



FACULTY OF **BUSINESS AND LAW**

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School Working Papers – Series 2004

SWP 2004/16

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Recent Australian Evidence**

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Information Signalling of Share Buy-Back Announcements – Recent Australian Evidence

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Abstract

Share buy-backs have become increasingly popular among Australian companies. One of the main aims of announcing a share buy-back by a listed company is signalling the market that its shares are currently underpriced. When market reacts to the signal, price of the shares is expected to increase immediately after the announcement. While there are several ways of buying back shares, 'on-market buy-backs' is the most popular method of buying back shares in Australia. Australian listed companies have announced more than two hundred on-market share buy-backs over the past three years. The aim of this paper is to examine the information signalling effects of these on-market buy-back announcements.

If the signal is considered positively (negatively) by the market, the price of the repurchasing company's shares should increase (decrease) immediately after the announcement. In this study, signalling effect of share buy-back announcements was examined using most recent Australian data. The total population of on-market buy-back announcements during the period from 1 January 2000 to 10 March 2003 was examined in this study. The abnormal market return over the short-run (announcement day and 9 trading days centred on the announcement date) was computed using the All Ordinaries Accumulation Index as the reference portfolio. The daily abnormal returns (AR) and cumulative abnormal returns (CAR) during the event period were computed. The results strongly support the information-signalling hypothesis of share buy-backs. Australian market generally considers announcement of on-market share repurchases as signalling of insider information that shares are currently underpriced.

Keywords

Stock repurchases, Australian share buy-backs, signalling, short-term price reaction

Working Paper May 2004
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Information Signalling of Share Buy-Back Announcements: Recent Australian Evidence

1. Introduction

Share buy-backs have become increasingly popular among Australian companies since the Australian Stock Exchange (ASX) announced its rules for the operation of 'on-market' buy-backs in 1991. Over 400 on-market buy-backs have been announced up to March 2003.¹ Contrary to the share buy-backs in early years (Ekanayake, 1994), on-market buy-backs in recent years represent a cross-section of the Australian listed companies. Many large well-known companies (eg. AMP, BHP, Commonwealth Bank, Fosters Breweries, National Australia Bank, Wesfarmers, Woolworth) as well as many small unknown companies from all sectors of the market have engaged in one or more on-market buy-back in recent years.

In the United States, share buy-backs grew at an average annual rate of 26.1 percent over the period 1980 to 2000 (Grullon and Michaely, 2002). Share buy-backs accounted for 41.8 of the total earnings of all U.S corporations in 2000 and exceeded the gross dividends pay-outs by 13.1 percent (Grullon and Michaely, 2002).

Past research has identified a number of motives for buying-back shares by Australian companies (see, Mitchell, Dharmawan and Clarke, 2001; Mitchell and Robinson, 1999). The two main motives identified for on-market buy-backs are: (i) to signal underpricing and future expectations and (ii) to improve financial performance and position. The first motive is in line with the information-signalling hypothesis. The

¹ This number was estimated by adding the on-market buy-backs identified during the following time periods: up to 1995, 29 (Mitchell and Robinson, 1999); 1996 - 1999, 219 (Balachandran, Faff and Troiano, 2003); 2000 – 2003 March, 206 (This study).

second motive can be seen as the long-term real outcome expected of share repurchases. How effective are Australian share buy-backs in achieving the first aim? In other words, does the share price of a repurchasing company go up immediately after a share repurchase announcement? If the price goes up, by how much?

Although several research attempts (Harris and Ramsay, 1995; Christianto, Clarke and Mitchell, 1997, Otchere and Ross, 2002) have so far been made to study the wealth effects of share buy-backs announcements of Australian companies, empirical evidence on recent on-market buy-backs is still scant. Harris and Ramsay (1995) study was limited by the amount of share buy-back data available at that time. They examined only 16 share repurchases and arrived at the tentative conclusion that effect on prices is positive but insignificant. Christianto, Clarke and Mitchell (1997) based their study on a sample of 29 on-market buy-backs announced during the period 1989–1995 and reported a short-term cumulative average abnormal returns of 2.35%.

Apart from the small size of the samples examined in these studies, the samples were very early buy-backs in Australia. Although share buy-backs have become much more widespread after 1995, only one published study (i.e., Otchere and Ross, 2002) has yet examined a large enough sample. However, Otchere and Ross (2002) limited their study only to the announcements that had specifically stated ‘market undervaluation’ as the reason for buying back. Their study was based on a sample 132 buy-back announcements initiated between 1991 and 1999.

