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The Origins of Mutual Funds*

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Abstract

Mutual funds emerged as early as the second half of the 18th century in The Netherlands. The paper traces the history of mutual funds from the development of securitization in the 17th century to the invention of depository receipts in the 19th century. The apparent motivation for organizing the first mutual funds was to provide diversification for small investors.

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Over the past two decades, mutual funds have become the primary investment for small investors. At the turn of the twenty-first century, the number of mutual funds in the United States exceeded the number of securities listed on the New York Stock Exchange¹. Compared to direct investments in individual stocks and bonds, mutual funds offer the advantages of liquidity and diversification at a relatively low cost. While the popularity of mutual funds is relatively recent, the origins of mutual funds date back to the early days of organized stock trading.

The founding of the Foreign and Colonial Government Trust in 1868 marks the beginning of mutual funds in the Anglo-Saxon countries. However, by that time investment trusts had existed in Holland for almost a century. In 1774 the Dutch merchant and broker Abraham van Ketwisch invited subscriptions from investors to form a trust named *Eendragt Maakt Magt*—the maxim of the Dutch Republic, “Unity Creates Strength.” The founding of the trust followed the financial crisis of 1772–1773, and Van Ketwisch’s aim was to provide small investors with limited means an opportunity to diversify. Risk spreading was achieved by investing in Austria, Denmark, Germany, Spain, Sweden, Russia, and a variety of colonial plantations in Central and South America.

The first mutual fund originated in a capital market that was in many ways well developed and transparent. More than one hundred different securities were regularly traded on the Amsterdam exchange and the prices of the most liquid securities were made available to the general public through broker sheets and, at the end of the century, a price courant—a biweekly publication that in addition to security prices listed real estate transactions and announcements of dividends and security offerings². The bulk of trade took place in bonds issued by the Dutch central and provincial governments and bonds issued by foreign governments that tapped the Dutch market. The governments of Austria, France, England, Russia, Sweden, and Spain all came to Amsterdam to take advantage of the relatively low interest rates. Shares were scarce, and the most liquid issues were the Dutch East India Company, the Dutch West India Company, the British

¹ Investment Company Institute Mutual Fund Factbook reports more than 8,000 mutual funds in the U.S. in 2002, compared to 2,800 firms listed on the NYSE.

² See L. Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge: Cambridge University Press, 1990).

East India Company, the Bank of England, and the South Sea Company. The other major category of securities consisted of plantation loans—or negotiatives³ as they were known in the Netherlands. Issued by merchant-financiers, these bonds were collateralized by mortgages to planters in the Dutch West Indies colonies Berbice, Essequibo, and Suriname.

Mutual funds emerged gradually, as merchants and brokers learned how to expand the range of investment opportunities to the general public during the eighteenth century. The two principal innovations that took place were securitization and stock substitution. Securitization uses the cash flows of illiquid claims as collateral for securities that can be traded in financial markets. In a stock substitution, existing securities are repackaged individually or as part of a portfolio to make them easier to trade, either in smaller denominations or at a lower cost than the underlying claims. Often these innovations were designed to overcome barriers associated with investing abroad, such as foreign registration requirements and the costs of collecting interest or dividends, which prevented smaller investors from participating in securities markets. This broadening of the Dutch capital market eventually led to the introduction of the forerunners of today's closed-end mutual funds and depository receipts.

Predecessors of Mutual Funds

Prior to the eighteenth century a number of investment vehicles emerged that created a joint interest in a pool of financial and non-financial assets. While these securities were not identical to modern mutual funds, they manifested many of the same characteristics. Their evolution sheds light on the first investment trusts to create tradable ownership of a financial securities portfolio. The first major type is a contract of survival. These included life annuities and, in particular, tontines. The second type includes plantation loans.

³ J. Riley, *International Government Finance and the Amsterdam Capital Market 1740–1815* (Cambridge: Cambridge University Press, 1980), points out that this term has no direct counterpart in the modern English language. In eighteenth century Holland, it applied to any investment undertaking organized and managed by a financial intermediary which sold shares to the general public.

Life annuities are financial contracts whereby borrowers pay interest to the lender for the remainder of the lender's life, or that of a third person named in the contract. They differ from term loans, wherein the principal of the loan is repaid at the end of a prespecified term in the contract. Life annuities probably date back as early as 205 b.c.⁴, and they were quite common in the Middle Ages in France and Northern Europe before becoming an important vehicle for public finance in the seventeenth and eighteenth centuries. Chapter 12 provides an overview of the history of life annuities; one particularly interesting variation on life annuities known as the tontine bears some resemblance to mutual funds.

In a tontine, a borrower promises to pay to a group of individuals an annuity which will be divided among the surviving members. As members die, the payout to the survivors increases. Many early tontines were organized by governments, but examples of private tontines are known to date back to the seventeenth century. Unlike public tontines, in which the payment promise was backed by the power of taxation, private tontines required some form of collateral to guarantee the periodic payments to participants. This was often accomplished by using the participants' initial contributions to purchase financial securities. If the underlying portfolio paid interest at a fixed rate, then—barring default of the securities—the annual payments could be guaranteed. For example,⁵ a 1746 private tontine with ten participants issued in the Town of Broek op Waterland in the Netherlands invested in bonds of Emperor Charles VI, which were collateralized by the proceeds of his possessions. If the investment portfolio of a private tontine consisted of company shares, no fixed payments could be guaranteed, and the best participants could only hope the company would continue its dividend policy. This was the case with a 1670 private tontine organized in Amsterdam among thirty participants who jointly invested in a share of the Middelburg chamber of the Dutch East India Company.⁶ This private tontine is an example of a “capital tontine,” in which the participants jointly owned the collateral. Unlike most government tontines, which promised an annuity but no repayment of principal, the collateral of a capital tontine

⁴ D. Houtzager, “Hollands Lijf- en Losrenteleningen voor 1672” (diss., Schiedam, 1950), 12.

⁵ H. Wagenvoort, “Tontines: Een onderzoek naar de geschiedenis van de lijfrenten bij wijze van tontine en de contracten van overleving in de Republiek der Verenigde Nederlanden” (diss., Utrecht, 1961), 145.

would be divided among the remaining participants when a pre-specified number of members of the group had died.

Private tontines resemble investment trusts in the joint ownership of financial securities. The difference from mutual funds becomes increasingly fine over time, as private tontine societies invested in diversified portfolios. For example, a private tontine organized in The Hague in 1770 under the name *Uit Voorzorg* invested its initial contributions in a portfolio of securities that closely resembled the investments of *Eendragt Maakt Magt* and other early mutual funds. However, shares in a tontine were difficult to transfer because they were tied to the lives of its participants, and the objective of tontines was income smoothing rather than providing diversification or portfolio management to its participants. According to the directors of *Uit Voorzorg*, the society intended to use its revenues “to pay its members an annual sum of money in the form of a pension.”

The second type of security that shares characteristics with mutual funds is the eighteenth century plantation loan, which securitized mortgages to planters in the West Indies. The practice of transforming private loans into publicly traded securities was pioneered by the firm of Deutz & Co. Johan Deutz was the factor of the Austrian emperor, and as early as 1695 Deutz advanced him loans requiring the revenues from his mercury mines as security. Subsequent loans to the emperor were financed by organizing a negotiatie under the direction of his heirs, who issued bonds in the Dutch capital market using these revenues as security.

In 1753 the firm of Deutz—then led by Gideon Deutz, also mayor of Amsterdam—applied the same technique to mortgage loans to West Indies plantation owners. The firm played a dual role of financier and commission agent. Deutz arranged to issue bonds in the Dutch capital market and used the proceeds to provide mortgages to the plantation owners in Suriname. In return, the owners were obliged to ship their crops back to Deutz, who acted as their commission agent in the Netherlands. The proceeds from these sales—as well as the real property of the plantations, including the equipment and the slaves—served as security for the interest and principal payments to the bondholders.

⁶ Wagenvoort, “Tontines,” 127

Similar loans soon followed from other firms to plantations in the Dutch colonies of Essequibo, Demerary, and Berbice, as well as to British plantations in the West Indies. Between 1753 and 1776 nearly two hundred plantation loans were brought to market in Amsterdam and accounted for the majority of new security introductions during this period. The plantation loans took many forms. Some were made to specifically named individual plantations or groups of plantations. Others indicated only the region where the capital would be employed and left the merchant-financiers considerable freedom in allocating the bond proceeds. This left investors holding a security that promised fixed payments from an unspecified portfolio of mortgages, apparently without any recourse to the merchant-financiers. When many of the plantation loans defaulted at the end of the eighteenth century, investors were forced to convert their bonds into equity stakes in the plantations.

