

LEMONS AND TIMBER. THE CASE OF TROPICAL TIMBER INVESTMENT FUNDS IN THE NETHERLANDS

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ABSTRACT

In this paper, we analyze the behavior of Dutch tropical timber investment funds in relation to financial regulation. These funds are a niche market within the market for socially responsible investments. During the past few years, several Dutch timber funds went bankrupt, whereas others were surrounded by scandals. Partly as a reaction to this, tighter regulation was developed and implemented. In response to the regulatory changes timber funds adjusted their operations and business strategy. The lack of supervision of timber funds, the subsequent tightening of the regulation and the strategic responses of the timber funds fits into the 'regulatory dialectic' as described by Edward Kane. Moreover, we can use Akerlof's concept of informational asymmetries to explain the underlying cause of the regulatory dialectic. The key problem with the Dutch timber funds is that there is no financial supervision with respect to the liquidity and the solvency of the timber funds. Consequently, investors are unable to verify the claims made by the timber funds, which causes major information asymmetries between the two parties. Our case study demonstrates how a lack of regulation can spoil a market that in itself has the potential to offer something useful to society.

1. Introduction

Since the early 1990s, there has been increased attention for investments that take account of social, environmental, and ethical issues. Socially responsible investing (SRI) has gained importance and has become a niche in financial markets all over the globe (International Finance Corporation 2003). The Social Investment Forum (2006) estimates that in the US every 1 out of 8 dollars is in some way or another invested by using social, environmental or ethical screens. A niche within this niche is investing in tropical timber. Tropical timber plantation investment

funds offer the public the opportunity to invest in tropical timber plantations (Canby and Raditz 2005). The marketing of the timber funds in the Netherlands emphasizes that the investor helps to fight the greenhouse effect, to set up local communities in developing countries, and above all has the opportunity to earn substantial financial returns. So far, this topic seems to have escaped the interest from academic researchers, despite the increased attention for SRI in general.

During the past few years several Dutch timber funds went bankrupt, whereas others were surrounded by scandals. Partly in reaction to this, tighter regulation was developed and implemented. In response to the regulatory changes timber funds adjusted their operations and business strategy. This paper investigates how financial regulation interacted with the behavior of tropical timber investment funds in the Netherlands. Given that the Netherlands has a fifteen-year history of tropical timber funds and has undergone important changes in the degree and extent of financial supervision, it can be regarded as a unique case study from which important lessons can be learnt.

The lack of proper supervision of Dutch timber funds, the subsequent tightening of the regulation and the strategic responses of the timber funds fits into the 'regulatory dialectic' as described by Edward Kane (1977). Moreover, we draw a parallel between the Dutch market for timber funds and Akerlof (1970)'s market for 'lemons'. We can use Akerlof's concept of informational asymmetries to explain the underlying cause of the regulatory dialectic. The key problem with timber funds in the Netherlands is that there is no financial supervision regarding the liquidity and solvency of the tropical timber funds. Consequently, investors are unable to verify the claims made by the timber funds, which causes major information asymmetries between the two parties. Our case study demonstrates how a lack of regulation can spoil a market that in itself has the potential to offer something useful to society.

Our research relates to the literature on financial regulation (for an overview, see Freixas and Rochet 1997). Financial regulation is generally justified on the grounds that the social costs of failure of financial institutions are large. On the other hand, there also are direct and compliance costs of regulation. Financial regulation in general is directed towards safety and soundness of the financial system (see Goodhart et al. 1998). For instance, portfolio restrictions, capital requirements, and

regulatory monitoring are crucial ingredients to ensure the financial solidity of investment funds. As such, regulation may help to reduce informational asymmetries.

The structure of the remainder of our paper is as follows. Section 2 provides a description of the tropical timber funds. In Section 3, we discuss the history and regulation of the timber funds in the Netherlands and assess how Dutch financial regulation interacts with the conduct of the tropical timber funds. Section 4 analyzes how the funds responded to (changes in) financial regulation. Finally, Section 5 concludes.

2. Tropical timber investment funds

Timber funds can be regarded as a special branch of mutual funds, which are financial intermediaries that pool financial resources of a group of investors. They invest these funds in (portfolios of) assets, which can be of a very different nature. As such, the mutual funds offer the public the opportunity to reduce transaction costs and to benefit from diversification by offering financial scale transformation. They pool relatively small amounts of money into larger investments, which for reasons of indivisibilities may not be achievable for the individual investor. The investment fund incurs scale and scope economies in this process that are not available to the relatively small individual investor. For the investment fund managers, who earn a fee for managing the funds, it is crucial to attract investors. A wide range of investment funds has emerged, aiming at servicing the particular needs and interests of the public.

