Announcement Effects of China's Listed Firms' Divestitures

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Abstract   This paper examines the announcement effects of China's listed firms' divestitures completed during 1998-2002 and finds that sample firms have positive cumulative average abnormal returns in the event windows of $[-1,+1]$ and $[0,+7]$. The results shows that the corporate divestitures of China can increase shareholders' wealth in a short period around the announcement date.

Key words   asset restructuring;   divestiture;   listed firm

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Asset sell-offs emerged in China in 1993. Since the Fifteenth Congress of CCP, shrinking asset restructuring has been adopted by listed firms gradually and taken on a rising trend, especially the asset divestitures. From 1998 to 2002, over 1 000 listed firms have divested their assets. Now it appears that asset divestiture has become an indispensable part of the everyday operations of listed firms in China.

However, up to now, an empirical analysis of the wealth effects of the divestitures of China's listed firms on shareholders has been received little attention. The reasons for it may be that there are too many cases and it is not easy to analyze them, and that it is very difficult to collect and process the stock price data. Therefore, it seems valuable for us to study listed firms' asset divestitures positively.

This paper intends to study the wealth effects of divestitures of China's listed firms on shareholders, and examines price movements during the entire divestiture process from 210 days prior to the announcement date through 210 days following the announcement date for 44 sell-offs which occurred between 1998 and 2002.

1   Literature Review

Like M&A, the divestiture announcement will affect a firm's stock price. In 1975, Ref.[1] did the initial study of the effects of the divestiture announcement on a firm's stock price by using monthly returns price index. This attempt aroused a series of research papers on divestitures by adopting daily price index and standard event study. The results of these researches show that prior to and on the divestiture announcement date, all the sample corporations get positive cumulative average abnormal returns (see Table 1).[2]

Now in China, the study of the asset divestitures of listed firms still remains on the stage of introducing foreign theories of divestment, and there is little genuine empirical study on divestitures. Ref.[3] touched upon divestitures' motives, time characteristics, associated trading, etc. when positively analyzing the asset restructuring of China's listed firms' divestment in 1999. Ref.[4] analyzed the general state of 1999's divestitures of listed firms, but concentrated on the motives, relevant transactions, and the problems of asset valuation. Up to now, there have been no tests of why china's listed firms divested their assets, nor empirical study of the wealth effects of asset divestitures.

Table 1   Abnormal Returns in Different Windows for American Divesting Firms

Researchers	Sample size	Time period	Event window	*CAAR*
Alexander, et al. (1984)	53	1964-73	(−1,0)	0.17
Rosenfeld (1984)	62	1969-81	(−1,0)	2.33
Jain (1985)	1 062	1976-78	(−1,0)	0.53
Klein (1986)	202	1970-79	(−1,0)	0.72
Hite, et al. (1987)	55	1963-81	(−1,0)	1.66
Hearth and zaima (1984)	58	1979-81	(−1,0)	8.74
Hirschey and zaima (1989)	64	1975-82	(−1,0)	1.64

Sources: compiled according to Kaiser and Stouraitis(1995).

2   Data and Methodology

1   Data Sample

According to the statistics in the Proceedings Pandect of China's Listed Firms' Restructuring published on China Securities Daily, China's listed firms had announced 1 359 divestitures from 1998 to December 21, 2002. Divestiture cases being too large, this paper has to make some selection. The selection criteria are as follows: (1) Listed in Shanghai Stock Exchange; (2) No associated transactions; (3) No overlapping restructuring-transactions; (4) Divestiture sum is over RMB 10 000 000; (5) Exclusive of ST(special treated) and PT(particular treated) corporations.

In the light of the above criteria, this paper has selected 44 divestitures announced by 44 listed firms in the end. Generally speaking, in an event study, it is a large-scale empirical study when sample size equals or is over fifty. The positive analysis in this paper can be regarded as a large-scale empirical study in the main. Daily common stock returns index was obtained from SinoFin in Beijing University. The study period for each company includes 210 days prior to the announcement date, the announcement date (day 0), the interim period (day −1 to day +1,) and other sub-periods.

1.2   Methodology

This study adopts the mean adjusted return methodology (MARM) described by Ref.[5]. Their study suggests that the mean adjusted return model acts as well as more complex models (e.g., the market model) in detecting the presence of abnormal returns. This methodology relies on the rational expectations hypothesis and assumes that the ex-ante return on security j is equal to its expected return, ER_t plus a random disturbance term. Hence the expected ex-ante return equals ER_t and the abnormal return is defined as the difference between the actual and the expected return. In the absence of significant price movements, abnormal returns ought to be randomly distributed around zero.