This study aims to contribute to the literature by examining the complete population of on-market buy-backs announcements made by Australian listed companies during the period 1 January 2000 to 10 March 2003. After a careful examination of the total population of on –market buy-back announcements (206 announcements) during

this period, the final analysis of this study was based on 127 announcements (Please see Table 1).

The rest of the paper is organised as follows. The next section reviews the literature on on-market buy-backs, develops the hypotheses and describes the proxies and measurements used in the study. Section 3 details the process of sample selection. Section 4 presents the results and analysis. Section 5 contains the summary and the conclusions.

2. Literature review

Buy-backs have been studied extensively in the US since 1960s. Over the last four decades, researchers have ascribed different rationales for buy-backs. For example, Bierman and West (1966), Elton and Gruber (1968), Grullon and Michaely (2002) considered buy-backs as a substitution for dividends. Baker, Gallagher and Morgan (1981) as an investment decision; Ellis (1965) as a capital structure decision (see, Tsetsekos, Kaufman and Gitman, 1991; Baker, Gallagher and Morgan, 1981 for US studies and Mitchell and Robinson, 1999; Mitchell, Dharmawan and Clarke, 2001 for Australian studies on motives for buy-backs).

Dann (1981), Vermaelen (1981), Asquith and Mullins (1986) and Lakonishok and Vermaelen (1990) among others attributed an information signalling role to buy-back announcements. According to them, by announcing a buy-back, a company management is giving an information signal to the market that the company shares are currently undervalued (underpriced). As a result, price of the shares is expected to

increase thereby passing the value of the 'insider' information to the current shareholders (Vermaelen, 1981, p.181). The signalling effect is generally believed to be stronger in the case of small companies because they are more likely to receive less attention from the market analysts and therefore more likely to have remained underpriced (Lakonishok and Vermaelen, 1990, p. 455). That is, signalling effect is believed to be stronger in small companies because information asymmetry between the management and shareholders is higher in such companies.

On-market buy-backs

The most common type of share repurchase in the US and in Australia is 'on-market buy-backs' (Ikenberry, Lakonishok and Vermaelen, 1995; Mitchell and Robinson, 1999). In on-market buy-backs, companies repurchase their own shares from the market at the going prices (i.e., no premium is offered) through a share broker. According to the Listing Rules of the Australian Stock Exchange, listed companies are required to announce all intended share repurchases by lodging an announcement (i.e., buy-back announcement) with the Stock Exchange before such buy-backs are commenced. These buy-back announcements are believed to convey a signal to the market on which investors would react. The size of the reaction is generally measured by the short-term abnormal returns (change in the share price over and above the normal change) surrounding the announcement date. US studies have consistently found positive abnormal returns around on-market buy-back announcements (e.g., Vermaelen, 1981; Ho, Liu and Ramanan, 1997; Stephens and Weissbach, 1998; Barth and Kasznik, 1999). The average size of the short-term abnormal return in US is about positive 3% (Thinggard, 2003). According to our knowledge, there are only three

published studies, which attempted to measure short-term abnormal returns of on-market buy-back announcements in Australia: Harris and Ramsay (1995) examined only 16 announcements and arrived at the tentative conclusion that effect on prices is positive but insignificant. Christianto, Clarke and Mitchell (1997) examined 29 on-market buy-backs announced during the period 1989 –1995 and reported 2.35% short-term cumulative average abnormal returns. Apart from the small size of the samples (in fact, population) examined in these studies, the samples were drawn from very early buy-backs in Australia. Otchere and Ross (2002) examined buy-back announcements that were made between January 1991 and July 1999. They limited their study only to the announcements which had specifically stated ‘market undervaluation’ as the reason for buying back. They reported a statistically significant abnormal return of 1.25 % on the day of announcement and 4.30% during the three days surrounding the buy-back.

2.1 Hypotheses

According to the information-signalling hypothesis, by announcing a share repurchase, the management of a company signals to the market that the company’s shares are currently under priced. In other words, the management informs the market that the real value or fair value of a share of the company is more than its current market price. It is expected that the market will react to this positive signal (good news) and share price will increase immediately after the announcement.

H1: The announcing company's share price will increase immediately after an on-market buy-back announcement.

