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Dutch Corporate Finance, 1602-1850

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Abstract

Early Modern Dutch corporate finance had two notable features, a remarkable ease of raising large amounts of capital and a flexible legal framework. Having pioneered new corporate forms with two intercontinental trading companies, Dutch business adopted such forms on a wider scale only during the 18th century, when economic concentration and consolidation led to the appearance of business units large enough to need them. The financial intermediation and legal institutions available also facilitated early industrialization during the 19th century, up to and including the railways. The large export of capital throughout the period under consideration failed to harm economic development at any point or in any way.

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1. Introduction

Corporate finance examines the extent to which the allocation of capital to business operations is efficient. Modern markets offer entrepreneurs a great variety of financial instruments, but these instruments may be reduced to variations of two basic forms, equity and debt. The holders of equity normally have control rights and are, as residual claimants, entitled to dividends and to increases in the value of their shares. Debtholders receive predefined and prescheduled interest payments, and have no control rights as long as borrowers meet their obligations. The financial economics literature explains optimal security design in terms of streamlining the flow of capital to businesses whilst reducing agency costs to a minimum (Becht, Bolton and Röell, 2003; Tirole, 2005). These latter costs reside in the fact that, when financiers as principals provide funds to agents (entrepreneurs, managers), the financiers have an information disadvantage and their interest may diverge from those of their agents (Jensen and Meckling, 1976). In addition, agency costs arise as a result of conflicts of interest between different claimholders, in particular shareholders and creditors. The relative efficiency of a country's capital market is therefore best examined by looking at the financing of large businesses, because the involvement of external investors in them means that we can observe the extent to which the instruments used did provide the finance required at minimal agency costs.

The evolution of the Dutch capital market during the 1602-1850 period is particularly relevant in this respect. Having pioneered remarkably modern-looking corporate finance practices and institutions during the early 17th century, Amsterdam rapidly developed into Europe's leading financial market, a position it held for almost two centuries (Riley 1980, Jonker and Sluyterman 2000, Gelderblom and Jonker 2004, Petram 2011a, b). During the 18th century the Dutch gradually lost their economic lead and failed to embark on industrialization until second half of the 19th century, a fact widely blamed at the time and since on conservative investors preferring an astounding array of foreign securities to home ventures (Jonker 1991, 1996, Van Zanden and Van Riel 2004). With foreign investment totalling an estimated 1,500 million guilders around 1800 there certainly was enough capital available. However, it is now generally accepted that a lack of opportunities boosted this sum, rather than an inherent distaste for domestic investment. While we can therefore no longer see an inadequate capital supply as causing the comparatively slow Dutch industrialization, it is still worthwhile to examine corporate finance up to 1850 to see how it evolved under radically different conditions.

Two features stand out overall. First, the remarkable ease with which, from before the start of the Dutch Golden Age until the mid-19th century, very large sums could be raised on a market that looks invertebrate to modern eyes, that is to say, without institutions such as big banking firms or specialized securities exchanges to structure the issuing of and trade in financial instruments. Second, the flexibility of the legal framework which, judging by an apparent paucity of litigation over debt and equity contracts, adapted to new business requirements as they emerged. Both features originated in the peculiar conditions shaping Dutch trade and finance. Markets were literally open to all and to everything; the exchanges

in main trading centres such as Amsterdam and Rotterdam were public, anyone with anything to sell or buy, commodities, services, money, or securities, could come and do business with anyone else (Jonker and Sluyterman 2000). A wide range of people did indeed find reason to visit the exchanges because the wealth accumulated during the Dutch Golden Age was quite widely dispersed, creating a fairly large public prepared to invest even modest sums in financial instruments ranging from shipping shares via public bonds to more complex investment products such as tontines or mutual funds. Finally, the keen commercial rivalry between cities kept everyone, businessmen, financiers, investors, and officials, on their toes. Initiatives or innovations which failed in one city would, if viable, quickly be taken up in another, as much a premium on inventiveness as an effective check on complacency and closed shops (Gelderblom 2013).

Now for most of the period under consideration large corporations formed an exception in Dutch business, mostly found in the intercontinental trade, insurance, colonial plantations, and occasionally in manufacturing. Their number remained quite small; most economic activities were conducted by firms with typically one or two, sometimes three, partners, and financed with retained earnings, trade credit, lombarding of (i.e. loans collateralized by) commodities or securities, and contributions from family; in farming, mortgages were also used. Our narrow focus on large corporations financed by external investors in the form of debt or equity claims on open markets should not be taken to mean that we consider these alternative forms of finance any less significant. Indeed, in terms of economic importance for commercial, industrial, and agricultural activity, they most likely dominated. As noted above, however, a capital market's efficiency is best gauged by looking at the challenges posed by large business concerns, and this is what we will do. We first sketch the evolution from private partnerships to chartered public companies (Section 2, 1602-1680) and then describe the wave of new initiatives and forms of organization until the Republic's demise (Section 3, 1680-1795). In Section 4, 1795-1850, we describe the transitional period from a largely mercantile economy to the first stirrings of industrialization. Section 5 concludes.

2. From partnerships to chartered public companies, 1602-1680

By the early 16th century Antwerp had become northern Europe's main centre of international trade and finance (Van der Wee 1963, 1993). To sustain the commercial capital of his sprawling empire, Emperor Charles V issued legal rules for key commercial transactions such as the transfer of bonds and bills of exchange, thereby considerably widening the scope of Antwerp's financial market and thus facilitating the city's fast expanding trade (De Smedt 1940-1941, Van der Wee 1993). Merchants from the Low Countries, roughly the area of present-day Netherlands and Belgium, started to explore ever more adventurous trade destinations: Russia, Italy, the Levant, West Africa, the Americas. To mitigate the risk of such undertakings, they appended clauses specifying purpose, duration, capital invested, and partners' individual tasks to existing

partnership contracts (Van Brakel 1908, 1912, 1914, 1917; Van der Heijden, 1908, 1914; Van Gelder, 1916; Gelderblom, De Jong and Jonker, 2011). Such clauses effectively limited the partners' joint and several liability to actions undertaken in accordance with the stated specifications. Specific-purpose partnerships were often designed for a short period, say a particular operation or one sailing season, but if the partners so wished they lasted for several years. In Holland, the biggest and economically most diversified province of the northern Low Countries, shipping companies were formally liquidated after a trip or a season, but as a rule shareholders would sign on again, thereby creating a continuous enterprise in practice, if not in law. The shipping company format or *rederij* also found application in other sectors such as industrial windmills.

