept term for Group 2 is -1.909, which is statistically significant ($p < 0.001$).

In the “Still exists in 1929, did emissions” group, none of the independent variables show significant effects on the log odds of belonging to this group. The intercept term for Group 3 is -0.160, which is not statistically significant ($p = 0.572$). Energy sector companies are indicated to have a positive, insignificant probability of being in group 3, compared to the base outcome of still existing companies that did not perform any stock and/or bond emissions.

Considering these factors, the model demonstrates some effectiveness in explaining the relationship between the independent variables (sectors) and the dependent variable (group). It is important to emphasize the limitations of the model, such as the omitted category and the non-significant coefficients.

| Variables | Group | | | |
|----------------------------|-------------------------|--------------------------|------------------------|-----------------|
| | 1 Purchased | 2 Bankrupt | 3 Emissions | 4. No emissions |
| Agriculture | -15.37 (1.666) | 1.139 (0.894) | -0.152 (0.586) | - |
| Clothing | -16.05 (3.849) | -14.44 (1.977) | 0.933 (0.904) | - |
| Construction | -15.77 (2.406) | 1.188 (0.971) | 0.343 (0.693) | - |
| Energy | -15.95 (3.308) | 2.154** (0.979) | 0.463 (0.802) | - |
| Manufacturing (omitted) | - | - | - | - |
| Size | -2.78e-07 (2.90e-07) | -2.88e-07* (1.47e-07) | 4.66e-08 (3.89e-08) | - |
| Constant | -0.603 (0.934) | -0.865 (0.736) | -0.123 (0.377) | - |

Note: Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12. Sector and Size Multinomial Logit Model (N=103)

This section presents the results of a multinomial logit regression analysis conducted to investigate the relationships between the dependent variable, Group, and the independent variables: Agriculture, Clothing, Construction, Energy, Manufacturing (omitted), and Size. The analysis was based on a dataset of 103 observations. The results, shown in Table 12, revealed that the multinomial logit model provided a statistically significant fit to the data (LR

$\chi^2(15) = 30.52, p = 0.010$), suggesting its effectiveness in explaining the variation in group classification. The pseudo R² value of 0.131 indicates a moderate level of explanatory power.

The multinomial logit regression analysis revealed the following coefficients for each group classification. For the “Does not exist anymore in 1929, purchased by other company” group, the coefficients for Agriculture, Clothing, Construction, Energy, Manufacturing (omitted), and Size, as well as the constant term, were not statistically significant, suggesting that these variables do not significantly influence the likelihood of belonging to Group 1 compared to group 4. Albeit insignificant, the size coefficient implies a negative relationship between size and the probability of being purchased by another entity.

In Group 2 (Bankrupt/ceased), only the coefficient for Energy was significant at 5% ($z = 2.20, p = 0.028$), indicating that being in the Energy sector is associated with a higher probability of being classified in this category compared to the base outcome. The coefficients for Agriculture, Clothing, Construction, Manufacturing (omitted), Size, and the constant term in Group 2 were all insignificant. The size coefficient, however, implies a negative relationship between size and going bankrupt/ceasing to exist.

For the surviving group that additionally performed stock/bond emissions, none of the independent variables, including Agriculture, Clothing, Construction, Energy, Manufacturing (omitted), Size, and the constant term, exhibited statistical significance. The coefficient for size was positive, suggesting a slightly higher likelihood of survival in combination with doing emissions, with larger sizes, but it was not significant.

Overall, the results suggest that the independent variables in the multinomial logit model have varying degrees of influence on group classification. Size is identified as having a negative relationship with disappearing in the period 1918-1929, due to being purchased or bankruptcy. A positive relationship had been found between size and surviving and performing stock and/or bond emissions. However, it is important to note that the insignificance of some coefficients indicates that certain variables may not play a significant role in differentiating between the groups.

