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Not All Buybacks Are Created Equal: The Case of Accelerated Stock Repurchases

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The authors documented the characteristics and market performance of ASR (accelerated share repurchase) stock. They found that post-announcement ASR stock performance is poor, unlike that documented in the literature for other repurchase methods, which implies that ASRs do not signal undervaluation, a frequently suggested motivation for repurchases.

A new and growing practice whereby companies repurchase their own shares has been adopted by businesses as diverse as Home Depot, HP, and Dollar Tree Stores. Rather than use the traditional methods of open-market repurchase (OMR) or self-tender offer ("tender offer"), these companies used an approach known as an accelerated share repurchase (ASR). Consider the language used to announce Home Depot's ASR: "The Company has entered into an accelerated share repurchase agreement which provides for the immediate repurchase of approximately 75 million shares."[1] HP's press release stated that "HP has accelerated its share repurchases in recent quarters and today's announcement signals our intent to aggressively repurchase shares in the immediate future. We believe that at current price levels, HP shares represent an attractive investment."[2] Dollar Tree asserted in its press release that "we believe that the accelerated share repurchase is an efficient use of capital and will provide long term benefit to our shareholders."[3] Each of these companies used a repurchase strategy that differs from a traditional OMR in that it enables the acquiring company to accumulate shares quickly.

In the literature, a number of reasons are offered to explain the motivations for share repurchase. They include signaling undervaluation, payout of free cash, share price support, takeover deterrence, EPS enhancement, and prevention of dilution resulting from executive compensation.[4]

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Given the attention that ASRs are attracting in the financial press, both analysts and researchers should understand whether the use of ASRs represents a fundamental difference in the way companies repurchase shares and whether companies that use ASRs are different from those that use more traditional approaches.

Absent clear shareholder gains, such motivations as EPS enhancement and takeover deterrence could well drive the use of ASRs.[5] Frequently, analysts speculate that share repurchases are motivated by a drive to increase EPS through share reduction or to compensate shareholders for the dilution caused by management stock grants. See, however, Oded and Michel (2008) for a discussion of the lack of economic value associated with EPS management through share repurchase. Although we did not conduct a comparative analysis of these motivations for ASRs, OMRs, and tender offers, we did investigate fundamental market-based differences between ASRs and other methods of repurchase by determining whether the economic value of ASRs is different from that of other repurchase methods.

Several researchers have studied announcement returns and the long-run stock performance of companies that repurchased their stock through traditional repurchase methods. The average documented announcement return on an open-market program is 2–4 percent (see, e.g., Grullon and Michaely 2002, 2004). Tender offer repurchases generate average announcement returns of 8–17 percent (Masulis 1980; Comment and Jarrell 1991), whereas privately negotiated transactions generate average announcement returns of about 2 percent and positive long-run cumulative abnormal returns, or CARs (see Peyer and Vermaelen 2005). Researchers have also found positive long-run CARs following repurchase announcements

(Ikenberry, Lakonishok, and Vermaelen 1995, 2000; McNally and Smith 2007; Peyer and Vermaelen 2005, 2009). As part of our analysis, we investigated both short-run and long-run stock performance following ASR announcements. A comparison of our findings regarding ASRs with earlier findings for other repurchase methods can facilitate an understanding of the motivations and consequences of ASRs. It can also shed light on the motivations and consequences of the other repurchase methods.

Accelerated Stock Repurchases vs. Alternative Repurchase Methods

In an ASR, a company hires an investment bank to borrow shares from existing investors. The investment bank delivers these shares to the company, which eliminates the shares immediately and pays the bank the current market price plus a fee. The bank then buys shares in the open market over several months on behalf of the company as in a regular open-market repurchase program and returns the shares to the lenders. The company generally insures the investment bank against price changes, but not completely: It typically pays the investment bank (or receives) the difference between the deal-date market price and the actual price the investment bank eventually pays for the stock in the open market. In other words, after the investment bank executes the program, the company compensates the investment bank if the price increases; if the price decreases, the company is remunerated. (This compensation can generally be made with either cash or shares.) The company may insure the investment bank completely by paying an adjustment according to the weighted average cost of purchasing the shares. Alternatively, it may agree to pay the average daily price of the shares over a predetermined period. In that case, the company does not bear all the price risk. Such incomplete coverage is sensible because without it, the investment bank may lose the incentive to try to purchase shares at the lowest possible price (e.g., it may give only market orders as opposed to limit orders).

An ASR can be viewed as a hybrid that combines characteristics of an OMR and a tender offer. In an OMR, the company makes a noncommitting announcement and then starts repurchasing shares in the open market. No premium is paid in an OMR except for the announcement return, which is typically 2–4 percent. An OMR is conducted in the financial markets and generally takes one to three years to complete. In a tender offer, the company is able to obtain shares quickly but pays a premium above the current market price—about 20 percent, on average (see Comment and Jarrell 1991). Like a tender offer, an ASR allows the company to obtain shares quickly; and like an OMR, an ASR does not incur a costly tender premium. Moreover, ASRs are more credible than OMRs because they commit the company to repurchase. This commitment, however, results in reduced financial flexibility for the ASR-announcing company.[6]

Selecting the ASR Sample

We searched news wires for ASR announcements on two databases: LexisNexis Academic and ProQuest's ABI/INFORM. We limited the search period to "before 1/1/2008." We searched for the terms *accelerated share repurchase*, *accelerated stock repurchase*, *accelerated share buyback*, and *accelerated stock buyback*—all combined with the word *announce* to limit the number of hits (without including *announce*, the search would yield thousands of hits irrelevant to our study). Given that very few new announcements were added after our last searches, we believe that our sample comprised virtually all ASR announcements during the investigation period.[7]

Our keyword searches produced 384 hits, of which 225 were either multiple news wires about the same announcement or events other than ASR announcements, resulting in 159 distinct announcements. Companies are required to report their ASRs in their financial statements.[8] Given that some of the news wires contained very limited information about the ASR announcements, we searched for additional information in U.S. SEC filings on the EDGAR database (www.sec.gov/edgar.shtml); we also searched Google for information about these announcements. After reviewing this additional information, we eliminated 10 of the 159 announcements for lack of information—either in the announcements or in the financial reports—confirming that an ASR had occurred.[9] We also eliminated an additional 21 ASR announcements for which information on EDGAR suggested that although the announcements were initially reported as ASRs, they ended up being privately negotiated transactions. Thus, we retained only companies with a confirmed use of an accelerated repurchase program. One company was eliminated because price information was missing. Following this elimination process, our sample consisted of 127 announcements.

Description of a Typical ASR Announcement

A typical ASR announcement states that the company will engage or has recently engaged an investment bank that borrows shares from existing shareholders and delivers those shares to the company.[10] Often, the name of the investment bank (one or more) is disclosed. The announcement generally states the deal date, which is usually the announcement date or a few days before or after the announcement date. Most announcements indicate the length of the period during which the investment bank must buy the shares in the financial markets and return them to the original shareholders. The announcement almost always states the dollar value of the ASR and sometimes also states the number of shares to be repurchased. Typically, the announcement states the initial price that the company will pay the investment bank. This price is generally the stock price on the date that the deal with the investment bank is struck.

We found that in some cases, instead of the shares being delivered to the company on the deal date, the deal specifies several future dates for delivery of the shares to the company. When the company receives the borrowed shares, it immediately reduces the number of shares outstanding. The most commonly stated sources of funds used for ASRs are cash on hand and short-term borrowing. The "safe harbor" rule (SEC Rule 10b-18), which protects companies against lawsuits based on stock price manipulation, does not apply to ASRs—that is, it does not protect ASR-announcing companies.