Tropical timber investment funds basically sell participations in commercial forestry enterprises, which predominantly operate in forest plantations. Most of these produce teakwood, but other high-grade species such as robinia are also cultivated. The individual investor buys a participation in the investment fund and earns the returns (minus costs and fees) from the plantation's revenues. The maturity of the investments is approximately 20 years. In contrast to the typical investment fund, timber funds offer almost no opportunity for the investor – or only against a high penalty – to sell the investment before maturity. Thus, the investment is highly illiquid.

More than 90 percent of the tropical timber plantations are located in Asia; mainly in Indonesia, India, Thailand, Bangladesh, Myanmar and Sri Lanka. Other locations with significant areas of tropical timber are parts of tropical America (mainly Costa Rica, Trinidad and Tobago) and tropical Africa (Nigeria, Cote D'Ivoire, Sudan, Ghana, Togo and Benin) (Odoom 2001). Worldwide, these plantations contribute to 7-10% of the total timber production (Food and Agriculture Organization 1991). By means of certification of the plantations the investment funds can convey the environmental quality of the plantations to the public. The Forest Stewardship Council (1996) is an agency which is concerned with the sustainability of forest harvesting and this agency has drawn up guidelines for prudent forest management. These guidelines deal with ten topics: compliance with laws and council principles, tenure and use rights and responsibilities, indigenous peoples' rights, community relations and worker's rights, benefits from the forest, environmental impacts, management plans, monitoring and assessment and the maintenance of natural forests and plantations. Certification is still on a voluntary basis. The Rainforest Alliance is an NGO concerned with sustainable forest management and is an example of a certifier. It uses various criteria to decide whether or not a plantation is to be certified, such as sustainable production, management quality and the social rights of workers. The Forest Stewardship Council certifies the certifiers. The certification process itself as well as the certification of certifiers is still in its infancy. The information about the financial prospects and results, as well as the intermediary itself, is subject to financial regulation. This regulation differs widely across countries. For example, in Spain the timber funds are not regarded as financial intermediaries and are left completely unregulated. By contrast, in Australia and New Zealand timber funds are supervised by the financial authorities.

Table 1 provides an overview of the key risks associated with the timber funds. These are risks of a very varied nature and there is a substantial chance that hitherto unforeseen risks materialize. Some of the risks mentioned relate to the asset type itself (flexibility, diversification, quality, certification, foreign exchange), where others are related to fund organization (supervision, costs, agency problem, project). In general, the risks in Table 1 are all positively correlated. The overall picture emerging from Table 1 suggests that the funds are an extremely risky investment. For instance, there is a very substantial risk that the investor

will not earn the promised/expected return or that he or she will even lose part of the original investment. The risk profile of timber fund investments differs substantially from investments in ordinary mutual funds. The latter are more liquid and flexible, generally subject to both behavioral and prudential supervision, usually more diversified (e.g. across different industries and countries), and mostly issued by financial institutions with a solid reputation. The informational differences between investors and timber funds regarding many of the risks listed in Table 1 constitute the main informational asymmetries between the two parties. In particular, investors have to make their decisions on the basis of scarcely available public information, whereas the funds possess insider knowledge about the daily operations of the projects and the resulting costs and benefits.

<i>Risk</i>	<i>Description</i>
Flexibility	The size of the investment is very substantial, starting from on average € 5,000. Furthermore, the maturity of the investment – usually between 15 and 20 years – is rather long from the perspective of the investor's life cycle. In this period, personal affairs such as unemployment, marriage, divorce, serious illness, and so forth can affect the income and wealth of the investor, which may ask for a change of her investments. With the timber funds, this is difficult as there is no liquid secondary market. There is usually a high penalty on liquidating the investment before maturity. Moreover, in the latter case the investor usually has to find a counter party herself.
Supervision	Supervision on this industry is limited. In the Netherlands, there is no prudential supervision, but only a general code of conduct provided by the prudential supervisor. Furthermore, under the Dutch law, funds that offer investments above € 50,000 do not fall under financial supervision at all. Therefore, the investor will have to do her own research on the trustworthiness of the fund.

