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An estimate of the control premium in South Africa

1. INTRODUCTION

In a Modigliani-Miller (1958) type world, shares with identical cashflows should trade in the market at the same price. There is a large and evolving literature (see Shleifer and Vishny 1997 for a survey) that suggests, however, that control is a valuable commodity. Shares with identical cashflows but different control rights will trade at different prices in the market. It is possible to exercise control in many ways. Differential voting rights on shares is the most obvious. In South Africa with its pyramid or group system, controlling shareholders are often able to control companies via a series of "holding companies" (Gerson, 1992; Barr, Gerson and Kantor, 1995; Gerson and Barr, 1996). Very often all shares in these companies have identical cashflow and voting rights, however, control is vested in a particular individual, family or coalition of individuals or families.

Recent events provide a natural case study setting for estimating the value of control in South Africa. In 1958 Donald Gordon founded Liberty Life of South Africa Ltd (an insurance company). Over the next three decades this firm evolved into a pyramid group concentrating largely on financial services, but with some industrial holdings (the history of the group is set out at <www.liberty.co.za>). As at January 1999, Donald Gordon and his family controlled (shareholding > 50 per cent) the listed firm Liberty Investors Ltd (Libvest). Libvest held a single asset, namely a 50 per cent share of LibLife Controlling Corporation Pty Ltd (LCC). LCC is the ultimate holding company of the Liberty Life Group. On February 5, 1999 it was announced that Gordon would retire. This opened the path for a merger between the Liberty Life Group and Standard Bank Investment Corporation Ltd (SBIC). Gordon had reportedly (Klein 1998) blocked earlier merger talks. *Prima facie*, a merger between these two organisations would give rise to a "universal bank" (in South Africa, this is referred to as "bancassurance"). Indeed, on February 9, 1999 a "merger" agreement was announced.

The Liberty Life Group and SBIC, however, were already closely associated with each other and had been so since 1978. Over time the Liberty Life Group had accumulated (approximately) a 40 per cent shareholding in SBIC (held by LibLife Strategic Investments Ltd – Libsil), making it the single largest shareholder. In turn SBIC and Libvest each held 50 per cent of the unlisted LCC which held a majority shareholding in Liberty Holding Ltd (Libhold), which in turn held a majority shareholding in Liberty Life Association of Africa Ltd (LLA), which held a majority shareholding in Libsil. A "merger" between the two hardly seems warranted.

This combination of events highlights a number of issues in economic theory, especially in the Coasean tradition (following Coase (1937, 1960)). Control of a pyramid group (Liberty Life) had changed from Gordon to SBIC. It must be conceded, however, that control had not changed too much. SBIC formed part of the Liberty Life Group before the change. Nonetheless, this change allows for an estimation of the control premium in South Africa.

The paper is set out as follows: Section 2 discusses the value of large shareholders and the control premium. The third section sets out the data, tests and results (a brief digression on the Fisher Body-General Motors merger is included here). A conclusion follows.

2. THE VALUE OF LARGE SHAREHOLDERS AND THE CONTROL PREMIUM

Close and effective shareholder monitoring of firms has public good characteristics: The benefits of monitoring are shared by all shareholders, while the costs of monitoring are borne by those shareholders who undertake the monitoring. In terms of standard economic theory, it could be predicted that little or no monitoring would occur. The presence of large

shareholders (or, more generally investors) is said to overcome this problem (Shleifer and Vishny, 1986). They argue (1986:462) that large shareholders would monitor firms closely and initiate disciplinary action against management. Demsetz (1986:223) argues that without specialisation on the part of large investors there would be little incentive for any monitoring at all. Large shareholders are in a position to internalise the costs of monitoring and still earn a profit, given their ability to influence management.