ASR Sample Characteristics

Table 1 provides summary statistics of our sample of ASR announcements. Panel A shows yearly statistics on repurchase activity. We found no ASR announcements before 2004, which suggests that ASRs did not exist before 2004.[11] There were 10 announcements in 2004, 21 in 2005, 29 in 2006, and 67 in 2007.[12] Although the number of ASR

Table 1. Sample Statistics, 2004–2007

	2004	2005	2006	2007	All Years
A. ASR yearly statistics					
No. of ASR announcements	10	21	29	67	127
Percentage	7.87%	16.54%	22.83%	52.76%	100%
Total dollar value (millions)	$7,046	$8,303	$14,753	$41,596	$72,093
Percentage	9.83%	11.58%	20.58%	58.02%	100%

	Mean	Quartile 1	Quartile 2 (median)	Quartile 3	Quartile 4 (max.)	*N*
B. ASR size and length statistics						
ASR size in shares (millions)	14.42	2.79	5.51	14.36	145	105
ASR size in dollar value (millions)	$568	$107	$250	$575	$12,500	127
Market value of the company (millions)	$12,517	$3,266	$5,720	$13,114	$156,174	127
ASR fraction of shares outstanding	5.30%	2.31%	3.55%	7.51%	19.56%	127
ASR period (months)	6.17	3	4.75	7	48	82
Related OMR program dollar value (millions)	$1,309	$275	$500	$1,018	$15,000	102
ASR size as a percentage of OMR program	50%	27%	50%	67%	105%[a]	102

C. Other ASR sample statistics								
No. of ASR announcements	*N* = 1	*N* = 2	*N* = 3	*N* = 4	*N* = 5	*N* = 6	*N* = 7	All
No. of companies[b]	72	14	4	2	0	0	1	93
Percentage	77.4%	15.1%	4.3%	2.2%	0%	0%	1.1%	100%
Stock exchange	NYSE	NASDAQ	Amex					
No. of ASRs	98	28	1	127				
Percentage	77%	22%	1%	100%				
ASR announcement is part of financial report?	Yes	No						
No. of ASRs	25	102	127					
Percentage	20%	80%	100%					
ASR-announcing company has an OMR?	Yes	No						
No. of ASRs	108	19	127					
Percentage	85%	15%	100%					

(continued)

Table 1. Sample Statistics, 2004–2007 (continued)

Investment Bank	No. of ASRs	Percentage of Total
D. ASR investment bank information		
Goldman Sachs	25	22%
UBS	11	10
Merrill Lynch	10	9
Bank of America	10	9
Lehman Brothers	8	7
JPMorgan	7	6
Credit Suisse	7	6
Morgan Stanley	6	5
Citigroup	4	4
BNP Paribas	3	3
Deutsche Bank	2	2
Bear Stearns	1	1
Two or more banks/others	18	16
Total	112	100%

Notes: This table presents sample statistics for the 127 ASR announcements. Not all announcements included information on all the variables that we investigated. Accordingly, we indicate the number of announcements (*N*) for each variable. Panel A describes the distribution of the sample of ASR announcements for 2004–2007 according to the year of announcement. Total dollar value is the sum of all the ASR dollar values within each year. Panel B presents statistics on size and length of the ASRs in our sample. ASR size in shares is the announced number of shares to be purchased. ASR size in dollar value was found in the announcements. Using the CRSP database, we calculated the market value of the company as the number of shares outstanding multiplied by the share price on the day before the announcement. Fraction of shares outstanding is the fraction of outstanding shares to be repurchased in the ASR as reported in the announcement. We calculated the fraction of shares outstanding as the number of shares announced divided by the number of shares outstanding immediately before the announcement. When the repurchase announcement did not state the number of shares to be repurchased, we calculated the fraction of shares to be repurchased as the announced dollar value of the ASR divided by the company's market capitalization. The ASR period is the number of months stated in the announcement during which the investment bank must repurchase the shares in the open market and return them to the lending shareholders. ASR size as a percentage of OMR program is the ASR dollar value divided by the value of the OMR program under which the ASR was conducted. Panel C presents other statistics of our ASR announcement sample. The number of ASR announcements describes the frequency of announcements made by the same company. The stock exchange information was found in the announcement or by looking up the ticker symbol for each company. Panel D describes the distribution of the investment banks involved in the ASR transactions in descending order of frequency. Of the 127 announcements in our sample, 112 included information about the investment bank. In 18 of the announcements (16 percent), more than one investment bank was involved, with most reported as a "consortium of investment banks."

[a]On one occasion, the size of the ASR was larger than the original size of the existing open-market program. Excluding this program would not have a significant impact on the results.

[b]Sample size is 127 announcements.

announcements has increased significantly over the years, it is still small relative to the number of OMR programs. The Securities Data Corporation (SDC) reported about 600 (950) announcements of OMR programs in 2006 (2007). Yet despite their small number, ASRs are very significant in terms of dollar volume. For example, the SDC documented a total dollar value for repurchase announcements of $360 billion and $570 billion in 2006 and 2007, respectively. For ASRs, we documented $14.8 billion and $41.6 billion (4.1 percent and 7.3 percent of the amounts for OMRs). Note, however, that because only about 70–80 percent of the dollar volume of OMR programs is actually executed and because OMRs take at least twice as long as ASRs to complete, the implied actual repurchase dollar value of ASRs relative to open-market programs is much higher than these percentages suggest.

Earlier studies found that most of the buybacks' dollar volume comes from open-market programs. For example, Peyer and Vermaelen (2005) and Banyi, Dyl, and Kahle (2008) reported that about 90 percent of buybacks are in the form of OMRs and the remaining 10 percent are in the form of self-tender offers and privately negotiated repurchases. Our findings suggest that in terms of dollar volume, the ASR has become a significant repurchase method.[13]

Panel B of Table 1 provides statistics (by quartile and median) on size and completion time of the ASRs in our sample. The average number of shares purchased in an ASR was 14.4 million (the median was 5.5 million). The average dollar size of an ASR was $568 million (the median was $250 million). This amount is very large compared with what is documented in the literature for OMR programs.[14] The relatively large size suggests that only a large

buyback can justify the costs of hiring an investment bank to execute the repurchase. ASR-announcing companies also tend to be large. The average market capitalization of an announcing company (calculated as the closing share price on the day before the ASR announcement multiplied by the number of shares outstanding on that day) was $12.5 billion, and the median was $5.7 billion. The resulting average ASR size as a fraction of shares outstanding was about 5.3 percent (the median was about 3.6 percent), which is similar to the fraction of shares sought in open-market programs.[15] Most companies in our sample disclosed the length of time within which the investment bank agreed to complete the repurchase (82 ASRs). As the table shows, the stated average time to completion was 6.2 months and the median was 4.8 months; the longest time to completion was 48 months (Liberty Property Trust).

A careful review of ASR announcements reveals that the majority of ASRs are stated as part of a repurchase program. In our sample of 127 announcements, 108 (85 percent) were from companies with an ongoing OMR program. These companies generally stated in their ASR announcements that the primary reason for initiating the ASR was to speed up their OMR programs. For 102 of these announcements, we obtained specific information on the size of the open-market program.[16] The average open-market program size for ASRs was $1.3 billion, and the average ASR size was about 50 percent of the size of the ongoing open-market program (the median was also 50 percent). Given our finding that ASRs are often stated as an execution of a previously or newly announced repurchase program and are thus not independent of such programs, one should be cautious when directly comparing these two repurchase methods.

Panel C of Table 1 provides additional statistics of our ASR sample. It first describes our findings with respect to the frequency of ASRs initiated by the same company. Most companies in our sample made only one ASR announcement (72). But 14 companies made two announcements, 4 companies made three announcements, 2 companies made four announcements, and 1 company made seven announcements during the sample period. Given our short sample period (2004–2007), these findings suggest that ASRs—like open-market programs and unlike tender offer repurchases—are often repeated. As Panel C shows, of the 127 announcements in our sample, 98 (77 percent) were from companies listed on the NYSE, 28 announcements (22 percent) were from NASDAQ companies, and 1 announcement was from an Amex company. Of the 127 announcements, 25 (20 percent) were first announced in a financial report and the remaining 102 (80 percent) were separate announcements.