The plantation loans contain some elements of an investment trust, but their investments—mortgages to planters—were not securities in themselves, which disqualifies these negotiatives as mutual funds. Furthermore, their primary purpose was not to provide diversification or portfolio services to the general public. Merchants used their reputation to mobilize capital on behalf of planters in return for the right to factor shipments of tobacco, cocoa, and coffee. By issuing the bonds, they could expand their business without tying up the firm's capital. Nevertheless, the plantation loans were an important innovation in their own right because they securitized the debt service of loans to planters. As such, they can be viewed as the forerunners of modern mortgage-backed securities. Many of the early mutual funds allocated a significant portion of their portfolios to plantation loans, closely linking their fortunes when continental European conflicts led to a reshuffling of colonial possessions near the end of the eighteenth century.

Eendragt Maakt Magt

In July of 1774, an Amsterdam broker by the name of Abraham van Ketwich invited subscriptions to a negotiatie named *Eendragt Maakt Magt*. The negotiatie would invest in bonds issued by foreign governments and banks and in plantation loans in the West

Indies. Investors were promised a dividend of 4 percent, with adjustments depending on the annual investment income of the portfolio. The initial plan was to dissolve the negotiatie after twenty-five years, at which time the liquidation proceeds would be distributed among the then remaining investors. Subscription was open to the public until all 2,000 shares were placed; thereafter participation in the fund would only be possible by purchasing shares from existing shareholders in the open market. Investors had a choice to either receive shares registered in their name, or purchase shares in bearer form (in blanco). The transfer of bearer shares was easier because it did not require registration with the issuer, but both types were freely tradable. Based on these characteristics, *Eendragt Maakt Magt* would most likely be classified today as a closed-end investment trust, which issues a fixed number of shares representing ownership of a portfolio of tradable securities. According to W.H. Berghuis, it is considered the first “mutual fund.”⁷

Much of what is known about *Eendragt Maakt Magt* is based on a manuscript copy of its “prospectus,” drawn up by the notary public Paulus van Huntum, and an unissued copy of a share certificate, both of which have survived in the municipal archives of the City of Amsterdam. The share certificate is essentially a printed version of the prospectus and contains seventeen articles describing the details of portfolio formation, management fees, and payout policies.

Article I of the prospectus names Dirk Bas Backer and Frans Jacob Heshuysen as commissioners of the negotiatie who were entrusted with the oversight of the investment policies of the fund. The daily administration of the trust was assigned to the broker Abraham van Ketwich. In practice, the role of the commissioners was intended to be limited, because the prospectus allowed little discretion regarding the investment policies. Article II specifically detailed ten categories of potential investments:

- Danish and Viennese banks
- Danish Tolls and Holsteyn
- Russia and Sweden
- Brunswick and Mecklenburg

⁷ W.H. Berghuis, “Onstaan en Ontwikkeling van de Nederlandse Beleggingsfondsen tot 1914” (diss., Assen: Van Gorcum & Company, 1967). A 1773 plan for similar investment trust organized in Utrecht has survived, but it is not known whether it was ever successfully placed on the market.

- Postal services of Saxony and Peatlands of Brabant
 - Spanish Canals Imperial and Taouste
 - British Colonies, under guarantee of Messrs. Hope and Comp., Vernede and Comp., J. Hodshon, Dedel and Roquette, and B. van Homrigh
 - Essequibo, at the offices of Messrs. J. van Reynevelt and Son, D. Changuion, K. van den Helm Boddart, A.J. Heshuysen and Comp., and D.W. van Vlooten
 - Berbice, at the offices of Messrs. J.A. Charbon and L. Schumacher
 - Danish American Islands, at the offices of Messrs. Bouwen and van der Hoop, J. Hodshon, H. Hofham, and Son, Lever and de Bruine, and Nauta Beukens & Volkmar
- The securities were either international bonds or negotiatives to planters (plantation loans) geographically grouped and further identified by their respective organizers.

The organizers were apparently quite sensitive to their fiduciary responsibilities to investors. The prospectus required Van Ketwich to provide an annual accounting to the commissioners and produce, upon request, full disclosure to all those interested parties, as to ensure “good and proper management at all times.” For his services, the administrator would receive a commission of 0.5 percent at the founding of the trust, plus an annual compensation of 100 guilders per class⁸. The physical securities that the trust invested in were stored at the office of Van Ketwich in an “iron chest with three differently working locks” to which the commissioners and the notary public kept the keys.

In addition to specifying its investments, the prospectus required that the portfolio would be diversified at all times. The 2,000 shares of *Eendragt Maak Magt* were subdivided into twenty “classes,” and the capital of each class was to be invested in a portfolio of fifty bonds. Each class was to consist of at least twenty to twenty-five different securities, to contain no more than two or three of a particular security, and to “observe as much as possible an equal proportionality.”

Despite this explicit diversification requirement, *Eendragt Maakt Magt* contained a curious and complicated lottery, which, from a diversification perspective, imposed unnecessary risks on its investors. The lottery worked as follows: not all investment

⁸ This translates into an annual management fee of 0.2 percent of assets, which is low even by modern standards

income from the portfolio would be passed on to the fund investors, but a portion was to be used to retire shares by lot at a premium and also increase dividends to some of the outstanding shares. Specifically, the promised dividend payout of the fund was 4 percent per annum, which was below the nominal interest rate on the bonds it invested in.⁹ As long as the bonds in the portfolio did not default, the excess of income over payout would accrue in a cash reserve account, which was used annually to repurchase one share determined by lot from each class at a premium of 20 percent over par. At the same time future dividends on the neighboring shares would be increased. Article IV in the prospectus gives the following example

The interest on redeemed shares will accrue to the holders of the preceding and succeeding shares: for example if share number 50 is redeemed, the annual interest of No. 49 and 51 will increase by 2 percent to 6 percent. If No. 49 is redeemed next, the interest of No. 48 and 51 will be augmented by 3 percent, hence 7 percent for No. 48 and 9 percent of No. 51.

This curious augmentation of the cash flow rights created heterogeneity among the outstanding shares after the first redemption had taken place, introducing a complexity to the valuation of the shares that would challenge even many modern day quantitative investors. Knowledge of the dividend on a particular share would not be sufficient to determine its value to a potential buyer. To accurately value each share, investors would have to know either the dividend on all the other shares or the numbers of the retired shares and the order of redemption.¹⁰

⁹ Many of the plantation loans paid interest at a rate of 6 percent per annum, Russian and Swedish bonds offered 5 percent, and the Danish Tolls 4 percent per annum.

¹⁰ The lottery creates what is often referred to as “path dependence” to the valuation of each share. To see this, consider the value of shares 52 and 53 in the previous example after redemption of the two shares. Both continue to earn the statutory dividend of four percent. However, No 52 is a more attractive investment – and should therefore sell at a higher price – because redemption of its “left” neighbor would increase its dividend by 4.5 per cent, compared to an increase of only 2 percent for No 53. To further complicate the valuation, if the order in which the shares are redeemed were reversed in the example, and No 49 was retired before No 50, shares No 48 and 51 would earn 9% and 7% respectively, thereby lowering the value of share No 52. At first glance, it would seem that all shares had equal value at the inception of the fund. Article I of the prospectus states that shares of “all classes are mutually combined,” and Article IV specifies that “the first share of the first class and the last share of the last class are understood to be consecutive.” Given that one share would be retired from each class annually, the first and

Although curious from a modern day perspective, lotteries were a common element of eighteenth century securities, and it is likely that Van Ketwich modeled his investment trusts after other existing negotiaties. For example, a negotiatie on loans to planters in Essequibo and Demerary introduced in 1772 by Karel van den Helm Boddaert and Adolf Jan van Heshuisen and Co. (family and business associate of the director of *Eendragt Maakt Magt*), contained a very similar lottery provision. The mortgages of this negotiatie were projected to earn 8 percent per annum, of which only 4 percent would initially be passed on to investors as dividends. The remainder of the investment income was used to retire shares in at a premium over par and gradually increase the dividends on the remaining shares to 6 percent per annum. The prospectus of this plantation security contains a detailed schedule of gradual capital repayment over a twenty-five-year period.

The embedded lottery should not detract from the significance of *Eendragt Maakt Magt*: it offered investors an opportunity to participate in and trade a diversified portfolio of securities. Because the prospectus allowed little flexibility with respect to the fund's investment policies, it is unlikely that Van Ketwich aimed to attract investors by offering superior returns through professional portfolio management. *Eendragt Maakt Magt* simply repackaged existing securities that were already traded in the Amsterdam market. The negotiatie was likely aimed at smaller investors, who would be unable to achieve this level of diversification on their own account. The bonds in its portfolio had a face value of 1,000 guilders, and replication of the portfolio by purchasing these securities in the open market was only feasible for investors of considerable wealth. *Eendragt Maakt Magt* created an opportunity to obtain portfolio diversification in portions of 500 guilders.