Shipping companies could draw on three sources of finance. Firstly, as a rule ship suppliers such as shipwrights, ropemakers, anchor smiths, and biscuit bakers took equity in payment for all or part of their input of labour or goods. Secondly, shares broken down into fractions as small as 1/64th or even 1/132nd of a ship found their way into the portfolios of numerous small investors all over the county. Finally, shipping companies could raise money with bottomry contracts (*bodemerij* in Dutch). Essentially a combination of insurance with finance, bottomry contracts enabled a shipping company to raise a loan, for instance to finance an expedition, while transferring the inherent risks to the creditors. If the ship failed to return they lost their money. If it did complete the trip, they were repaid with a premium called *opgeld*, varying from 15 per cent for relatively safe trips to Russia to more than 30 per cent for intercontinental expeditions. In modern finance, the use of bottomry contracts corresponds to a combination of common and preferred stock. Outsiders held preferred stock and a fixed maximum payoff, while the inside shareholders held the common stock entitling them to the residual payoffs. From the creditors' perspective the contract combined a loan with an embedded insurance contract for the amount of the principal, the *opgeld* equalling the sum of the insurance premium plus the interest on the loan. Over time the use of bottomry contracts in shipping appears to have declined as cheaper alternatives such as bills of exchange and common transport insurance became available, but the Dutch West India Company or WIC did still use them regularly, as we will see.

From the late 1560s onwards Antwerp's pre-eminence came under increasing pressure when a recession combined with religious tensions to spark the Low Countries into revolt against their Habsburg overlord Philip II. The ensuing civil war effectively split the country into two, the northern half becoming the Dutch Republic, the southern half remaining under Habsburg control as the Spanish and later Austrian Netherlands. For a long time Antwerp aligned with the Protestant north, but in 1585 the city fell to the Spanish, after which the rebels choked off its overseas trade by blocking the Scheldt river. Protestants emigrated in large numbers, many of them to the Dutch Republic, where they contributed to the extraordinary surge in economic growth which started during the 1590s, once the country's survival seemed secure (Gelderblom 2000). Amsterdam positioned itself to take up Antwerp's mantle, upgrading its commercial

infrastructure so as to suit the needs of international trade. Regulations were issued governing maritime insurance and the regular publication of commodity prices, the Antwerp *costuymen* or rulebook covering a range of commercial transactions was adopted as local law, the Wisselbank or Exchange Bank was set up to facilitate payments (1609) and an exchange modelled on that of Antwerp was built (1611) (Lesger 2006). The Republic's highly urbanized and commercialized western provinces were as a whole ideally placed to profit from the shift of economic activity from South to North (De Vries and Van der Woude 1997). Landlocked cities such as Haarlem and Leiden expanded existing manufacturing activities, in particular cloth production, while port cities seized new opportunities such as the opening of trade with Asia, previously the domain of Spanish and Portuguese merchants. Between 1595 and 1601 no fewer than seven cities sent expeditions to Asia for a total of 65 ships.

These expeditions, termed *voorcompagnieën* in Dutch, showed a further evolution of the specific-purpose partnership in the sense that they had a rudimentary board which managed the venture (Van Brakel 1908, Van der Heijden 1908, Mansvelt 1922, Den Heijer 2005, Gelderblom, De Jong and Jonker 2011). A number of merchants organized and ran the enterprise, each with a specific task, for which they received a percentage of money or goods handled as remuneration. The other shareholders, recruited by the merchants through their network, were sleeping partners who did not take part in operational decisions and had to wait for information and accounts upon the return of the ships, as a rule 2-3 years. The partnership was then liquidated, though most shareholders would roll over their participation into the next expedition organized by the same merchants. The *voorcompagnieën* were financed by a mixture of shareholders' equity and debt raised on personal account by the merchants, the partnership lacking the legal personality and limited liability required to take debt in its own name (Gelderblom, De Jong and Jonker, forthcoming).

Competition between the *voorcompagnieën* drove purchase prices of spices up in Asia and selling prices down in Europe, while at the same time undermining the Republic's fragile political unity and damaging the prospects of building a firm Dutch presence in Asia in the face of hostility from Spanish, Portuguese, and British merchants. Moreover, in the face of bitter continued fighting against Spain on the Republic's southern borders, it made sense to lift the pressure by attacking the Luso-Hispanic overseas empire. Consequently the Dutch Estates General pressured the six *voorcompagnieën* that were active in 1602 into merging to form the Verenigde Oost-Indische Compagnie (VOC, United East India Company), set up with a very large capital of 6.4 million guilders subscribed by some 1,800 shareholders from all over the Republic (Gaastra 2003). Managed by their original directors or *bewindhebbers*, the six *voorcompagnieën* were transformed into local chambers, semi-autonomous units running a part of the company's operations proportional to their share in the overall capital. Representatives from the chambers formed the *Heren XVII*, the VOC's central policy board.