Panel D of Table 1 presents the distribution of investment banks involved in the ASR transactions. Of the 127 ASRs in our sample, 112 reported this information. Although most of the ASRs in our sample involved an investment bank, some were executed with the help of a large commercial bank. Most companies used only one bank for executing the ASR. The investment bank most frequently involved was Goldman Sachs, with 25 ASRs, followed by UBS (11 ASRs) and Merrill Lynch and Bank of America, with 10 ASRs each. Of the 112 ASRs that reported this information, 18 used more than one bank to execute the deal.

Because the company eliminates the shares as soon as they are borrowed, boosting EPS is often suggested in the press as a motive for initiating an ASR.[17] Indeed, in an ASR, the company can eliminate the shares once it receives them from the investment bank; in an open-market program, a company can eliminate the shares only after it buys them in the market, which typically takes one to three years to complete. But the impact of an ASR on EPS may not be significant because companies must report EPS on the basis of the average number of shares outstanding during the reporting period (quarter or year). For example, if a company executes an ASR on the last day of the reporting period, EPS will not be affected at all. Given the nature of the EPS reporting requirement, we expect that if companies use ASRs for the purpose of boosting EPS, a relationship will exist between the reporting period dates and the timing of the announcement or deal.[18]

To investigate whether EPS considerations motivate the issuance of ASRs, we analyzed the distribution of the timing of ASRs over the months of the year. **Table 2** presents the monthly distribution of ASRs. Panel A reports the number of announcements per month on the basis of announcement date and deal date, where the announcement date is the date on which the ASR is publicly announced and the deal date is the date on which the company and the investment bank have contracted to conduct the ASR. Aggregating the announcements on the basis of the months of each calendar quarter, Panel B shows that the first months of each quarter (January, April, July, and October) had a total of 20 ASRs, the second months of each quarter (February, May, August, and November) had a total of 56, and the third months of each quarter (March, June, September, and December) had a total of 51. This finding suggests that the second and third months of each calendar quarter have about three times more announcements than the first month. The numbers under the deal date are

Table 2. Monthly Distribution of ASRs, 2004–2007

Month	Announcement Date	Deal Date
A. Calendar year		
January	1	2
February	8	6
March	15	17
April	5	4
May	11	9
June	11	10
July	9	7
August	20	21
September	14	13
October	5	4
November	17	18
December	11	8
	N = 127	N = 119
B. Calendar quarter		
January, April, July, October	20	17
	15.7%	14.3%
February, May, August, November	56	54
	44.1%	45.4%
March, June, September, December	51	48
	40.2%	40.3%
	N = 127	N = 119
	100.0%	100.0%
C. Fiscal quarter		
First month of fiscal quarter	23	20
	18.1%	16.8%
Second month of fiscal quarter	58	55
	45.7%	46.2%
Third month of fiscal quarter	46	44
	36.2%	37.0%
	N = 127	N = 119
	100.0%	100.0%

Notes: This table shows the monthly distribution of ASRs. Panel A presents the number of announcements per month on the basis of announcement date and deal date, where the announcement date is the date on which the ASR is publicly announced and the deal date is the date on which the company and the investment bank have contracted to conduct the ASR. Panel B aggregates the data in Panel A on the basis of the months of each calendar quarter. For example, the first line in Panel B lists the number of announcements that occurred in the first month of each calendar quarter, namely, January, April, July, and October. Panel C aggregates the announcements according to the months of each fiscal quarter.

not significantly different from the numbers under the announcement date. Panel C reports the results by fiscal quarter (some of the companies in our sample used a fiscal year not ending in March, June, September, or December). There is no significant difference between the results in Panels B and C.

One possible explanation for the clustering of ASR announcements in the second and third months of each fiscal quarter is that the ASR announcement is a management response to an anticipated earnings shortfall. The motivation to affect EPS and beat analysts' forecasts increases toward the end of each quarter. But the ability to affect quarterly EPS weakens toward the end of each quarter because the company must report EPS on the basis of the weighted average number of shares outstanding during each quarter. Although these findings could be interpreted in other ways, the relatively low number of announcements in the first month of each quarter suggests some motivation to affect fiscal quarter results.

Stock Performance of ASR-Announcing Companies

We investigated the stock performance of ASR-announcing companies around the announcement date and in the post-announcement period. We performed both univariate and multivariate tests. We obtained price data for ASR-announcing companies from Financial Times Interactive Data. This database is updated daily, which allowed us to extend our post-announcement analysis through 2008.[19] Most of our sample announcements were made in 2007. We obtained information about company-related control variables from Compustat through WRDS (Wharton Research Data Services).

Initially, we calculated CARs by using the methodology outlined in Campbell, Lo, and MacKinlay (1997). Calculating CARs according to the market model, we used the value-weighted S&P 500 Index as a benchmark. For robustness, we also calculated CARs by using a four-factor model consisting of the three Fama–French (1993) factors (market return, small [cap] minus big [SMB], and high [book/price] minus low [HML]) augmented with the momentum factor (Carhart 1997). We calculated factor loadings by using data from Kenneth French's website.[20] In both the market model and the four-factor model—following Brav, Geczy, and Gompers (2000) and Mitchell and Stafford (2000)—we calculated abnormal returns by using CARs rather than a buy-and-hold abnormal returns (BHARs) strategy. Barber and Lyon (1997) argued that BHARs are more appropriate than CARs for analyzing long-run returns. The statistical issues raised in Barber and Lyon (1997) should not be material in our relatively short post-announcement analysis. Furthermore, Fama (1998) and Mitchell and Stafford (2000) found that BHARs are more likely than CARs to yield inappropriate rejections of market efficiency, and Brav

et al. (2000) concluded that results from using CARs are more robust. Because our sample was small and our post-announcement period was short, we were unable to calculate CARs by using a calendar-time portfolio methodology (see, e.g., Fama and French 1993; Mitchell and Stafford 2000).[21] This constraint, however, does not materially detract from the robustness of our analysis because the distortions that a calendar-time portfolio methodology is intended to eliminate are substantial only in a multi-year-long analysis (see Fama 1998), and our post-event period was relatively short.

Stock Performance around ASR Announcements

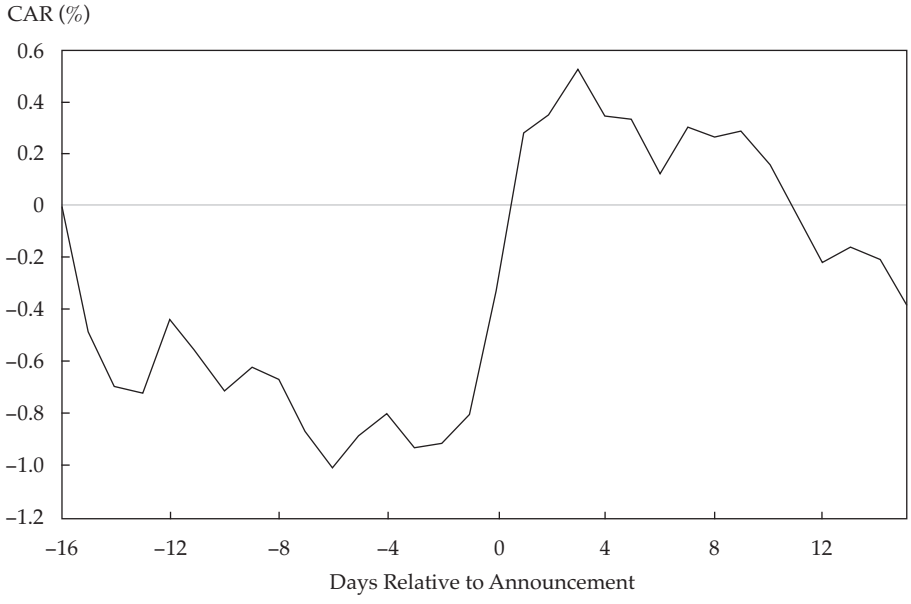
We investigated the price effects around ASR announcement days. We first considered share price behavior around the announcement. We provide statistics on the announcement return and present the results of multivariate regressions on it.

