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**Banken en industriefinanciering in de 19e eeuw**

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## **Summary in English: Dutch banks and the financing of industry in the 19th century**

### *Research focus*

In this dissertation we analyzed the unique role of banks in financing industrial firms in the late 19th century. The first part of this thesis examined the banks' role according to the financial intermediation theories of the 1970s, 1980s and early 1990s. The second part focused on the institutional environment of banks in the late 19th century, and the participants in the financial sector in general, and also evaluated the status quo of the Dutch industrial sector. The third part contains two case studies which explore the link between financial intermediation theories and institutional setting. In the first case we studied the relationship between the Stork family operating in textile and machinery and the Mees bankers family. In the second case we examined the relationship between the Van den Bergh family which traded in butter and margarine and the Amsterdamsche Bank, Rotterdamsche Bank and the investors in the London market respectively. The cases incorporate a unique collection of historical data and written material, which may be used for future case studies.

### *Part One: Theory*

In part one we developed four hypotheses with respect to the role of banks, derived from modern financial intermediation theory. The hypotheses are as follows:

1. Banks reduce the operating costs of lending by their scale, specialization and risk diversification. The gain increases with the specificity of transactions and the complexity of the risks. (Benston c.s., Williamson, a.o.)
2. Banks reduce the costs of ex ante information asymmetry by (1) specializing in ex ante screening, (2) developing a solid reputation as a credible information producer, taking risks on personal accounts and conducting sufficient internal audits. Banks can do better than financial markets in cases where confidential information is crucial. (Campbell & Kracaw, Ramakrishnan & Thakor, a.o.)
3. Banks can reduce the costs of ex post information asymmetry by (1) specializing in ex post monitoring, (2) maintaining longer term relationships, and (3) developing a reputation in this field. Because of the short-term focus of transactions in the financial markets, this benefit could never be achieved in financial markets. (Diamond a.o.)
4. Banks can reduce their own funding costs by developing a reputation as a creditworthy institution. Their debtors profit from that gain because the bank can offer a lower interest rate and a higher availability of funds. In this way banks lower the costs of financial intermediation as compared to the costs of direct financing in the market. (Sharpe, Boot, Thakor, a.o.)

The strongest support was found for the hypotheses on monitoring and the effect of reputation (hypotheses 3 and 4). In the Mees-Stork case we found support for hypotheses 3 and 4, while in the Van der Bergh case we found support for hypothesis 4. Hypothesis 2 would be true for any financial specialist, not merely a bank. We did not find support for hypothesis 1.

### *Part Two: Institutional Setting*

In part two we described the environment of Dutch banks, the demanders and the suppliers of external funding in the Netherlands.

#### *Entrepreneurs*

The pace of industrial growth in The Netherlands from the 1850s onwards and the consequent change in assets structures was gradual. Changes in financing patterns were not prevalent, except for the machinery industry. Improvements in production processes in most industries led to higher stocks, and thus to higher amounts of short term finance. With the diffusion of machinery in the 1860s the demand for longer term financing grew. Entrepreneurs at first satisfied their needs for longer term financing with rolled-over short term finance, which gave the financiers more security too. By the end of the 1890s the demand for longer term finance was substantial; the demand was satisfied with both longer term loans and equity capital. Only in cases of the development of new products and complex production processes bankers were called in to intermediate between investors and the entrepreneurs. In this environment any of the four roles described in the hypotheses could have been played.

#### *Financial markets*

As far as the financial infrastructure was concerned, in the 1860s sufficient facilities were available to those who invested funds and those who needed them: auctions, commodities markets and stock exchanges, notaries and legal procedures to enforce contracts in court, financial intermediaries (cashiers, bankers, brokers), telecommunication facilities (telephone and telegraph) and connections with London.

The supply of capital in the economy was so high, that there was a net export of capital. Investors preferred fixed income, liquid and (seemingly) safe securities. Dutch, unknown companies could not always offer these features and investors invested a lot in foreign funds. More risky investors therefore invested a lot abroad. Banks did not actively offer longer term funds to entrepreneurs in the market. Entrepreneurs did not explicitly obtain funding from financial intermediaries when looking for funding, because they preferred capital suppliers to take risky claims in the firm (more equity like). The banks' role was confined to cash settlements and the provision of payments system services. In order to play the roles described in the hypotheses banks would need more knowledge, more funds and a broader network. The new banks of the 1860s and 1870s had that potential.

### *Credit Mobilier: a new era*

With the establishment of Credit Mobilier in 1853 - a new kind of bank financing industry in France - the idea emerged that banks could play an active role in the provision of longer term financing and thus stimulate industrial development. The Dutch economists were not that enthusiastic but they did care: a lot of discussion took place. New ideas about external funding gained ground, also because traditional networks of mutual financing were declining. Many new banks were established in the 1860s, assuming a new need for external finance, but in fact they were too many. Several banks either disappeared or reduced capital in the 1870s. The credit mobilier spirit, however, induced innovations like the current account and longer term deposits. The financial infra-structure is that rich in this period of time, that Jonker says the participants were „spoilt for choice“.