The VOC was a hybrid organization, a specific-purpose partnership modified to suit public tasks. Its charter harnessed the commercial aspirations of the merchants leading the

voorcompagnieën to the military and political goals of the state by giving the company a monopoly on the Asian trade plus rights to wage war and conclude treaties in the Estates General's name. Mirroring other official bodies such as the admiralties, water boards, and polder boards, the charter ensured the proper execution of the company's public functions by giving the government access to operational data, the right to monitor policy and control of board appointments (Gelderblom, De Jong and Jonker 2011). Conversely, the shareholders received no continuous access to information, nor any control or appointment rights at all; their rights were limited to examination of the full accounts after ten years, when the company would be liquidated and a new one set up to complete the charter's twenty-year term, a dividend entitlement if available cash reached 5 per cent of capital, and the ability to exit in the form of clear procedure for transferring registered shares. This right to transfer ownership produced two probably unintended consequences. Share trading started almost immediately after the closing of subscriptions, and it predominantly took the form of forward transactions minimizing the transfer formalities via mutual clearing (Gelderblom and Jonker 2004, Petram 2011). From there it was only a small step to futures and options trading, which had appeared by the 1630s (Van Dillen 1964, Gelderblom and Jonker 2005, Petram 2011). The shareholders, excluded from the company's management and possessing fungible shares, probably enjoyed limited liability. However, the *bewindhebbers* or managers did not. The charter exempted them from having to account for their administration until 1612 and from claims against their person for pay arrears, while leaving them jointly and severally liable for the conduct of the cashiers and bookkeepers who they appointed, and for any debt. Consequently when in 1611 the Estates of Zeeland wanted to force the Middelburg chamber to settle an old debt, it did not threaten to sequestrate the chamber's property, but to take *bewindhebbers* into custody. This unlimited liability meant that the VOC could not raise more debt than the personal standing of its directors allowed (Schalk, Gelderblom and Jonker, 2012; Gelderblom, De Jong and Jonker, forthcoming).

The VOC therefore possessed three characteristics of modern corporations, that is to say a separation of ownership and management, limited liability for shareholders, and transferable shares, but lacked three more, i.e. a permanent capital, full limited liability for managers, and legal personhood (Gelderblom, De Jong and Jonker, 2013; Dari-Matiacci, Gelderblom, Jonker, and Perotti, 2013). Moreover, the company's flawed corporate governance structure, the state having all power and shareholders none, deviated from both contemporary and modern norms, and created serious agency problems. The Estates General pushed for warfare on such a scale that the company failed to pay a dividend, leading a group of disgruntled shareholders led by Isaac Le Maire to try and force a change of policy by organizing a bear raid on the shares with coordinated short sales in 1609 (Van Dillen 1930, Petram 2011a, b). To appease shareholders the VOC started disbursements, largely in kind, so as to conserve cash and clear overstocks of spices at the same time. Totaling 162.5 per cent over the first ten years, the dividend showed the board treating its shareholders as bondholders by

repaying their initial subscription plus ten times the prevailing interest rate of 6.25 per cent. A subtle change in the term used to describe them, from participants to *actionisten*, i.e. those with a claim to certain payments, showed a similar intention to put shareholders at a distance (Gelderblom, De Jong and Jonker 2011). They were finally moved to the sidelines in 1612. The VOC's position had deteriorated to such an extent that the board, arguing that disclosure would frighten investors away, obtained permission from the Estates General to ignore the charter injunction to publish accounts, liquidate, and set up a new company (Dari-Matiacci, Gelderblom, Jonker, and Perotti, 2013). In the run-up to the 1622 charter renewal shareholders began a determined campaign to obtain some control over the company but, despite support from the Estates of Zeeland and the Estates General, this initiative foundered on stubborn resistance by the VOC, backed by the Estates of Holland. The few concessions to shareholders' demands in the new charter remained a dead letter (De Jongh 2011).

Thus state intervention rendered the VOC's temporary capital de facto permanent, and at the same time cut off the possibility of raising more equity, since that would require changing the charter to address demands for more investor power (Dari-Matiacci, Gelderblom, Jonker, and Perotti, forthcoming). As a result, the VOC came to rely entirely on debt to supplement its funding from retained earnings. Unable to eliminate the bottleneck of unlimited liability in the short term and facing an immediate cash shortfall, the board devised an ingenious solution. In the Spring of 1613 it opened subscriptions to a contract offering a 5 per cent premium in return for guaranteeing to pay the VOC up to 3.2 million guilders in case the fleet then leaving port failed to generate revenues worth that sum by a set date (Gelderblom, De Jong and Jonker, 2013). This insurance against a potential shortage of cash to equip a fleet in 1617 remedied the inability to raise more debt under the constraints of unlimited liability; the British East India Company repeatedly used a similar contract for exactly the same purposes during the 1630s and 1640s (Stapel and Den Dooren de Jong 1928). As it happened rising revenues lifted the VOC out of immediate trouble so it did not need the insurance again, giving the board time to centralize financial policy. In 1617 the directors signed a mutual guarantee for debts taken on by any one of their number on behalf of his chamber. This may have been prompted by a legal opinion published two years before that they were all liable for such debt anyway, but a formal guarantee also enabled all chambers to borrow more cheaply via Amsterdam. The company's debt rose immediately, but the appearance of bonds from elsewhere signed by Amsterdam directors appears to have raised eyebrows. In 1623 the Amsterdam chamber, referring to a dispute with investors over the directors' personal liability for debt, adopted a new form of bond contract specifically excluding that liability, thereby indirectly giving the company legal personhood (Gelderblom, De Jong and Jonker, 2013). Presumably by that time the company's tangible assets such as offices, warehouses, yards, and ships inspired sufficient confidence for investors not to need further assurances, as debt continued to rise. Moreover, from the mid-1630s the board started to pay dividends roughly linked to revenues, boosting the share price and quelling the debate over the VOC's corporate governance. Debt averaged about 10-12 million guilders

during the rest of the 17th century (De Korte 1984). During the 1670s the board changed its issuing policy by introducing a higher yielding form of short-term debt called *anticipatiepenningen* and consolidating its long-term bonds into perpetuities, in order to avoid a recurrence of the liquidity squeeze experienced during the war crisis of 1672. In addition the company received small advances from the Amsterdam Wisselbank, mostly to finance the bullion supplied by the bank for shipment to Asia (Nieuwkerk 2009, Dehing 2012).

