

WHY DO HOLDING COMPANIES IN PYRAMIDAL GROUPS TRADE AT A DISCOUNT? (*)

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Abstract

Holding companies, which play an important role in corporate finance in Belgium and in other Continental European countries, often trade at a discount to their estimated net asset value (NAV). First, we discuss possible explanations for this discount: holding company destroys value, NAV overestimates actual value, noise traders cause underpricing, and private benefits of control. Second, we investigate the discount of the Belgian holding company Cobepa, for which detailed information on the calculation of the NAV was available. We can exclude the first three explanations for the Cobepa case, we cannot rule out private benefits as an explanation.

Key words: holding companies; closed-end fund discount; pyramidal groups; private benefits; clinical study

1. INTRODUCTION

In Belgium, as in other Continental European countries, holding companies play an important role in corporate finance. These holding companies are part of corporate groups which are characterised by complex pyramidal structures, interlocking ownership and voting pacts. These structures allow the ultimate owner to maintain control over a large group of companies through cascades of holding companies, while owning only a fraction of their cash flow rights.

The holding companies in these groups often trade at a significant discount compared to their estimated net asset value, which is the sum of the estimated values of the assets in the portfolio of the holding company minus its debt. So far there has been very little research on this “holding company discount”. On the other hand, plenty of research exists on a similar phenomenon observed for closed-end mutual funds, the so-called “closed-end fund discount”. Consequently, in our search for an explanation for the holding company discount, we will compare holding companies to closed-end mutual funds. The most important difference between a holding company and a closed-end mutual fund is that the former has the objective to control the companies in which it has a stake (active investor), whereas the latter only aims to make a profit out of buying and selling stakes (passive investor)¹.

There are several possible explanations for the holding company discount.

1. A holding company can create several benefits for its shareholders, but it also has several costs. If the costs outweigh the benefits, the holding company destroys value, which could explain (part of) the discount.

2. The estimated net asset value may not take into account the lack of liquidity of certain stakes in the portfolio. If the net asset value overstates the true value of a holding company, this could explain (part of) the observed “discount“.
3. Noise traders may invest more in the shares of a holding company than in its underlying shares. Hence, they may create a deviation of the market price of the shares of a holding company from their fundamental value. If they systematically undervalue holding companies, this could explain (part of) the discount.
4. Private benefits of control may be extracted from the (holding) companies in a business group. There may be private benefits of control for the controlling shareholder, at the expense of the other shareholders. There may also be private benefits of control for the professional manager, at the expense of *all* shareholders. If investors anticipate the extraction of private benefits of control, this will have a negative effect on the price they are willing to pay for the shares of the holding company.

In the first part of the paper, we elaborate on these possible explanations for the holding discount. In the second part, we examine the discount of the Belgian holding company Cobepa. In 2000, Cobepa traded at a discount to its estimated net asset value. A bid was made by its majority shareholder, BNP Paribas, a French financial services group, for the Cobepa shares it did not already own. BNP Paribas offered a price which was significantly higher than the stock market price, but significantly lower than the estimated net asset value of Cobepa. An investigation of the bid by BNP Paribas provides an interesting contribution because detailed information is available on the estimation of the net asset value of Cobepa, by Cobepa itself, by BNP Paribas, and by three independent investment banks. The bid led to a conflict of

interest between the Belgian management and the French shareholder of Cobepa. The bid was part of a strategy of BNP Paribas to refocus the activities of Cobepa. The Belgian management of Cobepa, supported by some of the minority shareholders, resisted this strategy and opposed the bid, claiming that the price offered by BNP Paribas, which was significantly below the estimated net asset value of Cobepa, was too low.

The Banking and Finance Commission (CBF), the official Belgian financial supervisor, at first ruled that the price offered by BNP Paribas was too low, thereby supporting the Belgian management. By doing so the CBF explored the limits of its authority, as it was argued that the CBF was only allowed to judge the prospectus composed by BNP Paribas and not to judge the price offered. Indeed, in the end the CBF agreed with the offer price it originally opposed. We do not know of any other cases in which the CBF took similar action.

Our analysis indicates that neither the argument that the costs of the holding company outweigh its benefits, nor the argument that the actual net asset value is lower than the estimated net asset value, seems to provide a convincing explanation for the Cobepa discount. The observation that Cobepa, like many other Belgian holding companies, traded at a significant discount for many consecutive years, suggests that capital market inefficiencies caused by noise traders also do not explain the discount. The ownership structure of Cobepa was not characterised by a strong the separation of ownership and control. Nevertheless, it is possible that BNP Paribas abused its power as a controlling shareholder to extract value from Cobepa.

2. EXPLANATIONS FOR THE HOLDING COMPANY DISCOUNT

In this section, we discuss several factors that may affect the value of a holding company. Some of these factors have the same impact on the value of the assets in the portfolio of the holding company. We will refer to these factors as “non-divergent“. Factors that affect the value of the holding company but have a different or no impact on the value of its portfolio are “divergent” factors. Only divergent factors can affect the holding company discount.

2.1. Benefits and costs of a holding company

There are many reasons why it may be beneficial to set up a holding company, but setting up a holding company will also generate costs. If these costs exceed the benefits, this should lead to a discount.

2.1.1. Benefits of a holding company

A holding company may create value for its shareholders in several ways.

1. What distinguishes a holding company from a closed-end mutual fund is that a holding company actively monitors management of the companies in which it has a stake (e.g. Daems, 1978). In this way the holding company can create value for its shareholders, as it can better monitor management than small individual investors. However, by monitoring management the holding company does not

only create value for its shareholders, but also increases the value of the companies it controls. Consequently, this factor is non-divergent.

2. A holding company may also create value by granting services to the companies in which it has a stake, for example by coordinating their tasks. This is another factor that distinguishes a holding company from a closed-end mutual fund. Analogously to the previous factor, this is a non-divergent factor, because the services granted increase the value of the holding company precisely owing to the fact that these services increase the value of the companies controlled by the holding company.

3. A holding company provides a diversified portfolio for its shareholders, as its shares represent stakes in several listed and non-listed companies. Hence, if an investor composes a portfolio and invests in some shares of the holding company, he will need to invest less in other shares in order to have a maximally diversified portfolio. If the investor would want to achieve the same degree of diversification without investing in the shares of a holding company, he would incur higher transaction costs and portfolio-management costs. Other cost reducing aspects of a diversified company are described in the literature on corporate diversification and shareholder value. First, a diversified company carries less risk, so it can take on more debt, which creates a tax shield. Second, diversified companies may enjoy the benefits of an internal capital market, which provides less costly financing and more decision control to the managers of the company. Finally, a recent body of research on corporate diversification argues that diversified companies may have

easier access to external capital markets, due to valuation problems faced by investors in the presence of asymmetric information (e.g. Hadlock et al., 2001).

4. Like a closed-end mutual fund, a holding company can try to take stakes in companies that are undervalued, in order to obtain an excess return. If the market feels that the management of a closed-end fund has the capacity and knowledge to do this, the fund will sell at a premium to its net asset value (Boudreaux, 1970). Hence, this factor is divergent.

5. In a parent-subsidary relationship, the parent may reap some benefits from the laws and regulations on taxes, for example through the tax shield a loss making subsidiary can provide. In some countries, such as the United States, it is stipulated that when a parent company owns a certain amount of the ownership and control rights of its subsidiary, their incomes can be consolidated to calculate the taxes due (Schill and Zhou, 2001). In countries where this tax regulation is operative, this would also apply to a holding company, generating a divergent effect.