Little direct evidence exists about what motivated Van Ketwich to organize the fund, but circumstantial evidence is consistent with the objective of diversification. Its inception follows the financial crisis of 1772–1773, which bankrupted British banks due to overextension of their position in the British East India Company. When the crisis spread to Amsterdam, several banking houses were pushed to the brink of default. Being a broker, Van Ketwich may have perceived a sentiment for diversified investments

last shares of a class had the opportunity to benefit from simultaneous share retirements of both neighbors, one being a member of their own class, and one from the adjacent class. Because shares in the middle of a class did not have this advantage, shares close to the border of a class are more valuable ex-ante.

among his clientele. Subsequent negotiations in which Van Ketwich was involved explicitly advertise the benefits of diversification to attract small investors. It is perhaps surprising that the portfolio did not include equity shares or domestic and British bonds, but share material was relatively scarce, and domestic interest-bearing securities were available in small denominations.

Subsequent Funds

The initial success of *Eendragt Maakt Magt* soon invited followers. In 1776 a consortium of Utrecht bankers founded the negotiatie *Voordeelig en Voorsigtig* (Profitable and Prudent). This time Abraham van Ketwich did not act as an administrator, but the prospectus lists his office as a collection agency for periodic dividend payments, which suggests that he was closely involved. The prospectus of *Voordeelig and Voorsigtig* is accompanied by an appendix, which explains the advantages of diversified investing using *Eendragt Maakt Magt* as an example. Its opening paragraph states that it is undisputable that prudent investing requires the manager

to spread as much as possible monies over good and solid securities. Because nothing is completely certain but subject to fluctuations, it is dangerous for people to allocate their capital to a single or a small number of securities. Not everyone has the opportunity to invest his money in a variety of securities. . . . For the sum of 525 guilders one can participate in this negotiatie . . . , which will be profitable with sufficient certainty. No one has reason to expect that all securities in this negotiatie will cease to pay off at the same time, and the entire capital be lost. If one had reason to fear such general bankruptcy, one never ought to invest any money¹¹.

The prospectus of *Voordeelig en Voorsigtig* closely followed the wording of *Eendragt Maakt Magt*, and its investment list mirrored its predecessor, including the diversification requirement. Forty percent of the portfolio was to be allocated to plantation loans,

¹¹ Koninklijke Bibliotheek The Hague, catalogus Knuttel, no. 19132.

although these were not detailed by name. The most interesting difference is that shares of *Eendragt Maakt Magt* were listed among the potential investments of the fund.

In 1779, Abraham van Ketwich introduced his second mutual fund under the name *Concordia Res Parvae Crescunt*, the Latin origin of *Eendragt Maakt Magt*.¹² While Van Ketwich's second fund resembled his first in both name and structure, an important difference was that he opted for more freedom in investment policy. The prospectus only states that the negotiatie would invest in "solid securities and those that based on decline in their price would merit speculation and could be purchased below their intrinsic values, . . . of which one has every reason to expect an important benefit," a phrasing which suggests that *Concordia Res Parvae Crescunt* may be the grandfather of modern value funds.

Fortunes of Early Mutual Funds

The fortunes of the early mutual funds are closely linked to the fortunes of their predominant investments—plantation loans in the West Indies. The outbreak of the Fourth English War in 1780 hampered colonial shipments to their Dutch commission agents, affecting the proceeds that were pledged as the security for holders of the plantation loans. For example, the price of Deutz's first plantation loan fell by 35–40 percent and bondholders were asked to accept interest rate reductions. In 1782, the decline in investment income forced Van Ketwich to suspend the redemption of shares in *Eendragt Maakt Magt* and lower dividend payments several years later.¹³ By the end of the century all three funds had disappeared from the official published price record of the Amsterdam stock exchange, and transaction prices show up only at irregular private auctions by securities brokers. In 1799, at the end of the scheduled life of *Eendragt Maakt Magt*, participants agreed to extend the negotiatie until the shares could be redeemed at par. In 1803 the management of the affairs of *Eendragt Maakt Magt* and *Concordia Res Parvae Crescunt* were taken over by the firm of Van Ketwich and Voomborg. By 1811 the share price of *Eendragt Maakt Magt* reached a low of 25 percent

¹² "Concordia res parvae crescunt, discordia maximae dilabuntur" is attributed to the Roman historian Sallust, meaning "In harmony small things grow, dissension dissolves the greatest."

¹³ Berghuis, pp. 62–68.

of its nominal value of 500 guilders, but eventually recovered. This seems miraculous, but the fund actively repurchased shares in the open market when prices were depressed. In 1824, a liquidating dividend of 561 guilders was paid to the remaining participants. Final settlement of shares in *Concordia Res Parvae Crescunt* took substantially longer. It existed for 114 years, until 1893 when it was officially dissolved. In 1894, a final distribution of 430.55 guilders per share of 500 guilders was paid, or 87 percent of the original investment. Despite its misfortunes, or perhaps due to them, *Concordia Res Parvae Crescunt* is probably the longest mutual fund to have ever existed.

Speculation on the Financial Fortunes of the United States

Despite the poor performance of the first investment trusts, there are also many success stories. During the 1780s and 1790s more than thirty investment trusts emerged with a single objective: speculation on the future credit of the United States. Together with France and Spain, the Netherlands was one of the major financiers of the American Revolution. Between 1782 and 1791, an estimated 32 million guilders were raised in Amsterdam and Antwerp, much of which was spent to finance supplies. These advances occurred following a period of steady deterioration in the credit of the United States. The war expenses, combined with a limited ability to raise revenues through taxation, had flooded the American market with paper currency, issued by both the states and the Continental Congress. The currency was expected to be self-liquidating as it was used to settle future taxes, but currency issues had far outgrown the anticipated tax liabilities. The consequence was a steady depreciation of the value of the continental currency. Currency, however, constituted only a fraction of the paper obligations in circulation. During the war, the quartermaster and commissary departments had issued certificates to private individuals in lieu of impressments of goods, and soldiers had been issued certificates for military pay. Combined with a myriad of interest bearing debt instruments issued by the federal government and the states, the result was an economy flooded with financial paper claims. To make matters worse, nobody knew the exact magnitude of the outstanding obligations or who was responsible for repayment. Some states retired obligations from the Congress, while other states argued that Congress was responsible

and should assume part of the states' debts that were incurred through the war. In 1782 Congress sent commissioners to the states to inventory all outstanding obligations. If claims were stated in depreciated currency they were to be translated into specie value, and for the balance "final settlement certificates" were issued. This process of "liquidation" established the outstanding balance of the government's obligations but did not solve the problem of how to pay for them. Investors were mixed about the prospects for full repayment as reflected in the market price of liquidated debt traded, which fluctuated between 15 and 40 cents on the dollar in 1788, depending on location and type of the original claim.

In this same year, the Amsterdam bankers Pieter Stadnitski and Hendrik van Vollenhoven organized a negotiatie holding liquidated debt of the United States. The prospectus states that the investment portfolio consisted of 6 percent liquidated debt with a face value of \$840,000, which was acquired for 60 cents on the dollar. At the going exchange rate of 2.35 guilders to the dollar the portfolio was valued at about 1.2 million guilders. Stadnitski and Van Vollenhoven sold 1,200 shares of 1,000 guilders in this negotiatie in the Amsterdam market. The negotiatie was planned for twenty-five years, and the prospectus called for a gradual redemption of shares over the life of the fund. Like Van Ketwich's negotiaties, this was accomplished using a portion of the investment income to redeem shares at a premium while keeping the underlying collateral intact. But instead of increasing the dividends on unredeemed shares, the excess of investment income over promised dividends was used to accelerate the rate of share redemption over time at increasing premiums. For example, thirty-six shares would be redeemed by lot with a 3 percent premium after one year, thirty-eight with a premium of 6 percent the next year, increasing gradually to sixty-one shares with a premium of more than 70 percent at the end of year twenty-four. This planned redemption schedule was certainly aggressive, and it would be possible only as long as the United States did not default on its interest payments. Annual expected interest income would be 6 percent of \$840,000, or 118,440 guilders. By contrast, promised interest in the first year was 6 percent of 1,200,00 guilders or 72,000 guilders, which would steadily decline after shares were redeemed over time. Investors whose shares were redeemed would receive a certificate

entitling them to 1/1,200 share of the liquidation value of the investment portfolio at the end of the negotiatie.

