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The Desire to Acquire and IPO Long-Run Underperformance

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Abstract

We analyze 3,547 initial public offerings (IPOs) from 1985 through 2003 to determine the impact of acquisition activity on long-run stock performance. The results show that IPOs that acquire within a year of going public significantly underperform for 1- through 5-year holding periods following the 1st year, whereas nonacquiring IPOs do not significantly underperform over these time frames. For example, the mean 3-year style-adjusted abnormal return is −15.6% for acquirers and 5.9% for nonacquirers. Our cross-sectional and calendar-time results suggest that the acquisition activity of newly public firms plays an important and previously unrecognized role in the long-run underperformance of IPOs.

I. Introduction

> The buyer in M&A transactions must prepare to be disappointed. It is also true that most transactions are associated with results that are hardly consistent with optimistic expectations. (Bruner (2002))

Why do newly public firms perform poorly in the years following their initial public offerings (IPOs)? Since Ritter (1991) and Loughran and Ritter (1995) documented the long-run underperformance of IPOs, researchers have sought to explain this intriguing performance puzzle. In investigating factors that influence the long-run abnormal returns of IPOs, for example, prior studies find that prestigious underwriters and venture capital (VC) backing can act to at least partially

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ameliorate this poor performance (e.g., Brav and Gompers (1997), Carter, Dark, and Singh (1998)). While these factors provide valuable insights into understanding IPO performance, we propose an additional factor that is an important driver of underperformance.

A potential explanation for the IPO performance puzzle stems from Brau and Fawcett's (2006) finding that newly public firms are active acquirers of other firms (see also a large sample study by Celikyurt, Sevilir, and Shivdasani (2010) and an early proposal of this hypothesis in Brau, Francis, and Kohers (2003)). In particular, through surveys of chief financial officers of 336 firms, Brau and Fawcett find that the most important stated motivation for going public is to create public shares for acquiring other firms. The revelation that newly public firms have a strong desire to acquire may be a new and important piece of the IPO performance puzzle. In this study, we investigate the connection between the merger and acquisition (M&A) motivation for going public and IPO long-run performance by examining the extent to which post-IPO merger activity helps explain IPO underperformance.

An M&A explanation for IPO underperformance seems plausible, since the long-run performance of acquiring firms tends to be lackluster. For example, Loughran and Vijh (1997) and Rau and Vermaelen (1998), among others, find that many acquirers significantly underperform in the long run. One classic explanation for the poor performance of acquiring firms is the hubris hypothesis of Roll (1986). Roll argues that acquiring managers become overconfident in their ability to select targets and destroy wealth by overpaying for acquisitions. This wasting of acquiring-firm wealth translates into poor subsequent stock price performance.[1] Rau and Vermaelen also find poor bidder performance among glamour firms, or those with low book-to-market ratios. Consistent with the hubris hypothesis, Rau and Vermaelen's findings suggest that managers of glamour firms appear to be overconfident about their acquisition abilities, and investors seem to believe in management's inflated perception of their acquisition skills. Malmendier and Tate (2008) find similar evidence of the value-destroying effects of acquisitions made by bidders with a propensity toward overconfidence.[2] In addition, Kohers and Kohers (2001) show that investors tend to be overly optimistic about the future performance of acquirers in high-tech takeovers, especially if the acquirer is a glamour firm.

This type of enthusiasm may play a prominent role in IPOs, affecting both managers and investors. For example, Baker, Ruback, and Wurgler (2007) note that, based on their review of previous studies, entrepreneurs of start-up firms seem to be particularly prone to overconfidence (see also Landier and Thesmar (2009), Camerer and Lovallo (1999), and Cooper, Woo, and Dunkelberg (1988)). Furthermore, Loughran and Ritter (1995) argue that investor perception of IPOs seems to be "the triumph of hope over experience," noting that investors appear

[1]Other studies looking at the performance of acquiring firms include Franks, Harris, and Titman (1991), Agrawal, Jaffe, and Mandelker (1992), and Loderer and Martin (1992), among others.

[2]CEOs who tend to be overconfident are classified as those with personal overinvestment in their companies, as measured by the voluntary holding of in-the-money stock options, and those described in the press as confident and/or optimistic.