In order to monitor the firm, however, large shareholders need to be present on the board of directors or to have management positions. Large shareholders need to access information and monitor firms directly as the firms cannot simply provide them with information to the exclusion of other shareholders. This is due, in part, to the illegality (in many countries) of providing information to only a subset of shareholders. In short, large shareholders need to be insiders. In the US, Holderness and Sheehan (1988) find that this in fact occurs, large shareholders tend to lead management teams. The issue of *quis custodiet custodes ipsos* (who shall guard the guardians), however, arises. Jensen and Meckling (1976) suggest a "convergence of interests" hypothesis, where, as the shareholding of insiders increase, they increasingly pursue the interests of all shareholders. Conversely, Morck, Shleifer and Vishny (1988) propose an "entrenchment" hypothesis, where, as insiders shareholding increases, they are able to maximise their own welfare at the expense of outside shareholders. Empirical evidence conducted largely in the US tends to support the entrenchment hypothesis (see Shleifer and Vishny (1997) for a survey).

Insiders, including large shareholders, have access to either "amenity potential" (Demsetz and Lehn 1985) or "private benefits of control" (Barclay and Holderness 1989). Amenity potential refers to situations where large investors, as insiders, direct corporate resources to meet their own non-profit personal objectives. For example, insiders may have a preference for high growth (Marris, 1963), managerial emoluments (Williamson, 1963) or some other non-profit objective. A related concept, perhaps less sinister, is the private benefit that insiders gain from control. These benefits are those that accrue to a large or dominant shareholder in excess of the cashflow rights which accrue to all shareholders in proportion to their ownership stake. It may be rational for minority shareholders to tolerate, or even encourage, these benefits as they too benefit from increased monitoring. Demsetz (1986) makes this type of argument in favour of insider trading. Holderness and Sheehan (1988) report evidence, however, that suggests majority shareholders *do not* expropriate corporate resources. Outright expropriation, of course, is illegal (in most countries) and many of the private benefits would be difficult to observe or quantify. Zingales (1995:1069), for example, makes the argument that the type of private benefit is chosen "precisely because they cannot be easily measured (and thus claimed) by minority shareholders".

The value of private benefits to control (or the control premium) can be inferred by market reaction to sales of control (a majority shareholder selling his or her block of shares). Barclay and Holderness (1989) investigate the difference between the market price and the block price and report that controlling block prices are at a premium to exchange prices. Their point is that this premium must relate to private benefits that the marginal shareholder cannot access and consequently will not pay for. Similarly, the differential in price between high voting shares and low voting shares also reflects the control premium. When firms have different classes of shares with differential voting rights but similar (if not identical) cashflow rights, standard theory (following typical Modigliani and Miller 1958 type assumptions) would indicate that they would sell at the same price. This, however, is not the case. The share with superior voting rights trades at a higher price than that with inferior voting rights. Zingales (1995:1071) reports that the premium is related to the value controlling shareholders will receive in a control contest and private benefits of control. The size of the premium in the US is 10 per cent on average (Zingales 1995:1060). This is relatively small compared to some other countries. Shleifer and Vishny (1997:748), for example, report that the average premium is 45,5 per cent in Israel, 6,5 per cent in Sweden, 20 per cent in Switzerland, and 82 per cent in Italy. In addition, Zingales (1995:1059) reports the premium to be 13,3 per cent in the UK and 23,3 per cent in Canada.

3. METHOD AND RESULTS

In this section, two interrelated analyses are undertaken. First the market response to Gordon's resignation and the subsequent "merger" are evaluated and second the value of the control premium is estimated. For this purpose, an event study method will be employed. Shleifer and Vishny (1997: 746) report that event studies have "become the most common empirical methodology of [the] corporate governance and finance [literature]". To that end data for the period 2/1/96 to 3/3/99 are drawn from the Datastream database. In the event study method, it is required to make use of an index as a proxy for the market as a whole. In order to overcome criticisms over the choice of proxy index, two approaches to estimating the market model are employed: First the standard market model with the market being proxied by the All Share Price Index, and second, an augmented market model with the market being proxied by both the Industrials Price Index and the Gold Index (Gilbertson and Goldberg, 1981). This is done to demonstrate the robustness

of the results. The price time series for Libhold, Libvest, LLA, Libsil and SBIC are used to create continuously compounded returns series: $r_t = \ln(P_t/P_{t-1})$. Summary statistics are shown in Table 1.