Large companies are generally well scrutinised by the security analysts. Hence, the market is generally well informed about large companies. As a result, there is a relatively low information asymmetry between the managers and investors of large companies. In contrast, small companies do not draw attention of many security analysts. Hence, the information asymmetry between managers and the investors is higher in case of small companies. Higher the information asymmetry between the management and the market, the higher will be the effect of any information signalling. Accordingly, announcing of an on-market share buy-back by small companies is likely to increase share prices more than in the case of large companies.

H2: The smaller the size of the company, the larger the positive effect of on-market buy-back announcements.

The larger the proportion of outstanding shares announced to be bought back, the higher should be the positive effect on share prices around the buy-back announcements. This is because, the signal is stronger when higher the proportion. When management has decided to buy-back a larger proportion of the outstanding ordinary shares, market gets a stronger signal of the management's conviction.

H3: The larger the proportion of outstanding shares being bought back, the larger the positive effects of on-market buy-back announcements.

2.2 Proxies and Measurements

Short-term abnormal return

The increase in short-term share price was measured by the cumulative average abnormal return (CAR) over the 10-day event period [days -4; 0; +5] surrounding the announcement day [day 0]. Daily abnormal returns (AR) for each firm in the sample were cumulated to find CAR. Abnormal returns (AR) and CAR were calculated as follows:

$$AR_{i,t} = R_{i,t} - R_{x,t}$$

Where $AR_{i,t}$ is the abnormal return for sample firm i in day t , $R_{i,t}$ is the return for sample firm i in day t , and $R_{x,t}$ is the return on the All Ordinaries Accumulation Index (i.e., the reference portfolio) on day t .

Information asymmetry

The relative size of the announcing company, measured by the market value of the outstanding ordinary shares (i.e., market capitalisation) on the date of the announcement of a buy-back, was used as the proxy for the level of general information asymmetry between the management and the market. The lower the total

market value of the ordinary equity, higher the level of information asymmetry (i.e., a negative relationship). Prior studies also have used market value of shares on the announcement date as the proxy for general information asymmetry (e.g., Thinggard, 2003; Ho, Liu and Raman, 1997). This proxy has also been empirically identified in prior research as an alternative to the proxy of number of analysts that are following a company (Thinggard, 2003). In this study, the entire sample of companies was first ranked based on the market value of the equity. Then the ranked list was partitioned into quartiles. Top quartile served as the proxy for low information asymmetry. Bottom quartile served as the proxy for high information asymmetry.

Proportion of shares sought

The proportion of shares sought was computed for each buy-back announcement by dividing the number of shares to be bought back by the total number of outstanding ordinary shares of the company. The proportions were then grouped into the following five discreet ranges: less than 2.5%; 2.5% - < 5%; 5% - <7.5%; 7.5% - <10%; and over 10%.

3. Sample selection

Data on buy-back announcements were compiled by using DatAnalysis database of Aspect Financial Company Pty Ltd. (www.aspectfinancial.com.au). First, all share buy-back announcements made by Australian Listed companies during the period 1 January 2000 to 10 March 2003 were identified. Next, on-market buy-backs were sorted out and a list of 206 announcements was prepared. Electronic images of the

actual announcements (Form Appendix 3C) lodged with the Company Announcements Office of the Australian Stock Exchange were downloaded and printed. Next, each announcement was carefully studied and relevant data was tabulated. Forty-five announcements were screened out for reasons such as insufficient buy-back data, incorrect classification, and confounding events during the event period. The screening process resulted in a list of 161 on market buy-back announcements. Further 26 announcements were excluded from this list because they were identified as multiple buy-back announcements within a year (i.e., the same company had made more than one announcement within a period of 12 months). Further 8 announcements were excluded for the lack of daily share price data. The final sample used for data analysis was 127 announcements.

Daily share price data and Australian Share Price Accumulation Index data were obtained from Aspect Financial Company database.

Table 1: Sample Selection and Descriptive Statistics: On-market share buy-backs

Year of the Announcement	(1) Number of identified on-market buy-back Announcements	(2) More than one on-market announcement made by a company in a 12 month period	(3) = (1)-(2) No. of single announcements in a 12 month period	(4) Left out due to lack of data	(5) Final Sample
2000	48	10	38	4	34
2001	53	8	45	2	43
2002	51	8	43	2	41
2003 Up to 10th March	9	0	9	0	9
Total	161	26	135	8	127

4. Results and Analysis

4.1 Short-term abnormal returns

Table 2 below shows daily average abnormal return (AR) percentages during the 10-day window: 4 days before the event, event date and 5 days after the event. AR ranges from a low of negative -0.55% in $t = -4$ (i.e., 4 days before the announcement date) to highest of positive 1.25% in $t = 0$ (i.e., the announcement date).