2.1.2. Costs of a holding company

A holding company thus could create value in several ways, but there are also costs involved. All costs mentioned are divergent.

1. Investing indirectly through a holding company instead of investing directly in the companies controlled by the holding company, may create an additional “tax

leak” to the state, if additional taxes at the level of the holding company have to be paid.

2. In countries where capital gains are taxed, another problem emerges. As a capital gain is not taxed until it is realised, a tax-timing option is provided to investors. They can realise losses immediately, and postpone the realization of profits. This can be done by selling the stake at a later point in time, as a capital gain is only realised the moment the stake is actually sold. As with standard options, the value of the tax timing option increases when the underlying security volatility (Schill and Zhou, 2001). Most holding companies hold a well-diversified portfolio. Therefore, it can be expected that the stock prices of holding companies maintain lower price volatility than those of the companies in their portfolio. Because investors are unable to realize the tax-timing feature of the companies in the portfolio, holding companies could trade at discounts. It should be noted, however, that this argument does not hold if capital gains are not taxed.
3. While an internal capital market may create value, it may also destroy value if it leads to bad allocation of resources (see e.g. Lamont (1997), Scharfstein and Stein (2000), Shin and Stulz (1998)).
4. If the market feels that the management of a holding company or a fund has the capacity and knowledge to select undervalued shares in order to generate an excess return, investors are willing to pay a premium for the shares of the holding company or the fund. Similarly, if the market feels that the management of a closed-end fund is not able to select portfolios that generate an excess return, and

incurs additional costs by trying to do so, or selects overvalued portfolios, this would lead to a discount (Boudreaux, 1970).

5. In a holding company, general costs, such as the compensation of the management of the holding company, are incurred. Moreover, if the holding company actively monitors the companies in which it has a stake, it will bear the monitoring costs, while it has to share the benefits of monitoring with the other shareholders of these companies. These general costs should be higher for holding companies than for closed-end funds, as the latter do not actively monitor management of the companies in which they have a stake.

2.2. Liquidity and net asset value

In order to value a holding company or a closed-end mutual fund, the net asset value has to be estimated. The net asset value can be defined as the value of total assets minus the value of debt. How should the value of total assets be determined? Obviously any asset valuation based on efficient market prices is more correct than a valuation based on book values. However, if a holding company sells a large block of shares on the open market, it might have to do so at a price below the market price of these shares. Moreover, if a holding company wants to sell shares of a non-listed company, it may be hard to find a buyer who is prepared to pay the fundamental value of these shares. These “lack of liquidity” arguments imply that the estimated net asset value overstates the true asset value of the holding company. Hence, the holding company discount may arise because the estimated net asset value is too high, not because the market valuation is too low.

The “lack of liquidity” arguments can be countered, however. First, when a holding company sells a controlling stake, it can receive a *control premium*: investors are often willing to pay a premium over the market price for a block of shares that gives control power in a company, because they anticipate private benefits of control (see e.g. Barclay and Holderness, 1989). Second, investors may be willing to pay a *premium* for the shares of a closed-end fund or a holding company, as the liquid shares of the fund or the holding company offer a possibility to invest in illiquid shares indirectly (Dimson and Minio-Paluello, 2002). In these cases the net asset value thus may actually *undervalue* the closed-end fund.

Moreover, the closed-end fund literature treats of a phenomenon that contradicts the hypothesis that the net asset value based on market prices overstates the true value of a closed-end fund. It can be observed that when a fund is open-ended² its market price rises to its net asset value, which suggests that the net asset value is the correct valuation of the fund and the market price is an undervaluation of the fund (Lee et al., 1990). Hence, this suggests that the net asset value correctly values a closed-end fund. This might also be true for a holding company.

2.3. Capital market inefficiencies

According to Black (1986), there are two kinds of investors. On the one hand, there is the rational investor, who grounds his action on analyzing information. On the other hand, there is the irrational investor, who trades on noise, which he believes is information. Noise traders provide liquidity in a capital market, for they are the

counter-party to investors with information, but they make market prices inefficient (Black, 1986).

It can be shown that the clientèle of closed-end funds consists mostly of individual investors. They hope to benefit from the diversification of the fund through the security substitution it provides. Institutional investors have less need for this (e.g. Dimson and Minio-Paluello, 2002). The individual investors are the noise traders, because they do not have the means or the competence to undertake a sophisticated analysis into the value of a share. The institutional investors, on the contrary, do. Therefore, they are the rational investors. For a closed-end fund it can be assumed that noise traders are more likely to invest in the shares of the fund than in the shares in the portfolio of the fund, as the fund offers a security substitution (Lee et al., 1991; Dimson and Minio-Paluello, 2002). The same may be true for holding companies.

Consequently, due to noise traders, the market price of a fund or a holding company may deviate from its fundamental value³. This may provide an opportunity for the rational investors to apply arbitrage strategies, but there are several impediments to arbitrage. First, as the actions of noise traders are unpredictable and rational investors have short horizons, this contains a risk, for it is not certain the market price will return to the fundamental value. This keeps the rational investor from arbitraging, which allows the market price deviation from the fundamental value to persist (Lee et al., 1991). Moreover, setting up an arbitrage strategy is difficult. First, the arbitrageur does not know how long he will need to hold the short position, because it is not sure when the market price will return to the fundamental value. Second, the interest on the short position may be less than the interest on the long position. Third, a fund

announces the exact composition of its portfolio only on certain points in time. This means a rational investor is not able to replicate this portfolio at every instant (Gemmill and Thomas, 2002). Finally, even when a rational investor would be able to replicate the portfolio of the fund, the costs incurred in a fund will decrease the profit he can make in an arbitrage strategy (Dimson and Minio-Paluello, 2002).

Moreover, setting up an arbitrage strategy is often simply not possible for European holding companies, as it is not possible to sell the assets in the portfolio of the holding company short. Also, a large part of the portfolio of the holding company may not be listed and is therefore not replicable.

2.4. Private benefits of control

On the one hand, there may be private benefits for the professional manager of the holding company, at the expense of all shareholders: *managerial entrenchment*. On the other hand, there may be private benefits for the controlling shareholder, at the cost of the other shareholders.

2.4.1. Private benefits for the professional manager

A contract is concluded between the investors and the manager about how the manager will employ their resources and how the proceedings will be distributed. Not everything can be anticipated in this contract, however, so the manager is empowered to decide in every unforeseen situation. The manager might abuse this power to pocket some of the resources provided by the investors, or he can start his own

company to which he transfers the output or sometimes even the assets of the company that he manages at prices below the market price, in order to generate a profit for himself. This is called managerial entrenchment (Shleifer and Vishny, 1997).

Evidence on the existence of managerial entrenchment can be found in the closed-end fund literature: a manager will resist the open-ending of a closed-end fund. In the traditional agency theory this is explained by the fact that the manager would lose his job in most cases of open-ending (Barclay et al., 1993). Another explanation could be that the manager wants to prevent losing the benefits that he can gather through managerial entrenchment. Brauer (1984) demonstrates that the expense ratio of a closed-end fund is often larger than the expense ratio of an open-end fund, which implies that open-ending a closed-end fund would imply a loss of benefits for the manager.

2.4.2. Private benefits for the controlling shareholder

Commonly, one share of common stock gives a shareholder one vote in the General Assembly, and a right to a part of the cash flow of the company that is available for distribution. Normally, this cash flow is distributed proportionally to the ownership rights held by the shareholders. The controlling shareholder can abuse her power to gather private benefits of control, to the exclusion of the other shareholders.