These terms were certainly attractive relative to the promised returns on other forms of debt securities in the Amsterdam market and stalled subsequent efforts of the United States to place new loans in the Netherlands. Why would investors pay 100 percent on the dollar for a new loan at 6 percent when similar claims could be purchased at a 40 percent discount through investment trusts? If the United States were to ultimately honor its obligations, new bonds would offer their promised 6 percent return, while an investment in the negotiatie would yield between 8 and 14 percent, depending on the exact moment of redemption. No matter the course of events, Stadnitski and Van Vollenhoven were to be the major beneficiaries in this negotiatie: although the prospectus called for a 1 percent annual management fee on the investment income of their portfolio, the bulk of their compensation was to be received up front. Shares in their investment trust were sold at a price that implicitly valued the liquidated debt of the United States at 60 percent of its face value, but it is estimated that the debt had been purchased at around 42 cents on the dollar, an immediate return of almost 50 percent.

According to P.J. van Winter, the negotiatie of Stadnitski and Van Vollenhoven was the first of a series of twenty-nine trusts investing in United States debt that were successfully placed in the Amsterdam market between 1787 and 1804.¹⁴ Similar negotiatives were organized by the firms of W&J Willink, N&J Van Staphorst & Hubbard, and Daniel Crommelin and Sons. Their success made them the dominant category of foreign investments listed in the Amsterdam Prijs-Courant during the early 1800s.

Depository Receipts

Closed-end mutual funds and plantation loans are examples of liquidity creation through asset substitution and securitization. The plantation loans created a tradable interest in portfolios of illiquid mortgages, and mutual funds made it possible for small investors to hold and trade diversified portfolios of securities. While diversification was not the primary motive behind the funds invested in the U.S. debt, the trusts provided domestic

¹⁴ P.J. Van Winter, *Amsterdam en de opbouw van Amerika*, 2 vols., ('s-Gravenhage: Martinus Nijhoff, 1933), appendix 4.

liquidity in foreign securities that were difficult to trade in Amsterdam due to the foreign registration requirements. It would take two more decades for the purest form of asset substitution to emerge, directly aimed at lowering the cost of foreign investing.

In the eighteenth and nineteenth centuries much of government borrowing took place through a “book of public debt,” a large ledger containing the names of investors. Investors would receive a receipt that could be presented at the treasury to collect periodic interest payments. Although foreign participation was not precluded per se, in practice it was limited to large investors and financial institutions that could overcome the registration requirements and difficulties associated with the collection of interest abroad.

By the end of the eighteenth century Hope & Co. had become the principal banker raising money for the Russian czar in Holland. In addition to directly issuing bonds on behalf of the czar, the firm also helped to popularize a mechanism for small investors to participate in inscriptions in the Russian book of public debt. The Office of Administration of Hope, Van Ketwich, Voomberg, and Widow W. Borski, founded in 1824¹⁵ took foreign inscriptions in its name and offered “certificates,” or depository receipts, backed by these inscriptions to the Dutch public. In return for a small fee, the firm would administer the collection of interest payments abroad, which would be passed on to the certificate holders upon presentation of the coupons attached to the certificates. The added advantage of the depository receipts was that they were freely tradable in bearer form in Amsterdam, thereby circumventing the registration requirements of the original inscriptions. If desired, investors could always tender the depository certificates to the administration office in exchange for an original inscription in the foreign book of public debt. To further alleviate investor concerns, the certificates explicitly specified that the administrators would keep the original inscriptions in “an iron safe, with three different working keys, one of which would remain in the hands of a notary public.”

While depository receipts were initially created to facilitate trade in foreign government debt, their presence became widespread in the Amsterdam stock market in

¹⁵ This was certainly not the first office of administration. According to K.D. Bosch, *Nederlandse Beleggingen in de Verenigde Staten*, Elsevier, Amsterdam, Brussels (1948), this particular firm emerged from the firm of N.&J.&R. Van Staphorst, Ketwich & Voomberg and W. Borski, which was formed in

the second half of the nineteenth century. Their application economized on onerous registration requirements associated with the trading of American railroad stocks, which required transfer in the company books, and the collection of foreign dividends. In 1863 the firm of Boissevain and Teixeira de Mattos set up an Office of American Railroad Stocks to purchase shares in Illinois Central Railroad Company. The original shares were deposited with a notary public, against which the office issued “Certificates Illinois Central Railroad Company” in portions of one, five, or ten shares. The certificates were freely negotiable in bearer form, and they contained coupons for collecting the dividends that would accrue on the original shares. Transfer of certificate ownership did not require transfer in the company books in the U.S., because the administration office remained the owner of record, although investors retained the right to request that the original shares be placed in their names upon the tendering of the depository receipt.

To accommodate foreign investors, some American companies managed a transfer book for their shares in London—but never in Amsterdam, probably due to the widespread use of depository receipts. When J.P. Morgan introduced an American Depository Receipt (ADR) on the British retailer Selfridge’s in the United States in 1927, the bank could build on more than a century of European experience.

Nineteenth-century Mutual Funds

The first investment trust outside of the Netherlands is the *Foreign and Colonial Government Trust*, founded in 1868 in London. Like *Eendragt Maakt Magt*, it invested in foreign government bonds. According to its prospectus, the goal was to provide “the investor of moderate means the same advantages as the large capitalist, in diminishing the risk of investing in foreign and colonial government stocks, by spreading the investment over a number of different stocks.” It was modeled after the Dutch trusts in the sense that investment income was projected to exceed dividends, and excess income would be used to liquidate shares over its projected twenty-four-year life. By 1875 eighteen trusts had

1805. According to Riley, *International Government Finance and the Amsterdam Capital Market*, Van Ketwisch partnered in an administration office investing in French annuities as early as 1802.

been formed in London.¹⁶ It was during this period that the Scotsman Robert Fleming started his famous first trust, investing in U.S. railroad bonds, later named the First Scottish American Investment Trust. During the 1890s, investment trusts were introduced into the United States. Most of the early U.S. investment trusts were closed-end funds, like *Eendragt Maakt Magt*, issuing a fixed number of shares. The issue of new shares, or repurchases, were not precluded but were infrequent. Moreover, the repurchase or issue price was not necessarily proportional to the intrinsic value of the underlying portfolio.

This changed in 1924, when the Massachusetts Investors Trust became the first U.S. mutual fund with an open-end capitalization, allowing for the continuous issue and redemption of shares by the investment company at a price that is proportional to the value of the underlying investment portfolio. Open-end capitalization has become the dominant model for mutual fund organization, suggesting that it has been an important innovation contributing to its modern success. One cannot fail to be surprised, however, by how many of the features of eighteenth-century investment funds have survived until today.

¹⁶ H. Bullock, *The Story of Investment Trusts* (New York: Columbia University Press, 1959).

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Figure 1

William Gideon Deutz, Mayor of Amsterdam, modeled the first plantation loan after a secured loan to the Austrian Empire. This is the back page of a 1736 loan he issued in Amsterdam on behalf of Charles VI, secured by his possessions in Silesia.