Table 2: Daily Abnormal Return (AR) during the event window

Day (t)	Daily Abnormal Return(%)
-4	-0.55*
-3	0.28
-2	-0.12
-1	0.74**
0	1.24***
1	0.77*
2	0.08
3	-0.03
4	0.93*
5	-0.03

The table shows the daily abnormal returns (AR) for each day of the event period. The two-tailed t -test tested that the abnormal returns are different from zero.

$n = 127$

$t = 0$: announcement day of an on-market buy-back

* Represents significance level at 10%

** Represents significance level at 5%

*** Represents significance level at 1%

As shown in Table 2, the significant positive AR on the announcement day for this sample was 1.24% ($p < .01$, two-tail). The day after the announcement day ($t + 1$) positive abnormal return was 0.77% ($p < .10$, two-tail). On the days $t + 2$, $t + 3$ and $t + 5$ the abnormal returns are insignificant. Profit-taking seems to have taken place in these days. On the fourth day after the announcement day [$t + 4$] the significant abnormal positive return was 0.93% ($p < .10$, two-tail).

Interestingly, the significant positive share price reactions for on-market buy-backs have commenced on the day prior to the announcement day [t- 1]. The positive abnormal return on t-1 was 0.74% ($p < .05$, two-tail). Among the possible reasons for this reaction before the official announcement of buy-backs is leaking of information to some or most investors and their insider trading prior to the official lodging of announcements with the Australian Stock Exchange.

The Cumulative Abnormal Returns (CAR) for each day of the event window (Panel A) and various combinations of days within the ten-day event window (Panel B) are presented in Table 3 below.

Table 3: Cumulative Abnormal Returns (CAR) during the event window**Panel A: CARs for each day of the event window**

Time Period	CAR (%)
-4	-0.55*
-3	-0.27
-2	-0.39
-1	0.35
0	1.59***
1	2.36***
2	2.44***
3	2.41***
4	3.34***
5	3.31***

Panel B: CARs for different combinations of days within the event window

Time Period	CAR (%)
-4; -2	-0.39
-4; -1	0.36
-4; +5	3.30***
-1; +5	3.69***
0; +5	2.95***
-1; +1	2.74***
-1; 0	1.98***
-1; +2	2.83***
-1; +3	2.79***
-1; +4	3.72***
0; +4	2.98***

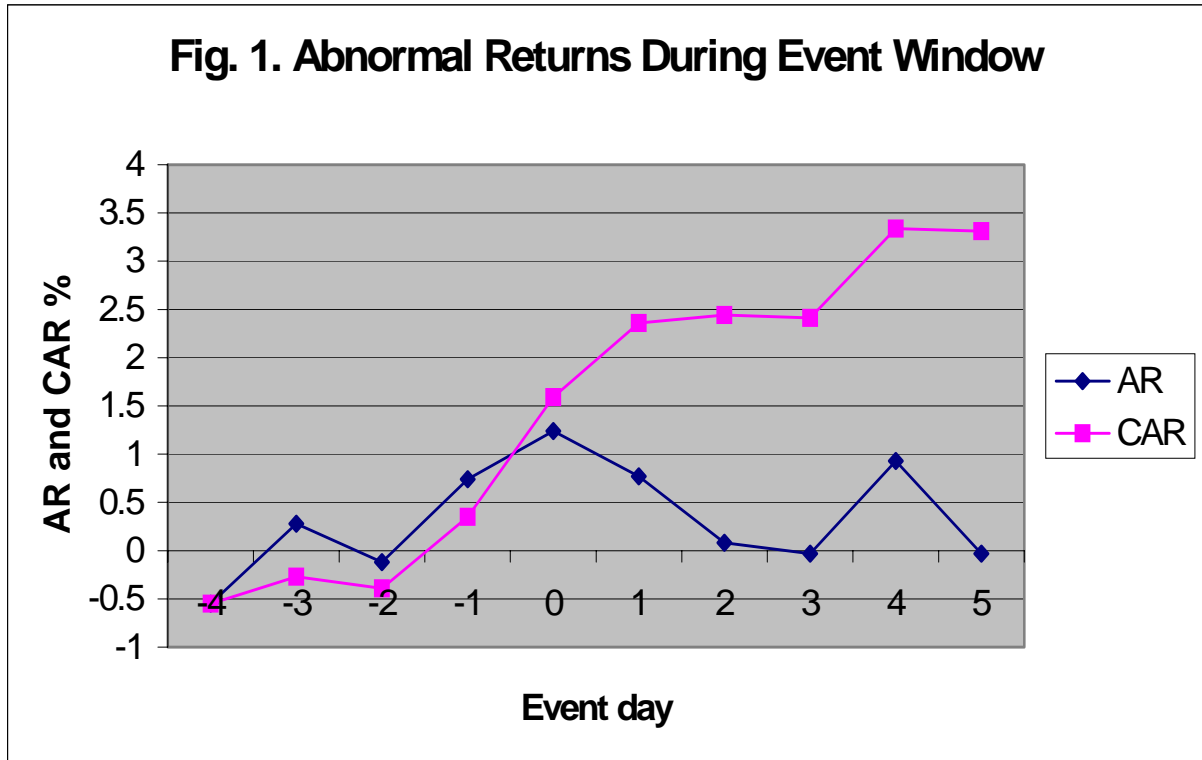
The table shows the cumulative abnormal returns (CAR) for each day of the event window and combinations of days within the event window. The two-tailed t -test tested that the cumulative abnormal returns are different from zero.