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to systematically overestimate the likelihood of finding the next Microsoft. Given the general market enthusiasm toward IPOs and the newly public firm's appetite for acquisitions, we hypothesize that investors have a tendency to be overly optimistic about the acquisition decisions of IPO firms. We expect that managers of newly public firms are susceptible to overconfidence in their acquisition decisions, and enthusiastic IPO investors tend to underestimate the likelihood that IPO firm managers will overinvest via acquisitions. This prediction would also be consistent with more general evidence from Titman, Wei, and Xie (2004), who note that increases in capital investment are associated with negative benchmark-adjusted returns, suggesting that investors do not fully recognize the empire-building risks associated with increasing investment (see also Cooper, Gulen, and Schill (2008) and Lyandres, Sun, and Zhang (2008)). Titman et al. further point out that firms with higher levels of capital investments may be more likely to have managers with a tendency to overinvest.[3] Newly public firms with a strong motivation to acquire would fit into this category of firms at high risk of overinvestment.

Recent studies (e.g., Celikyurt et al. (2010)) have highlighted the importance of the acquisition motivation for conducting an IPO but have not examined how these acquisition decisions impact the long-run performance of IPOs. This study contributes to the recent literature by examining whether the acquisition behavior of IPO firms helps to explain the long-run negative IPO performance anomaly documented by Ritter (1991) and Loughran and Ritter (1995).

Our results show that IPO firms are active participants in the takeover market, consistent with Brau and Fawcett (2006) and Celikyurt et al. (2010). Our long-run analysis indicates that the acquisition activity of IPOs is a contributing factor in the long-run underperformance of IPO firms. Newly public firms that acquire within the 1st year of going public experience significantly worse long-run performance after the 1st year than IPO firms that do not acquire in the 1st year. In particular, the mean 3-year (5-year) buy-and-hold abnormal return is −15.6% (−23.1%) for 1st-year acquirers, compared to 5.9% (1.1%) for nonacquirers. Our findings are robust to different long-run methodologies, including calendar-time factor model regressions using traditional and more recently discovered factors found to explain stock returns. More specifically, based on Fama-French (1993) regressions supplemented with an investment factor (e.g., Lyandres et al. (2008)) and an asset growth factor (e.g., Cooper et al. (2008)), acquiring IPOs experience significant negative abnormal monthly returns, whereas nonacquiring IPOs exhibit normal monthly returns. Thus, our findings indicate that the acquisition effect for IPOs that acquire within the 1st year has a distinct impact on long-run performance and is not encompassed by other important asset pricing factors. Whereas previous studies have highlighted the desire to acquire as a key motivation for going public, our findings suggest that newly public firms do not make value-enhancing acquisitions vis-à-vis long-run returns and that investors are slow to recognize this tendency to overinvest.

[3]The observed negative relationship between capital investment and abnormal returns still holds after excluding new issues, suggesting that the new issues effect does not drive the broader capital investment effect.

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II. Data and Univariate Results

To obtain our initial sample of IPO firms, we use the Securities Data Company (SDC) New Issues Database to identify IPOs and the SDC Mergers and Acquisitions Database to determine whether these firms become acquirers. In screening the IPO sample, we exclude real estate investment trusts (REITs), limited partnerships, foreign issuers, closed-end funds, penny stocks (less than $5 offer prices), unit offers, and financial firms (i.e., firms with Standard Industrial Classification (SIC) codes between 6000 and 6999).[4] Using a sample period from 1985 through 2003 (to allow for the calculation of 5-year returns), we obtain 3,547 IPO firms with available Center for Research in Security Prices (CRSP) and Compustat data. We use Compustat to obtain the IPO firms' annual sales and book value of equity for the fiscal year-end following the IPO date, as reported on the 1st available annual statement after the IPO. In classifying 1st-year acquirers, we require that the merger effective date occurs before the 1st anniversary of the IPO. Of the 3,547 IPOs, 1,181 of them (33.3%) are involved in M&A activity within the 1st year.[5]

Table 1 provides a breakdown of the sample of 3,547 IPOs by year and industry. The 4th and 5th columns report the number of 1st-year acquirers and percent of 1st-year acquirers, respectively. The number and percentage of newly public firms that acquire within the 1st year after going public begin to increase in the early 1990s and peaked in 1999, when 55.3% of the firms that went public acquired another firm within 1 year. In Panel B, our industry distribution shows that manufacturing (including electronics and computer hardware) and services (including computer software) are the 2 primary industry representatives in the sample, with 38.8% and 33.8% of the sample in these 2 industries, respectively. Due to the frequency distributions of IPO Year and Industry, we control for industry and time-period effects in our subsequent multivariate analyses.