Discussion

This study contributes to the understanding of the relationship between capital raising and merger activity of industrial enterprises in The Netherlands in the 1920s. The findings of this study provide valuable insights into the dynamics of capitalization and consolidation. In contrast to previous research (Thorpe, 1931; Eddy, 1937; Markham, 1955) the link between the stock and/or bond emission and the merger is not shown. While the regression analysis implied a significant relationship between stock emissions and merger activity, the company level analysis refuted this result. However consistent with previous research (Weston, 1961; Holmstrom & Kaplan, 2001; Dong et al., 2003; Ang & Ceng, 2006), this study found merger activity to be significantly related to stock prices.

The Managerial-Discretion Hypothesis and the Overvalued Share Hypothesis are the potential mechanisms that underlie this relationship. Gugler et al. (2012) suggest that merger waves occur during stock market booms as bullish sentiments in the market enable growth-oriented managers to pursue more mergers that destroy wealth than they would during normal circumstances. The overvalued share hypothesis proposes that there are instances where certain companies' stocks are overpriced by the stock market. To safeguard their shareholders from potential wealth decline caused by a market evaluation correction, managers of these companies may choose to convert their overvalued shares into tangible assets by means of mergers or acquisitions (Shleifer and Vishny, 2003; Rhodes-Kropf and Viswanathan, 2004; Rhodes-Kropf, Robinson and Viswanathan, 2005).

The finding of empirical evidence supporting the Managerial-Discretion Hypothesis and the Overvalued Share Hypothesis hold significant implications for the discussion on corporate governance. By providing evidence of the existence of these theories, the research adds to the understanding of managerial decision-making dynamics and the potential conflicts of interest between managers and shareholders. The identification of overvaluation in certain company stocks and the subsequent choice of managers to exchange these overvalued shares for tangible assets through mergers or acquisitions highlights the importance of market evaluations and their impact on corporate strategies. These findings contribute to the body of knowledge on agency problems in corporations and provide valuable insights for investors, regulators, and policymakers in enhancing transparency, accountability, and market efficiency.

One of the key strengths of this study is the extensive nature of the analysis. This study implements several strategies and methods to form a comprehensive analysis of the dynamics at play in capitalization and consolidation. Data visualizations, statistical analysis techniques, including Multi-way Fixed Effects Models and individual analysis of observations were employed to analyze the data, providing robust evidence to answer the research question.

The utilization of a physical book (Van Oss' Effectenboek) as a data source had both strengths and limitations. The book offered a historical perspective and access to primary source information from the specified period. This enabled the study to capture insights into the relationship between capital raising and merger activity in industrial enterprises during the 1920s in the Netherlands, which might not have been possible with other sources.

However, it is important to acknowledge the limitations associated with relying solely on a physical book. The availability of observations and data variables was constrained by the content and scope of the book, potentially leading to a limited sample size and restricted breadth of variables considered. Consequently, the findings might not fully represent the entire population of industrial enterprises during that period.

Based on the findings and limitations of this study, several recommendations can be made for future research to expand and deepen our understanding of the relationship between capital raising and merger activity in industrial enterprises during the 1920s in the Netherlands.

Firstly, it is recommended to augment the dataset by incorporating additional sources of data. While the utilization of a physical book provided valuable insights, expanding the data collection to include other archival records, company reports, or financial statements from the same time period would enhance the sample size and increase the breadth of variables considered. This would provide a more comprehensive understanding of the dynamics of capitalization and consolidation.

Furthermore, conducting comparative studies across different time periods or geographical regions could provide a broader perspective on the relationship under investigation. Exploring the similarities and differences in capital raising and merger activity patterns during different economic cycles or in different countries would contribute to the generalizability of the findings and help identify contextual factors influencing the relationship.

Additionally, future research could delve into the underlying mechanisms driving the observed relationships. Investigating the decision-making processes of managers and the role of shareholder interests, agency problems, and market conditions would shed light on the Managerial-Discretion Hypothesis and the Overvalued Share Hypothesis. Incorporating qualitative research methods such as interviews or case studies could provide deeper insights into the motivations and strategies employed by managers in capitalization and consolidation activities.

Lastly, exploring the long-term effects of capital raising and merger activity on firm performance and shareholder value would be a valuable avenue for future research. Assessing the financial outcomes and sustainability of the merged entities over time would contribute to understanding the broader implications and consequences of capitalization and consolidation in industrial enterprises.