Barclay and Holderness (1989) study block trades involving public corporations, and find that when somebody wants to buy a block of shares that makes her the

controlling shareholder of the company, she is prepared to pay a premium to its post-announcement exchange price for it. This indicates that the individual anticipates private benefits of control.

Dyck and Zingales (2002) study 412 control transactions in 39 countries between 1990 and 2000, and find that the premium paid for control is on average 14% of the equity value of a firm. Interestingly, they find that this premium, which ranges from -4% in Japan to +65% in Brazil, is higher when the buyer comes from a country that protects investors less, and thus is more able to extract private benefits of control.

A second method to estimate private benefits for the controlling shareholder relies on the existence of companies with multiple classes of shares traded, with differential voting rights. In this case the value of a vote can easily be calculated. Nenova (2003) measures the value of the voting rights of control blocks in a sample of 661 dual-class firms in 18 countries, in 1997. She finds that the value of control blocks varies widely across countries, and is determined by e.g. legal environment, law enforcement and investor protection.

Another indication of the existence of private benefits for the controlling shareholder can be found in the closed-end fund literature. The controlling shareholder of a closed-end fund often refuses to open-end it, although she would gain an abnormal return by doing so. Not making use of this opportunity might indicate that she has private benefits in the fund that she wants to preserve (Barclay et al., 1993).

2.4.3. *Private benefits of control in a holding structure*

In a pyramidal holding structure the controlling shareholder has an even larger incentive to extract private benefits of control, as a separation between cash flow rights and control rights is created. In the example presented in Figure I, the ultimate shareholder is able to exercise control over Company (C) through two holding companies, while only having an indirect stake of 13,6% in Company (C).

insert Figure I about here

As the ultimate shareholder controls every level in the holding structure, she can extract value from any company in the holding structure. In this way the ultimate shareholder draws value towards herself at the expense of the minority shareholders on the level of the company from which value has been extracted. This falls under the term *tunneling* (La Porta et al., 2000).

Bertrand et al. (2000) find evidence on tunneling in Indian business groups. Their results show that the diversion of resources follows the lines of ownership, flowing from firms near the bottom of the pyramid to firms near the top of the pyramid. Furthermore, they are able to discern that much of this diversion occurred on non-operating components of profits. Similar results are found by Bigelli and Mengoli (1999) for Italy. They hypothesise that the high separation of ownership and control achieved in Italian listed companies through the use of non-voting shares and stock pyramiding, may favour acquisitions made to increase the private benefits to the controlling shareholders rather than total shareholders' wealth. Their research reveals

that for acquisitions made within a pyramidal group the price is set so as to transfer wealth towards the companies located at the upper levels of the pyramidal chain, where the ownership of the majority shareholders is less diluted. Bae, Kang and Kim (2000) use Korean mergers to investigate the nature of business groups in emerging markets and examine whether Korean business groups, Chaebols, add value to their member firms, or provide the controlling shareholders with an opportunity for wealth transfer. Their results also support the tunneling view that firms belonging to business groups pay less attention to the maximization of individual firm value and make takeover decisions that are beneficial to the controlling shareholders only.

Buyschaert, Deloof and Jegers (2004) find no evidence on the existence of tunneling when studying Belgian pyramidal groups in the period 1996-1999. They find that in intra-group equity sales positive abnormal returns are generated for both the buying firm and the selling firm, which suggests that value is created for all shareholders. These findings are in contrast to the results of Bigelli and Mengoli (1999). Buyschaert et al. (2004) suggest that a possible explanation for this disparity could be that the 1996-1999 equity sales in Belgian groups were induced to create a more transparent group structure, whereas the 1989-1996 acquisitions in Italian groups could have been motivated by shareholder expropriation.

The other form of private benefits of control, namely private benefits for the professional manager at the expense of all shareholders (including the controlling shareholder) might also be found in a holding company, but to our knowledge this has not been documented yet.

Both forms of private benefits could explain (part of) the holding company discount. Investors investing in the holding company will ask for a higher return on their investment when they anticipate private benefits for the professional manager or for the controlling shareholder.

3. THE CASE OF COBEPa

In the previous section, we have reviewed some possible explanations for the discount on holding companies. In this section, we will examine to what extent these explanations may apply to the case of the Belgian holding company Cobepa.

In 2000, Cobepa traded at a discount to its estimated net asset value. On June 8, 2000, the Board of Directors of its majority shareholder, BNP Paribas, a French financial services group, decided to make a bid for the Cobepa shares it did not already own. First we explain the background of the bid. Then we discuss the discount of the market value of Cobepa to its estimated net asset value. Finally, we examine to what extent the factors discussed in the first part of the paper may explain the discount of Cobepa.

3.1. The BNP Paribas bid

In this section, we will introduce both parties in the bid and explain the circumstances of the bid.

3.1.1. BNP Paribas

The bidder, BNP Paribas was the result of the merger on May 23, 2000 between the Banque Nationale de Paris (BNP), a French retail bank, and Paribas, a French financial services group with roots in investment banking and retail banking⁴.

On June 8, 2000, the day the Board of Directors of BNP Paribas decided to make a bid for Cobepa, BNP Paribas was the largest listed financial services group in France. It was active in three domains (retailing, including some specialized financial services like consumer credit, lease financing, and real estate financing; corporate and investment banking; and private banking, including asset management, securities services and insurance). Besides the three core businesses, BNP Paribas had a subsidiary named BNP Paribas Capital that invested in unlisted companies (Prospectus, 2000, p. 62-64).

3.1.2. Cobepa

The target, Cobepa (Compagnie Benelux Paribas) was established on December 4, 1957, by the Compagnie Financière Paribas, a holding company that controlled several banks in France⁵. The establishment of Cobepa was part of a strategy to create a network of holding companies in foreign countries. Cobepa started off by investing in the key sectors of the Belgian economy at that time, namely steel, distribution and public utilities, and grew strongly, owing to frequent mergers and additional capitalisations (Musch, 1983).

On June 8, 2000, the day the Board of Directors of BNP Paribas decided to make a bid for all Cobepa shares, Cobepa was active in two domains. On the one hand, it took long-term stakes in companies, principally in the Benelux. Three types of investments were made. First, Copeba took minority stakes in family-owned companies. Second, it took majority stakes to assist for example a management buy-out. Third, it was active in risk capital by financing new projects in telecommunications, IT and biotechnology. On the other hand, Cobepa also delivered financial consulting concerning mergers and acquisitions, privatizations and financial reorganizations (Prospectus, 2000, p. 87). Although the consulting department had been very active in the previous years, this domain was of minor importance⁶ (Prospectus, 2000, p. 107; Cobepa, 1999, p. 52).

Cobepa's shareholder structure on May 23, 2000 was as follows. Cobepa had 44.566.602 shares outstanding, of which BNP Paribas directly owned 34,21%. Furthermore, BNP Paribas owned 0,16% of these shares through Paribas Trust Luxembourg (a company indirectly held by BNP Paribas for 99,99%) and 24,36% through SGCF (Société Générale Commerciale et Financière, another company indirectly held by BNP Paribas for 99,99%). Cobepa held 0,05% of its own shares directly. Through Fidepa (a 50% direct subsidiary of Cobepa) Cobepa owned 2,72% of its own shares and through Ibel (a 77,90% direct subsidiary of Cobepa) it owned 0,09%. Hence, BNP Paribas owned (both directly and indirectly) 58,73% of the Cobepa shares, while Cobepa itself and its subsidiaries held 2,86%.