The timing of the announcements, Gordon's resignation and the merger, are identified from the *Sunday Times Business Times* (Klein, 1999) as being February 5 and February 9. Once the announcement dates are identified, announcement dummy variables are created and the market model estimated.

Table 1: Summary of data used in the analysis.

	GOLD	INDI	ALSI	Libhold	Libsil	Libvest	LLA	SBIC
Mean	-0,0005	-0,0002	0,0000	-0,0004	0,0000	0,0000	-0,0004	0,0000
Median	-0,0031	0,0006	0,0006	0,0000	0,0000	0,0000	0,0000	0,0000
Max	0,1458	0,0693	0,0670	0,1819	0,2011	0,1551	0,1590	0,1379
Min	-0,0776	-0,1175	-0,1185	-0,1509	-0,2766	-0,2113	-0,1520	-0,1863
Std.Dev	0,0255	0,0131	0,0129	0,0209	0,0332	0,0271	0,0225	0,0268
Skew	0,8254	-1,3972	-1,6137	0,3946	-0,7996	-0,2775	-0,2433	-0,7520
Kurt	6,0383	15,4114	16,6295	17,9514	12,8448	14,1915	13,5277	10,9689
JB	397,06	5374,84	6514,77	7444,21	3303,47	4169,53	3688,42	2183,98
Prob	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
N	797	797	797	797	797	797	797	797
	GOLD	INDI	ALSI	Libhold	Libsil	Libvest	LLA	SBIC
INDI	0,1268							
ALSI	0,2774	0,9662						
Libhold	0,1131	0,5673	0,6127					
Libsil	-0,0662	0,5922	0,5371	0,3354				
Libvest	0,0690	0,4693	0,4899	0,5777	0,2292			
LLA	0,1472	0,6201	0,6710	0,8478	0,4289	0,5644		
SBIC	-0,0867	0,6458	0,6432	0,4624	0,5626	0,3170	0,5119	

The market model is fully described in any finance or econometrics text:

$$r_{i,t} = \alpha_i + \beta_i r_{m,t} + \varepsilon_{i,t} \qquad (1a)$$

where $r_{i,t}$ = return of stock i on day t, $r_{m,t}$ is the return on the market portfolio (All Share Index) on day t, α_i = an intercept term, $\beta_i = (\rho_{im}\sigma_i\sigma_m/\sigma^2_m)$ and $\varepsilon_{i,t}$ = an error term.

In order to overcome benchmark portfolio concerns, a two-factor market model is estimated with the Gold Index and Industrial Index substituting for the market portfolio:

$$r_{i,t} = \alpha_{i,t} + \beta_{1i,t} r_{Gold,t} + \beta_{2i,t} r_{Indi,t} + \varepsilon_{i,t} \qquad \ldots(1b)$$

The market model is augmented with the dummy variables:

$$r_{i,t} = \alpha_{i,t} + \beta_{i,t} r_{m,t} + \delta_1 resign_t + \delta_2 merge_t + \varepsilon_{i,t} \quad \ldots(2a)$$

$r_{i,t} = \alpha_{i,t} + \beta_{1i,t}r_{Gold,t} + \beta_{2i,t}r_{Indi,t} + \delta_1 resign_t + \delta_2 merge_t + \varepsilon_{i,t}$ (2b)

where resign = dummy variable which = 1 on February 5, 1999 and 0 otherwise, merge = 1 on February 9, 1999 and 0 otherwise, δ_n = parameter intercepts. Results are shown in Table 2.

The financial media's response to the resignation and "merger" was unfavourable. For example, *The Financial Mail* had the headline "hardly a fitting accolade to Gordon" and the *Sunday Time Business Times* article of February 21 was negative. It is not immediately obvious, however, that this interpretation is warranted.