Figure 1 plots the average CARs for the entire sample of 127 announcements, centered on the announcement date of the ASR and ranging from 15 days before to 15 days after the ASR announcement. We calculated the CARs by using the market model, in which the value-weighted S&P 500 is the market portfolio.

As Figure 1 shows, there were negative cumulative abnormal returns, totaling about 0.8 percent, from Day –15 to Day –1 before ASR announcements. Negative abnormal returns before the announcements of OMR programs are also documented in the literature. No similar findings are documented in the studies of tender offer repurchases.[22] The literature interprets the negative stock performance before repurchase announcements as evidence of motivation for price support, which could also motivate ASRs.

Figure 1 also shows a positive average three-day abnormal return of about 1.3 percent—that is, from about –0.8 percent on Day –1 to about 0.4 percent on Day 1 relative to Day –15. As discussed earlier, this announcement return was lower than that documented in the literature for other repurchase methods. Following the announcement, performance deteriorated. Figure 1 suggests that within 15 days of the announcement, about half the abnormal gains from the announcement were lost. As we will show later in the article, this decline was not temporary; it continued in the long run.

Figure 1. Cumulative Average Net-of-Market Returns for Accelerated Repurchases around Announcement



Notes: We calculated the daily excess returns under the market model. Daily average excess returns are cumulated from 15 trading days before the announcement to 15 trading days after the announcement. The original sample included 127 accelerated repurchase announcements from 2004 to 2007. From left to right, each data point represents the average CAR for all the companies in our sample for that day, starting from the end of Day –16.

Announcement Return Statistics. Table 3 reports the results of significance tests on the average CARs over a three-day window (from Day –1 to Day 1 around the announcement) and over a five-day window (from Day –2 to Day 2 around the announcement) under both the market model and the four-factor model. As shown in the table, under the market model, the average CARs for the entire sample were 1.26 percent and 1.34 percent over the three-day window and the five-day window, respectively, and were statistically significant. For robustness, we performed additional tests. We reduced the sample to only the first announcement for companies that had more than one announcement in the sample period. As the table shows, in that case, the three-day and five-day average CARs were slightly higher, at 1.43 percent and 1.48 percent, respectively, and were statistically significant. These findings that infrequent announcements are associated with higher first-day returns suggest that the information effect is weakened in subsequent announcements. Jagannathan and Stephens (2003) reported similar findings for OMR programs. We also split the sample period into two subperiods (2004–2005 and 2006–2007) and calculated the three-day and five-day CARs. As the table shows, those CARs were similar but were statistically significant at the 1 percent level only in the later subperiod. We related the lower significance of the earlier period to the relatively smaller sample size. Our sample consisted of 31 announcements in 2004–2005 and 96 announcements in 2006–2007. The results under the four-factor model were similar.

Table 3. Average CARs around Announcements of ASRs, 2004–2007

	Market Model	Four-Factor Model	*N*
A. Three-day CARs			
2004–2007	1.26%	1.20%	127
t-Statistic	4.40***	4.12***	
2004–2007, multiples excluded	1.43%	1.30%	93
t-Statistic	4.02***	3.64***	
2004–2005	1.36%	1.17%	31
t-Statistic	2.10**	1.83*	
2006–2007	1.23%	1.22%	96
t-Statistic	3.88***	3.72***	
B. Five-day CARs			
2004–2007	1.34%	1.42%	127
t-Statistic	3.61***	3.77***	
2004–2007, multiples excluded	1.48%	1.53%	93
t-Statistic	3.21***	3.32***	
2004–2005	1.28%	1.12%	31
t-Statistic	1.54	1.35	
2006–2007	1.36%	1.52%	96
t-Statistic	3.31***	3.60***	

Notes: This table presents three- and five-day CARs centered on the ASR announcement day. We calculated CARs under the market and the four-factor models. Under the market model, abnormal returns are net of the S&P 500 value-weighted index market return. Under the four-factor model, abnormal returns are net of the three Fama–French factors (market return, SMB, and HML) and a momentum factor. The first row in Panels A and B provides average CARs for 2004–2007. The second row in each panel provides average CARs for the same period but excludes subsequent announcements made by the same company; when a company made more than one announcement, we included only the first. The last two rows in each panel provide results for two equal subperiods: 2004–2005 and 2006–2007.

*Significant at the 10 percent level.
**Significant at the 5 percent level.
***Significant at the 1 percent level.

Multivariate Analysis of Announcement Return. In our multivariate analysis, we controlled for different variables that could affect the announcement return. Many ASR announcements are made at the same time that a financial report is released to the public. The information revealed in the financial report introduces noise that could distort the informational content of the ASR announcement. Therefore, we used the dummy variable *FREP* to indicate whether the ASR announcement was made independently or along with the release of the financial report. To check for robustness over the sample period, we used the dummy variable *YEAR* to indicate whether the announcement was from the earlier period (2004–2005) or from the later period (2006–2007).

Earlier studies that investigated the announcement returns on share repurchases (Ikenberry and Vermaelen 1996 [open-market programs]; Vermaelen 1981 [tender offers]) found that they are positively correlated with the fraction of shares sought. Therefore, we used the variable *%ASR* to control for the fraction of shares sought. Other factors for which we controlled—factors that have been shown in the literature to affect announcement returns generally—are the log of market capitalization, defined as the number of shares outstanding times the stock price (*MC*); the debt ratio, defined as the ratio of total debt to total assets (*DR*); the ratio of cash to sales (*CASH*); the operating margin, defined as the ratio of operating income to sales (*OPER*); and the ratio of book value to market value of equity (*BtM*).

Table 4 presents the correlation matrix of the nondummy variables in our multivariate regression analysis. As the table shows, most correlations were low. The exception was the correlation between *%ASR* and *MC* (–0.31), which suggests that larger companies tend to buy a smaller fraction of their shares.

Table 4. Correlation Matrix

	Size of ASR (%)	Log of Mkt. Cap.	Debt Ratio	Cash/ Sales	Log of Total Assets	Oper. Inc./Total Assets	Book-to-Market Ratio
Size of ASR (%)		–0.3117	–0.0268	–0.1119	–0.3844	0.1988	0.0753
Log of mkt. cap.			–0.0088	–0.0632	0.7354	–0.0193	–0.2078
Debt ratio				0.0262	0.0205	–0.1333	–0.1581
Cash/sales					–0.0125	–0.2389	–0.0151
Log of total assets						–0.4383	0.3069
Oper. inc./total assets							–0.4048
Book-to-market ratio							

Note: This table presents the correlation matrix of the nondummy variables that we used in our multivariate regression analysis of both the event CAR and the post-announcement CAR.

Table 5 presents the results of multivariate regression on announcement returns. Panels A and B report the three-day and five-day CARs, respectively. In each panel, we calculated CARs on the basis of both the market model and the four-factor model. Let us consider the three-day regression first (Panel A). The dummy variable *FREP* was statistically significant at the 5 percent level under both the market and four-factor models, which suggests lower announcement returns when the announcement is part of a financial report. The dummy variable *YEAR* was insignificant, indicating robustness over the sample period.

Panel A also shows that the variable *%ASR* was highly significant and positively correlated with the announcement return. Our interpretation is that the larger the fraction of shares sought, the more substantial the ASR and thus the stronger the market response. Market capitalization, *MC*, was significant and negatively correlated with the announcement return, which is consistent with information theories: Smaller companies are associated with more information asymmetry and, therefore, the information revealed has a stronger effect on price.

