

where  $\varphi_b$  ( $\varphi'_b$ ) is the buyer's power index before (after) the transaction. The price of one share belonging to the block is therefore bounded below by the seller's valuation and above by the buyer's valuation:

$$(5) \quad \frac{\varphi_s - \varphi'_s}{N^T} C + \frac{q}{N} \leq P \leq \frac{\varphi'_b - \varphi_b}{N^T} C + \frac{q}{N}.$$

The market price of common shares, conditional on a block transaction, should similarly depend on the valuation of shares by those investors who trade in the market. It should therefore be equal to the present value of not only pecuniary benefits but private benefits as well. Indeed, it has already been suggested that private benefits are reflected in the exchange price of a common share in proportion to outsiders' Shapley value (Zingales, 1995). Let  $P^e$  be the market price of a common share,  $\phi$  ( $\phi'$ ) be outsiders' Shapley value before (after) the transaction and  $N_o$  the number of outsiders' shares  $N_o$ . Then the market price of a common share before the transaction is:

$$(6) \quad P^e = \frac{\phi C}{N_o} + \frac{q}{N} \quad 0 \leq \phi \leq 1$$

and the pre-transaction block premium equals:

$$(7) \quad \left( \frac{\varphi_s - \varphi'_s}{N^T} - \frac{\phi}{N_o} \right) C \leq P - P^e \leq P \left( \frac{\varphi'_b - \varphi_b}{N^T} - \frac{\phi}{N_o} \right) C.$$

A similar specification for the post-transaction premium obtains, with  $\phi'$  ( $p^{e'}$ ) replacing  $\phi$  ( $p^e$ ). (6) implies that stock market price behaviour around block transactions should be associated with changes in the Shapley value of stockholders trading in the market, if  $\phi'$  differs from  $\phi$ . (7), in turn, states that block transaction premium is determined by the share of total private benefits being transferred through the block relative to the share of private benefits enjoyed by the market. In the empirical section