$n = 127$

* Represents significance level at 10%

** Represents significance level at 5%

*** Represents significance level at 1%



While CAR was significantly positive for each day of the event window commencing from the announcement day (t_0), the highest CAR (3.34%) was on the fourth day after the announcement day ($t+4$).

The combination of days which resulted in the highest CAR (3.72%) was during the period $t-1$ to $t+4$ (i.e., from one day before the announcement day to 4 days after the announcement day). After the announcement of a buy-back (i.e., for non-insiders), the highest positive CAR (2.98%) is gained during the period from t_0 to $t+4$.

As reported in Table 2, Daily Abnormal Return (AR) is positive and significant on the announcement day, the day before the announcement day, the after the announcement day, and on the fourth-day after the announcement day. As reported in Table 3, Cumulative Abnormal Return (CAR) is positive and significant (2.95%) during the

six-day event period from the announcement day to five days after the announcement day. In contrast, the CAR for the period $t - 4$ to $t - 1$ (i.e., before the announcement) is positive but insignificant (0.36%). When AR on $t - 1$ is excluded for the possible insider trading, the CAR before the announcement of buy-back is negative (-0.39%). As the AR and CAR were computed after adjusting for normal return, and after screening for compounding events, the significant abnormal returns (both AR and CAR) can be attributed to the event of interest (i.e., announcement of on-market share repurchases). Hence, the results strongly support Hypothesis 1 of this study.

4.2 Company size and abnormal return

It was hypothesised in H2 that larger the size of the company, the smaller the positive effect of on-market buy-back announcements. To test this hypothesis, the total sample of 125 announcements² were split into quartiles based on the market value of equity just before the beginning of the event period (i.e., 5 days prior to the announcement date). Next, the top quartile abnormal returns were compared with the bottom quartile abnormal returns. For the top quartile (representing the large companies), the event day abnormal return was 0.10%, while CAR for the period $t 0; t + 4$ was 0.55%. For the bottom quartile (representing the small companies), the positive abnormal return on the event day was 2.82% and positive CAR for the period $t 0; t + 4$ was 5.88%. The results are significantly different from zero at .01% confidence level. These results overwhelmingly support H2.

² Two companies had to be excluded from the sample of 127 announcements due to unavailability of data to compute the company size.

4.3 Proportion sought and abnormal returns

It was hypothesised in H3 that larger the proportion of shares sought in the announcement, the larger would be the positive effect on abnormal returns. To test this hypothesis, buy-back announcements were partitioned into 5 groups based on the proportion of the outstanding ordinary shares sought in the announcements. Next, the abnormal returns (AR) for the event day (i.e., $t = 0$) and CAR for $t = 0; t+4$ were computed for each group and compared with the other groups. Table 3 below shows abnormal returns for each group.