Debt ratio, *DR*, was significant at the 10 percent level and the 5 percent level under the market model and the four-factor model, respectively, and was negatively correlated with the announcement return. This result supports an explanation of free cash disbursement rather than wealth expropriation. Reducing the agency costs of free cash implies that the higher the debt ratio, the more significant the removal of free cash through interest payments—and thus the smaller the benefit from the removal of free cash through a buyback and the lower the announcement return. In contrast, the wealth expropriation motivation suggests that the higher the debt ratio, the less collateral there is for debt—and thus the higher the wealth transfer from bondholders to equityholders through an ASR cash disbursement and the higher the announcement return.

One would expect that higher cash holdings and higher operating income would result in higher announcement returns because of the agency costs of free cash—that is, the more free cash the company accumulates, the more important disbursing it is. But the results presented in Panel A show that the coefficient of the variable *CASH* was statistically insignificant under the market model and was significant only at the 10 percent level under the four-factor model. The coefficient of the variable *OPER* was statistically insignificant.

In investigating the ratio of book value to market value of equity (*BtM*), we found that the coefficient of *BtM* in Panel A was negative and significant at the 10 percent level under the market model and was negative and significant at the 5 percent level under the four-factor model. Because high *BtM* is generally associated with both low growth opportunities and financial distress, the negative sign of the coefficient suggests that the better the company's prospects, the greater the market's reaction to the ASR announcement.

Panel B of Table 5 shows that the significance of the control variables in the five-day CARs was, in general, substantially reduced compared with the three-day CARs. This decrease suggests that the wider window in Panel B increases the variance, which, in turn, reduces the statistical significance.

Post-Announcement Stock Performance

We examined the post-announcement average CARs, as well as post-announcement return statistics. We also conducted a multivariate analysis of the post-announcement return nine months after the ASR announcement.

Post-Announcement Average CARs. **Figure 2** plots the average CARs over the entire sample (2004–2007) on the basis of the market model, starting from Day 15 after the announcement (the

Table 5. Multivariate Regression Analysis of ASR Announcement Returns

	Market Model	Four-Factor Model		Market Model	Four-Factor Model
A. Three-day window			*B. Five-day window*		
Intercept	0.0891	0.0844	Intercept	0.0768	0.0694
t-Statistic	2.53**	2.60**	*t*-Statistic	2.01**	1.94*
FREP	–0.0198	–0.0191	*FREP*	–0.0120	–0.0142
t-Statistic	–2.31**	–2.41**	*t*-Statistic	–1.29	–1.63
YEAR	–0.0089	–0.0076	*YEAR*	–0.0077	–0.0047
t-Statistic	–1.03	–0.95	*t*-Statistic	–0.83	–0.54
%ASR	0.3102	0.2539	*%ASR*	0.2550	0.2195
t-Statistic	3.35***	2.97***	*t*-Statistic	2.54**	2.33**
MC	–0.0072	–0.0061	*MC*	–0.0053	–0.0037
t-Statistic	–2.13**	–1.96*	*t*-Statistic	–1.45	–1.07
DR	–0.0410	–0.0503	*DR*	–0.0526	–0.0566
t-Statistic	–1.68*	–2.23**	*t*-Statistic	–1.99**	–2.28**
CASH	–0.0032	–0.0033	*CASH*	–0.0038	–0.0040
t-Statistic	–1.56	–1.76*	*t*-Statistic	–1.71*	–1.92*
OPER	0.0197	0.0163	*OPER*	0.0243	0.0047
t-Statistic	0.66	0.59	*t*-Statistic	0.75	0.15
BtM	–0.0202	–0.0216	*BtM*	–0.0216	–0.0235
t-Statistic	–1.84*	–2.14**	*t*-Statistic	–1.82*	–2.10**
N	124	124	*N*	124	124
R^2	0.225	0.225	R^2	0.157	0.174

Notes: In each panel, under the market model, CARs are net of the S&P 500 value-weighted index market return. Under the four-factor model, CARs are net of the return on the three Fama–French factors and a momentum factor. Of the original sample of 127 announcements, 3 announcements were removed because of missing control-variable data, resulting in 124 announcements. *FREP* is a dummy variable indicating whether the ASR announcement was made independently or along with the release of the financial report. *YEAR* is a dummy variable indicating whether the announcement is from the earlier period (2004–2005) or from the later period (2006–2007); *%ASR* is the size of the ASR relative to the market capitalization. *MC* is the log of market capitalization on the day the ASR was announced, calculated as the number of shares outstanding times the stock price. *DR* is the debt ratio, calculated as total debt divided by total assets. *CASH* is the ratio of the company's cash to its sales. *OPER* is the ratio of operating income to sales. *BtM* is the ratio of book value of equity to market capitalization.

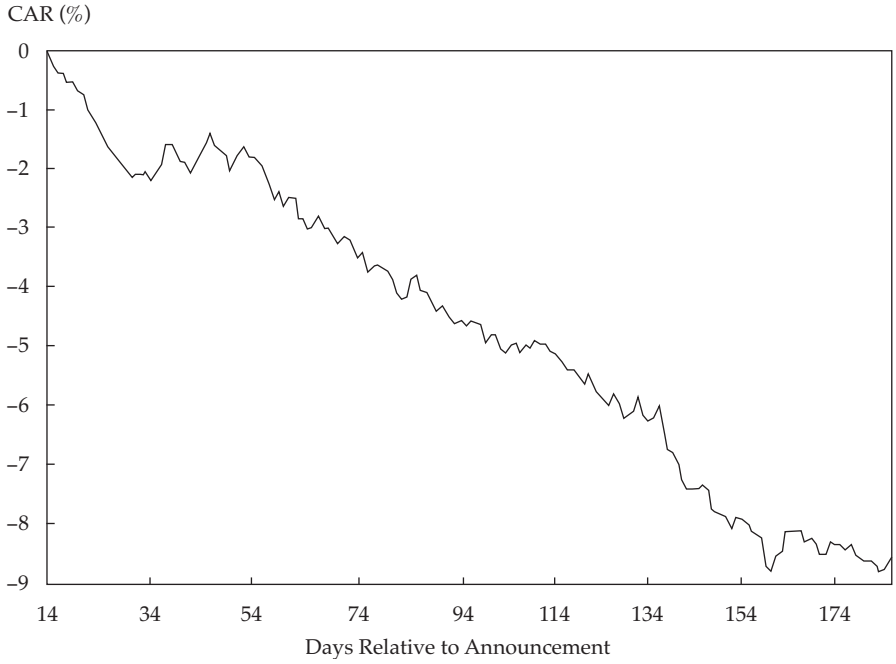
*Significant at the 10 percent level.
**Significant at the 5 percent level.
***Significant at the 1 percent level.

terminal date in Figure 1) and ending 171 trading days later, a period equivalent to nine calendar months. Figure 2 illustrates that stock prices deteriorated significantly following the initial announcement effect. Specifically, nine months after the announcement, the average CAR was about –8.5 percent relative to its value on Day 15 after the announcement.

For robustness, we again split the sample period into two subperiods (2004–2005 and 2006–2007). **Figure 3** shows that the qualitative results for each subperiod were similar. In both subperiods, the post-announcement performance of the stocks was poor. The deterioration, however, was greater in the later subperiod. Nine months after the announcement of the ASR, the average CAR was approximately –3.3 percent for 2004–2005 and –10.3 percent for 2006–2007.

Post-Announcement Return Statistics. **Table 6** reports statistics on the average CAR nine months after the ASR announcement under both the market model (depicted in Figures 2 and 3) and the four-factor model. In Panel A, under the market model, for the entire sample period, the announcement return was negative and statistically significant. The average CAR nine months after the announcement was –8.57 percent. With multiple announcements excluded, the average announcement return was less negative (–7.25 percent), which implies poor performance for companies that tend to engage in ASRs frequently. When we split the sample into two subperiods (2004–2005

Figure 2. Cumulative Post-Announcement Average Net-of-Market Returns for Accelerated Repurchase Announcements (All Data), 2004–2007



Notes: We calculated the daily excess returns under the market model. Daily average excess returns were cumulated from 15 trading days after the announcement to 185 trading days (nine calendar months) after the announcement. The original sample included 127 accelerated repurchase announcements from 2004 to 2007. To control for outliers, we excluded the top and bottom 2.5 percent CARs (a total of 6 announcements); thus, the figure is based on 121 announcements. From left to right, each data point represents the average CAR for all the companies in our sample for that day, starting from the end of Day 14.

and 2006–2007), the poor performance persisted. It was statistically significant, however, only in the later subperiod. We attribute the lack of statistical significance in the earlier subperiod, at least in part, to the smaller subsample, as was the case with the announcement effect in Table 3 (the results in Table 3, however, were significant in both subperiods). There were 30 announcements in 2004–2005 and 91 in 2006–2007.