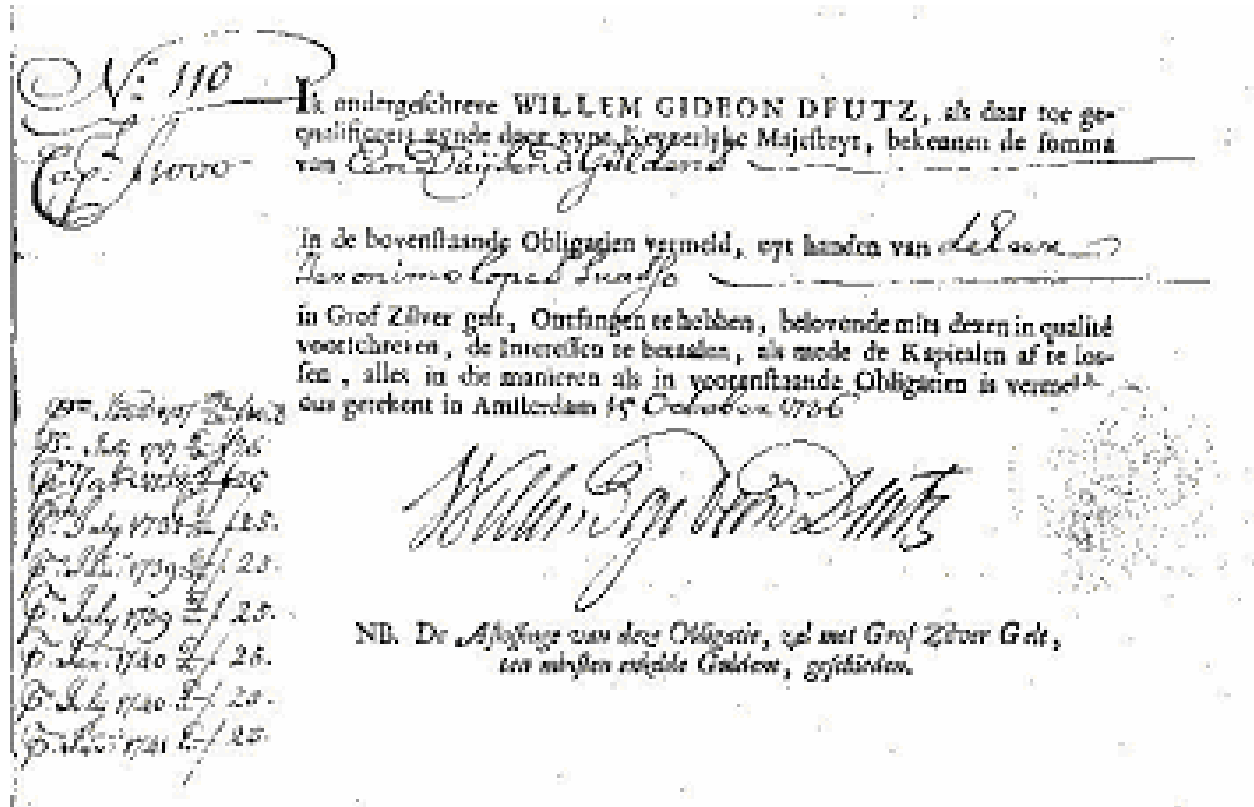


Figure 2: The first page of a share in *Eendragt Maakt Magt* contains a list outlining the composition of the investment portfolio

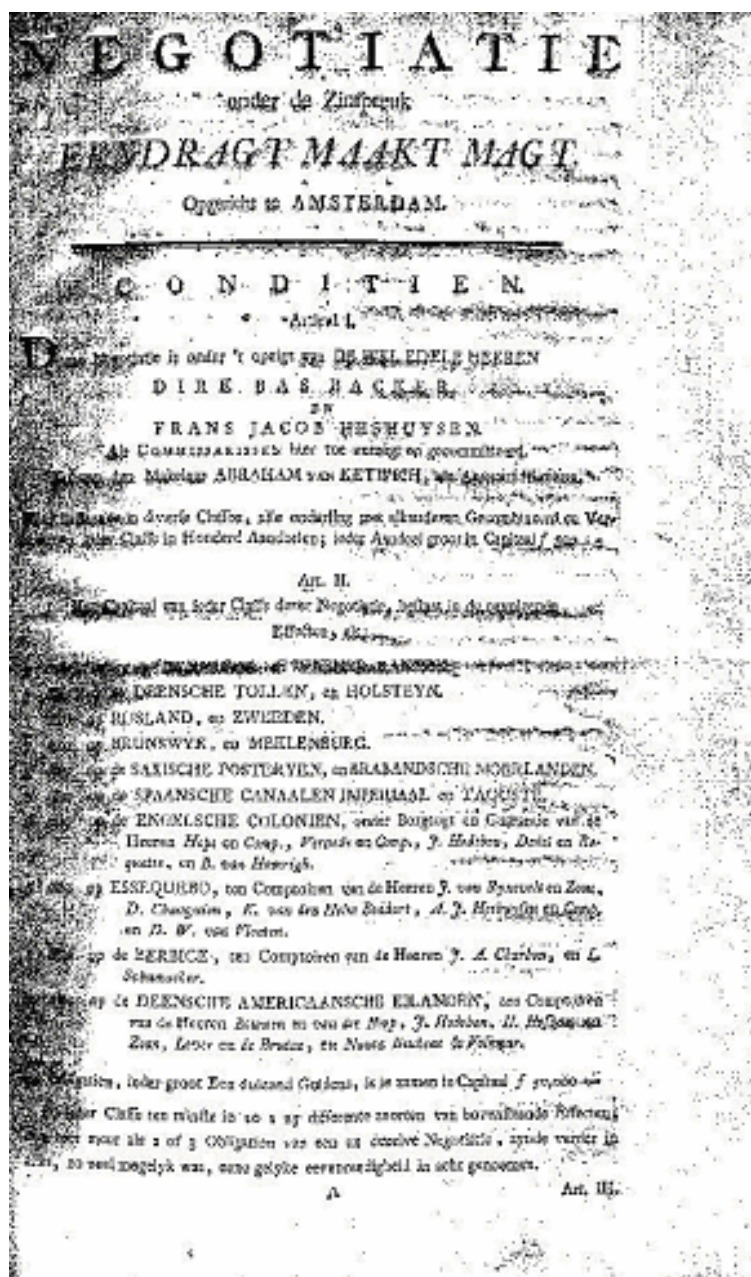


Figure 3: This bond was one of the securities *Eendragt Maakt Magt* invested in. The 20-year, 5% bond was secured by mortgages on plantations in the Colonies of Essequibo and Demerary. To secure the payments to the bondholders, up to 5/8th of the appraised value the plantations could be mortgaged. Plantations needed to be periodically re-appraised. The mortgage arrangement with the plantation owners includes a variety of clauses to ensure repayment. The plantation would be collateral to the loan. And when a plantation owner shipped his goods to Europe to be sold, he was obliged to insure the shipments for pre-specified amounts.

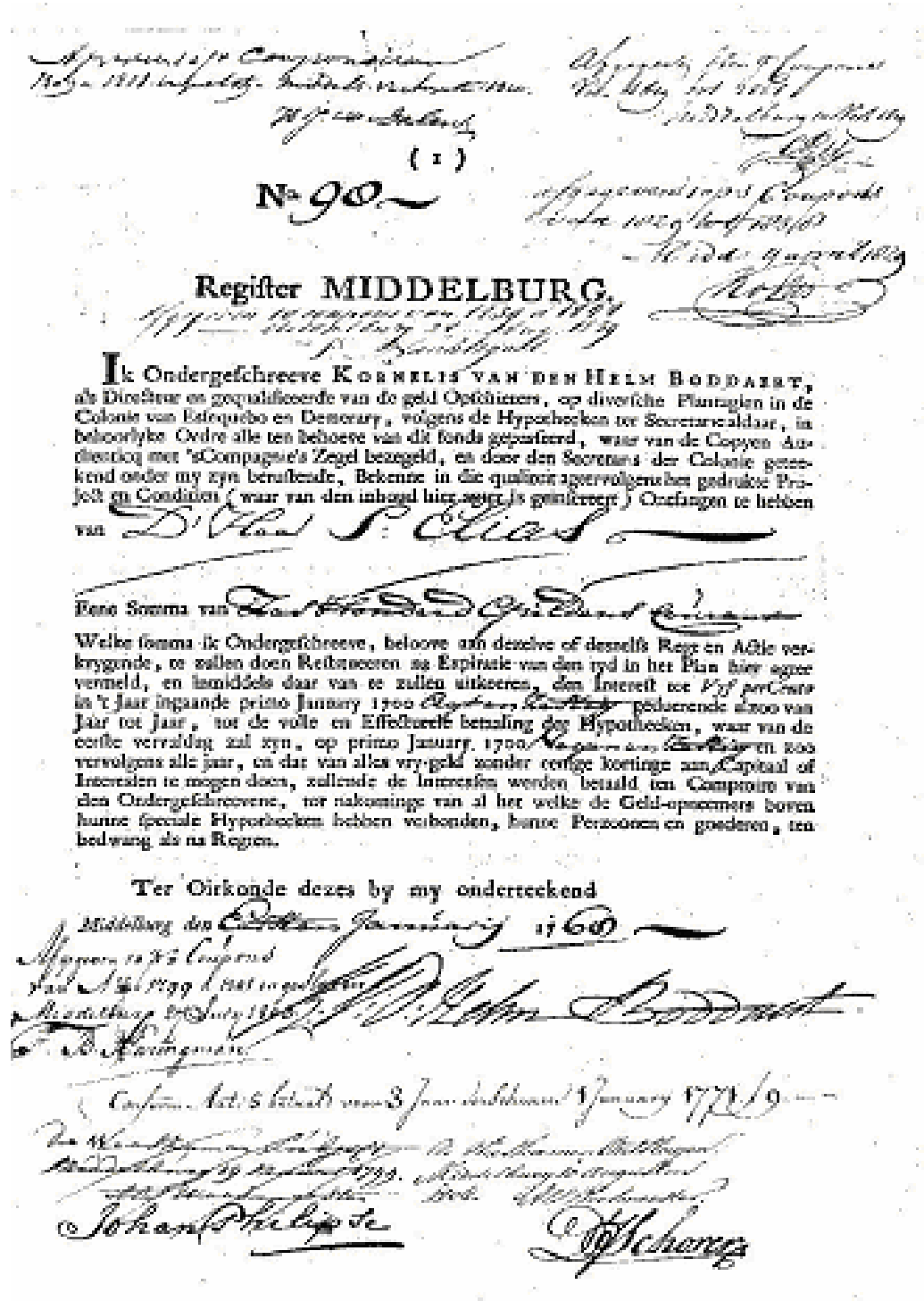


Figure 4: Preamble of a 1769 Plantation Loan of Daniel Changuoin, one of the investments of *Eendragt Maakt Magt*:

Conditions of a negotiatie, for a fund, under the direction of Daniel Changuoin, to furnish a sum of F. 400,000;- to planters in Rio Essequibo and Rio Demerary, for continuation and improvement of their plantations at an annual interest rate of 6 per cent.