In an event study, the expected ex-ante return is defined as the mean return over a period of time sufficiently prior to the event so as not to be affected by the event. In this study, the estimation period is used to estimate the expected ex-ante return and consists of day−240 D to day −30 D. Thus,

$$ER_j = \frac{1}{210} \sum_{t=-240D}^{-30D} R_{jt.}$$ (1)

Abnormal returns are computed for each firm in the sample for the 41 day-window periods, where:

$$AR_{jt} = (R_{jt} - ER_j)$$ (2)

Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) are computed separately for divesting firms for each day according to the event window of [−20, +20] across the entire sample. For 44 firms, the average abnormal return and cumulative average abnormal returns are defined as:

$$AAR_t = \frac{1}{N} \sum_{t=1}^{N} AR_{jt}$$ (3)

$$CAAR_s = \sum_{t=1}^{s} AAR_t$$ (4)

where N is the sample size, and s represents the number of trading days in the event window of [−20, +20].

Testing the significance of the AAR_s and $CAAR_s$ helps to ascertain whether there are significant abnormal price movements during the period prior to the sell-off announcement or following its completion. The variance of the collectivity remaining unknown, we use a binomial test. The test statistic for AAR_s and $CAAR_s$ equals:

$$T = AAR / \sigma \sqrt{D}$$ (5)

where D represents the days in the event window, $\sigma = \left\{ \frac{1}{n-1} \sum (R_t - ER)^2 \right\}^{\frac{1}{2}}$, R_t is the actual daily return rate in the estimating period, and n is the days in the estimating period of ER.

3 Empirical Results

Abnormal returns in the event window of [−20, +20] for the sample divesting firms can be seen from the Fig.1 and Table 2. Generally, the CAAR that sample firms get is negative (−0.049 2%) in the event window of [−20, +20], and presents a continual falling trend, which is significant at the 2.5 percent level.
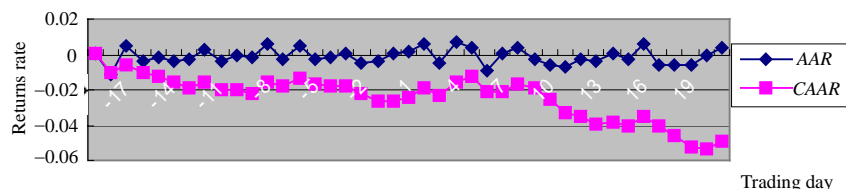

Fig.1　Attachment Abnormal Returns for Divesting Firms

Although having negative *CAAR* in the event window of [−20, +20], sample firms experience positive *CAAR$_s$* in the event windows of [−1, +1] and [0, +7], which are 0.007% and 0.009 3% respectively, and significant at the 5 percent level (see Table 2).These results show that the divestitures of China increase shareholders' wealth in a short period around the announcement date.

Table 2　CAAR Summary over Various Sub-periods for Divesting Firms

Sub-period	CAAR	$\sigma(CAAR)$	T(CAR)
(−1,+1)	0.007 003	0.006 641	3.573 3[*]
(−5,+5)	−0.004 63	0.012 716	0.364 1
(−10,+10)	−0.012 06	0.017 57	0.686 4
(0,+7)	0.009 357	0.010 844	2.406 5[*]
(−20,+20)	−0.049 22	0.024 55	2.004 9[**]

Note: * denotes significance at 5% level, and ** at 2.5% level.

4 Conclusions

Using a sample of 44 divestitures during 1998-2002, this paper examines whether the divestments have positive announcement-period abnormal returns. The empirical findings are that sample firms have a cumulative average abnormal returns of 0.007% in the event window of [−1, +1] and a cumulative average abnormal returns of 0.009 3% in the event window of [0, +7] respectively. The results show that the divestitures of sample firms can increase shareholders' wealth in a short period around the announcement date, which is consistent with the findings of the researchers in the above literature review.

This study restricts the sample selection strictly. If freeing those limitations, different results may be found. Therefore, the future study should select the sample firms that are listed not only in Shanghai Stock Exchange but also in Shenzhen Stock Exchange. Other relaxations may be considered, too.

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