Share Buybacks in Japan: The Preliminary Evidence*

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1. Introduction

Should share repurchase activity increase shareholder value? The empirical evidence, to date, for the US market indicates that share buybacks increase shareholder value for all forms of repurchase methods available to US corporations.(1) Share buyback programs, however, are relatively new in Japan. The Commercial Code in Japan was revised in 1997 allowing Japanese companies to buyback their own shares. Thus the Japanese experience should provide us with a unique opportunity to investigate the extent to which empirical findings in the US are robust to different market settings. This note has the modest objective of documenting the change in shareholder value due to share repurchase announcements in the Japanese market. Several hypotheses explaining the rationale behind the positive creation of shareholder wealth are proposed in the literature. We focus on the information signaling hypothesis suggested by Vermaelen (1981) as a potential rationale and find evidence consistent with this hypothesis.

In mid January 1998, the Japan Federation of Economic Organizations (Keidanren) suggested that the rules governing corporate share buybacks be relaxed. More specifically, the Keidanren Chairman, Mr. Takashi Imai (formerly of Nippon Steel Corp.) placed a formal request with the former Prime Minister Kiichi Miyazawa to allow firms to use their legal capital reserves for share buyback purposes. Under this proposal companies could use capital surplus if the sum of the company's retained earnings and capital reserves exceeded 25% of its equity. This would make it easier for less profitable firms to undertake repurchasing activity.

The original Japanese Commercial Code prohibited companies in Japan to repurchase their shares in order to prevent managers from manipulating the system. However, with collapse of the Japanese "bubble", the government permitted Japanese firms to repurchase shares. In October 1994, the Commercial Code was revised to allow companies to repurchase shares using its retained earnings so long as approval is granted at the shareholders meeting. In other words, the articles of association need not be changed. One drawback to this scheme was the tax code. An imputed dividend from the share buyback scheme is subject to taxation at the same rate as other income. This is referred to as the deemed dividend tax.

In March 1996, the code was revised allowing Japanese companies to repurchase their own shares using retained earnings or funds reserved for the payment of dividends. However, companies could not purchase more than 10% of their outstanding shares under this system. Two years later, in March 1998, share buybacks could be financed with legal capital surplus as mentioned above. A limit on the number of shares that could be purchased is not imposed on the legal capital surplus financing scheme. Both the retained earnings and legal surplus funding schemes require approval at shareholder meetings and at the Board level. Moreover, both financing methods would have been subject to the deemed dividend tax. Fortunately, the "temporary" freeze on deemed dividend taxes should make share buybacks more likely.

For a company to repurchase its shares, it must revise its articles of association to include an article on the repurchasing of stock. This change in articles must be approved at shareholders meeting under Japanese Commercial Law. In changing the articles, the shareholders are protected in possible instances where repurchases are undertaken for the purpose of "greenmail," for example. This places legal responsibility on the Directors. Once, the articles are changed, the company must decide on the number of shares to repurchase and the method of repurchase. Two methods used to date in Japan are the open market repurchase (OMR) and fixed price tender offer (FPT).

The open market repurchase method involves a company announcing it will purchase a specified amount (in yen) during a specific period in the open market. Thus, corporations using this method could vary the amount of shares they repurchase over the specified period and purchase the shares at differing market prices. In contrast, in an FPT, the company will offer to buy a specified number of shares at a given price within a given time frame. Generally, the fixed price offer is higher than the current or prevailing market price.

Why would firms change their articles and begin a repurchasing plan during the 1990's in Japan? In general, one would suspect that a firm which uses its excess cash to repurchase its own shares would be penalized by the market. For use of cash in this manner signals that firms do not have profitable or positive net present value projects to invest in. However, under the signaling hypothesis, if a company announces that it will repurchase its own shares at a substantial premium over the market price, then this announcement serves as a signal that management believes its shares are undervalued relative to the market. Assuming the managers assessment is correct, then the market should respond favorably to the (fixed price) repurchase program.[2] Given the weak performance of the Japanese market in the 1990's, it is possible that some firms desired to signal their fundamental strength to the market in this way.

2. Methodology and Data

We gathered information on announcement dates, company names, number of shares repurchased, repurchase amount, repurchase method, and repurchase periods from 1996 to 1998 from the *Japan Company Handbook*. The Board's decision date is used as the event date. The study is limited to companies listed on the Tokyo Stock Exchange (first and second sections). If transaction prices were missing for five days or more, the company was deleted from the sample. This leaves us with a sample of 184 repurchase announcements.