Despite the evident investor concerns about VOC bonds, company directors' liability for debt and the legal personhood of companies do not appear to have become pressing issues in need of a clear legal solution. The Delft directors of the whaling association Noordsche Compagnie, set up in 1614, lost their claim to have limited liability in 1625 and ended up sharing an unpaid bill for beer supplied (Van Brakel 1909). The promoters of an insurance company presumably took this as a cue to limit directors' liability, with apparent approval, for the debate about the proposal during 1629-1635 passed over its corporate governance to centre on operational aspects of the business (Blok 1900a, b). The 1621 West-Indische Compagnie (West India Company, WIC) charter, issued by the Estates General after another long debate, retained the same clause as the VOC charter protecting the directors only from untimely demands for accounts and from claims for pay arrears, that is, they remained formally liable for debt and for the cashiers and bookkeepers. This did not prevent the WIC from becoming even more heavily reliant on debt than its sister company, though for different reasons (Den Heijer 2007).

Plans for an Atlantic monopoly trading company had circulated since 1600 (Meijer 1986, Van Rees 1868), but entrenched private interests and later the truce with Spain prevented their adoption, until the resumption of war in 1621 provided the impetus to consolidate trade into a VOC-type concern with a monopoly for 24 years and attack the Luso-Hispanic empire in the Americas. Modeled on its sister company, the WIC had five departments or chambers running operations and directed by a central board, but it differed in three important respects from the VOC (Den Heijer 2005). First, the company would establish colonial settlements for Dutch emigrants as well as engage in trade and warfare. Second, the Estates General took a direct interest by supplying 500,000 guilders of the 7.1 million initial capital. Additional clauses gave further assurances of financial and practical support. Third, commercial and non-commercial operations were kept in separate accounts, so as to avoid the latter from draining the former unseen. As for the WIC's corporate governance, early charter drafts had aimed to remedy the VOC's perceived shortcomings by granting more power to shareholders, but the WIC charter merely nodded in that direction. Accounts would be published every six years and directors stood to lose pay if this failed to happen on time.

Given investors' repeated protests about the right to monitor and control the use of their own money in companies like this, one would have expected rather more. However, the Estates General clearly thought that such rights were subordinate to the company's public tasks and therefore ignored them. The market begged to differ. Despite frantic canvassing by officials subscriptions came in very slowly, partly because the WIC's business prospects were considered

poor, partly because the ongoing battle between the VOC board and shareholders highlighted the corporate governance defects copied into the WIC. The Estates General tackled the former issue first, by adding the Venezuelan salt trade to the company's monopoly in 1622. When that failed to stimulate investors enough, a postscript was added to the charter giving *hoofdparticipanten*, shareholders with more than a certain amount of shares, the right to nominate new directors from their midst. Meanwhile the Amsterdam chamber had recognized the need to bring these big shareholders into the fold and negotiated a twelve-point corporate governance agreement with them. Approved by the Estates General, this agreement gave the big shareholders board representation, the right to approve charter changes, board appointments, and debt issues, plus the right to audit the internal accounts of annual expeditions (L'Honoré Naber 1931). These assurances broke the deadlock. In October 1623 subscriptions closed on a total of 7.1 million guilders and shareholders responded quickly to the board's 1624 call for another 3.5 million.

The WIC had a good start, overcoming Spanish and Portuguese resistance to establish footholds in West Africa and the Caribbean, expanding trade and, to cap it all, capturing Spain's entire 1628 silver fleet worth 11.5 million guilders. Only 1.5 million of this windfall was reinvested in the business, the rest was disbursed. In 1629 the company paid its first dividend of 25 per cent, and a further 50 per cent the following year. The tide soon turned, however. Attempts to dislodge the established colonial empires failed, the Caribbean footholds proved too small for a remunerative business on the WIC's scale, the handsome profits from its West African trade and privateering were not enough to finance the heavy military costs, and private merchants chipped away parts of the monopoly. To sustain its business the company made two further calls on shareholders taking the capital to more than 17 million guilders by 1639, but this required issuing a kind of preference shares with a dividend guarantee of first eight, then six per cent. Even then shareholders failed to fully take up their allotments. Under such circumstances raising debt at 5.5 per cent was cheaper, and some chambers took this option (Schneeloch 1971, 1982, Den Heijer 2007).

As the company's debt mounted, the share price slipped, so it became increasingly difficult to obtain funding even for profitable ventures, as suppliers of funding realized that a share of the proceeds would first go towards satisfying existing creditors, leaving too little reward for their investment. This lack of funding even for positive-Net Present Value projects when a company approaches insolvency is termed 'debt overhang' by financial economists, and the associated loss of overall firm value is considered an important agency cost of high leverage (Myers, 1977). The debt overhang problem can only be resolved if new claims can be issued that are effectively senior to the existing debt; equity finance and junior or unsecured debt finance are no longer available. The WIC resolved the problem by recourse to bottomry loans that secured the newly issued debt on the ship and its cargo, thus making it possible to raise new money by effectively conferring seniority on the new debt. These loans were largely placed with shareholders to compensate them for the suspension of dividends.

By the mid-1640s the WIC was no longer a viable operation in itself, and had become a rubber stamp operation dependent on revenue generated by licensing private merchants to trade under its monopoly and privateers to prey on competitors. Strenuous efforts by the board, supported by the state, to merge the WIC with the VOC foundered on the latter's stubborn refusal to take on a structural loss maker, so the WIC limped on. At the end of the 1650s all outstanding debts were restructured into a single type of bond carrying two per cent interest, which the company could not even pay. In 1664 the situation had become so difficult that the board suspended its regular accounts and launched desperate schemes to get money, tying specific profits to preferential claims which shareholders and creditors could obtain by paying five or six per cent of their holding. To force a more permanent solution the Estates General made the charter prolongation in 1671 conditional on the WIC possessing a permanent fund of 1 million guilders for business operations. A fight developed between the directors, shareholders, and creditors over the conditions for supplying fresh capital, directors defending their position, shareholders clamoring for more control, creditors proposing ways to generate cash.