### *The financial problem to be solved*

The newly established banks assumed a higher demand for external funding. Higher demand, however, did not materialize. The market needed experts solving the problem of matching the funding of a firm with its new asset structure: an information problem, not an availability problem. Investors, however, were reluctant to entrust their money to banks. First of all, banks could not offer higher returns on their securities than securities (short term and longer term) in infra-structure, treasury bills or the on-call rate. Second, bankers were not able to convince investors of the value of industrial projects, because they did not have sufficient experience in that field. Still, there was a need among investors for financial intermediaries capable of coping with the „new“ financial situation in several companies and of explaining this to investors. Bankers who were indeed able to see through the new financial problem, could actually stimulate industrial initiatives and thus demand. Because of the lack of knowledge among most bankers however as to valuing risks and expected returns, most bankers were forced to remain doing what they did: granting short term credits. Only after 1900 more bankers got insight into the financial possibilities for industrial entrepreneurs. Only then banks were really able to play the roles as described in the hypotheses.

### *Part Three: the cases*

#### *The Mees bankers and the Stork entrepreneurs*

Stork had been operating in the textile industry since 1834. In the 1860s he started repairing textile machinery and decided he could improve the machinery. The establishment of a machinery factory required a large amount of investments in fixed assets (45% of total assets instead of 15%). The capital structure of the firm did not change, however. A crunch in the ability to repay short term debt was the result.

Storks administration did not show this crunch easily, since it the administration was created for a textile company, with mostly floating assets. Stork just saw his cash position shrink too much. He felt he would go bankrupt.

Stork needed a financial specialist, who could understand his financial situation, the financial structure needed for his plant, and who could forecast the expected returns. Stork just knew that he had to pay his bills. Mees saw that short term finance had been the only funding up until then, he could add longer term finance and he pursued a drastic change in accounting. He saw good prospects for the industry and he could promise a certain return to investors. Moreover, because of his reputation he could attract funds. Over a period of some years he achieved a sound match between fixed assets and longer term funding, by influencing Stork's entrepreneurial and financial decisions. Thus the added value of the Mees bankers was twofold: financial expertise and monitoring financial decisions, and the availability of external funding due to his reputation (hypotheses 3 and 4)

#### *Van den Bergh goes to London*

Simon van den Bergh traded butter since 1844 and left a butter and margarine trading company to his sons. In 1871 they established a margarine factory in Oss. Van den Berghs market for margarine grew especially in England. Some bad experiences with butter traders in England drove two sons, Henry and Jacob van den Bergh to England. Expansion of the firm was financed either internally or from 1885 onwards with bank loans, indefinitely rolled over current account credit, for as much as two thirds of total assets. Since the main activity of the firm was trading, short term funding was the appropriate kind. In the 1890s the five Van den Bergh brothers decided to heavily expand internationally. They decided to pay back all the bank loans and issue preference shares in London. We found out that their decision to go public and pay back bank loans was induced by the ability to disclose sufficient information to the market; the decision to go to London instead of Amsterdam or Rotterdam was based on the size of the English market as compared to the total market for Van den Bergh (90% in 1891) and on the expected capitalization of goodwill in England. The Amsterdamsche Bank and Rotterdamsche Bank would not have granted that much capital based on goodwill. The relationship with the banks remained, but focused on facilitating Van den Bergh's suppliers credit. The added value of the banks for Van den Bergh was flexibility in short term funding, before 1895 for themselves, after 1895 for their customers. Before 1895 the banks could provide funds to Van den Bergh as a new industrial firm not sufficiently known by the public yet; after 1895 Van den Bergh could find sufficient funding in the public market themselves. This case supports hypothesis 4, in the sense that a sufficient reputation of the entrepreneur may induce the decision to go public and pay back bank loans.