The interpretation of Table 2 is fairly straight forward. The δ_1 coefficients are all positive, but not always statistically significant. It appears with the exit of Gordon that the market anticipated a merger. An issue of interest to investors at the time, however, is where the merger would occur. SBIC, in principle, could have merged with any of the firms in the Liberty Life group. SBIC, however, was unlikely to merge with Libsil, as it is only a holding company for Liberty's strategic investments. (In any event, given that Libsil held approximately 40 per cent of SBIC's issued share capital, it is unlikely that a merger between the two would be legal without it divesting the SBIC shares). When the merger was announced the uncertainty of who the merger partner would be was resolved. SBIC bought the remaining 50 per cent of the share capital of the unlisted LCC. Outside shareholders in Libhold and LLA realised that they would not share in the merger premiums and their share returns fell. Consistent with this analysis, most of the δ_2 coefficients are negative. The magnitude of δ_1 is greater than δ_2, however, indicating that these events were wealth enhancing.

Table 2: Results of standard event study (p-values in parenthesis

	Libhold	Libsil	Libvest	LLA	SBIC	Libhold	Libsil	Libvest	LLA	SBIC
α	-0,0005	0,0000	-0,0002	-0,0005	0,0000	-0,0004	0,0001	0,0000	-0,0003	0,0001
	(0,3527)	(0,9843)	(0,8436)	(0,4184)	(0,9738)	(0,4920)	(0,9115)	(0,9625)	(0,6261)	(0,9227)
β_{ALSI}	0,9246	1,3830	0,9633	1,1440	1,2974					
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)					
β_{Gold}						0,0219	-0,1955	0,0072	0,0593	-0,1845
						(0,3412)	(0,0000)	(0,8304)	(0,0112)	(0,0000)
β_{INDI}						0,8492	1,5470	0,8997	1,0291	1,3282
						(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Resign	0,1761	0,0362	0,1317	0,1516	0,0620	0,1837	0,0501	0,1399	0,1608	0,0748
	(0,0000)	(0,1967)	(0,0000)	(0,0000)	(0,0030)	(0,0000)	(0,0569)	(0,0000)	(0,0000)	(0,0002)
Merge	-0,0441	-0,0174	0,0197	-0,0710	-0,0331	-0,0443	-0,0170	0,0195	-0,0713	-0,0331
	(0,0058)	(0,5337)	(0,4060)	(0,0000)	(0,1120)	(0,0071)	(0,5171)	(0,4154)	(0,0000)	(0,1012)
Adj-R^2	0,4217	0,2876	0,2392	0,5028	0,3965	0,3870	0,3727	0,2204	0,4511	0,4321
F	194,4611	108,1404	84,4208	269,2804	175,3371	126,6271	119,2549	57,2504	164,5668	152,4295
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
LM_{ARCH}	0,0000	0,0000	0,0001	0,0000	0,0000	0,0005	0,0000	0,0780	0,0000	0,0000

It is possible to tell a richer story with the data. A feature of many financial time series is the presence of time-varying volatility. This result has been confirmed for many markets and financial commodities (Bollerslev, Chou and Kroner, 1992), including the Johannesburg Stock Exchange (Brooks, Davidson and Faff, 1997). It has been shown by Baillie and Bollerslev (1989) that as the sampling frequency becomes finer the presence of time-varying volatility becomes increasingly significant and needs to be accounted for. Indeed, the final row of Table 2 contains p-values from a LM test for ARCH effects. In 9 of the 10 instances ARCH effects are present in the data. To account for these effects a version of the GARCH model suggested by Bollerslev (1986) is employed.

The specification of the model, incorporating both the return generating process and the time-varying volatility is as follows:

$$r_{i,t} = \alpha_{i,t} + \beta_{i,t} r_{m,t} + \delta_1 \text{resign}_t + \delta_2 \text{merge}_t + \varepsilon_{i,t} \qquad \ldots(3a)$$

$$h_t = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \beta_1 h_{t-1}$$

$$r_{i,t} = \alpha_{i,t} + \beta_{1i,t} r_{Gold,t} + \beta_{2i,t} r_{Indi,t} + \delta_1 \text{resign}_t + \delta_2 \text{merge}_t + \varepsilon_{i,t}$$

$$(3b)$$

$$h_t = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \beta_1 h_{t-1}$$

Results of this exercise are shown in Table 3.