By addressing these recommendations, future research can build upon the findings of this study and further enrich our knowledge of the relationship between capital raising and merger activity in industrial enterprises during the 1920s in the Netherlands.

Conclusion

Key Findings

In conclusion, this study has investigated the relationship between capitalization, through stock and bond emissions, and merger activity in industrial enterprises in The Netherlands of the 1920s. Through an in-depth analysis of historical financial data and literature, using several different examination methods, several key findings have emerged.

In accordance with the extensive body of academic literature, the study found merger activity to be significantly related to stock prices. This supports the idea that long-term market fluctuations in the valuation of companies and the number of takeovers is positively related. In contrast to previous research however, the link between the stock and/or bond emission and the merger is not shown. While the regression analysis implied a significant relationship between

stock emissions and merger activity, the company level analysis refuted this result. The deceitful role of the promoter, that the literature describes in the United States, has therefore also not been found.

Substantial size and sectoral differences have been identified in this context. This study identified the sectors with relatively high rates of consolidation as: Agriculture/Food Processing and Manufacturing/ Building. The Clothing/ Textiles sector has been found to be the most inclined to perform emissions, with about three quarters of the surviving companies performing one or more emissions.

It can be concluded from this study that industrial enterprises with bigger total balance had a better chance of survival in the period 1918-1929. The group of bankrupt/cease to operate sub-group had the lowest total balance in 1918. The surviving companies who had performed emissions were identified as the biggest sub-group in the sample.

Relevance

This study has made contributions towards filling gaps in the existing knowledge and literature regarding stock/bond emissions and merger activity. By conducting an extensive review of the literature and conducting historical research, the study has addressed several key research gaps.

Firstly, this study provides novel insights into the relationship between capitalization and consolidation in the context of The Netherlands in the 1920s. Prior research in this area and context has been limited in terms of proving the existence of a merger wave in The Netherlands, and our findings expand upon the existing knowledge base by offering a more comprehensive understanding of the underlying phenomenon.

Furthermore, the findings shed light on the effects of size and sectoral differences, which has remained relatively unexplored in the literature. By analyzing the historical data, valuable findings have been uncovered that contribute to the theoretical understanding of merger activity and provide practical implications for investors, managers, and regulators.

Limitations

While this study has provided valuable insights and contributed to the existing knowledge, it is essential to acknowledge and discuss the limitations and constraints that may have influenced our research and findings.

One limitation of this study is the availability of observations and data variables. The availability of observations and data variables was constrained by the content and scope of the book, leading to a limited sample size and restricted breadth of variables considered. Consequently, the findings might not fully represent the entire population of industrial enterprises during that time period.

Additionally, it is important to acknowledge the limitations of utilizing a multi-way fixed effects model in examining the relationship between capital raising and acquisitions. Firstly, the model assumes a linear relationship between the independent variables and the outcome, potentially overlooking non-linear effects. Secondly, the model relies on the availability and accuracy of data on capital raising and acquisitions, which, as described, may be subject to reporting errors or incomplete information. Lastly, while controlling for fixed effects helps address certain sources of bias, there may still exist unobserved factors that influence the relationship.

The classification of companies into five categories and assignment to four groups, for the sector and size analysis, may introduce subjectivity and potential misclassification, leading to potential biases in the analysis. Finally, the dataset primarily focuses on listed industrial enterprises, which may not fully capture the entire landscape of industrial enterprises of the time, potentially limiting the generalizability of the findings to non-listed companies or other sectors of the economy.

Future directions

The following recommendations outline potential avenues for future research in the field of capitalization and merger activity. Future research should delve deeper into understanding the factors that drive merger activity in industrial enterprises during the 1920s. Investigating additional variables such as market conditions, industry dynamics, regulatory changes, and

managerial motivations could provide a more comprehensive understanding of the underlying mechanisms that contribute to merger decisions.

While this study did not find evidence of a deceitful role of promoters, further research could focus specifically on examining the role of promoters in the context of merger activity in different countries or time periods. Comparative studies could shed light on variations in promoter influence and its impact on merger outcomes.