#### *Conclusion*

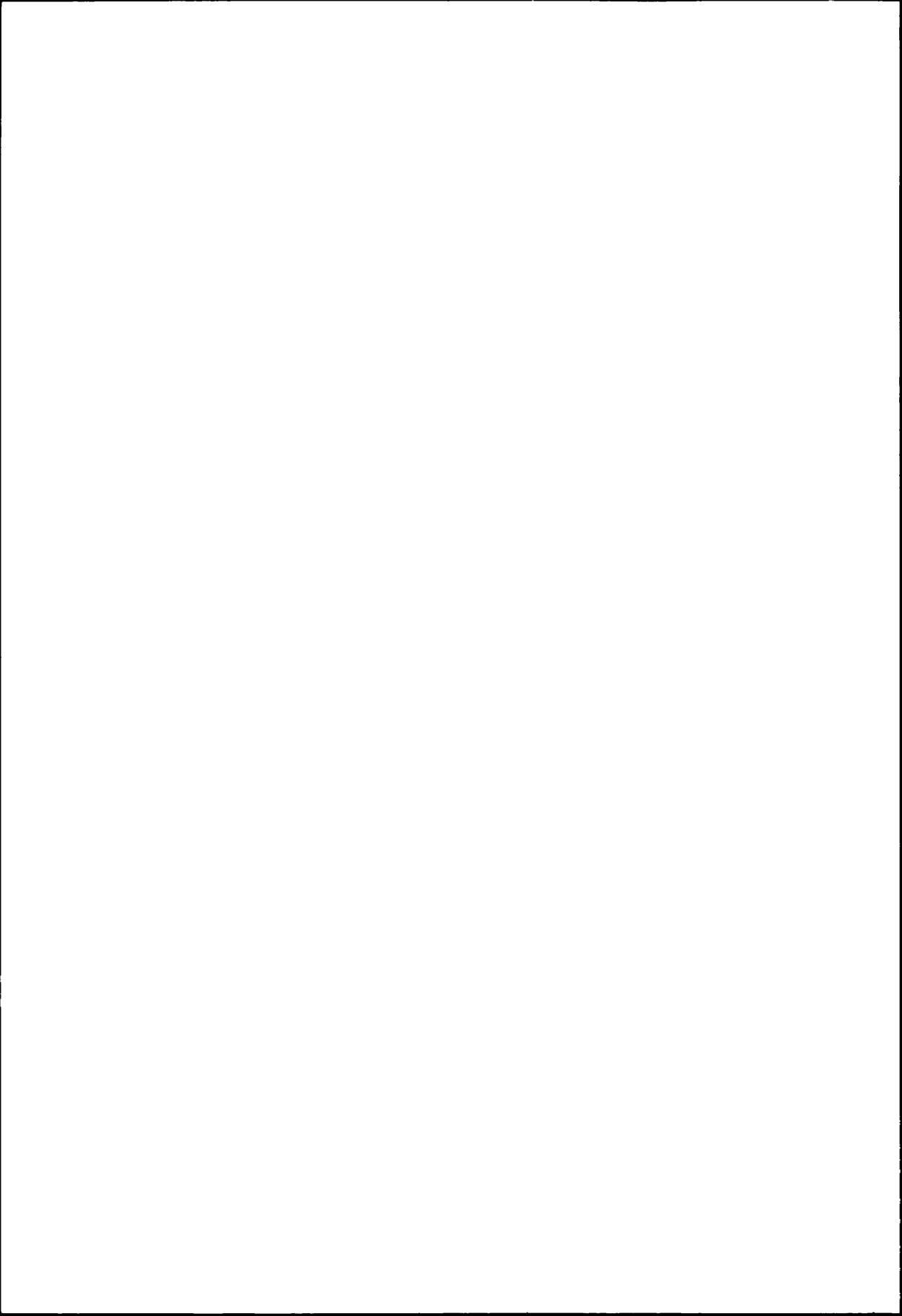
The main role of banks in financing Dutch industry in the 19th century was their ability to reduce uncertainty, both on the side of the entrepreneur and on the side of the investors. According to the survey we have done, banks' comparative advantage in the financial sector vis-a-vis financial market direct financing was threefold. First, banks could benefit from their

experience and skills in initiating and maintaining financial relationships rather than size; a minimum scale was a prerequisite to success but further gains were unrelated to size, gains were more related to experience. Second, banks benefited from economies of scale in conducting the monitoring task on behalf of the investors. Apart from economies of scale in monitoring, the delegated monitoring reduced the uncertainty among investors, due to the development of expertise. Third, a solid reputation of a firm's bank would induce other investors to provide funds to the firm, in cases where the firm would not have had any access to external funds. The bank's reputation reduced the uncertainty among investors who did not know the firm yet. The firms on their part were less uncertain about the availability of external funding.

### *Concluding remarks*

Combining insights from modern finance theory and historical data might give some readers an anachronistic impression. It is indeed not a very common way of analyzing financial relationships. The research in this dissertation, however, showed how valuable using modern insights might be for historical research. The research showed what role banks could perform and what role they could not perform in the earliest era of modern banking.

It is striking to see that the personal commitment of bankers to their relationships and to the financial arrangements they had made up is of great importance in overcoming information asymmetries. According to Mees, bankers should indeed be personally committed to their financial relationships, because trust and reputation are crucial to the success of a financial arrangement. Limited partnerships are by definition not suited for complex financial arrangements, where the information problem is the crucial one. A theoretical investigation of the effect of financial personal commitment would be complementary to the theories of reputational effects. The notion that the added value of bankers in the early era of modern banking would be a result of their personal commitment, might be a valuable lesson from the past to the present.



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