A simple but standard event study methodology was used in this study. Weston *et al.* (1997) provides an overview of event study methods used in empirical research in the area of corporate finance. Abnormal returns were generated by taking the daily return for each company less the daily Nikkei index return. In effect, we are assuming a uniform beta equal to one for all companies in the sample.

$$AR_{it} = R_{it} - R_{index,t} \ ,$$

where AR_{it} is the abnormal return for company i at time t, R_{it} is the return for company i, and $R_{index,t}$ is the index return. The average abnormal return is defined as $\overline{AR_t} = (\sum_{i=1}^{N} AR_{it})/N$ for N announcements in the sample. The cumulative abnormal return is

$$CAR_t = \sum_{t=-T}^{T} \overline{AR}_t \ ,$$

where *CAR* is the cumulative abnormal return. *CAR* is simply the sum of the average abnormal returns over a specified time period around the announcement. For purposes of this paper, the event window was set from –30 trading days to +30 trading days around the announcement date (day zero). All findings in this study were robust to the use of Nikkei and TOPIX indices. We also used a longer window of –40 to +40 days but the results were qualitatively similar to the –30 to +30 day window.

3. Empirical Findings and Discussion

We find the *CAR* for the entire sample is substantially negative and hence it would appear that the first generation of repurchase programs in Japan did not create shareholder wealth at least in the short run. As we did not adjust the beta for each firm, these results could be attributed to the overall downward trend in the market.

When we partitioned the sample, however, the results were strikingly different. We

first focused on a sub-sample of repurchases under the fixed tender price method. Under this approach firms would offer a price at a premium over the current market price, hence we would expect a positive reaction on average if the shares are undervalued. Given the market conditions in Japan at the time, this mind set would appear plausible as companies required avenues to signal to the market that their business was fundamentally sound. In our sample of 20 announcements, the 30 day *CAR* was 0.0259 indicating an increase in shareholder wealth (Table 1). The *CAR* turns positive on day +1 and remains consistently positive roughly in the same range for the remaining thirty days of the event window. Not only is this pattern consistent with those found in the US market but consistent with the predictions of the signaling hypothesis.

Table 1: Cumulative Abnormal Returns

Day	Fixed Price	Medium Sized	Capital Reserve
-30	0.0028	-0.00002	-0.0028
-20	-0.0062	0.0004	0.0135
-15	-0.018	-0.0278	0.0001
-10	-0.0088	-0.0293	-0.0160
-5	-0.023	-0.0283	-0.0288
-4	-0.024	-0.0277	-0.0305
-3	-0.028	-0.0236	-0.0307
-2	-0.018	-0.0287	-0.0354
-1	-0.020	-0.0303	-0.0389
0	-0.017	-0.0210	-0.0371
1	0.015	-0.0055	-0.0090
2	0.0075	-0.0010	-0.0007
3	0.0073	0.0059	0.0021
4	0.0053	0.0086	0.0058
5	0.0064	0.0121	0.0059
10	0.0126	0.0137	0.0055
15	0.0111	0.0145	0.0068
20	0.0154	0.0185	0.0095
30	0.0259	0.0262	0.0283

Fixed price refers to announcements for the fixed price tender offer (sample size N=20). Medium size refers to announcement for medium sized firms (TSE classification) undertaking share repurchases (N=55). Capital reserve refers to announcements for firms using their capital reserve funds to repurchase shares (N=44). All abnormal returns are generated relative to the Nikkei index. Announcement is centered at day zero. Sample covers firms listed on the Tokyo Stock Exchange from 1997 to late 1998. *CAR* is statistically significant at the ten percent level for all days from +1 for FPT and for all days from +3 for medium sized and capital reserve.

We also focus on medium sized corporations (TSE classification). The rationale follows from the signaling literature. Smaller or in the case of Japan, medium sized firms, should exhibit stronger signaling effects. Again we find evidence consistent with hypothesis as the *CAR* at day 30 is positive (Table 1). Here, however, the *CAR* did not turn positive until day 3.

And finally, we created a sub-sample of events where the company announced it would use capital reserves to fund its repurchase program (from mid 1998). Our sample size is 44 announcements. Interestingly, the *CAR* is positive after day 3 indicating the market perceives the program as welfare improving (Table 1).

Future research would address econometric issues on the estimation of abnormal returns and place greater structure on testing the signaling hypothesis by running cross-section regressions of the *CAR* (short span) on various explanatory variables. The sample universe would be expanded to include the large number of companies which have started and also completed share repurchase programs since 1998. Of particular interest is the potential link between repurchase programs and stock option programs and the unwinding of cross-shareholdings. As buyback programs become a standard tool in managements arsenal of financial policies, we could expect creative ways of funding such proposals to emerge such as the use of put warrants (Salomon Brothers, 1994).

Notes

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(1) Weston *et al.* (1997) provides a thorough overview of the theory and empirical evidence of repurchase programs in Chapter 18. Empirical work in the area include Dann (1981), Vermaelen (1981), Comment and Jarrell (1991), Ikenberry *et al.* (1995), Lakonishok and Vermaelen (1996) among others. Okamura (1998) provides some preliminary insights on buyback programs in Japan.

(2) Ikenberry and Vermaelen (1996) suggest that fixed tender price share repurchase programs are identical in nature to options and apply option pricing methods to value these programs.

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自社株買いが株価へ与える影響について

〈要　約〉

竹澤　伸哉

本論文は「event study」による自社株消却の情報効果の検証を行った。一定の価格で買い戻す公開買付による自社株取得方法が株価に著しいプラスのインパクトを与えたことを証明した。