Since the study did not find a direct link between stock emissions and merger activity, it would be valuable to investigate the long-term effects of stock emissions on company performance, growth, and sustainability. Longitudinal studies that track the financial performance of companies post-emission can provide insights into the implications of capitalization strategies on long-term survival and growth.

This study focused on specific sectors in the Netherlands during the 1920s. Future research could expand the analysis to include a broader range of industries and geographic regions, allowing for a more comprehensive understanding of the relationship between capitalization, merger activity, and sectoral dynamics in different contexts.

Combining quantitative analysis with qualitative research methods such as interviews, case studies, or archival research can offer a more nuanced understanding of the historical and contextual factors influencing merger decisions and capitalization strategies. Qualitative insights can provide valuable context and complement the quantitative findings.

By exploring factors driving merger activity, investigating the role of promoters, examining long-term effects of stock emissions, expanding analysis to different industries and regions, and incorporating qualitative research methods, scholars can enhance our understanding of this historical context and contribute to the literature on corporate finance and business history.

Conclusion

This study has shed light on the relationship between capitalization and merger activity in industrial enterprises during the 1920s in the Netherlands. The findings underscore the significance of stock prices in influencing merger decisions and highlight sectoral differences

in consolidation rates. While the direct link between stock and/or bond emissions and mergers was not established, this study contributes to the existing literature by challenging prior assumptions and emphasizing the role of other factors in shaping merger outcomes. Moving forward, further research should explore additional determinants of merger activity, investigate the long-term effects of capitalization strategies, and examine the implications of these findings for financial decision-making in contemporary industrial contexts. Such endeavors will deepen our understanding of the complex interplay between capitalization and mergers, providing valuable insights for practitioners and scholars alike.

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Appendix

Appendix A. Tables of Trends

| Years | Number of mergers | Total Value of Bond Emissions (f) | Total Number of Bond Emissions | Total Value of Stock Emissions (f) | Total Count of Stock Emissions | Stock price index (CBS/LIFE) |
|-------|-------------------|-----------------------------------|--------------------------------|------------------------------------|--------------------------------|------------------------------|
| 1918 | 5 | 3.400.000 | 4 | 23.477.680 | 41 | 100 |
| 1919 | 9 | 14.590.000 | 5 | 48.832.000 | 42 | 102,2833 |
| 1920 | 4 | 35.200.000 | 11 | 48.240.500 | 55 | 85,23011 |
| 1921 | 5 | 4.950.000 | 4 | 2.600.000 | 2 | 59,97146 |
| 1922 | 3 | 27.305.600 | 9 | 1.450.000 | 2 | 47,44916 |
| 1923 | 4 | 0 | 0 | 1.000.000 | 1 | 42,31181 |
| 1924 | 4 | 400.000 | 2 | 4.163.000 | 4 | 41,99072 |
| 1925 | 3 | 53.900.000 | 11 | 5.539.000 | 6 | 43,52479 |
| 1926 | 1 | 19.000.000 | 6 | 7.700.000 | 6 | 45,80806 |
| 1927 | 5 | 2.300.000 | 4 | 1.150.000 | 4 | 49,94649 |
| 1928 | 4 | 5.000.000 | 3 | 18.741.000 | 11 | 51,51623 |
| 1929 | 10 | 700.000 | 2 | 59.129.000 | 22 | 46,23618 |

Appendix B. List of companies performing an acquisition/merger (1918-1929)

| Company name | Year |
|---|------|
| 1 Zuid-Hollandse Beetwortelsuiker Fabriek | 1918 |
| 2 Algemeene Norit maatschappij | 1918 |
| 3 Meelfabrieken Der Nederlandse Bakkerij | 1918 |
| 4 Nederlandsche Gist- en Spiritusfabriek | 1918 |
| 5 Noord-Nederlandse Beetwortelsuikerfabriek | 1918 |
| 6 Koninklijke Nederlandse Edelmetaal bedrijven van Kempen, Begeer en Vos | 1919 |
| 7 Verenigde touwfabrieken | 1919 |
| 8 Van Den bergh's Fabrieken | 1919 |
| 9 Koninklijke Pharmaceutische Fabrieken v/h. Brocades-Stheeman en Pharmacia | 1919 |
| 10 Centrale Suiker Maatschappij | 1919 |