Article 1. The Planters in aforementioned colonies, which are inclined to draw moneys for improvement and continuation of their plantations, and have been approved by the director, are obliged at their own cost to have their plantations appraised by sworn appraisers, including the grounds, buildings, works, male and female slaves, and other belonging, but excluding furnishings and things that are unnecessary for cultivation.

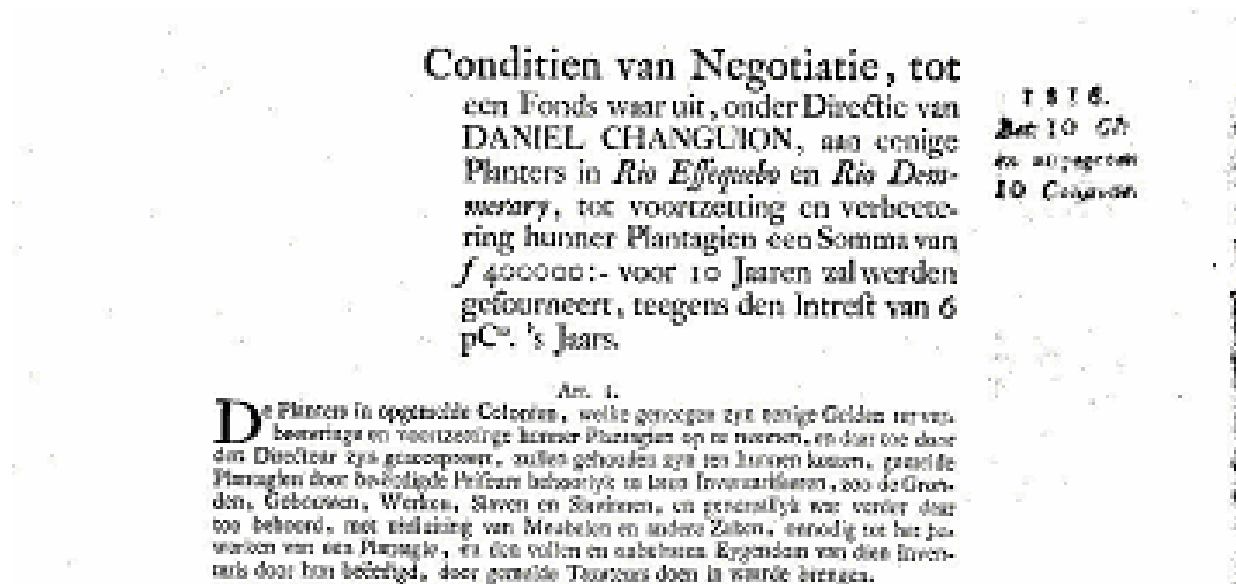


Figure 5: The Second Mutual Fund: *Voordeelig en Voorsigtig*

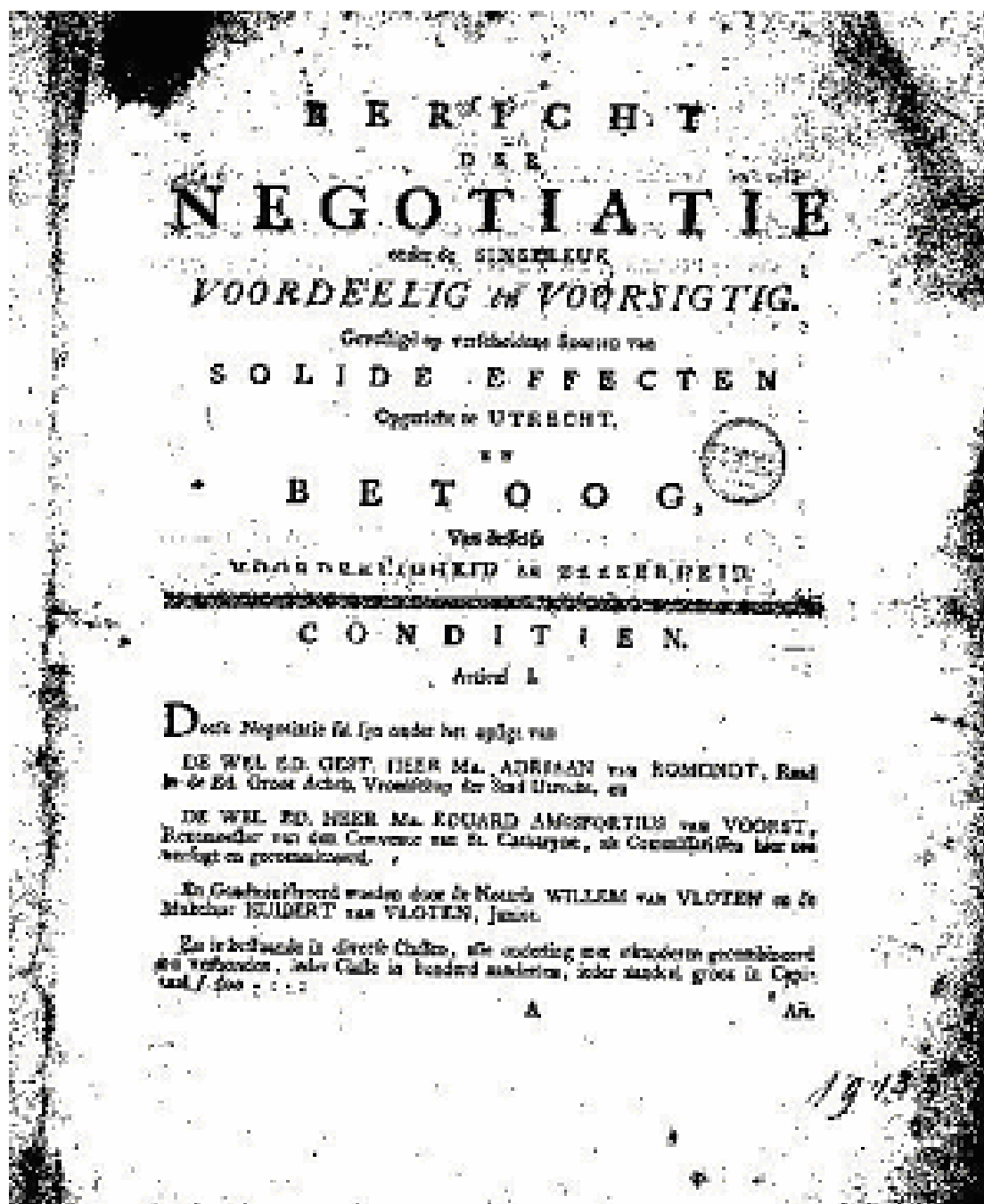


Figure 6: *Concordia Res Parvae Crescunt*: the first value fund.