3.1.3. The context of the BNP Paribas bid⁷

After BNP became the majority shareholder of Paribas in August 1999, Cobepa lost the role it had in the group. BNP indicated that it wanted to focus on banking activities, while Cobepa had always been a rather independent investment company as far as decision making was concerned. As the future of Cobepa was unclear, the management of Cobepa proposed a partial management buyout (MBO) on February 18, 2000, (FET⁸, 18/02/00)⁹. However, BNP Paribas did not respond to this proposal¹⁰.

On June 8, 2000, the Board of Directors of BNP Paribas decided to make Cobepa the central vector in its private equity activities (FET, 10/06/00). To provide the shareholders of Cobepa with a possibility to exit if they did not agree with this new strategy, BNP Paribas made a bid for the remaining shares of Cobepa. A price of € 74 per share was offered¹¹ (Prospectus, 2000, p. 11 and p. 20). The market value of a Cobepa share on June 8, 2000, the day before the announcement of the bid, was € 63,5. Hence, the *premium* offered to the market value came to 16,5%. BNP Paribas did not explain why it offered this premium.

The price offered stood for a *discount* of 6,8% to the estimated net asset value calculated by Cobepa itself (€ 79,42). BNP Paribas revised Cobepa's calculation of the estimated net asset value and found a slightly higher value (€ 79,66). Hence, the discount of the price offered to the net asset value estimated by BNP Paribas amounted to 7,1%.

At the request of BNP Paribas, the Belgian investment bank Bank Degroof delivered on June 16, 2000 a fairness opinion on the price offered in the bid. The bank called the price offered “acceptable” (Prospectus, 2000, p. 118). In the mean time, the management of Cobepa asked UBS Warburg for a second fairness opinion. The management was surprised by the sudden bid, because BNP Paribas never responded to its MBO-proposal. Moreover, the management of Cobepa was disappointed in the decisions of BNP Paribas, as the new role for Cobepa strongly reduced its autonomy (FET, 14/06/00). This call for a second fairness opinion suited some of the minority shareholders of Cobepa, who felt the new strategy would destroy value for Cobepa, and argued that the price offered to exit was too low (FET, 16/06/00). UBS Warburg did not pronounce upon the fairness of the price offered in the bid, but announced, on June 20, 2000, that it judged the value of a share of Cobepa to range between € 77,6 and € 85,2, based on its calculations of the net asset value (Prospectus, 2000, p. 130). There were rumours that UBS Warburg was “manipulated” by BNP Paribas to not pronounce upon the “fairness” of the bid (FET, 18/07/00; De Standaard¹², 18/07/00)

The official Belgian financial supervisor CBF had to approve the prospectus published by BNP Paribas for the bid on Cobepa. It urged Cobepa to ask for a third fairness opinion on the price offered in the bid. The Board of Directors of Cobepa gave this task to Fortis Bank (FET, 12/07/00). On July 13, 2000, Fortis Bank called the price “not generous, but not manifestly inadequate and therefore acceptable” (Prospectus, 2000, p. 133). Again, there were rumours that Fortis Bank was “manipulated” by BNP Paribas. It appeared that on the day on which the Board of Directors of Cobepa had to appoint a bank to deliver a third fairness opinion, an arrangement had already been made with Fortis Bank. Hence, BNP Paribas seems to

have steered the appointment of Fortis Bank. Moreover, BNP Paribas held a meeting with Fortis Bank the day of the appointment (FET, 18/07/00; De Standaard, 18/07/00).

After the “verdict” by Fortis Bank, it was expected that the CBF could not but approve of the bid made by BNP Paribas (FET, 15/07/00). However, on July 19, 2000, the CBF demanded that the price would equal at least the net asset value calculated by Cobepa on May 31, 2000, namely € 79,42. Moreover, it threatened to go to court if BNP Paribas would not increase the price offered in the bid (FET, 20/07/00). BNP Paribas replied that, according to the law, the CBF was not allowed to judge the price offered, but could only admit or dismiss the voluntary bid (FET, 01/08/00). In opposition to this reply, the CBF argued that in case a majority shareholder makes a voluntary bid, the other shareholders do not have the choice not to accept, because if they do not accept they are left with an illiquid share. Therefore, the CBF believed it had the right to judge the price offered (FET, 28/06/00, 12/07/00 and 03/08/00).

We do not know of any other cases in which the CBF took similar action. Moreover, the CBF questioned the methodology used by Fortis Bank and Bank Degroof to deliver the fairness opinion, although it stated that it did not question the independence of the investment banks. Still, in this way, the CBF opened a discussion on the role of investment banks (FET, 20/07/00).

On July 28, 2000, BNP Paribas responded to the threat by the CBF by supplying the prospectus with more information, for example on the expected return on the risk

capital activities of Cobepa. However, in spite of the explicit demand of the CBF, BNP Paribas did not change the price offered (FET, 01/08/00 and 03/08/00).

Eventually, on August 8, 2000, the CBF approved of the BNP Paribas bid¹³. It judged that, as additional information was supplied by BNP Paribas, the shareholders of Cobepa were able to make a well-founded choice of whether or not to accept the bid (FET, 08/08/00).

After the bid, on September 9, 2000, BNP Paribas owned more than 90% of Cobepa (FET, 12/09/00). After the reopening of the bid, from September 18 until October 6, 2000, BNP Paribas owned 98,4% of the capital of Cobepa (FET, 13/10/00).

3.2. The discount

In this section, we explain how Cobepa/BNP Paribas and the three independent investment banks (Bank Degroof, UBS Warburg and Fortis Bank) estimated the net asset value of a Cobepa share, and discuss the discount of the market price to the net asset value. The information on the estimation of the net asset value was found in the prospectus of the bid of BNP Paribas for Cobepa, in which the fairness opinions delivered by the three banks were enclosed.

3.2.1. Calculation of the net asset value

Cobepa/BNP Paribas, Bank Degroof, UBS Warburg and Fortis Bank applied somewhat different methods to estimate the net asset value.

- Cobepa/BNP Paribas

To calculate its net asset value on May 31, 2000, Cobepa valued its quoted stakes at their market prices of that day. Non-quoted stakes were valued at purchase price, but valuations in connection with later transactions, such as new stock issues, were taken into account. Cobepa did not apply a discount on its non-quoted stakes, because it often sold non-quoted stakes at a premium. However, it did not add a control premium either.

Cobepa estimated the net asset value of a Cobepa share to be € **79,42**. BNP Paribas revised the calculation by Cobepa and took into account another transaction that was just recently announced. Due to this correction, the net asset value totalled up to € **79,66**.

- Bank Degroof (to the order of BNP Paribas)

Bank Degroof applied the same method as Cobepa to calculate the net asset value on May 31, 2000. For the quoted stakes, Bank Degroof found a different value for certain stakes. These were all upward adjustments, except one. The reasons why Bank Degroof made these adjustments are unclear. Furthermore, Bank Degroof insisted on taking into account a liquidity discount on the quoted stakes. For the non-quoted stakes, Bank Degroof applied a discount of 20% on one stake (in holding company Erbe), but it did not explain why. The net asset value on May 31, 2000 calculated by Bank Degroof amounted to € **77,98**¹⁴.

- UBS Warburg (to the order of the Board of Directors of Cobepa)

UBS Warburg calculated an upper bound, which was derived under a going concern assumption and a lower bound, which reflected the situation in case of liquidation of Cobepa.