Costs	The funds' costs, such as land and labor costs, management fees, and so forth are opaque. There is no detailed reporting about these costs and expenses. As a result, it is often a complete mystery what the eventual returns will be. In the investment contract, it is not clear which risks are accounted for and are deemed 'reasonable'. In this way, the initial investment is basically an open cheque. The Dutch supervisor does not take into account the cost structure in the licensing process.
Diversification	Most funds invest in one single plantation in one location where one specific type of tree is cultivated. As such, investments are maximally concentrated. This implies that there is no risk diversification.
Foreign exchange	Currency risk – unexpected changes in the exchange rate – is not accounted for. The costs are made in euro and in local currency, whereas the price of timber is in US dollars. This is an additional risk and – given the long maturity of the investment – it can not be hedged.
Country risk	There is the risk of nationalization or seizure of the assets or problems with cash-flows to be transferred abroad. This risk is not accounted for.
Quality	There is a wide variation in the quality of teakwood and prices differ accordingly. This affects the earnings from the plantation and, therefore, the return earned by the investor.
Agency problems	There is no proper alignment between the interests of the various parties. For example, the plantation manager aims at selling his harvest at the first price, the investor aims at the best price. Monitoring the manager is costly. Corporate governance of the constructions is very problematic.
Project risk	The risk of mismanagement. Given the complexity of the organization this risk is very high.

Certifi- cation	Certification affects market access, particularly access to the best market segments. As certification of the plantation depends on several aspects, it is not certain whether the certification will be kept over the complete maturity once it has been granted.
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Sources: Mills and Hoover (1982), Redmond and Cabbage (1988), Wear (1994) and Scholtens (1998).

TABLE 1. Key investment risks of tropical timber funds

3. Timber funds in the Netherlands

In 1992, the first Dutch timber fund entered the market, namely Bosque Teca Verde. Within one year, the insurance company Ohra introduced a teakwood investment which attracted a lot of interest. Ohra's timber investment was presented as extremely profitable, with returns up to 19% per year. This investment opportunity gained much attention in the press, as it claimed to provide the investor not only with a substantial financial return but also with the opportunity to contribute to the environment and to support local social development. However, after some media attention questioning the high returns and the benefits for the local population in developing countries, Ohra adjusted the return forecasts downwards and eventually withdrew the product from the market. Despite this negative experience, many new timber funds entered the market in the years thereafter. In their marketing, they specifically addressed the issue of creating a greener planet and reducing global carbon dioxide emissions. Many people welcomed the idea of earning a substantial financial return and doing something good for the planet.

However, during the past decade several Dutch timber funds suffered from bad management and investors lost huge amounts of money, which turned out to have disappeared into the pockets of fraudulent managers and directors. At least seven funds went bankrupt and of one fund the bankruptcy proceedings are still running. The amount

of money invested in these funds is estimated at 93 million Euros.¹ Other funds are still operational, but surrounded by a scandalous past, bad management and sometimes even fraud. At the end of 2007 we counted 35 Dutch and nine foreign timber funds that were active on the Dutch market, with a market value of 500 million euro according to the Autoriteit Financiële Markten ('Financial Markets Authority', AFM). To get an idea of the relative size of this market, we compare it with the size of the Dutch market for 'conventional' socially responsible investments, which equaled € 3.8 billion at year-end 2006 (Van der Voorst and Van Weperen 2007).

With respect to financial regulation, the Dutch financial authorities distinguish between 'behavioral' and 'prudential' supervision. The goal of the former type of supervision is to ensure that consumers are provided with adequate information by financial intermediaries, whereas the aim of the latter is to monitor and safeguard the financial solvency and solidity of financial institutes. The AFM is responsible for behavioral supervision, whereas the Dutch Central Bank ('De Nederlandsche Bank', DNB) is the prudential supervisor. In the 1990s, financial supervision in the Netherlands went along the different types of intermediaries (i.e. banks, insurance companies, pension funds, investments funds). By then, the timber funds seemed to fall under the Law on Supervision of Investment Funds ('Wet Toezicht Beleggingsinstellingen'), which was effected by DNB. However, this law applied only to collective investments. As the timber funds claimed that their investments were in earmarked trees or hectares on plantations, they could circumvent financial supervision.

Although the first timber fund was introduced in 1992, it took until 2006 before timber funds came under supervision of the AFM and were covered by the Law on Financial Services ('Wet Financiële Dienstverlening'). Prior to that, DNB did not want to monitor the timber funds. The supervisor was afraid that consumers would erroneously interpret supervision as an approval sign or proof of quality of such funds. In 2006, the new legislation forced all timber funds to apply for a

¹ The bankrupt funds are: EcoBrasil, EcoSure, Global Green, Green Capital, Robinia Gold, Sintrex/CO2 Invest, United Green. The figure of € 93 million is based on information in newspaper clippings surrounding the bankruptcy of the fund.

license with the AFM. The licensing process was not finished yet when legislation changed again in January 2007. Under the new legislation, called the Law on Financial Supervision ('Wet Financieel Toezicht'), timber funds also have to apply for a license. The licensing process finished end-2007 and only six out of the 45 applying timber funds have been granted a license. Various funds voluntarily withdrew their application in an early stage, following the advice of the AFM (Van der Marel 2007).