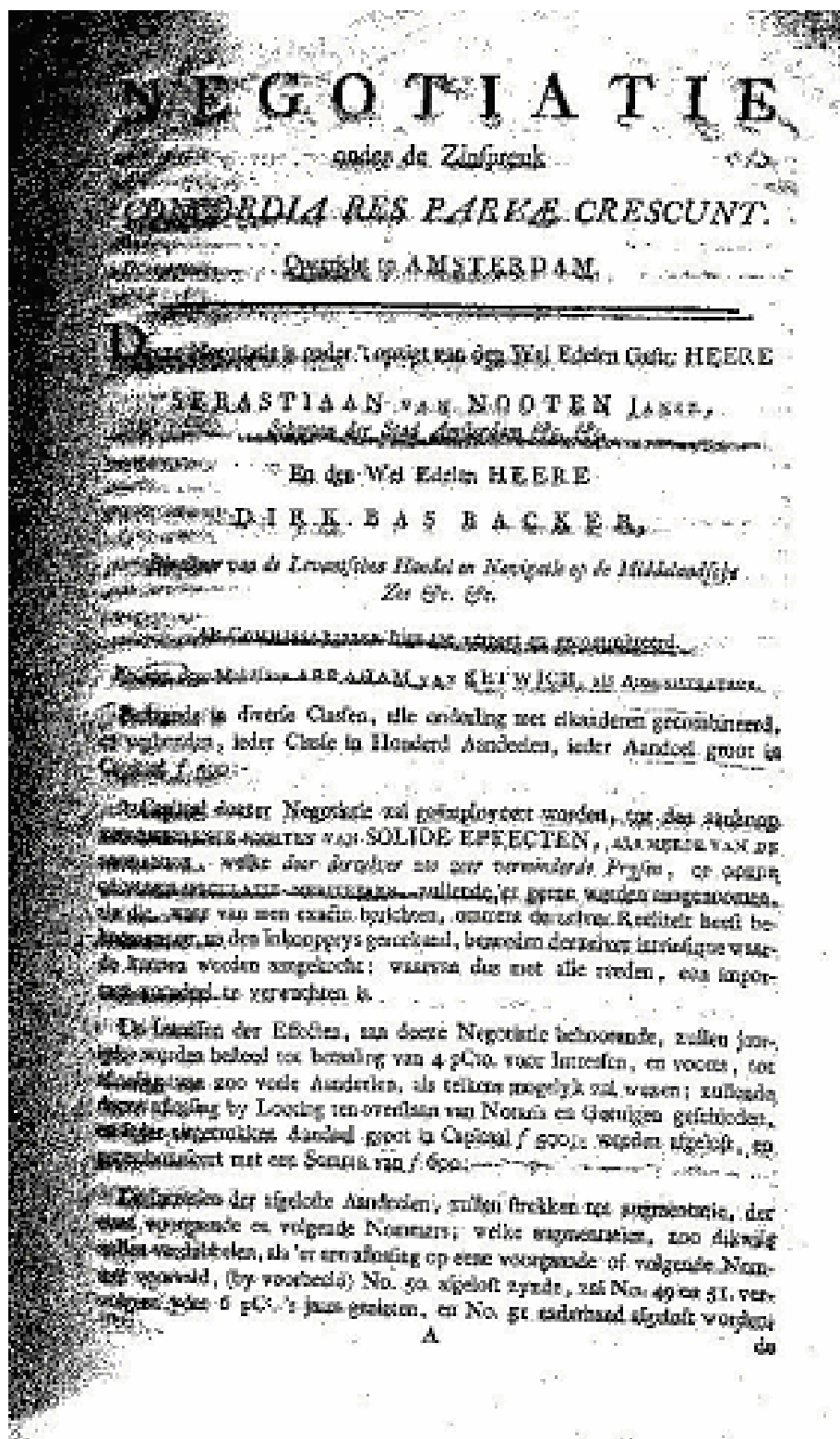


Figure 7: Concordia Res Parvae Crescunt was formed in 1779 and scheduled to exist for 25 years only. When it was finally liquidated in 1893, investors received a payment of 430,55 for each share of 500 guilders.



Figure 8. Between 1787 and 1804, twenty-nine trusts were introduced in Amsterdam speculating on the fortunes of the United States. Dutch Financiers would take inscriptions in US Debt, and sell these through an investment fund to the public. The top half of the certificate is signed by the registrar Joseph Nourse declaring that the United States owes Daniel Crommelin and Sons \$10,000, in the form of funded deferred debt bearing interest at 6% per annum after January 1st 1801. The bottom half contains a statement by Clement Biddle - as notary public - declaring that he has verified that the copy is an exact duplicate of the original.

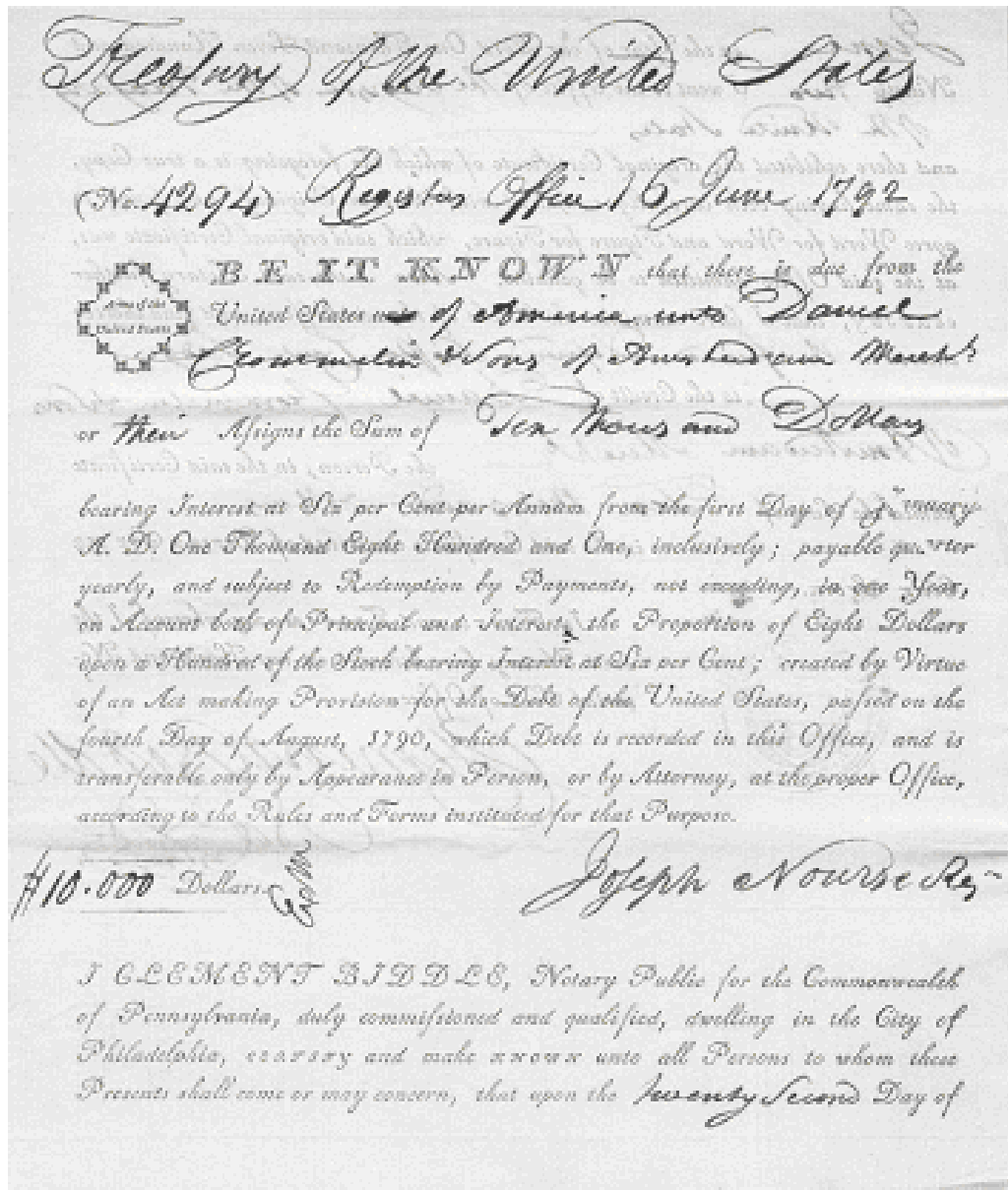


Figure 9. 1854 Inscription in the Russian Book of Public Debt in the name of the Administration Office of Hope, Ketwich Voomberg and Wed W. Borski.



Figure 10. 1857 Depository certificate on Russian Inscriptions by Hope & Co, Ketwich and Voomborg, and Widow W. Borski issued in the Dutch market

CERTIFICAAT	CERTIFICAT
Van 6 per Cent	D'INSCRIPTION Russe
RUSSISCHE FONDSSEN	à 6 pour Cent
en	en
SILVER.	ARGENT.
R ^l 670	R ^l 500:--
HOUDEER dezes is gerechtigd tot een Inlegging van VYF HONDERD ROEBLES 6 per Cent guldige afreken, betaalebare in SILVER, ingeschreven in het Staat-Bank te St. Petersburg, ten name van het ADMINISTRATIE-KANTOOR, ingereg. te Amsterdam, onder directie van HOPE en Comp., KETWICH en VOOMBORG, en WED. W. BORSKI. Waarvan de Interesten voor rekening en risico van den HOUDEER ontrogen en afbetaald zullen worden op Coupons, ingevolge Art. 6 van het uitgegeven Statuut. De HOUDEER van de Certificaat zal ten allen tijde gerechtigd zijn de originele INSCRIPTION terug te verdoen, tegen inleggen van de Certificaat, met de overgeschreven Coupons, en het daarbij uitgegeven statuut voor nieuwe Coupons, en tegen betaling van de voluten, in Art. 10 van het Statuut vermeld.	Le porteur a droit à une Inscription de CINQ CENT ROEBLES capital à 6 pour Cent, de la Grille intitulée le Grosse, payable en ARGENT, inscrit sur le Grand-Livre à St. Petersbourg, au nom du BUREAU D'ADMINISTRATION, établi à Amsterdam, sous la direction de HOPE et Comp., KETWICH et VOOMBORG, et WED. W. BORSKI. Dont les Intérêts seront reçus pour compte et risque du porteur et payés contre la remise des Coupons, suivant Art. 6 du Prospectus. Le PORTEUR de ce Certificat pourra en tout temps redevoir l'INSCRIPTION originale, contre restitution du Certificat, avec les Coupons non échangés et appartenant, et la procuration y annexée pour obtenir de nouveaux Coupons, moyennant le paiement des frais, mentionnés dans l'Art. 10 du Prospectus.
Amsterdam, den 10 ^e Mai 1857.	
Gaveu bij mij <i>S. Gommeling</i> <i>Bureau</i>	<i>W. Voomborg</i> <i>W. Borski</i>
Beitij uitgegeven, behoudende Coupons, tot de Staat Bank te St. Petersburg.	Delivered Coupons de Bureau de St. Petersbourg, jusqu'à la Grille Intérêts Bank.