All quoted stakes were valued at their average closing price over twenty days before June 8, 2000, the day before the announcement of the bid. For the upper bound, a control premium of 25% was taken into account for certain stakes. For the lower bound, UBS Warburg applied a discount according to the liquidity of the shares. This discount was not applied on the companies on which a control premium was applied to calculate the upper bound.

UBS Warburg applied several methods to value the non-quoted stakes. Small and recently acquired stakes were valued at purchase price. If a stake had been object of transaction, its value was derived from the transaction price. In some cases the stake was valued by UBS Warburg's buy-side analysts, but no information was given on their methodology. If no indication of the value of a stake was found, ratios applied on quoted companies or on similar transactions were applied on the results for 1999. A stake in a holding company for which the most important stake was a quoted company, was valued in transparency based on the average closing prices of this quoted company over the last 20 days before June 8, 2000 after taking into account a discount of 25%.

Real estate, financial claims and net working capital were valued at their book value on May 31, 2000.

The shares of Cobepa owned by Cobepa itself were valued at the closing price on June 8, 2000 for the lower bound. For the upper bound, they were valued at the net asset value.

Finally an adjustment was made to take into account transactions that took place after May 31, 2000 (dividends received early June 2000, the increase of one stake), and additional operational costs for April/May.

The net asset values calculated by UBS Warburg equalled € 77,6 for the lower bound and € 85,2 for the upper bound.

- Fortis Bank (to the order of the Board of Directors of Cobepa)

Fortis Bank calculated the net asset value on May 31, 2000 under a going concern assumption. The quoted stakes were valued at their average market price of May. Fortis Bank applied a discount of 10% on one stake (Fortales), and took some options on another stake into account (Aegon). The valuation of non-quoted stakes was mostly based on ratios or recent transactions. Sometimes the book value of the equity, or the value estimated by Cobepa or by a third party was used. Fortis Bank considered these values as maximum values and therefore applied a discount of 15% and of 20% to these stakes. Fortis Bank also took into account the increase of one stake (GIB) and the additional operational costs for the period April/May. The net asset value

calculated by Fortis Bank taking into account a discount of 20% on non-quoted stakes, equalled € 79,5. When a discount of 15% was applied, the net asset value amounted to € 80,1.

The above findings are summarised in Table I.

insert Table I about here

3.2.2. The discount of the market price to the net asset value

It is obvious that Cobepa traded at a discount to its net asset value. BNP Paribas set the price offered in the bid at a level that it judged “fair”. According to BNP Paribas the discount of the price offered to the net asset value can be justified by the illiquidity of certain stakes in the portfolio of Cobepa. Cobepa, BNP Paribas and the three banks did not give an explanation for the discount of the price offered to the net asset value. This price lay in all cases between the market price and the net asset value of a Cobepa share.

Cobepa justified the discount of its market price to its net asset value to costs that would be incurred upon realization of some of its stakes. Furthermore, it argued that the volatility of the shares in the portfolio was another factor that explained the discount. Cobepa also stated that the discounted value of the future operational costs was reflected by the discount. Finally, it pointed out that taxes influenced the discount. The three banks did not give an explanation for the discount.

For comparison, Cobepa added that the average discount on the most important holding companies traded in Brussels on May 31, 2000 equalled 35%¹⁵. Bank Degroof was of the opinion that comparing the discount on Cobepa to the discount on other holding companies did not give extra information, but did not develop this point further. However, it explained that the discount on Cobepa shares was lower than the discount on other holding companies, because Cobepa was also active as a merchant bank and created value by offering a large portfolio of non-quoted stakes to its shareholders. The activities of Cobepa as a merchant bank were of minor importance, however (Prospectus, 2000, p. 115).

Cobepa showed that over the period December 30, 1997 until May 31, 2000 Cobepa always traded at a discount to its net asset value (cfr. Table II). Although these percentages were generally lower than the average discount on the most important Belgian holding companies, their evolution over time was comparable.

insert Table II about here

On May 31, 2000 Cobepa had 44.566.602 shares outstanding, the market price of a Cobepa share equalled € 59,7 and the net asset value per share amounted to € 79,42, according to its own estimation. Hence, the discount equalled € 878.853.392. This is a discount of 24,83% of the market value to the net asset value. In the next section, we investigate to what extent the possible explanations for the holding company discount apply on this discount.

3.3. Which of the explanations for the holding company discount apply to the Cobepa case?

3.3.1. The costs versus the benefits involved in the holding company

If the costs of a holding company outweigh the benefits, value is destroyed for the shareholders of the holding company, which could explain (part of) the discount. Here, we take only into account the potential costs of Cobepa. Hence, we assume that the benefits are zero.

A first potential cost of a holding company is the additional tax “leak” generated by a holding company. An investor investing indirectly through a holding company may bear additional tax costs on dividends and capital gains. In Belgium, capital gains are in principle not taxed. Dividends, on the other hand, are taxed. However, company tax is subject to the regulation of “Definitively Taxed Income”. This means that dividends received by a Belgian company are assumed to already have been taxed. For the receiving company, only 5% of the dividend will be taxed. The regulation is similar when the distributing company is a foreign company. Therefore, very few additional taxes on dividends will have to be paid at the level of the holding company (Cobepa). These additional taxes are negligible in view of the little taxes Cobepa paid annually in proportion to the profit of the fiscal year before taxes. Table III shows that Cobepa indeed paid very little taxes in the years before the offer.

insert Table III about here

As capital gains are in principal not taxed in Belgium, the second possible cost of a holding company, namely the lack of a tax-timing option, does not apply in the case of Cobepa.

The costs of bad allocation of resources in an internal capital market, higher costs of financing on the external capital market due to information asymmetry, and the cost of bad management, are difficult to measure¹⁶.

Finally, setting up a holding company involves some general costs. In the case of Cobepa, the operational costs amounted to € 11.801.000 for the year 1999. UBS Warburg estimated the cost of capital between 8,9% and 9,4% (assuming a risk free rate of 5,4%, a beta of 0,93 and a risk premium between 3,75% and 4,25%). If we assume a perpetuity, use these discount rates, and do not take into account that these costs are tax deductible, we find that the present value of future operational costs ranges between € 132.595.505,6 and € 125.542.553,2. Fortis Bank estimated the cost of capital to be 8,79% (assuming a risk free rate of 5,54%, a beta of 1 and a risk premium 3,25%). Using this discount rate, we find that the present value of future operational costs to equal € 134.254.835, which is only about 15% of the total discount¹⁷. In other words, these costs can only explain a minor part of the total discount, even if no benefits are taken into consideration.

3.3.2. Asset illiquidity and estimated net asset value

It is argued that the estimated net asset value overstates the true value of a holding company because it does not take into account the lack of liquidity of certain stakes in

the portfolio of the holding company. However, under 2.2. several counterarguments were given. In practice, this discussion leads to an arbitrary valuation of the stakes in the portfolio of a holding company. For quoted stakes the market price is used as a valuation basis, but illiquidity discounts and control premia are applied at will. Non-quoted stakes are generally valued based on their purchase price, accounting for valuations made in recent transactions and several ratios. The value obtained hence often depends on the method chosen to value the stakes. Moreover, on this value discounts are again applied at will.