Panel A also reports nine-month CARs under the four-factor model. Although the results under that model were qualitatively similar to the results under the market model, the performance measured under the four-factor model was not as negative as that under the market model. Furthermore, the results under the four-factor model were statistically significant only for the entire sample and the later subsample (2006–2007).

Panel B reports the quartile averages of the CARs nine months after the announcements. Of the 127 announcements, 89 had negative nine-month CARs under the market model and 83 had negative nine-month CARs under the four-factor model.

Multivariate Analysis of Post-Announcement Return Nine Months after the ASR Announcement. **Table 7** reports multivariate regression statistics of the post-announcement CARs nine months after the announcement. We used the same control variables as in the short-run analysis.

In general, Table 7 supports the robustness of the poor post-announcement performance of ASR stocks in that most variables did not have a statistically significant effect on the CAR. The exceptions were the variables *YEAR* and *OPER*. The dummy variable *YEAR* was insignificant under the four-factor model but was significant at the 5 percent level under the market model. The significance of the dummy variable *YEAR* was consistent with Figure 3, which shows that the average CAR in 2006–2007 was more negative compared with 2004–2005. Operating income was significant only at the 10 percent level under both models.

Table 8 shows the evolution of the number of shares outstanding, the total assets, and the debt ratio two years before and one year after the ASR announcement on the basis of quarterly data from Compustat. The table shows that after the drop of

Figure 3. Cumulative Post-Announcement Average Net-of-Market Returns for Accelerated Repurchase Announcements, 2004–2005 and 2006–2007

Notes: See notes to Figure 2. Panel A depicts the average CARs for 2004–2005 (N = 30), and Panel B depicts the average CARs for 2006–2007 (N = 91).

approximately 4 percent in the number of shares outstanding between Q0 and Q1, the increase in the number of shares outstanding accelerated. Within a year after the ASR, the number of shares increased by about 2 percent (i.e., from 96.15 percent in Q1 to 98.31 percent in Q4). This increase is approximately equal to the increase in the number of shares over the two years preceding the ASR announcement (i.e., from 98.03 percent in Q–7 to 100 percent in Q0). This finding implies that the growth rate in the number of shares doubled after the announcement. But the changes in (book) asset value and in the debt ratio (rows 2 and 3 of Table 8) suggest that this acceleration in the number of

Table 6. Average CARs in the Post-Announcement Period

	Market Model	Four-Factor Model	*N*
A. Post-announcement nine-month CARs			
2004–07 CARs	–8.57%	–4.56%	121
t-Statistic	–3.87***	–2.01**	
2004–07 CARs, multiples excluded	–7.25%	–3.47%	89
t-Statistic	–2.64***	–1.28	
2004–05 CARs	–3.24%	–0.73%	30
t-Statistic	–0.66	–0.16	
2006–07 CARs	–10.33%	–5.83%	91
t-Statistic	–4.19***	–2.24**	
B. Quartile averages of nine-month CARs (2004–2007)			
Quartile 1	–30.92%	–30.01%	30
Quartile 2	–14.37	–11.62	30
Quartile 3	–3.64	–0.32	30
Quartile 4	13.88	22.79	31

Notes: Starting from 15 days after the announcement to nine months after the announcement, we calculated CARs under the market and four-factor models. Under the market model, abnormal returns are net of the S&P 500 value-weighted index market return. Under the four-factor model, abnormal returns are net of the three Fama–French factors (market return, SMB, and HML) and a momentum factor. To control for outliers, we excluded the top and bottom 2.5 percent CARs (a total of 6 announcements), resulting in 121 announcements. Panel A reports the post-announcement CARs for the various horizons. (For consistency, we applied the truncation rule to the CARs calculated under the market model and then used the same sample throughout the long-run analysis. The results are not significantly different if the truncated sample is determined under the four-factor model.) The second row in Panel A provides average CARs for 2004–2007 but excludes subsequent announcements made by the same company; when a company made more than one announcement, we included only the first. The third and fourth rows in Panel A provide results for two equal subperiods: 2004–2005 and 2006–2007. Panel B provides the quartile averages for 2004–2007 (i.e., for the sample described in the first row of Panel A).

**Significant at the 5 percent level.
***Significant at the 1 percent level.

shares is not associated with an increase in equity but rather with an increase in debt. One possible scenario implied by these findings is that companies use ASRs to offset dilution from the acceleration of stock and option compensation programs. Such programs tend to increase the number of shares but not the value of equity. For a discussion of the correlation between stock and option compensation programs and stock repurchases, see, for example, Fenn and Liang (2001).

Discussion

Both the relatively small announcement return on ASRs and the poor post-announcement performance of ASR stocks are puzzling. Earlier literature on repurchases considered the signaling of undervaluation and the agency costs of free cash as the main motivations for repurchases. Explaining ASRs with these motivations is difficult. If signaling is the main motivation for repurchasing shares, one would expect ASRs to generate a stronger announcement return than OMRs because ASRs are more credible: Although a company can refrain from executing an OMR or stop it at any time, an ASR is a corporate commitment. After controlling for the size of the repurchase, the lower announcement returns on ASRs are even more puzzling because our sample statistics suggest that ASRs are 10 times larger than OMRs and because larger repurchases are expected to send a stronger signal. In sum, because ASRs are more credible than OMRs, our findings of lower announcement returns on ASRs relative to OMRs do not support a signaling motivation for ASRs.[23]

Alternatively, if the disbursement of excess cash motivates repurchases, ASRs seem superior to OMRs because they commit the company to repurchase stock whereas OMRs are optional and are often only partially executed.[24] In terms of reducing the agency costs of free cash flow, ASRs are similar to tender offers because cash leaves the company immediately after the announcement. If disbursement of free cash is driving share repurchase, the announcement return on ASRs should be greater than that for open-market programs and closer to what is documented for tender offers, in contrast to what we found. One way to explain the lower announcement return on ASRs relative to that documented in the literature for OMRs is that most ASR-announcing companies also have an OMR (see Table 1). Thus, the ASR does not add

Table 7. Multivariate Regression Analysis of Post-Announcement Nine-Month CARs

	Market Model	Four-Factor Model
Intercept	0.0483	0.1086
t-Statistic	0.30	0.59
FREP	–0.0064	–0.0593
t-Statistic	–0.16	–1.29
YEAR	–0.0809	–0.0403
t-Statistic	–2.07**	–0.89
%ASR	–0.0729	–0.5216
t-Statistic	–0.17	–1.04
MC	0.0013	–0.0028
t-Statistic	0.08	–0.16
DR	–0.0919	0.1123
t-Statistic	–0.84	0.88
CASH	–0.0012	–0.0036
t-Statistic	–0.13	–0.34
OPER	–0.2370	–0.2903
t-Statistic	–1.73*	–1.83*
BtM	–0.0237	–0.0384
t-Statistic	–0.47	–0.66
N	118	118
R^2	0.071	0.073

Notes: Under the market model, CARs are net of the S&P 500 value-weighted index market return. Under the four-factor model, CARs are net of the return on the three Fama–French factors (market return, SMB, and HML) and a momentum factor. Of the original sample of 127 announcements, 3 announcements were removed because of missing control-variable data; to control for outliers, we excluded the top and bottom 2.5 percent CARs (a total of 6 announcements), resulting in 118 announcements. *FREP* is a dummy variable indicating whether the ASR announcement was made independently or along with the release of the financial report. *YEAR* is a dummy variable indicating whether the announcement is from the earlier period (2004–2005) or from the later period (2006–2007). *%ASR* is the size of the ASR relative to the market capitalization. *MC* is the log of market capitalization on the day the ASR was announced, calculated as the number of shares outstanding times the stock price. *DR* is the debt ratio, calculated as total debt divided by total assets. *CASH* is the ratio of the company's cash to its sales. *OPER* is the ratio of operating income to sales. *BtM* is the ratio of book value of equity to market capitalization.