The interpretation of the results in Table 3 is somewhat different from those shown in Table 2.

First, the δ_1 coefficients remain positive. Now, however, the SBIC δ_1 coefficients are not statistically significant, while the δ_2 coefficients are significant and negative. Apart from SBIC, the δ_2 coefficients are only statistically significant in one instance (LLA with the market portfolio being proxied by the ALSI). The results in Table 3 are consistent with the following interpretation: Investors did not react adversely to the merger announcement and the negative response for SBIC is due to either adverse results or a perceived over-payment for LCC.

The issue of an implied control premium can now be addressed. The analysis is complicated by, at least, two factors. First, SBIC's announcement on February 9 is not "clean". SBIC also published its annual financial statements, indicating a loss on its Russian investments. Second, Gordon exited in two steps: First he announced his resignation (on February 5) and second he severed his shareholding on February 9. In order to estimate the value of the control premium, the market models set out above are re-estimated with a combined dummy variable labelled "event" where the dummy is equal to 1 on the 5th and 9th of February and 0 for all other dates.

Following the evidence set out in the previous tables and Holderness and Sheehan (1988), it can be hypothesised that the event coefficient would be positive. Holderness and Sheehan (1988:331) argue that if a control block changes hands for the purpose of expropriating shareholder wealth, that share prices should decline, not increase (on the assumption that the less proficient expropriators sell to the more proficient).

Table 3: Results of GARCH event study (p-values in parenthesis)

	Libhold	Libsil	Libvest	LLA	SBIC	Libhold	Libsil	Libvest	LLA	SBIC
α	-0,0002	0,0000	-0,0007	-0,0006	0,0006	0,0000	-0,0002	-0,0006	-0,0003	0,0004
	(0,7113)	(0,9937)	(0,2996)	(0,1849)	(0,1842)	(0,9307)	(0,7909)	(0,3961)	(0,5924)	(0,4261)
β_{ALSI}	0,8780	1,4645	0,9258	1,1519	1,1040					
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)					
β_{Gold}						0,0032	-0,0685	-0,0091	0,0178	-0,0481
						(0,8759)	(0,0196)	(0,7776)	(0,3191)	(0,0468)
β_{INDI}						0,7328	1,6579	0,8382	1,0659	1,1381
						(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Resign	0,2193	0,0367	0,1724	0,1050	0,0495	0,2301	0,0490	0,0914	0,1107	0,0735
	(0,0000)	(0,8794)	(0,0000)	(0,0000)	(0,1984)	(0,0000)	(0,9459)	(0,0001)	(0,0000)	(0,9405)
Merge	-0,0643	-0,0223	0,0264	-0,1062	-0,0715	-0,0618	-0,0162	0,0230	-0,0816	-0,0547
	(0,4224)	(0,6190)	(0,9446)	(0,0075)	(0,0000)	(0,5094)	(0,9999)	(0,9783)	(0,5883)	(0,0269)
C	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
	(0,0000)	(0,0000)	(0,0140)	(0,0000)	(0,0016)	(0,0000)	(0,0000)	(0,0033)	(0,0000)	(0,0027)
ARCH	0,2361	0,2068	0,0722	0,1842	0,1560	0,1970	0,2033	0,0847	0,1768	0,1034
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
GARCH	0,6721	0,7560	0,9320	0,7552	0,8407	0,6646	0,7601	0,9194	0,7764	0,8926
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Adj-R^2	0,4118	0,2839	0,2328	0,4922	0,3823	0,3708	0,3575	0,2116	0,4400	0,4066
F	93,8991	53,5965	41,2658	129,5907	83,0988	68,0190	64,2639	31,5261	90,3327	78,9213
	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)

Table 4: Estimates of the control premium (p-values in parenthesis)