It should be noted that the estimated net asset value is influenced by the date on which it is calculated and the period over which it is calculated (cfr. 3.2.1.). For example, over the period May 31, 2000 to June 8, 2000, Mobistar has risen 4,05%, Bayer 2,71%, Delhaize 10,31%, Dexia 3,64% and Sapec 1,28%, Floridienne has dropped 3,75%.

Although the market price was used as a basis to value the quoted stakes in the portfolio of Cobepa, the value obtained for these shares is subject to arbitrariness. For example, Cobepa and Bank Degroof found a different value for the company Power on the same date (May 31, 2000). Also, Bank Degroof and UBS Warburg subjectively applied illiquidity discounts. UBS Warburg applied a discount on some of the stakes to calculate the lower bound for the net asset value, which reflected the situation in case of a liquidation of Cobepa. Bank Degroof also applied a realisation discount on some companies according to their liquidity, although it did not make a distinction between the going concern assumption and the situation in case of a liquidation of Cobepa. Moreover, the percentages applied by both banks differ (cf. Table IV).

insert Table IV about here

Furthermore, UBS Warburg applied a control premium of 25% on some of the quoted stakes to calculate the upper bound for the net asset value. Cobepa was in control of the operational management of these companies, but did not apply a control premium on these stakes itself. Neither did Bank Degroof nor Fortis Bank. It is remarkable that UBS Warburg applied a control premium on Berginvest and SAIT RadioHolland to calculate the upper bound, whereas Bank Degroof applied an illiquidity discount on these stakes without even making a distinction between the going concern perspective and the situation in case of liquidation.

The valuation of the non-quoted stakes is subject to even more arbitrariness, as no market price exists for these shares. In general, the valuation of the non-quoted stakes was based on their purchase price, accounting for valuations made in recent transactions and several ratios. However, the criteria chosen by each party to value the non-quoted stakes differed significantly. For instance, Bank Degroof found a higher value than Cobepa for a number of stakes (Fortales, Swets&Zeitlinger, Zetes, Neurones, Telenet and Schreder). Besides the arbitrary valuation criteria, subjective discounts are applied on the non-quoted stakes. Cobepa did not apply a discount on its non-quoted stakes, because it often sold its non-quoted stakes at a price higher than the value used to calculate the net asset value. Bank Degroof, UBS Warburg and Fortis Bank on the other hand did apply a discount on some of the non-quoted stakes.

UBS Warburg applied a discount of 25% on non-quoted holding companies. This is remarkable because the valuation of these holding companies was based on the value of their largest quoted stake. Hence, applying a discount of 25% on this value implies the conviction that a holding company is worth less than the sum of the values of its stakes. It should also be noted that even in spite of this, the estimated value for these companies is higher than the value calculated by Cobepa.

Fortis Bank applied discounts of 15% and 20% on all non-quoted stakes. For one holding company (Fortales), the value was determined analogously to the valuation method used by UBS Warburg for non-quoted holding companies. A discount of 10% was applied to the estimated value of Fortales, because of some clauses binding the shareholders. The other non-quoted holding companies were not valued according to this method, but no explanation was given for the different approaches.

The facts described show the arbitrariness of the calculation of the net asset value. An important factor contributing to this arbitrariness is the assumed asset illiquidity. In order to find out to what extent asset illiquidity may justify a discount on estimated values, we investigated 21 quoted companies in which Cobepa had a stake. We found in the FET that the shares of 16 of these companies were involved in a transaction. We found information on the price paid for eight of these 16 transactions. The shares of seven of the companies involved were sold at a premium, while the shares of only one company were sold at a discount. Four of the seven transactions in which a premium was paid concerned majority stakes, two transactions concerned minority stakes (for one transaction we do not know whether it concerned a majority or

minority stake). This suggests that the lack of liquidity argument (here due to bringing a large block of shares on the open market) for the discount may not hold for Cobepa.

As for non-quoted stakes, in the prospectus it is mentioned that “it is a fact that Cobepa *in general* has sold its non-quoted stakes at a price that was *higher* than the price used to calculate the net asset value” (emphasis added). We found information on the price paid for large blocks of shares of three non-quoted companies involved in a transaction: in all three cases a premium to the valuation based on the purchase price and other transactions was paid. Again, this counterpoints the lack of liquidity argument (both lack of liquidity due to bringing a large block of shares on the open market and plain illiquidity).

3.3.3. *Capital market inefficiencies*

If the clientèle of a holding company is largely composed of individual investors, and these individuals invest more in the shares of the holding company than in its underlying shares, noise traders may create a deviation of the stock price from its fundamental value. The shareholdership of Cobepa is presented in Table V. The information on the direct and indirect stakes held by BNP Paribas and Cobepa dates from May 23, 2000, before the bid. The information on the stakes held by so-called “Undertakings for Collective Investment” (UCIs), which are closed-end mutual funds and open-end mutual funds, relates to the year 1999.

insert Table V about here

Together, BNP Paribas and Cobepa owned 61,59% of Cobepa. UCIs held of 5,58% of Cobepa shares. The remaining 32,83%, of which ownership is unknown, could have been held by banks and insurance companies (institutional investors) or by individuals (individual investors).

If a large part of the free float of Cobepa was held by individual investors, noise traders could have been responsible for a deviation of the market price of Cobepa from its fundamental value (the value of the quoted stakes held by Cobepa represented 83% of the total estimated net asset value of Cobepa). Individual investors could have invested more in Cobepa-shares than in the underlying shares. However, if noise trading causes a deviation of the market price from the fundamental value, there does not seem to be a priori reason why this deviation should always be negative (discount). In other words, why would noise traders consistently remain too pessimistic over time? We would expect them to be overpessimistic at some times, and overoptimistic at other times. Hence, the observation that Cobepa, like most Belgian holding companies, has been trading at a discount for many years, suggests that capital market inefficiencies are not the only explanation for the discount.

Furthermore, while we are not aware of other studies on the valuation of Belgian holding companies, Barontini and Siciliano (2003) find evidence that Italian holding companies are systematically *overvalued*: buying a portfolio of Italian holding companies and selling short a portfolio made of any other listed Italian company would have earned a negative abnormal return of 7% per year in the 1991-2000 period. This finding implies that investors are consistently *overoptimistic* about the value of Italian holding companies.

3.3.4. Private benefits of control

We discussed two forms of private benefits of control: private benefits for the controlling shareholder at the expense of the other shareholders, and private benefits for the professional manager at the cost of all shareholders. If these private benefits are extracted from a holding company, they could explain (part of) the discount, as investors demand a higher return on investment when they anticipate expropriation.

The ultimate shareholder in a holding structure has a strong incentive to extract private benefits of control, due to the separation of cash flow rights and control rights. Hence, private benefits of control for the controlling shareholder induced by a separation of ownership and control could explain (part of) the discount on Cobepa. However, there was no separation of cash flow rights and control rights between BNP Paribas and Cobepa, as Figure II shows. BNP Paribas had a direct stake of 34,21% in Cobepa, and two indirect stakes of respectively 24,36% and 0,16% through two fully owned subsidiaries. Consequently, BNP Paribas did not have the strong incentive provided by the separation of ownership and control to extract private benefits. Nevertheless, we cannot rule out the possibility that BNP Paribas abused its power as majority shareholder to extract value from Cobepa.

insert Figure II about here

To our knowledge, the extraction of private benefits of control by the professional manager has not yet been examined for holding companies. The fact that the Belgian management of Cobepa opposed the new strategy which BNP Paribas had in mind for

Cobepa, and which would strongly reduce the autonomy of the management, suggests that the management valued its control over Cobepa. However, this does not necessarily imply private benefits for the management. The management may have opposed the bid because it was convinced that the strategy it had in mind would maximise the value of Cobepa.