In 1674 agreement was finally reached to replace the old company with a new WIC (Schneeloch 1971, 1973, 1982; Den Heijer 2007). The agreement envisaged a capital of 4.5 million guilders. Shareholders and creditors would supply 3.3 million guilders by swapping old claims for new shares and 1.2 million in cash by paying up a percentage of their claims. Shareholders paid up four per cent of face value to receive 15 per cent of face value in new shares; creditors prior to 1656 paid eight per cent for 30 per cent. However, creditors after 1656 did not have to pay a percentage, yet received the full amount of their claim in shares, presumably because they had hardly received any interest payments. The WIC's gigantic debt and its survival until the reorganization of 1674 suggests that the directors must have possessed limited liability. The company had a huge board, but the burden far outstripped its combined capacity or likely appetite for personally contracting debt. Indeed, the episode underlined a danger of limited liability, the risk of raising too much debt. The new charter freed the WIC from the burdens of war, cut costs by halving the company's large number of directors, and changed its corporate governance by giving shareholders and creditors one third of board positions each, the old directors supplying the other third. It took three years for the conversion to generate the required 1 million guilders cash, enabling the WIC to embark on a relatively calm and prosperous phase of its existence.

3. Branching out, 1680-1795

The size, corporate form, monopoly, and financial structure of the two chartered companies remained very much the exception during the Dutch Golden Age. Other very large businesses, such as Louis de Geer's arms trade and manufacturing conglomerate, the merchant house of the brothers Trip, or Jean Deutz's trade and finance operations, were all traditional partnerships financed with equity, small family deposits, retained earnings, and trade credit, if needed topped up by lombarding securities with acquaintances or on the call money market at the exchange

(Breedvelt-Van Veen 1935, Elias 1963, Klein 1965). The same was true for the much smaller firms in processing industries such as brewing and sugar refining, and also for shipyards. Even large firms in these sectors rarely had assets of more than 20,000-50,000 guilders, an amount easily raised by two to three partners.

Conditions changed once the Republic had entered its climacteric sometime during the last quarter of the 17th century. Economic activities concentrated in big ports such as Amsterdam and Rotterdam, to the detriment of smaller cities like Enkhuizen or Delft. A process of consolidation began in export-oriented industries such as brewing, sugar refining, malting, and salt refining, and by the 1740s this had given rise to firms with assets of 100,000-250,000 guilders run by professional, salaried managers (Visser 1927, De Vries 1968, Yntema 1992, Unger 2001). Financially these firms conformed to the customary pattern of avoiding leverage by relying on equity, retained earnings, and some trade credit. As a rule shares were closely held by family members and perhaps a business associate, and any new equity was raised within the same circle. Declining opportunities prompted investors to hold on to assets, so that the shares in such businesses tended to stay in families, with holdings fragmenting from one generation to the next to create a rising number of shareholders. The growing distance between owners and managers necessitated the molding of the specific-purpose partnership into a form closely resembling a limited liability company. Such firms were set up for a period of ten to twenty years, and they had transferable shares and regular shareholders' meetings to discuss operations and results. Shareholders appointed *commissarissen* or non-executive directors for monitoring the managers. In one Amsterdam brewery, De Hooiberg, these non-executives inspected the accounts every fortnight, and the manager had to consult them about all large transactions (Van Eeghen 1958).

This close monitoring shows that shareholders were aware of agency issues arising because their manager was not only increasingly drawn from outside their own social circle, but also was no longer personally liable for company debt. That is to say, by now some specific-purpose partnerships had evolved further towards limited liability companies and possessed a form of legal personhood. This does not appear to have created confusion, presumably because people could tell the liability regime of firms they dealt with from the name. The Dutch term for limited liability companies, *naamloze vennootschappen* or literally nameless partnerships, denoted firms without the names of liable partners. If a business name mentioned specific people, e.g. Jansen & Janssens, or Hope & Co., the partners had full liability. If it did not, as for instance in the case of the Amsterdam brewery De Hooiberg (The Haystack) discussed above, then the business operated under limited liability. Thus there was no need for prospectuses or company statutes of the 17th and 18th century to mention the liability regime, as it was evident from the name chosen for the company. This evolution must have taken place between the 1629-1635 insurance company proposal with its limited liability clause, and 1720, as we will see. The most likely decade in which things moved forward is the 1640s, when the WIC began running up debt without apparently alarming either directors or investors about its liability regime.

The flurry of proposals for new companies circulating in 1720, detailed in the *Groote Tafereel der Dwaasheid* (The Great Mirror of Folly) shows the extent to which specific-purpose partnerships had evolved into limited liability companies (*Groote tafereel*, 1720, Groeneveld 1940, Gelderblom and Jonker, forthcoming). Hoping to take advantage of the speculative fever that had spread from Paris to London and then the Republic, promoters launched 40 projects between June and October. Fanned by the Republic's keen intercity rivalry, the projects closely resembled each other. They used the credit of local public officials such as mayors and aldermen to attract investors to their IPO, but were otherwise entirely private companies, not hybrids like the VOC or WIC. The companies' names expressed ambitions for an operational scope ranging from insurance to other financial services, trade, and transport. Towards this end huge capitals of up to 100 million guilders were to be raised, but investors were required to deposit only 1-2 per cent, sometimes a bit more at first, on penalty of forfeiting their subscription. Subsequent calls would be decided by managers, by shareholders or their representatives, or by a combination of those. The corporate structure, though differing in details from project to project, was that of joint-stock limited liability companies. Managers were monitored by non-executives appointed by either all or only the large shareholders, sometimes assisted by local officials. Regular accounts would be presented to shareholders or their representatives, who would then set dividends. A few proposals stipulated limited liability for shareholders, but none of them limited or even described the directors' liability, not even for the conduct of bookkeepers and cashiers, since the company names chosen made that clear.