Apart from the compulsory license, timber funds have to fulfill several other – more general – requirements. Since 2006, all funds are obliged to provide a 'financiële bijsluiter', which is a description of the investment product, highlighting for example risks of losing the initial investment and the costs involved with the investment. As decided by the AFM (see Autoriteit Financiële Markten 2006), investments in timber should always be placed in the highest of six risk categories ('very risky'). Additionally, the funds should provide a more detailed investment brochure of their product on their website, called the 'prospectus'. This document should elaborate on, among others, the maturity of the investment, risks, fees and costs, historical performance, and details of the contract. Obviously, the existence of a prospectus does not guarantee the liquidity and solvency of the timber fund, as the latter would require prudential supervision. Also, the timber funds have to provide their investors with an annual valuation of their plantations done by an independent party.

The funds that have been granted a license now advertise with it, suggesting that the license is a quality sign. However, timber funds are not being supervised by DNB and the AFM license in no way guarantees the financial solidity of the fund (Dohmen 2007; Buters and Mos 2007). The licensing criteria of the AFM relate solely to financial expertise, reliability and integrity of the board of the fund and its employees, the way the fund informs its investors (transparency), and the administrative organization of the fund (Dohmen 2007).

4. Regulation and Fund Behavior

In the early years, the Dutch financial supervisors did not regulate the market for investments in timber plantations. Timber fund investments

became 'big business'. As such, the lack of supervision seemed to have contributed to the growth in the number of timber funds. From virtually non-existent in 1990, their number rose to more than 40 in 2007. As mentioned before, several Dutch timber funds went bankrupt, whereas others were surrounded by scandals.

When regulation was tightened early 2006, this led to a pronounced response by the Dutch timber fund industry. For example, some immediately stopped their activities or relocated their business to another country with less regulation, others diversified by broadening the investments opportunities they offered. For instance, some funds started to offer non-timber investment objects (such as exotic fruits) and assets other than participations (such as bonds, venture capital and real estate properties). Furthermore, several funds violated the law as they continued their activities without the required license.

The lack of supervision of timber funds, the subsequent tightening of the regulation, and the strategic responses of the funds provides a vivid illustration of the 'regulatory dialectic' described by Edward Kane (1977). Kane (1977) writes that 'introducing political power into economic affairs initiates a dialectical process of adjustments and counter adjustments' and that 'continuing play between the political and economic markets produces broadly predictable cycles in which controls are set, markets adapt, and controls are redesigned and set for yet another round'. Kane (1977) points out that the intentions of political power are 'good', in the sense that they aim at protecting individuals against agents whose behavior may reduce individual welfare. However, governmental good intentions can often not be accomplished in a market economy, as regulatees try to find and exploit loopholes in the regulations or even disobey the law. Kane emphasizes that the resulting regulatory dialectic is a costly process. Market adaptation increases the costs of performing the previously unregulated activities (due to for example the costs of lawyers and administrators). Moreover, the rising bureaucracy at the side of the government induces high costs for society.

We now switch back to the interaction between the Dutch timber funds and the financial supervisors: All the actions of the financial authorities seemed to result in new problems for which the supervisors had to find a solution. For example, timber funds extended their activities to the real estate market. This sector is hampered by similar informational asymmetries as the timber plantations. In particular, this

relates to the problem of assessing the true value of the project. Recall that the risks listed in Table 1 all affect the value of the timber project. Restructuring of the timber funds often took the form of contract renegotiation with the clients, where they were e.g. asked to swap their investment in illiquid bond-like assets with long maturities. Liquidation of the fund left the investors with the full loss of their investment. Relocation to other countries made it very difficult for the Dutch investors to claim any of the fund's assets. Basically, the nature of regulation is that it is always at least one step beyond in this 'arms race' (Kane 1977). In our opinion, the 'story' of the tropical timber funds in the Netherlands is a typical example of Kane's concept of regulatory dialectic.²

To highlight the underlying cause of the aforementioned regulatory dialectic, we draw a parallel between the Dutch market for timber funds and Akerlof's market for 'lemons' (Akerlof 1970).³ Basically, Akerlof's paper is about the economic costs of dishonesty. The presence of people in the market who are willing to offer inferior goods tends to drive the market out of existence. There may be potential buyers of good quality funds and there may be some potential sellers of good quality products. However, people who pawn bad products as good investments drive out the legitimate business. The cost of such 'dishonesty' (i.e. the imprudent behavior of market participants) is not only the amount by which the purchaser is cheated; this cost also includes the loss incurred from driving (potential) legitimate business out of existence. Drawing a parallel, we can say that the Dutch market for timber funds is full of lemons. This is underlined by the bankruptcies and scandals during the past years, but also by the steady fall in the value of these funds on the over-the-counter secondary market (Scholtens and Spierdijk, 2007). Bad timber funds may not only drive out timber funds with good intentions. The bad reputation of the former may even spread out to related financial activities, such as other green or socially responsible investments.