Thus, in theory both forms of private benefits of control could explain a part of the discount on Cobepa. By nature, however, private benefits of control are difficult to trace out. Excessive compensation, diversion of resources, asset transfers at arbitrary prices, cheap loans and guarantees, insider trading, creeping acquisitions, freeze-out and squeeze-out, issuance of shares at dilutive prices are examples of private benefits of control that could be responsible for the discount (Erhardt and Nowak, 2003). In this case we do not have evidence on private benefits for either the controlling shareholder or the professional management.

4. CONCLUSION

The explanations for the holding company discount discussed in this paper come from four angles. First, a holding company can create value for its shareholders in several ways (monitoring management, provision of services to companies controlled, security substitution, selection of undervalued shares), but it can also destroy value (additional taxes, less tax-timing, selection of overvalued shares, general costs). Of the benefits of a holding company, only security substitution and the selection of undervalued shares are divergent factors. All costs are divergent. If the divergent costs outweigh the divergent benefits, value destruction could explain part of the discount.

Second, it can be argued that the net asset value does not take into account the illiquidity of certain stakes in the portfolio of a holding company. Hence, this lack of liquidity might explain (part of) the discount. Third, capital market inefficiencies could explain (part of) the discount on holding companies, as noise traders might invest more in the holding company than in the underlying shares. Finally, private benefits of control were discussed. On the one hand, there are private benefits for the controlling shareholder. It was demonstrated that in a holding structure the ultimate shareholder has a strong incentive to extract private benefits of control, because in a pyramidal group the controlling shareholder can control a company while holding only a small stake in it. On the other hand, there may be private benefits for the professional manager at the expense of all shareholders (including the controlling shareholder), also referred to as managerial entrenchment. To our knowledge, this has not been examined for holding companies. If these forms of private benefits of control are extracted from a holding company, they could explain (part of) the discount, as investors ask for a higher return on their investment when they anticipate that they will be expropriated.

We examined these explanations for the holding company discount for the case of Cobepa, a Belgian holding company, which traded at a discount of 24,83% to its estimated net asset value. The explanations given by Cobepa itself for the discount, more or less conformed to what we described as the costs involved in a holding company and the illiquidity of certain assets in the portfolio. These arguments do not seem to be sufficient to explain the discount. In a “worst case” scenario value destruction by the holding company can explain less than a quarter of the discount of

Cobepa. Furthermore, we showed that the lack of liquidity argument does not seem to apply to the Cobepa case.

We have insufficient information to determine to what extent the free float of Cobepa was held by individual investors. If individual investors held a significant part of available Cobepa shares, this could have been consistent with the theory that noise traders are responsible for (part of) the discount. However, if this theory would explain deviations of the stock market price from the net asset value of Cobepa, we do not see why this deviation should always be negative. Hence, the observation that Cobepa, like many other Belgian holding companies, traded at a discount most of the time, suggests that capital market inefficiencies caused by noise traders does not explain the discount. Private benefits of control might be an important explanation for the Cobepa discount. However, the ownership structure of Cobepa was not characterised by a strong separation of ownership and control. Nevertheless, it is possible that BNP Paribas abused its power as a controlling shareholder to extract value from Cobepa.

TABLES AND FIGURES

Figure I: Ultimate control through the holding structure

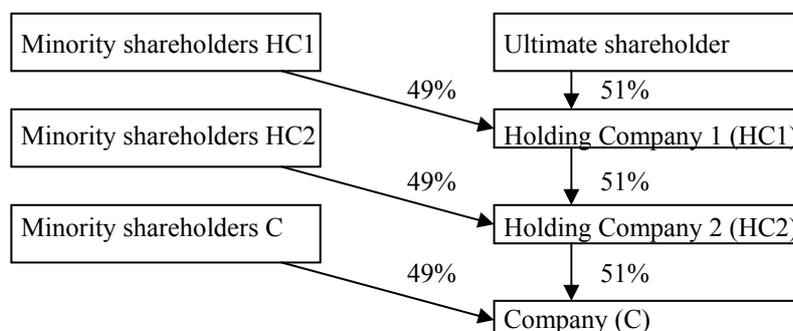


Table I: The discount of the market price and the price offered to the net asset value of Cobepa

	Cobepa 31/05/00	BNP Paribas 31/05/00	Bank Degroof 31/05/00	Bank Degroof 08/06/00	UBS Warburg 08/06/00 Low	UBS Warburg 08/06/00 High	Fortis Bank 31/05/00 20%	Fortis Bank 31/05/00 15%
Net asset value	€ 79,42	€ 79,66	€ 77,98	€ 77,89	€ 77,6	€ 85,2	€ 79,5	€ 80,1
Discount of market price to net asset value	24,8%	25,1%	23,4%	18,5%	18,2%	25,5%	24,9%	25,5%
Discount of offer price to net asset value	6,8%	7,1%	5,1%	5,0%	4,6%	13,1%	6,2%	7,1%

The columns show by which institution and on which date the estimated net asset value was calculated. The market prices of Cobepa were taken on these same dates to give the discount. UBS Warburg gave for the estimated net asset value an upper bound, which as derived under a going concern assumption and a lower bound, which reflected the situation in case of a liquidation of Cobepa. Fortis Bank considered the value it found for the non-quoted stakes as a maximum and therefore applied a discount of 20% and of 15% to these stakes.

Source: Prospectus, 2000, p. 36

Table II: The discount of the market price of a Cobepa share to its net asset value over time

Date	Discount market price to net asset value
30/12/1997	17,4%
31/12/1998	8,3%
31/12/1999	29,1%
31/05/2000	24,8%

Source: Prospectus, 2000, p. 39

Table III: Cobepa: Pre tax profits and taxes

	1992	1993	1994	1995	1996	1997	1998	1999
Pre tax profit	€ 62,323 mio	€ 62,611 mio	€ 88,659 mio	€ 68,330 mio	€ 73,558 mio	€ 917,473 mio	n.a.	€ 580,106 mio
Taxes paid	€ 15000	€ 20000	€ 12000	€ 14000	€ 13000	€ 21000	n.a.	€ 119000
Taxes paid as a % of pre tax profit	0,0241%	0,0319%	0,0135%	0,0205%	0,0177%	0,0023%	/	0,0205%

Source: Bel-First, Financial reports and statistics on Belgian and Luxembourg companies, Bureau van Dijk, 2003

Table IV: Comparison of the percentage illiquidity discount applied on some of the quoted stakes of Cobepa by Bank Degroof versus UBS Warburg (lower bound)

	Bank Degroof	UBS Warburg
Mobistar	3%	10%
Saptec	10%	15%
Floridienne	10%	15%
CNP	7%	10%
SAIT RadioHolland	10%	-
Berginvest	10%	-
Holland Chemical International	7%	-
Versatel	7%	4%
Burhmann	-	15%
IPSO ILG	-	10%
Delhaize	-	5%
Aegon	-	3%