In the Republic's fragmented polity such company proposals needed only the approval of local authorities in provinces such as Holland and Zeeland, while in others, provincial government approval was also required. The Amsterdam city council, swayed by opposition from powerful local merchants to the entry of a well-capitalized competitor into the insurance business and possibly also by misgivings about stoking speculative fever, turned down a sensible insurance company proposal in June, prompting the Rotterdam council to adopt a very similar one. Officials elsewhere, however, were anxious to stimulate flagging economic growth and approved 32 of the 40 projects. Only eight passed from the initial subscription stage to develop any business at all, of which six became operational, though on a much smaller scale than originally envisaged. The high early termination rate reflects the lack of impact which the speculative climate of 1720 had on the country.

With Dutch public debt markets stable and secure, there was no large debt-equity swap vehicle, such as the Mississippi and South Sea companies, to boost expectations. Moreover, investors were skeptical that local economies could be kick-started with huge infusions of capital, and they also recognized the attraction of consolidating insurance, so they bought into the few viable insurance proposals and spurned the crowd of small-town hopefuls. No more than four companies, from Rotterdam, Delft, Gouda, and one of two from Middelburg, all mainly focused on insurance, attracted sufficient interest to push their share price substantially above par. The best performer, Rotterdam, peaked at 186 per cent of par, hardly a bubble level. Of those four,

the Delft and Gouda companies disappeared after a few years. The Middelburg insurance company survived for longer, but left no traces; and a trading company from the same city, Middelburgsche Commercie Compagnie, went into business with a paid-in capital of 1.4 million guilders, about 1/7th of its intended size, to develop a flourishing business in the Atlantic slave trade (Reinders Folmer- Van Prooijen 2000). The Rotterdam Maatschappij van Assurantie, Disconto en Beleening proved the most durable, surviving into the 21st century, but that company had to drastically scale down its size and ambitions as well. The board reduced the nominal capital from 15 million guilders at the end of September to 8.5 million two years later, of which about 5 per cent, or under 0.5 million guilders was paid in. That proved entirely sufficient to conduct a sound if not exactly dynamic insurance business (Slechte 1970, Van de Laar and Vleesenbeek 1990).

The *hausse* of 1720 did not, therefore, channel much money into excessively speculative new ventures in the Republic, nor do investors appear to have been burnt, contrary to what was believed at the time and later by some (Frehen, Goetzmann and Rouwenhorst, 2013). Even so the stock exchange climate was buoyant enough for some opportunistic moves. A pre-existing colonial trade syndicate reorganized itself into the joint-stock company Sociëteit Berbice with a share capital of 3.2 million guilders (divided into 1,600 shares of 2,000 guilders each), and launched a public offering of 1,200 shares, on which 400 shares were to be retained by the original owners. This attempt to foist a languishing business onto investors was only partially successful; only 941 shares, not much more than three quarters of the total offered, were sold. The board had great difficulty in persuading the shareholders to pay up once the prospects of the enterprise became clear: by 1732 only 42 per cent of capital had been paid in; 50 per cent was due by 1724 according to the original schedule. The WIC also jumped on the bandwagon (Van Gelder 2012). Since November 1719 its share price had risen steadily, in line with that of the VOC, from a normal trading range of about 80 per cent of par to 200 by July. In early August the Estates General gave permission to issue 1,600 new shares priced probably at 250. This rights issue looks suspicious. First, the board pushed for it though having no idea how to use the money once the Amsterdam city council had refused its request to diversify into insurance. Second, the 1,600 shares at 250 per cent should have raised 12 million guilders, but the company received no more than 3.7 million. No more than 100 shares actually reached the market; 500 were given away for free, probably as bribes to officials, and 1,000 were sold to shareholders at par, enabling them to cash in on the inflated market price.

Thus the issue appears to have been designed to unload overpriced shares on the public (Gelderblom and Jonker forthcoming, *pace* Frehen, Goetzman and Rouwenhorst, 2013). Given the WIC's highly concentrated shareholding this should not have been difficult to organize. Suspicions are confirmed by subsequent events. Following an August peak of 450 the board secured permission to float another share issue at that price in mid-September. It was too late. Market sentiment had already turned, so the WIC tried pushing the flotation; its shares continued to rise against the trend of falling prices. Even so the issue flopped, raising

no more than 7,500 guilders of a projected 13.5 million. Nor did the money ease the WIC's worsening position. During the 18th century it lost further ground as private merchants eroded its monopoly. The company first kept going first by building up debt, then by suspending its own trading operations, and finally by leaning on the Estates General for subsidies to maintain the West African forts. In 1791 the WIC was nationalized by the Estates General who bought up the shares at 30 per cent, giving shareholders an eight per cent windfall over the going price (Den Heijer 2007).

Meanwhile the VOC struggled in the face of mounting competition. The intra-Asian trade turned into a structural loss maker, the costs of controlling spice supplies rose inexorably while European prices fell, and the policy of routing all goods through Batavia became uncompetitive as rivals set up direct routes between Asian production centres and Europe. The VOC responded imaginatively at first, trebling the annual number of arriving ships and sales between 1670 and 1730, changing its product mix towards higher-value goods, and experimenting with direct routes (Gaastra 1989, 2003). However, from 1730 revenues fell and new ideas ran out. Instead of facing reality and cutting high payouts to shareholders, the board continued them and used mounting debt to plug the resulting budgetary holes, just like the WIC had done (Van Zanden 1996).

Though financially irresponsible, this policy was rational enough under the circumstances. Unable to raise equity, the company relied entirely on debt. Although apart from regular auction prices no operational information at all was published, investors suspected something and from 1732 the share price glided downwards. Cutting dividends would have undermined confidence further and raised the cost of borrowing, so the board was wedded to high dividends. From the end of the 1730s the VOC's annual cash flow regularly turned negative. Repeated attempts to reform operations brought some relief in the form of higher revenues, but directors failed to bring about the fundamental overhaul which their business needed (Steur 1984, Jonker and Sluyterman 2000). By 1760 debt had risen to 32.3 million guilders, overwhelmingly in short-term maturities. During the Fourth Anglo-Dutch War (1780-1784) the company entered a liquidity crisis from which it never recovered. Emergency funding from various authorities plus a state-guaranteed bond loan kept operations going until the bankrupt VOC was nationalized following the French invasion of 1795. A contingent casualty was Amsterdam's proud Wisselbank, which had clandestinely supplied large advances to the company.