| | | |
|----|---|------|
| 11 | Lettergieterij "Amsterdam" | 1919 |
| 12 | Constructiewerkplaatsen vh Du Croo en Brauns | 1919 |
| 13 | Meelfabrieken Der Nederlandse Bakkerij | 1919 |
| 14 | Vereenigde Nederlandsche Chamotte Fabrieken | 1919 |
| 15 | Nederlandse Mpij. voor Scheepvaart Handel en Nijverheid | 1920 |
| 16 | Koninklijke Pharmaceutische Fabrieken v/h. Brocades-Stheeman en Pharmacia | 1920 |
| 17 | Vereenigde Hollandsche Sigarenfabrieken | 1920 |
| 18 | Vereenigde Hollandsche Sigarenfabrieken | 1920 |
| 19 | Bierbrouwerij „De Drie Hoefijzers" | 1921 |
| 20 | De Cacao Unie | 1921 |
| 21 | Koninklijke Pharmaceutische Fabrieken v/h. Brocades-Stheeman en Pharmacia | 1921 |
| 22 | W. A. Hoek s Machine- en Zuurstoffabriek | 1921 |
| 23 | Roupe van der Voort's Industrie- en Metaalmaatschappij | 1921 |
| 24 | Burgerhout's Machinefabriek en Scheepswerf | 1922 |
| 25 | Stoom-Meelfabriek „Holland" | 1922 |
| 26 | N.V. voorheen G. van Voornveld & Co. | 1922 |
| 27 | Vereenigde Glasfabrieken | 1923 |
| 28 | Unie van IJsfabrieken | 1923 |
| 29 | Utrechtsche Asphaltfabriek v/h Firma Stein en Takken | 1923 |
| 30 | Utrechtsche Asphaltfabriek v/h Firma Stein en Takken | 1923 |
| 31 | De Vereenigde Blikfabrieken | 1924 |
| 32 | Algemeene Norit maatschappij | 1924 |
| 33 | N.V. tot Exploitatie van de gebouwen en terreinen Weesperzijde Amsterdam | 1924 |
| 34 | Philips' Gloeilampenfabriek | 1924 |
| 35 | Machinefabriek "Reineveld" | 1925 |
| 36 | De Rotterdamse Droogdok Maatschappij | 1925 |
| 37 | Nederlandache Springstoffenfabriek te Amsterdam | 1925 |
| 38 | Vereenigde Glasfabrieken | 1926 |
| 39 | Koninklijke Stearine Kaarsenfabriek Gouda | 1927 |
| 40 | Koninklijke Pharmaceutische Fabrieken v/h. Brocades-Stheeman en Pharmacia | 1927 |
| 41 | Margarine Unie | 1927 |
| 42 | Bierbrouwerij en AeljnmakerIJ „de Gekroonde Valk" voorh. van Vollenhoven & Co | 1927 |
| 43 | Koninklijke Nederlandse Edelmetaal bedrijven van Kempen, Begeer en Vos | 1927 |

| | | |
|----|--|------|
| 44 | Brood- en Meel- Fabrieken maatschappij "De Korenschoof" | 1928 |
| 45 | Vitrage weverij Anglo-Holland | 1928 |
| 46 | Coöperatieve Suikerfabriek en Raffinaderij „Dinteloord” | 1928 |
| 47 | Maatschappij tot Exploitatie van Steenfabrieken „Udenhout" | 1928 |
| 48 | Maatschappij voor scheeps- en Werktuig-bouw Feijenoord | 1929 |
| 49 | Dordtse Metaalwaren Fabriek | 1929 |
| 50 | Margarine Unie | 1929 |
| 51 | Van Den bergh's Fabrieken | 1929 |
| 52 | Machinefabriek "Breda" | 1929 |
| 53 | Enkes N.V. | 1929 |
| 54 | Koninklijke Stoomschoenenfabriek A. H. van Schijndel | 1929 |
| 55 | Anton Jurgens' Vereenigde Fabrieken | 1929 |
| 56 | Machinefabriek Gebr, Stork & Co. | 1929 |
| 57 | Algemene kunstzijde unie | 1929 |