Table 4: The proportion of the ordinary shares sought in the announcement and the signalling effect on abnormal returns

Proportion of shares	Announcement Day AR [$t = 0$]	CAR [$t0:t+4$]
< 2.5%	0.31%	2.65%
> 2.5% - <5%	0.44%	-0.31%
> 5% - <7.5%	1.45%	2.24%
>7.5% - < 10%	2.04% **	2.61%
> 10%	1.65% *	0.48%

The two-tailed t -test tested that the abnormal return for the announcement day and CAR for the period [$t0; t+4$] are different from zero.

* Represents significance level at 10%

** Represents significance level at 5%

As shown in Table 4, the announcement day abnormal return (AR $t = 0$) is higher, the higher the proportion of shares sought. The only exception to this pattern is the last

group (i.e., when the proportion is more than 10%). It is possible that the market becomes somewhat concerned about the buy-back signal when the proportion of shares sought is more than 10%. For instance, the market may have some doubts about the availability of future investment opportunities (i.e., existence of positive NPV projects) for the company when over 10% of the outstanding shares are being bought back. In spite of this anomaly, the results for AR support H3.

The results for CAR do not support H3. However, the CAR for 'higher than 10% equity repurchases' perhaps suggests the existence of an interesting scenario: to realise the gains in share price on the day of announcement, investors seem to have heavily engaged in profit-taking by selling off shares in this category after the day of the announcement.

Thus, hypothesis 3 is supported by the announcement day abnormal returns (AR $t=0$) but not by CAR.

5. Summary and Conclusions

The objective of this study was to test the information signalling hypothesis of share repurchases in the Australian share market. The study examined how the market reacted to the on-market buy-back announcements by examining their impact on the share prices of announcing companies. It also examined whether the strength of the buy-back signal was higher: (i) when the level of information asymmetry between the company management and the market was higher; and (ii) when the proportion of buy-back was higher. The study found that the on-market buy-back announcements significantly increase the announcing companies' share price during the short-term.

The abnormal cumulative increase in share prices, after allowing for normal returns (All Ordinaries Accumulation Index return) for the same period, was 3.31% during the event window. The announcement day (event day) abnormal return was 1.24%. The abnormal return for three days surrounding the announcement date (t-1; t+1) was 2.74%. The period inclusive of one day before the announcement day and four days after the announcement day (t-1; t+4) recorded an abnormal return of 3.72%. It is clear that the market considered on-market share buy-back announcements as a positive signal.³ The results support the expectation based on ‘information asymmetry’ rationale that larger the company, the lower the short-term positive reaction to buy-back announcements. Based on daily abnormal returns (AR), the results also support the expectation that higher the proportion of shares that is sought to be bought back, the stronger the positive signal of the announcement. The results of this empirical study provide strong evidence to conclude that on-market share buy-back announcements in Australia contain a positive information signal. The signal is stronger (a) when the information asymmetry between the management and the investors is high, and (b) when the proportion of shares to be bought is between 7.5 per and 10 per cent of the total number of outstanding shares.

These findings are theoretically and practically important in many ways in corporate finance. For example, corporate managers who are expected to maximize shareholder wealth will find these findings useful in devising and timing their strategies of equity management. On the other hand, investors will gain a better understanding of the short-term wealth effects of buy-back announcements and take appropriate exit and entry decisions.

³ In spite of the differences in the samples and methodology, Otchere and Ross (2002) reported an almost identical 1.25% abnormal return on the announcement day. Their three-day abnormal return surrounding the announcement day was 4.30%.