*Significant at the 10 percent level.
**Significant at the 5 percent level.

significant information: The company has already reported its OMR, and the ASR tells the market only that the company is accelerating the program.

If ASRs do not seem to have superior signaling or free cash disbursement properties, why are they becoming so popular? To understand the motivation behind ASRs, let us assume that the company wishes to repurchase shares and then abstract for a moment from the motivation to repurchase. Suppose that the company wants to obtain the shares quickly. It could announce a tender offer and pay the tender premium. If the company believes the stock is undervalued, the premium may not be too costly—and it can also signal to the market that the stock is undervalued. But if the company wants to repurchase shares and the management is not confident that the shares are undervalued (or might even suspect that the stock is overvalued), then a tender offer becomes costly. The company must pay a premium above the current market price, and the value of the remaining shares is reduced because of this premium.

A company that is not confident that it is undervalued could announce an open-market program and avoid the tender premium. It would also have the flexibility to cancel the repurchase or stop it at any time. Alternatively, it could simply wait for the price to decline and then execute the repurchase in the open market. The disadvantage of an OMR relative to a tender offer is that an OMR takes more time to complete. Companies that repurchase shares through an open-market program are constrained in their ability to buy shares. First, trying to buy a large quantity of shares in the open market will adversely affect the price. Second, regulations significantly limit a company's ability to repurchase stock through OMRs (see SEC Rule 10b-18). Indeed, although most tender offers are completed within a month, most OMRs take one to three years to complete (see, e.g., Stephens and Weisbach 1998). If obtaining the shares quickly is important for the company, an open-market program has a severe disadvantage.

As discussed earlier, a company that suspects it is overvalued will find a tender offer very costly. At the same time, if it wishes to obtain its shares quickly, an OMR is not an option. In that case, the company can undertake an ASR. In an ASR, as in a tender offer, the company will receive the shares quickly; and as in an open-market program, it will not have to pay a premium above the market price. Note that from the company's perspective, given overvaluation, an ASR has no cost advantage over an OMR. Although the company receives the shares immediately in an ASR, it bears most of the price risk. Hence, the expected price that the company will eventually pay for the shares is similar to what it would pay in an OMR. From the company's perspective, given that obtaining the shares quickly is the main advantage of ASRs over OMRs and that ASRs are becoming more popular, our findings suggest that obtaining the shares quickly may also be the primary advantage of ASRs over OMRs.

A motivation to get the shares quickly is consistent with the finding that many ASR-announcing companies have an OMR. As mentioned previously, SEC Rule 10b-18 significantly restricts the pace at which an OMR-announcing company can repurchase shares. For example, the rule requires, on any given day, that a company not repurchase

Table 8. Shares Outstanding, Debt Ratio, and Total Assets before and after the ASR Announcement

	Q–7	Q–6	Q–5	Q–4	Q–3	Q–2	Q–1	Q0	Q1	Q2	Q3	Q4
Shares	98.03	99.12	99.56	99.72	99.86	99.69	100.18	100.00	96.15	96.20	97.51	98.31
Assets	93.66	94.33	95.54	96.24	96.80	98.48	99.24	100.00	99.30	101.17	104.31	105.11
DR	22.42	22.66	22.31	21.44	21.19	21.32	21.04	21.02	23.88	23.46	23.56	24.46

Notes: This table's sample includes all 124 announcements for which Compustat data were available. *Shares* is the number of shares outstanding as reported in the quarterly report. *Assets* is the total book value of assets. *DR* is the debt ratio calculated as total debt divided by total assets. Q0 is the last quarter just before the ASR announcement. Shares outstanding and assets are normalized to 100 percent for Q0. The number of shares and the total assets are then reported in percentages relative to their values in Q0. All values are in percentages.

more than 25 percent of the average daily volume, that it be a price taker, and that it not trade in the last half hour of trading. An ASR allows a company to speed up its existing OMR because Rule 10b-18 applies to OMRs but not to ASRs. In other words, an ASR allows companies that generally repurchase shares through an OMR to speed up their buyback without violating Rule 10b-18.[25]

Our findings for ASRs also offer new insights into the various properties of the different repurchase methods. In particular, from the market's perspective, ASRs are very similar to OMRs because shares are purchased gradually in the market over time with either method. Consequently, the low announcement return we found for ASRs also suggests that the lower announcement return reported in the literature for OMRs relative to tender offers is not because they are less credible but rather because the company is not committed to a price. At the same time, the lower announcement return for OMRs suggests that avoiding the premium in tender offers is what makes OMRs more popular than tender offers.[26]

Our findings are thus consistent with information theories. An ASR does not signal that the company is undervalued; therefore, the announcement return is low relative to other repurchase methods. The company wants the shares immediately but does not want to pay premium prices. In an ASR, as in a tender offer, the company is committed to executing the repurchase (any cancellation of a tender offer is publicly known). But in a tender offer, the company also commits to a price. In an ASR, the company receives the shares immediately (or within weeks after the announcement) but is committed to pay the future prevailing price. In sum, ASRs allow the company to repurchase quickly while avoiding the premium required in a tender offer and committing the company to the future price rather than the current price.

The positive announcement return on ASRs is surprising given the poor post-announcement stock performance, but it is consistent with earlier evidence on the market's underreaction to information released in repurchase announcements. Ikenberry, Lakonishok, and Vermaelen (1995, 2000) and Peyer and Vermaelen (2005, 2009) documented a positive drift in the stock price of repurchase-announcing companies (tender offers or OMRs) in the long run. They interpreted this anomaly as the market's underreaction to the good news revealed by the repurchase announcement. Our findings for ASRs suggest that the market also underreacts to the information revealed in an ASR announcement. The market recognizes that ASRs are different—that is, it recognizes that the ASR announcement is not as good a piece of news as the announcement of other repurchase methods (e.g., tender offer, OMR), and accordingly, the market reacts to ASRs with a lower announcement return. But this explanation does not account for the full extent of the difference; specifically, the market does not recognize that the news is actually negative. Over the long run, this information is revealed and the stock price declines.

The question remains, Why would a company want to engage in a complicated and possibly costly ASR contract if its only advantage over an OMR is the ability to receive the shares today? Why would a company want to get the shares quickly? One possible motivation is the desire to boost the company's EPS. As mentioned earlier, only a few of the repurchasing companies stated that desire as a motivation in the ASR announcement. Although our analysis does not provide clear support for this motivation, it does show that a relatively large number of ASRs are announced in the second and third months of the fiscal quarter, which suggests some motivation to affect EPS.

Disbursement of free cash is quicker in an ASR than in an OMR, but the incremental benefit from disbursing free cash more quickly may not be high. In ASRs, perhaps the corporate commitment to disburse free cash is the main benefit with respect to free cash disbursement and can be weighed against the flexibility provided by an open-market program.[27] Consistent with the poor post-announcement performance of ASR stock, compa-

nies with few growth opportunities may not need excess cash as a means of financial flexibility.

Other reasons that could motivate the desire to obtain shares quickly could be the need for a quick capital structure change, a control change, takeover deterrence, or avoiding inflation in the number of shares resulting from accelerated employee and management compensation in the form of stock and options, as implied by the findings in Table 8.[28] But these are topics for further research and analysis.