The decline of the colonial companies stands in stark contrast to the flowering of Amsterdam's financial market during the second half of the 18th century, harmed remarkably little by the 1763 and 1773 crises (De Jong-Keesing 1939, Schnabel and Shin 2004). The colonial commodities sector pioneered an innovative finance method in the form of mortgage-backed debt using the special-purpose legal vehicles first launched by Jean Deutz in 1695 for repackaging his mercury-backed loans to the Austrian emperor (Elias 1963, Van der Voort 1973). Called *negotiatie* and first sold by the Deutz firm in 1753, these vehicles enabled Caribbean

plantation owners to borrow at the Republic's low interest rates. A *negotiatie* owned one or more mortgages on Caribbean sugar, coffee, and cacao plantations, investors buying bonds issued by the vehicle. A merchant banker initiated and managed them, servicing the loan with the proceeds of the plantation's product sales which he typically had exclusive rights to handle as well, and charging commission all around: on arranging the mortgage, on organizing and managing the vehicle, on shipping and product sales, on interest payments.

In essence merchants boosted their own business while any risk of default was passed on to investors. Since plantations were always short of cash there was a rush to use this license for printing money. Within a few years some 80 million guilders was raised, which caused a serious credit inflation in the areas concerned: rapidly rising plantation prices, doubtful or downright fraudulent mortgage appraisals and imprudently lenient lending limits, overindebted plantation owners, overproduction of commodities. When during the early 1770s product prices dropped and slave revolts further undermined planters' capacity to pay, loans started to default one by one until by 1780 nearly all were in serious arrears. Though ultimately some *negotiaties* recovered through prudent management (Jonker 2002), most had to be written off entirely. The *negotiatie* vehicle did not spread to other economic sectors for a lack of demand, but some of the foreign loans floated during the 1780s and 1790s did adopt this or a similar form.

Another remarkable innovation appeared in 1774 when Abraham van Ketwich opened the first investment trust, called *Eendracht Maakt Macht* ("Strength Through Unity"). Designed to offer the benefits of an actively managed diversified portfolio to smaller investors, this fund looked remarkably like modern-day closed investment mutual funds (Berghuis 1967, Rouwenhorst 2005). The market was not ready for it; Van Ketwich's trust, together with two copycat funds launched in its wake, attracted no more than 2.5 million guilders, of which three quarters was lost during the political upheavals of the late 18th century. Presumably investors preferred to build their own portfolios from the rapidly rising number of primarily foreign securities on the market. Marketed by dense networks of brokers throughout the country (Buist 1974), these loans to countries including Austria, Sweden, Poland, Russia, Denmark, Portugal, Spain, and the fledgling USA, totalled some 1,500 million guilders by 1800 (Riley 1980). Though decried at the time as unpatriotic, this outflow in fact underlined the lack of remunerative home investment opportunities, interest rates in the Republic remaining very low, much lower than those abroad.

4. New challenges, 1795-1850

The upheavals of the late 18th century inaugurated a period of economic stagnation lasting some fifty years. As a French satellite state from 1795 to 1813, the Netherlands found itself an enemy of Britain, its usual ally, which occupied the Dutch colonial possessions one by one. Moreover, the embargoes imposed by either side forced merchants to devise ever more ingenious ways to keep trade going until they had to accept a virtual standstill from 1811 (Jonker and Sluyterman 2000). Recovery after the restoration of independence in 1813 proved slow. Amsterdam had

totally lost its former commercial entrepot function, reducing trade to serving the needs of the immediate hinterland (Jonker 1996). The colonial possessions were restored, but Dutch merchants found it hard to dislodge entrenched British and American rivals, partly for a lack of competitive manufacturing exports.

This situation started to improve gradually from the mid-1820s, when the government adopted a comprehensive neo-mercantilist economic policy built around the Nederlandsche Handel-Maatschappij (NHM, 1824), a large colonial trading company loosely modelled on the VOC (Jonker and Sluyterman 2000). The NHM acted as government agent for shipping and selling colonial commodities levied as taxes in kind by the colonial authorities in the Dutch East Indies. The above-market freight rates paid by the NHM boosted Dutch shipbuilding, while carefully designed tariffs prompted the rise of a mechanized processing industry, notably sugar refining, which in turn stimulated the growth of engineering (Van Zanden 1987). By 1850 both Amsterdam and Rotterdam possessed large and thriving engineering works, in Amsterdam originating in the processing industries and in Rotterdam in government-sponsored shipping lines and navy orders. Both cities also had large gasworks for lighting their streets and the increasing number of tall factory buildings such as Amsterdam's mechanized sugar refineries. The engineering works, sugar refineries, and gas works dwarfed other nascent industries, such as the Twenthe and Brabant textile mills. Meanwhile railway building had also taken off. During the late 1830s two companies were set up with the aim of constructing lines to Belgium and to Germany. The first train service opened in 1839 (Fritschy 1983, Van den Broeke 1985, Veenendaal 1998).

Existing legal and financial frameworks proved entirely adequate to facilitate this early phase of Dutch industrialization (Jonker 1996). During the French occupation the legal system had undergone a profound overhaul at the top, but this had failed to leave much impact on existing business practice. In 1811 Napoleon had imposed the Code de Commerce, which recognized three basic forms of business organization: the private partnership with unlimited liability; the private limited liability company, *commanditaire vennootschap* or CV in Dutch; and the joint-stock limited liability company, termed *naamloze vennootschap* or NV. The first two required no more formalities than the registration of a deed of partnership with the local court, but the statutes of an NV now had to obtain official approval, an administrative novelty. Until then limited liability companies had been set up by a simple notarized deed, like for instance the Associatie Cassa, the first Dutch joint-stock limited liability bank, as recently as 1806. Moreover, after the restoration of independence the government strove to expand its administrative grip, with successive proposals to replace the French code laying down procedures for official monitoring of annual reports, minutes of general shareholders' meetings, and even capitalization. The far-reaching proposals for a continuous assessment foundered in the face of vociferous protests from the business community, but the prior official approval of company statutes remained in the new *Wetboek van Koophandel* (commercial code) finally accepted by Parliament in 1838.