Appendix C. Dutch reasons for stock emissions from prospecti

| Company Reason for Stock Emission | |
|--|---|
| 1 | Not mentioned |
| 2 | Door de geleidelijk toeneming van zaken, de enorme stijging van metaalprijzen, waardoor een belangrijk grooter roulerend kapitaal benodigd is, verder door het in bedrijf stellen der nieuw geïnstalleerde fabriek gepaard met aanschaffing van diverse machines, is de behoefte voor versterking van kapitaal sterk gaan groeien |
| 3 | Ten slotte is in verband met een algeheele wijziging der bedrijfspolitiek, door de fusie mogelijk geworden, besloten tot uitgifte van f 2.700.000 6 pet. cumulatief-preferente winst deelende aandelen ter verkrijging van een ruim werkkapitaal. |
| 4 | De uitbreiding der zaken, gepaard aan de voortdurend hoge prijzen der grondstoffen, de grootere sommen die voor uitbetaling der loonen vereischt worden enz. maken het wenschelijk tot versterking der bedrijfsmiddelen van de vennootschap over te gaan |

- 5 Wij stellen ons voor het met deze uitgifte te verkrijgen agio aan te wenden tot volstorting der reserve, enz. De vooruitzichten om ook voor het nieuwe kapitaal in ons bedrijf loonend emplooi te vinden, zijn gunstig. In binnen- en buitenland bestaat naar onze producten groote vraag en vereisen de steeds stijgende omzetten een grooter bedrijfskapitaal, terwijl de reeds in voorbereiding zijnde uitbreidingsplannen onzer fabrieken en filialen ten spoedigste dienen te worden uitgevoerd.
-
- 6 Not mentioned
-
- 7 De bouw der nieuwe ketelmakerij is met de bestaande liquide middelen betaald, maar het is gewenscht om voor de verdere ontplooiing van het bedrijf het kapitaal te vergroten, om welke reden tot uitgifte van 500 nieuwe aandelen a f 1000 werd besloten.
-
- 8 Ten einde te voorzien in meer bedrijfskapitaal, hetgeen noodzakelijk is geworden door do steeds hoogere kosten van materialen, loonen en voorraden en door den belangrijk ge stegen omzet, hebben wij besloten de inschrijving open te stellen op nog f 498.500 aandeelen.
-
- 9 Not mentioned
-
- 10 De kapitaaluitgifte is nodig in verband met de geleidelijke uitbreiding van het bedrijf.
-
- 11 De redenen die tot deze uitgifte nopen zijn de geldbehoefte die zullen ontstaan door zeer belangrijke verbouwingen te Delft, alsmede te Brugge, — waar de algehele stilstand in de nieuwbouw gedurende de oorlogsjaren nog steeds niet is ingehaald.
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- 12 Het doel van deze uitgifte is te voorzien in de behoefte aan kapitaal, die zich doet gevoelen ten gevolge van de groote uitbreiding onzer bedrijven, zowel te Eindhoven als van onze dochterondernemingen in het binnen- en buitenland.
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- 13 De opbrengst van deze uitgifte moet strekken tot bestrijding der kosten van deelneming in het kapitaal der op te richten vennootschap „Nederlandsche Fabriek voor Voedingsmiddelen.” Deze fabriek zal gebouwd worden op een stuk grond gelegen naast onze eigen terreinen.
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14 Ter versterking van hare eigen bedrijfsmiddelen wenscht de N.V. Unie van Ijsfabrieken thans over te gaan tot uitgifte van f 513.000 nominaal aandelen, deelende in de winst over het laatste kwartaal van 1923. Van deze uitgifte wordt tevens gebruik gemaakt om voor het geheel maatschappelijke aandelenkapitaal de officieele notering ter beurse van Amsterdam aan te vragen.

15 Bovendien hebben wij dezer dagen eene overeenkomst gesloten waardoor eene dusdanig groote uitbreiding aan onze portefeuille aandelen in De Margarine-industrie wordt gegeven, dat, naar wij vertrouwen, een zeer productief emploi voor onze geldmiddelen is verzekerd.