Figure 11. 1825 Depository Receipt on Russian Debt by Stadnitski and Van Heukelom and others, with unredeemed coupons from January 1, 1918 on.

2466

L. A.

N^o 5320.

Certificaat.

Houder dezes

is gerechtigd tot een Kapitaal van

DUIZEND ROEBELS,

IN ASSIGNATIËN,

Inschrijving, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, welk fonds, door dit Certificaat gerepresenteerd, in bewaring is bij het

Algemeen Kantoor van Administratie te Amsterdam,

onder directie van:

STADNITSKI & VAN HEUKELOM,
JACOB VAN BEECK VOLLENDOVEN,
SAMUEL & DAVID SAPORTAS,
LAMAISON & BOUWER,
JOHANNES SAMUEL WURFFAAN
HENDRIK OYENS

en

DE LANOY & BURLAGE.

En heeft houder dezes, ingevolge het den 30 Junij 1824 uitgegeven, het regt het bovengenoemde fonds ten allen ti oplevragen, tegen teruggave van dit Certificaat met bijvoeging der nog niet vervall Coupons.

Certificat.

Le Porteur

a droit à une somme capitale de

MILLE ROUBLES,

EN ASSIGNATS,

Inscriptions, donnant 6 pC. d'intérêt, au Grand-Livre de la Dette publique de la Commission Impériale d'Amortissement à St. Petersburg, dont le titre se trouve déposé au

Bureau général d'Administration, établi à Amsterdam,

sous la direction de:

STADNITSKI & VAN HEUKELOM,
JACOB VAN BEECK VOLLENHOVEN,
SAMUEL & DAVID SAPORTAS,
LAMAISON & BOUWER,

187. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Januarij 1918, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

188. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Juli 1918, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

189. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Januarij 1919, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

190. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Juli 1919, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

191. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Januarij 1920, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

192. L. A. N^o 5320

COUPON voor zes maanden Rente, verschoven 1 Juli 1920, over een Kapitaal van DUIZEND ROEBELS Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg, betaalbaar na gedane afvertentie deswegens door het Algemeen Kantoor van Administratie te Amsterdam.

R^e. 30 in Assign.

H. van Heukelom

KAPITAAL R^e 1000. in Assignatiën.

Uitgegeven twaalf Stuks Individuele Coupons,

geteekend door *[Handwritten Signature]*

Verklaring voor NIEUWE COUPONS, behorende bij het Certificaat L. A. N^o 5320

van Inschrijving in Assignatiën, rentende 6 pCt., in het Grootboek der Publieke Schuld van de Keizerlijke Commissie van Amortisatie te St. Petersburg.

Door het Algemeen Kantoor van Administratie te Amsterdam, opgericht den 30 Junij 1824, onder directie van STADNITSKI & VAN HEUKELOM & C., zal binnen drie maanden na den vervalltijd van de laatste Coupon bij dit Certificaat uitgegeven, aan den Houder van dit Bewijs, doch na 1^o Januarij 1924 aan den Houder van het Certificaat, worden afgegeven een Stuk van Twaalf Stuks Nieuwe Halfjarige Coupons, waarvan de eerste vervallen zal 1^o Januarij 1921.

H. van Heukelom

Figure 12. Depository Receipts on American Railroads in Amsterdam for 10 shares of preferred stock in the Denver and Rio Grande Railway, and 10 shares of common stock in the Rock Island Railroad.

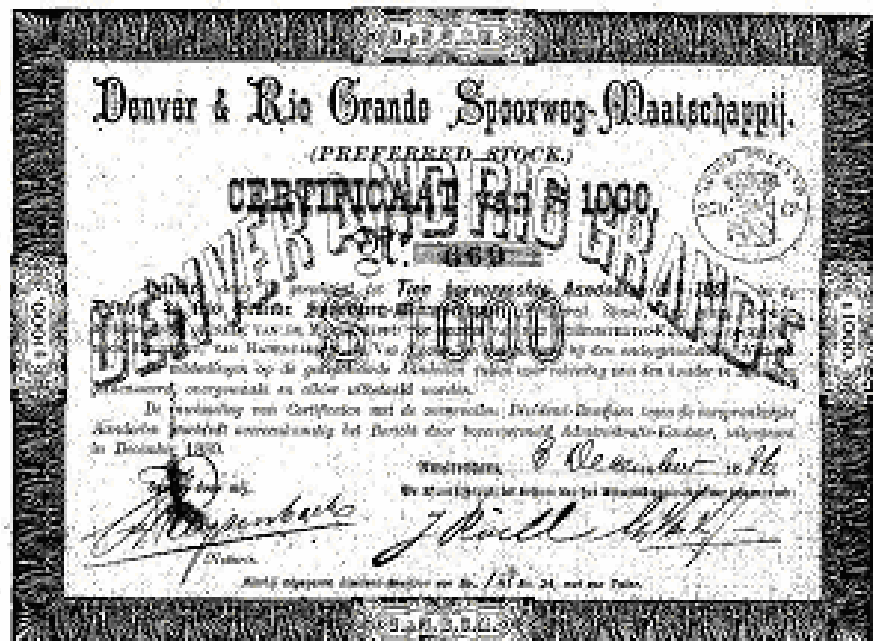
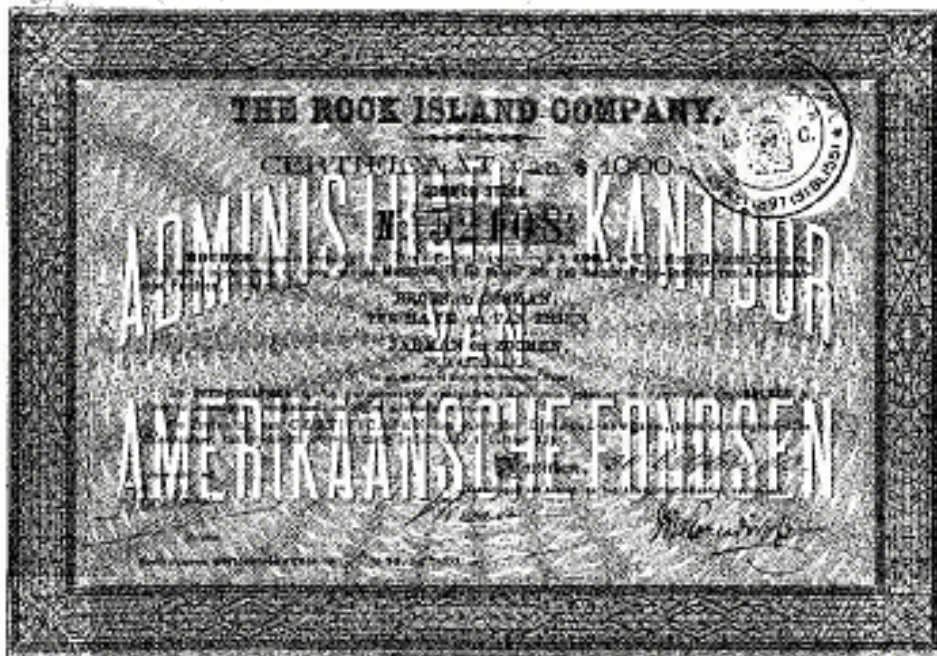


Figure 13: Foreign and Colonial Government Trust – Coupon of Reversion

The First British mutual fund contained a sinking fund similar to the early Dutch mutual funds. If at the end of the scheduled 24-year life of the trust, after all shares were redeemed, any remaining value of the fund would be divided among its investors by tendering this coupon of reversion.