Equation	(1a)	(1b)	(2a)	(2b)
Libhold	0,0660	0,0697	0,1205	0,1233
	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Libsil	0,0094	0,0165	0,0127	0,0217
	(0,6365)	(0,3747)	(0,0947)	(0,0008)
Libvest	0,0757	0,0797	0,0650	0,0669
	(0,0000)	(0,0000)	(0,0001)	(0,0001)
LLA	0,0403	0,0447	0,0946	0,0996
	(0,0007)	(0,0004)	(0,0000)	(0,0000)
SBIC	0,0144	0,0208	0,0191	0,0236
	(0,3311)	(0,1486)	(0,0291)	(0,0069)

Results for this exercise are shown in Table 4. SBIC is included for completeness. For the sake of brevity only the event coefficient is shown. Following earlier results, the interpretation of Table 4 is mixed. This is especially so for Libhold and Libvest. Results from equations (1a and 1b) indicate that the control premium is about half of that estimated in equations (2a and 2b). In the case of Libsil, only one of the event coefficients is significant. This indicates that the value of the control premium ranges from zero (unlikely) to about 12 per cent.

There is, however, an unresolved puzzle. Why was it necessary, given the close relationship between Liberty Life and SBIC for a merger at all? In many respects, the situation is similar to the famous Fisher Body-General Motors merger of 1926. This case study and its lessons are highly controversial in the literature and have become a paradigm case study in the Coasean literature (see *inter alia* Klein, Crawford and Alchian, 1978; Coase, 1993; Klein, 1993; Bolton and Scharfstein, 1998). The basic facts of the case are set out in Williamson (1985:114-115). In short, General Motors contracted, in 1919, with Fisher Body to supply motor car bodies to it's production lines. Due to an unexpected increase in demand, General Motors wished to vary the conditions of the contract and wanted Fisher Body to relocate its plants next to the General Motors plants. Fisher Body refused on both accounts. As a consequence General Motors acquired Fisher Body as a wholly owned subsidiary in 1926. The reasons why this takeover occurred are controversial, especially when we consider that by 1919 General Motors already owned 60 per cent of Fisher Body (Bolton and Scharfstein 1998:103).

It seems that a majority stake in a firm does not ensure complete control. Despite owning a majority stake, General Motors was unable to compel Fisher Body to its wishes. General Motors and Fisher Body remained two separate legal entities until 1926. The benefits of integration obviously were not realised while the firms were separated by the veil of incorporation. In essence, an internal capital market cannot be formed across legal entities. The root cause of this difficulty probably comes from non-exclusive overlapping sets of shareholders. Within an internal capital market, resources are allocated by fiat and this has the potential to prejudice at least one of the sets of shareholders. This view is given credence by Klein's (1993:216) implication that had Fisher Body acquiesced to General Motors, their profitability would have been compromised.

The SBIC-Liberty Life merger is similar to the Fisher Body case. SBIC has not acquired the operating company LLA, rather it has acquired 100 per cent of LLA's ultimate controlling company. There are, however, two sets of outside shareholders to consider in all decision making. This guarantees that the benefits of internal capital markets (which are themselves controversial) cannot be realised from this "merger". In addition, despite having control over the Liberty Group, SBIC will still need to contract with Liberty Life for the provision of insurance, something that it could and would have had to do even in the absence of the "merger". The Fisher Body case indicates that even with a controlling interest, disputes between firms over the operation of long term contracts can occur.

4. CONCLUSION

This paper has investigated recent corporate governance developments in South Africa. The resignation of Donald Gordon and the subsequent merger of Liberty Life and SBIC have created a natural case study environment. Apart from

investigating the market response to these event, it is possible to estimate the value of South Africa's control premium. Given, however, that only one pyramid group is investigated, it is likely that the control premium is pyramid specific.

The market response to the resignation was generally positive whereas, following Table 3, there was no market response to the merger. SBIC was an exception, however, it also announced negative annual results on that day. Estimates for the control premium are as high as 12 per cent. Relative to other countries where similar exercises have been undertaken this is relatively low.

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