1929: De voortdurende uitbreiding van het bedrijf en de sterk toegenomen omzet vereisen een verdere uitbreiding der middelen, waarin door reservering-alleen niet kan worden voorzien, weshalve besloten werd tot vergroting van het kapitaal over te gaan.

16 1920: verwachten uitbreiding van zaken, de verwerving van nieuwe belangen en de wenschelijkheid voor onze bedrijven om te beschikken over flinke voorraden ruwe tabak, op den handel in welk artikel wij ons intusschen ook hebben toegelegd, is door directie en commissarissen besloten tot uitgifte van f 1.207.000 gewone aandelen

17 Met het oog op bovenstaande uitbreidingen en de daarmee in verband staande hoogere eischen gesteld aan het bedrijfskapitaal, alsmede ter aanschaffing van eigen transportmiddelen en vergroting van het flesschenpark, hebben commissarissen en directie besloten, de nog in portefeuille zijnde 400 aandelen uit te geven, en wel tegen den koers van 125 pet. m

18 Zoals uit het jongste jaarverslag reeds is medegedeeld, zullen, ter bestrijding van de koopsom van bovengenoemde aandelen in de Scheepsbouw-Maatschappij „Nieuwe Waterweg ener voorziening in het bedrijfskapitaal van de nieuwe Portefeuille zijnde aandelen worden uitgegeven en een 6 pet. obligatielening groot f 2.000 k worden gesloten.

Appendix D. Dutch reasons for Bond emissions from prospecti

Company reason for Bond Emission

- 1 De opbrengst hiervan zal dus tevens worden aangewend tot directe afbetaling van bedragen, door ons verschuldigd wegens aankoop van vroeger verworven ondernemingen, welke bedragen aanvankelijk in termijnen zouden worden betaald.
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- 2 Met de bovengenoemde uitbreidingsplannen zijn groote uitgaven gemoeid Ook toenemende omzet brengt een voortdurende stijging van voorraden en debiteuren met zich mede, terwijl voorts de sinds 1924 verhoogde Accijns aan de kas zij het tijdelijk om deze redenen belangrijk grootere bedragen dan voorheen onttrekt Om bestaat behoefte aan ruimere bedrijfsmiddelen
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- 1922:
- De voorgenomen uitgifte van obligatiën beoogt versterking der bedrijfsmiddelen en houdt verband met de gestadige uitbreiding der zaken. In het afgelopen boekjaar werden voor uitbreiding en nieuwe installaties onzer eigen fabrieken en die der onderhoorige Maatschappijen, alsmede voor verdere deelnamen onzer vennootschap in het kapitaal van andere suikerfabrieken ongeveer f 9.000.000 besteed.
- 1925: De Centrale Suiker Maatschappij is geïnteresseerd met £ 200.000.— aandeelen bij elke fabriek. In het aandelenkapitaal van eene derde fabriek, welke in 1926 zal worden gebouwd, zal door de Centrale Suiker Maatschappij eveneens worden deelgenomen met £ 200.000.—.
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- 3
- Zoals bij de toelichting der uitgifte van bovengenoemde Obligatie leening werd vermeld, diende het provenu, behalve voor de vergrooting der verwerkingscapaciteit der fabriek welke thans het respectabele cijfer van 3.000.000 K.G. bieten per dag heeft bereikt, tot completeering der Suikerraffinaderij en tot uitbreiding der Pulpdrogerij alsmede ter voorziening van meerder werkkapitaal benodigd voor de gestadige ontwikkeling van de diverse onderdeelen van het bedrijf.
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- 4

5 Zoals uit het jongste jaarverslag reeds is medegedeeld, zullen, ter bestrijding van de koopsom van bovengenoemde aandelen in de Scheepsbouw-Maatschappij „Nieuwe Waterweg ener voorziening in het bedrijfskapitaal van de nieuwe wer de no2 m Portefeuille zijnde aandelen worden uitgegeven en een 6 pet. obligatielening groot *f* 2.000 k» worden gesloten.