² We point out that the Dutch timber funds constitute only part of the SRI-like investment market in the Netherlands. Outside this segment, i.e. the 'conventional' market for socially responsible investments, we have hardly witnessed any of the problems described above.

³ With 'lemons', Akerlof (1970) refers to bad cars.

In the Dutch market for SRI, the funds that offer investments in timber plantations can be regarded as the lemons. Other providers of socially responsible investments are certainly not to be qualified as such. To a great extent, this results from the fact that regulation of more 'official' SRI is much better. First, a large segment (about one third) of Dutch SRI is under a special tax regime (the so-called green funds, see Scholtens 2007). Here, funds are obliged to report in what types of projects they invest their money. These projects have to be of an innovative nature with respect to environmental technology. Otherwise, the tax exemption is not granted. Second, the providers of conventional SRI funds are well-known financial institutions which are subject to prudential supervision by the financial authorities and have a good reputation. In the financial industry, it is the prudential supervision by the financial authorities which helps the depositors and investors to believe in the reliability of the financial intermediary (see Freixas and Rochet 1997). Here, the informational asymmetries between intermediary and depositor or investor are partly solved by having an independent party who, on behalf of depositors and investors, aims at monitoring the intermediary's operations. The key problem with the Dutch timber funds is that there is no prudential supervision. Consequently, investors are unable to verify the claims made by the timber funds, which causes major information asymmetries between the two parties.

We can also use Akerlof's ideas to evaluate several solutions for the problems in the Dutch timber fund market. Akerlof comes up with numerous institutions that may arise to counteract the effect of quality uncertainty, such as guarantees, brand names, and licensing. Guarantees are put in place to ensure the buyer of some normal expected quality. We observe that the timber funds use FSC certification of the plantation as a signal of the quality of the fund. However, there are no explicit and enforceable guarantees for this quality and it does not relate to financial returns. As to brand names, one of the first timber funds was offered by a large and well-respected Dutch financial institution (Ohra). It managed to attract a substantial amount of investors. So branding seems to work. However, Ohra ended the project because it expected to be unable to fulfill the high return promises and offered the investors a generous alternative investment. Furthermore, various attempts have been made to come up with some licensing practice for timber funds. However, these were unsuccessful because the institutions providing the licenses were

heavily connected with timber funds which rendered their independent position untrustworthy.

The combination of regulatory dialectic and poor product quality is, in our opinion, likely to result in Kane's 'unintended evil' of keeping the timber fund business going. The funds will adapt to the tighter regulation. Given that there is regulation, part of the public may regard this as a signal that the funds are under supervision and draw the unsubstantiated conclusion that this business is sound. As a side effect, this 'muddling through' may negatively affect the reputation of the Netherlands as a financial centre and lower the demand for and flow of funds to green and socially responsible investments (Rotteveel 2005).

5. Conclusion

In this paper, we analyze the behavior of Dutch tropical timber investment funds in relation to financial regulation. These funds are a niche market within the market for socially responsible investments.

Initially, the Dutch market for timber funds was completely unregulated. Over time, an increasing number of timber funds entered the market. People invested huge amounts of money into these funds, but several funds went bankrupt, whereas others were surrounded by scandals. In 2006, the financial authorities finally intervened in the market for timber funds and established behavioral supervision. Many firms responded to the change in regulation by changing their operations and business strategy.

The lack of supervision of timber funds, the subsequent tightening of the regulation and the strategic responses of the timber funds fits into the 'regulatory dialectic' described by Edward Kane (1977). To highlight the underlying cause of the 'arms race' between timber funds and supervisory authority we draw a parallel between the Dutch market for timber funds and Akerlof's market for 'lemons' (Akerlof 1970). The key problem with the Dutch timber funds is that there is no prudential supervision. Therefore, investors are unable to know whether the claims made by the timber funds are reliable, which causes major information asymmetries between investors and timber funds.

This case study on timber funds in the Netherlands demonstrates how a lack of regulation can spoil a market that in itself has the potential to offer something useful to society.

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