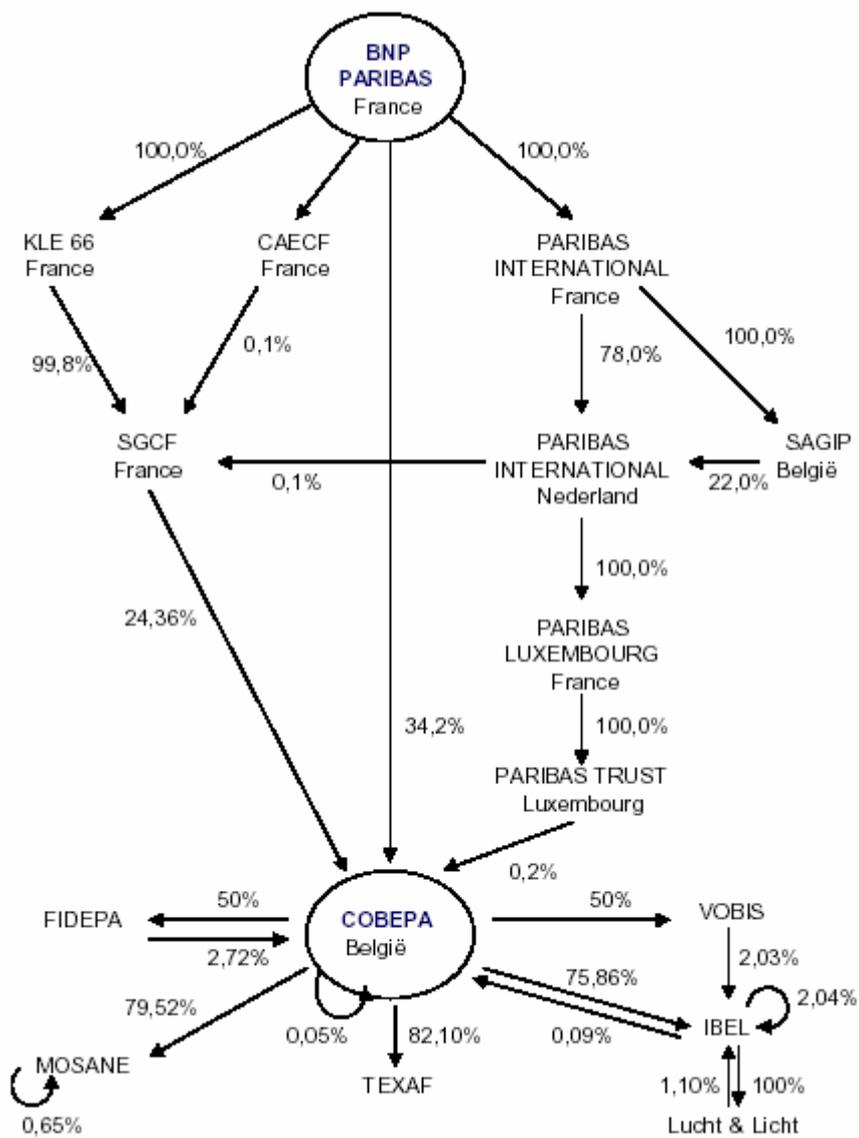
Source: Prospectus, 2000, p. 120 and 125

Table V: The shareholdership of Cobepa before the bid

Shareholder	Fraction held
BNP Paribas	34,21%
BNP Paribas through SGCF	24,36%
BNP Paribas through Paribas Trust Luxembourg	0,16%
Cobepa	0,05%
Cobepa through Fidepa	2,72%
Cobepa through Ibel	0,09%
UCIs	5,58%
Other	32,83%

Source: Prospectus, 2000, p. 97 and Belgische Vereniging van de Instellingen voor Collectieve Belegging, 2002, p. 6

Figure II: The shareholdings of Cobepa before the bid



Source: Prospectus, 2000, p. 98

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NOTES

¹ For instance, Banerjee et al. (1997, p. 24) define a holding company as “a professionally managed institution owning a portfolio of stocks in public and private companies, with the purpose of controlling them”.

² A closed-end fund differs from an open-end fund in two important respects. First, a closed-end fund's shares are publicly traded. Second, a closed-end fund is not subject to continuous issue-redemption. Hence, the shares of a closed-end fund are traded at market prices, which may be above or below their net asset value, whereas an open-end mutual fund is obliged to buy and sell its securities at net asset value. Open-ending a closed end fund can be done in several ways. One possibility is to convert the closed-end fund into an open-end fund. Alternatively, the closed-end fund can be merged with a mutual fund. Third, the closed end fund can be liquidated (Brauer, 1984).

³ Interestingly, Draper and Paudyal (1991) find that the proportion of individual to institutional investors has an insignificant impact on the extent of the discount on UK investment trusts over the period 1983-1986.

⁴ In fact, this merger was brought about indirectly. BNP, whose primary activity was retail banking, wanted to make a bid for the Société Générale, which was also specialised in retail banking. The Société Générale, however, had already made a bid for Paribas, because the investment banking roots of Paribas would be complementary to its retail banking specialization. Therefore, by virtue of the French take-over law, BNP was obliged to bid for Paribas as well. In August 1999 BNP became the majority shareholder of Paribas, with 65,1% of the shares and voting rights. The remaining 34,9% was acquired in the merger in May 2000 (The Economist, 18/04/98-28/09/99).

⁵ Thus, Cobepa was already part of the Paribas network before the merger between BNP and Paribas, as Paribas was the result of a merger between Compagnie Financière Paribas, Banque Paribas and Compagnie Bancaire.

⁶ In the fiscal years 1999, 1998 and 1997, the revenues from financial consulting only formed 1,95%, 1,83% and 2,76% respectively of the total consolidated revenues (Cobepa, 1999, p. 51-52).

⁷ We do not discuss the legal proceedings that were instituted in connection with the bid of BNP Paribas for the shares of Cobepa it did not already own, because this would lead us too far.

⁸ FET is short for “Financieel Economische Tijd”, the leading Flemish financial newspaper (now “De Tijd”).

⁹ Cobepa would be split up in a Belgian and a French listed company. The liquid stakes of Cobepa would be transferred to the French company, controlled by BNP Paribas, while the private equity stakes would be transferred to the Belgian company, controlled by the management of Cobepa and “friendly parties” (FET, 15/06/00 and 04/08/00).

¹⁰ The merger between BNP and Paribas took place in May 2000, so strictly speaking the name “BNP Paribas” does not apply here. However, BNP had already been the majority shareholder of Paribas since August 1999.

¹¹ The bid would be valid from August 21 until September 8, 2000. If BNP Paribas owned more than 90% of the shares of Cobepa after the bid, the bid would be reopened during 15 working days. The shares of Cobepa would remain listed on the Brussels Exchange, but they would be cancelled in Amsterdam, Frankfurt and Luxembourg. The Board of Directors of Cobepa would be scaled down and its composition would be changed as to reflect the new shareholder structure (Prospectus, 2000, p. 16-18 and p. 21).

¹² A leading Flemish general newspaper.

¹³ On August 1, 2000, “the market seemed already to believe that the CBF would admit the prospectus and would not go to court”, as the Cobepa share dropped 4,22% (FET, 01/08/00).

¹⁴ Bank Degroof also calculated the net asset value on June 8, 2000, the day before the announcement of the bid. It equalled € 77,89.

¹⁵ These holding companies may have used different methods to calculate their net asset value.

¹⁶ Deloof (1998) studies the role of internal capital markets within holding structures in Belgium. He finds that making use of an internal capital market reduces financing constraints and that consequently managers are freer in choosing their investments. He does not find evidence of overinvestment by managers neither of transfers of surpluses to other group members by investing in financial fixed assets.

¹⁷ Even if we assume that the relevant discount rate is the risk free rate of 5.4%, the present value of operational costs is only one quarter of the total discount.