References

- Asquith, P. and D.W. Mullins, Jr., 1986, Signalling with dividends, stock repurchases, and equity issues, *Financial Management*, Autumn 15, 27-44.
- Baker, K. H., Gallagher, P. L. and K. E. Morgan, 1981, Management's view of stock repurchase programs, *The Journal of Financial Research*, pp. 687-696.
- Balachandran, B., Faff, R. and R Troiano (2003), New evidence on the market impact of share buy-back announcements, Unpublished Working Paper, Department of Accounting and Finance, Monash University.
- Barber, B.M. and J.D. Lyon, 1997, Detecting long-run abnormal stock returns: The empirical power and specification of test-statistics, *Journal of Financial Economics* 43(3), March, 341-372.
- Barth, M. E, and R. Kasznik, (1999), Share repurchases and intangible assets, *Journal of Accounting and Economics*, pp. 211-241.
- Bierman, H., Jr. and R. West, 1966, The acquisition of common stocks by the corporate issuer, *The Journal Of Finance*, pp. 687-696.
- Bradley, M. and L.M. Wakeman, 1983, The wealth effects of targeted share repurchases, *Journal of Financial Economics* 11, 301-328.
- Christianto, C., Clarke, A. W. and Mitchell, J., (1997), Short-and long-run performance of Australian buy-backs, Paper presented at AAANZ Conference, 1997, Hobart, Australia.
- Comment, R. and G.A. Jarrel, 1991, The relative signalling power of dutch auction and fixed price tender offers and open market share repurchases, *Journal of Finance* 46, 1243-1271.
- Cudd, M., Duggal, R. and S. Sarkar, 1996, Share repurchase motives and stock market reaction, *Quarterly Journal of Business and Economics* 35(2), 66-75.
- Dann, L.Y., 1981, Common stock repurchases: An analysis of returns to bondholders and stockholders, *Journal of Financial Economics* 9, June, 113-138.
- Dann, L.Y. and H. DeAngelo, 1983, Standstill agreements, privately negotiated stock repurchases, and the market for corporate control, *Journal of Financial Economics* 11, 275-300.
- Ekanayake, S., 1994, Share buy-backs- An exploratory study of the Australian experience, Working Paper No. 9422 , Faculty of Management, Deakin University.
- Ellis, C., 1965, Repurchase shares to revitalize equity, *Harvard Business Review*, pp. 119-128

- Elton, E. and M. Gruber, 1968, The effect of share repurchase on the value of the firm, *The Journal of Finance*, pp. 135-149.
- Fama, E. F., 1998, Market efficiency, long-term returns, and behavioural finance, *Journal of Financial Economics* 49(3), September, 283-306.
- Grullon, G. and R. Michaely, 2002, Dividends, share repurchases, and the substitution hypothesis, *The Journal of Finance*, pp. 1649 -1684
- Harris, T.C. and I.M. Ramsay, 1995, An empirical investigation of Australia share buy-backs, *Australian Journal of Corporate Law* 4, 393-416.
- Hewett, J., 1990, Share buy-backs for Australian companies, *Company and Securities Law Journal*, pp. 383-404.
- Ho, L.C. J., Liu, C. S. and R. Ramanan, 1997, Open-market stock repurchase announcements and revaluation of prior accounting information, *The Accounting Review*, pp 475-487.
- Ikenberry, D., Lakonishok, J. and T. Vermaelen, 1995, Market under reaction to open market share repurchases, *Journal of Financial Economics* 39(2), October, 81-208.
- Jaffe, J. F., 1974, Special information and insider trading, *Journal of Business* 47, July, 410-428.
- Lakonishok, J., and T. Vermaelen, 1990, Anomalous price behavior around repurchase tender offers, *The Journal of Finance*, pp. 455-477.
- Masulis, R.W., 1980, Stock repurchase by tender offer: An analysis of the causes of common stock price changes, *Journal of Finance* 35, 305-319.
- Mikkelson, W.H. and R.S. Ruback, 1991, Targeted repurchases and common stock returns, *Rand Journal of Economics* 22(4), 544-561.
- Mitchell, J.D., and S.P. Robinson, 1999, Motivations of listed companies effecting share buy-backs, *Forthcoming ABACUS* 35(1), 109-136.
- Mitchell, J. D., Dharmawan, G. V. and A. W. Clarke, 2001, Managers views on share buy-backs: an Australian survey, pp. 93-129.
- Otchere I and Ross M, 2002, Do share buy back announcements convey firm-specific or industry-wide information?: A test of the undervaluation hypotheses, *International Review of Financial Analysis*, Volume 11, Issue 4, 2002, pp 511-531
- Pugh, W. and J.S. Jahera, Jr, 1990, Stock repurchases and excess returns: an empirical examination, *Financial Review* 25(1), 127-142.
- Stephens, C. P. and M. S. Weisbach, 1998, Actual share reacquisitions in open-market repurchase programs, *The Journal of Finance*, pp. 313-333.

Thinggard, F., 2003, Market reaction to actual open-market share repurchases- A non-US empirical study, Paper presented at European Accounting Association annual Meeting, Sevilla, Spain.

Tsetsekos, G. P., Daniel, J. and L. Gitman, 1991, A survey of stock repurchase motivations and practices of major U.S. corporations, *The Journal of Applied Business Research*, pp. 15-21.

Vermaelen, T., 1981, Common stock repurchases and market signalling, *Journal of Financial Economics* 9, June, 139-183.