Conclusion

In this article, we explored the characteristics and market performance of ASR stocks and investigated the motivation for using ASRs. We documented that since the advent of ASRs in 2004, their number and volume have grown dramatically, reaching a total value of $42 billion in 2007. Typically, ASRs are very large repurchases that tend to be announced by relatively large companies. The average ASR is around $570 million, and the average market capitalization of an announcing company is $12.5 billion. On average, ASRs involve 5.3 percent of the repurchasing company's outstanding shares, a percentage close to that documented for OMR programs.[29]

Most ASRs accelerate existing open-market repurchase programs and take, on average, six months to complete. In terms of market performance, the announcement return on ASR stock is positive and statistically significant but small compared with the announcement return on other repurchase methods. Furthermore, although studies of other repurchase methods found positive drift in the post-announcement performance of the stock, we found poor post-announcement stock price performance. Our interpretation of the relatively low announcement return and the poor post-announcement performance is that unlike OMRs and tender offers, ASRs do not signal undervaluation. We suggest that the market recognizes that ASRs are different from other repurchase methods, such as tender offers and OMR programs, and greets them with a lower announcement return. But this explanation does not account for the full extent of the negative news. Over the long run, this information is revealed and the stock price declines.

Our findings suggest that an ASR's main advantage is in allowing the company to obtain the shares much more quickly than in an OMR program, yet without paying the premium required in a tender offer.

One possible motivation for obtaining the shares quickly is the desire to boost the company's EPS. Our analysis showed that a relatively large number of ASRs are announced in the second and third months of the fiscal quarter, consistent with a motivation to affect EPS. We also found that the quarterly growth rate in number of shares outstanding doubles after ASRs, which suggests that companies might be using ASRs to offset accelerated inflation in the number of shares outstanding that results from management stock and option compensation plans.

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This article qualifies for 1 CE credit.

Notes

1. "The Home Depot Announces $3 Billion Accelerated Share Repurchase," press release (14 December 2006): http://ir.homedepot.com/phoenix.zhtml?c=63646&p=irol-newsArticle&ID=1267546&highlight.
2. "HP Announces $1.3 Billion Accelerated Share Repurchase; HP Board of Directors Authorizes Additional $3 Billion for Share Repurchases," press release (20 September 2004): www.hp.com/hpinfo/newsroom/press/2004/040920a.html.
3. "Dollar Tree Stores, Inc. Announces $150 Million Accelerated Share Repurchase," press release (29 March 2007): www.dollartreeinfo.com/investors/global/releasedetail.cfm?ReleaseID=235975.
4. For an excellent survey, see Allen and Michaely (2003).
5. These motivations have been suggested in recent working papers. For EPS enhancement, see Marquardt, Tan, and Young (2007) and Dickinson, Kimmel, and Warfield (2008). For takeover deterrence, see Akyol, Kim, and Shekhar (2009) and Bargeron, Kulchania, and Thomas (2010).
6. Chemmanur, Cheng, and Zhang (2008) compared ASRs with OMRs and found that companies that undertake ASRs have lower pre-announcement market valuations,

more positive announcement effects, and better post-announcement operating and stock return performance than do those that undertake OMRs. In contrast, we found significantly negative, rather than positive, post-announcement stock return results.

7. LexisNexis and ABI/INFORM search different news wire databases back in time for different horizons. The shortest period searched was 10 years.
8. In announcing a repurchase program, some companies state that they may execute the repurchase in the form of a privately negotiated repurchase or an accelerated share repurchase. Although such announcements were initially selected by our search, a careful reading of the content of the announcements revealed that many were not ASR announcements.
9. Some companies announced only intentions to conduct an ASR, without any additional information. If the financial reports did not confirm that an ASR had occurred, we removed those announcements from the sample.
10. For examples of typical ASR announcements, go to http://ir.homedepot.com/phoenix.zhtml?c=63646&p=irol-newsArticle&ID=1267546&highlight, www.dollartreeinfo.com/investors/global/releasedetail.cfm?ReleaseID=235975, and www.hp.com/hpinfo/newsroom/press/2004/040920a.html.
11. Although the initial sample included a few pre-2004 announcements, they were eliminated during the sample cleansing process, mostly because they were found to be regular OMR programs rather than ASRs.
12. We did not include post-2007 ASR announcements to ensure sufficient post-announcement market data.
13. Stephens and Weisbach (1998) and Kahle (2002) measured actual OMR programs rather than announcement data. They noted that the available data are very noisy and may underestimate or overestimate actual repurchases. These estimation problems do not apply to ASRs, which require companies to commit to repurchase.
14. Ikenberry, Lakonishok, and Vermaelen (1995) found that the average size of an OMR program is about $100 million. Massa, Rehman, and Vermaelen (2007) documented an average program size of $56 million and an average announcing company size of $1.4 billion.
15. Ikenberry and Vermaelen (1996) reported 6 percent; Peyer and Vermaelen (2009) reported 7.4 percent. We calculated the fraction of shares outstanding as the number of shares announced divided by the number of shares outstanding just before the announcement. When the repurchase announcement did not state the number of shares to be repurchased, we calculated the fraction of shares to be repurchased as the stated dollar value of the ASR divided by the company's market capitalization. In fact, using the companies that disclosed both the dollar value and the number of shares, we verified that both methods yield virtually identical figures.
16. Some ASR-announcing companies had an open-market program whose original size was unavailable. We excluded those companies from the sample of 102 announcements. The dollar value remaining on an existing open-market program at the time of the ASR announcement is generally available. Specifically, since December 2003, this information must be reported in the financial statements. But comparing the size of the announced ASR to the amount remaining on an existing open-market program will upwardly bias the relative size of the estimate (of the ASR as a fraction of outstanding shares) because at the time of the ASR announcement, an existing open-market program may have been partially completed.
17. See, for example, "Stock Buyback Now," *Wall Street Journal* (31 January 2006). See also Marquardt et al. (2007).
18. We considered the deal date in addition to the announcement date because the deal date determines when the company can eliminate the repurchased shares.
19. For consistency with previous studies, once pricing information became available on CRSP, we verified that our results are virtually unchanged under this widely used database.
20. Available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french.
21. This limitation occurred, in turn, because the portfolio was empty or included fewer than three announcements during many months (including almost all of 2004). Thus, the CAR time series was short and not continuous.
22. See, for example, Ikenberry, Lakonishok, and Vermaelen (1995); Comment and Jarrell (1991).
23. See, however, Oded (2005), which addresses signaling with OMRs without a corporate commitment to repurchase.
24. Stephens and Weisbach (1998) showed that in the United States, only 70–80 percent of the announced dollar value is, on average, actually repurchased and that about 5 percent of announcing companies do not repurchase any shares (see also Banyi et al. 2008). Actual repurchase rates outside the United States are significantly lower. For a discussion of the agency costs of free cash, see Jensen (1986).
25. Note that although the company is not required to comply with Rule 10b-18, it is automatically protected against lawsuits about price manipulation if it does so. This protection does not exist under ASRs. Once the company delegates the repurchase to an investment bank, however, it is less likely to be sued because the company isolates itself from the execution of the repurchase. In contrast, in an OMR, the company itself is more involved in the actual repurchase, even if a broker eventually performs the transaction. For more on Rule 10b-18, see, for example, Cook, Krigman, and Leach (2003).
26. Chowdhry and Nanda (1994) made a similar argument for repurchases in general. They suggested that because repurchases signal undervaluation and require a tender premium, they are unattractive to insiders who cannot participate.
27. Regarding the financial flexibility of OMRs, see, for example, Brav, Graham, Harvey, and Michaely (2005).
28. Correlation between insiders' ownership and open-market programs has been documented in the literature (see, e.g., Kahle 2002). Our conjecture here is along the same rationale—namely, that accelerated equity compensation or redemption for insiders is associated with accelerated repurchases.
29. Ikenberry and Vermaelen (1996) reported 6 percent; Peyer and Vermaelen (2005) reported 7.4 percent.

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