This was not a dead letter; the Government turned down proposed companies at least twice, in 1837 and in 1857, both banking projects. The number of NVs grew only slowly, reaching 137 for the whole of the Netherlands in 1850. However, businessmen could easily circumvent the law by setting up a CV with tradable shares instead, and they did so on a fairly large scale. During the 1820s many insurance firms adopted this form. The two biggest Amsterdam manufacturers, an engineering company and a sugar refiner, were both CVs with tradable shares until they were finally reorganised into NVs under pressure from large creditors during the 1840s. We may thus conclude that the law imposed little in the way of restraint on business organization. Nor did the code provide stimuli to create disciplinary mechanisms on limited liability companies through the market, for instance by forcing them to publish regular audited accounts. As a result none of them did so until during the 1840s one of the railway companies, foreseeing a need for continued access to equity funding, started issuing monthly traffic statements and annual balance sheets in order to promote investor confidence. This helped to turn the tide; from the early 1850s publishing something in the way of annual accounts gradually became the norm.

The growth of corporate business did not encounter any structural funding bottlenecks either. The notion that a lack of finance slowed down Dutch industrialization has been conclusively proven false by evidence that the financial system fully retained its remarkable capability for raising large sums with effortless ease (De Vries 1982, Jonker 1991, 1996). The market retained its singular configuration centering on a public exchange where a large and varied crowd of merchant bankers, underwriters, and brokers ruled the roost. As often as not they conducted a mix of operations, dealing in commodities, securities, insurance, and call money at the same time. Since the late 18th century and quite likely much earlier the *prolongatie* or on-call market functioned as the hub of the system, as businessmen would habitually put any surplus cash in securities, to be lombarded when cash was needed (Jonker 1996). The Wisselbank had ceased operations, but the Associatie Cassa flourished and inspired one or two followers on a much smaller scale, while the Rotterdam firm of R. Mees & Zn. also cautiously advanced from cashiers' services into banking. In 1814 King William I set up the Nederlandsche Bank as a circulation bank for his new kingdom. Facing strong opposition from the Amsterdam financial world to what they viewed as outside interference, the bank developed only slowly. It slotted seamlessly into the dominant pattern of short-term credit on bill discounts and securities lombards, so both its operations and its notes remained modest in scale and local in scope until the late 1840s. The securities market became more transparent with the publication of a regular price list in 1796 and it also obtained a notable new feature in the form of *administratiekantoren* set up by brokers to promote liquidity during the rough trading years of the Napoleonic era (Veenendaal 1996, Jonker 1996). Roughly similar to trustee offices, these institutes issued guilder-denominated certificates in lieu of the pools of original securities held by them. By simplifying trade and lowering the cost of handling interest and redemption payments for

investors, *administratiekantoren* materially supported the voluminous trade in both Dutch and foreign securities and enhanced the market's ability to raise large sums (Veenendaal 1996).

New issues were handled by one or more of the merchant banks and sold using the network of *commissionairs* or underwriters perfected during the late 18th century (Buist 1974). Hope & Co.'s hold over Russian loans continued into the 1850s; except for those loans Amsterdam had lost its position as the leading international primary market to London and had to content itself with being the first among secondary markets. Foreign securities continued to dominate stock exchange price lists, contrasting sharply with the meager number of Dutch industrials, but this should not be taken as an indication that investors shunned home securities. Any new venture or going concern offering returns at or above the yield on public debt had little difficulty in raising money (Jonker 1996). The low number of home industrials merely reflected the delay in Dutch industrialization relative to the United Kingdom, Belgium, or France, plus the fact that companies organized as CVs with tradable shares functioned a little like clubs, the shares usually being closely held and therefore not very liquid. True, not every scheme to raise money was successful, but the few examples of failure, and of ventures financed by imported capital, all concern either politically unpopular proposals, such as the Nederlandsche Bank in 1814, or struggling performers such as the railways and the engineering works after the end of the neo-mercantilist policies during the 1840s, or instances of foreign technology imports paid with equity stakes, as did one of the railways and a number of utility companies.

5. Conclusion

Early Modern Dutch corporate finance neatly illustrates both the power and the limitations of the virtuous circle of financial innovation. The creative spurt at the beginning of the 17th century started just such a circle, increasing the scale of corporate business and calling forth new forms of organization, of governance, of participation, of finance and of financing techniques, but also provoking shareholder protests and revealing inherent limitations in the new forms. The general framework of the VOC and WIC proved far too cumbersome for general adoption, and the chartered companies' peculiar corporate governance model, with its heavy state involvement, was not to survive. But the emergence of a sophisticated securities trade in the wake of the VOC and WIC was a leap ahead, spawning a continuously widening array of finance options and investment opportunities which, combined with the growing surplus of available savings and a flexible legal system, ensured until 1850 and beyond that any viable business opportunity could obtain funding. That said, even the most sophisticated and flexible financing options could not prevent Dutch economic decline, nor were they enough to jump-start the economy after the French occupation.

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Het groote tafereel der dwaasheid, vertoonende de opkomst, voortgang en ondergang der actie, bubbel en windnegotie, in Vrankryk, Engeland, en de Nederlanden, gepleegt in den jaare MDCCXX. Zynde een verzameling van alle de conditien en projecten van de opgeregte compagnien van assurantie, navigatie, commercie, &c. in Nederland ... als meede konst-plaaten, comedien en gedigten, door verscheide liefhebbers uytgegeeven (S.n. s.d. 1720)

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