To compare our sample to previous long-run studies, we first measure underperformance as the buy-and-hold abnormal return for a firm from the day after the IPO to 3, 4, and 5 years after the IPO. Following prior research, such as discussed in Ritter and Welch (2002), we use a characteristic benchmark procedure by subtracting the return over the same horizon for a similar nonissuing firm:

$$\text{AR}^{i}_{0,3} = \prod_{t=1}^{36}\left(1 + r^{i}_{t}\right) - \prod_{t=1}^{36}\left(1 + r^{b}_{t}\right), \tag{1}$$

where $\text{AR}^{i}_{0,3}$ is the buy-and-hold abnormal return for firm i for months 1–36 after going public, r^{i}_{t} is the raw return for firm i in month t after going public (excluding the 1st day), and r^{b}_{t} is the benchmark return in month t. The 1-, 2-, 3-, 4-, and

[4]Following Bradley, Cooney, Dolvin, and Jordan (2006) in their examination of penny stock IPOs, we do not adjust for inflation in using the $5 penny stock screen in the results shown. However, we also used an inflation-adjusted penny stock screen and found similar results. Our results are robust to the inclusion of financial firms as well.

[5]We exclude roll-up and shell IPOs. Our results are stronger with the inclusion of these special entity IPOs. We thank Jay Ritter for making the identity of these firms freely and conveniently available on his Web site (http://bear.warrington.ufl.edu/ritter/ipodata.htm).

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TABLE 1

Frequency Distribution by IPO Year and Industry

Table 1 gives the frequency distribution of 3,547 IPO firms in our sample by year and industry. Industry classifications are from Kahle and Walkling (1996). The sample excludes REITs, limited partnerships, foreign issuers, closed-end funds, penny stocks, unit offers, and financial firms.

Panel A. Frequency Distribution by IPO Year

IPO Year	Frequency	% of Total Sample	No. of 1st-Year Acquirers	% of 1st-Year Acquirers
1985	86	1.8%	5	5.8%
1986	203	4.2%	20	9.9%
1987	178	3.7%	15	8.4%
1988	68	1.4%	6	8.8%
1989	60	1.3%	12	20.0%
1990	81	1.7%	32	39.5%
1991	177	3.7%	43	24.3%
1992	261	5.4%	74	28.4%
1993	333	6.9%	106	31.8%
1994	266	5.5%	86	32.3%
1995	275	5.7%	105	38.2%
1996	400	8.3%	146	36.5%
1997	274	5.7%	129	47.1%
1998	180	3.8%	91	50.6%
1999	329	6.9%	182	55.3%
2000	252	5.3%	89	35.3%
2001	47	1.0%	17	36.2%
2002	41	0.9%	11	26.8%
2003	36	0.8%	12	33.3%
Total	3,547	100.0%	1,181	33.3%

Panel B. Frequency Distribution by Industry

Industry	2-Digit SIC	Frequency	%
Agriculture, forestry, and fishing	01–09	8	0.2%
Mining and oil & gas production	10–14	80	2.3%
Construction	15–17	41	1.2%
Manufacturing (including electronics and computer hardware)	20–39	1,378	38.8%
Transportation, communication, electric, gas, and sanitary services	40–49	317	8.9%
Wholesale trade	50–51	201	5.7%
Retail trade	52–59	322	9.1%
Finance, insurance, and real estate	60–67	0	0.0%
Services (including computer software)	70–89	1,200	33.8%
Public administration	91–97	0	0.0%

5-year abnormal returns are defined similarly with returns calculated for 1–12, 1–24, 1–36, 1–48, and 1–60 months after the firm goes public, respectively. The return calculations begin on the day after the IPO issue date. A month is defined as 21 trading days, with 252 trading days in a year. Following Loughran and Ritter (1995), if an IPO delists, the abnormal return is truncated at the date of delisting and used for all longer-horizon returns for that IPO.

For the portfolio benchmarks, we first consider market-adjusted returns using the value-weighted CRSP index as a benchmark. Panel A of Table 2 shows that the mean market-adjusted return is significantly negative for 3-, 4-, and 5-year returns. In particular, the mean 3-year (5-year) market-adjusted return in our sample is −17.1% (−25.7%), which is comparable to the poor 3- and 5-year performance for IPOs relative to a market benchmark found in previous studies (e.g., Loughran and Ritter (1995), Ritter and Welch (2002)).

We also consider a benchmark portfolio controlling for style effects (size and book-to-market) following the method of Lyon, Barber, and Tsai (1999). We first create a possible matching sample by choosing all firms that have been listed on

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TABLE 2

Abnormal Returns for the Full Sample

Panel A of Table 2 gives the means of buy-and-hold abnormal returns for 1- through 5-year holding periods. The benchmark returns are either the CRSP value-weighted index ("market adj.") or style-matched firms based on size and book-to-market ratio ("size-BM adj."). If an IPO delists, the abnormal return is truncated at the date of delisting and used for all longer-horizon returns for that IPO. If a matching firm delists, the next closest market-to-book matching firm is used at the delist date. The cluster-adjusted *p*-value statistics account for year effects. In Panel B, abnormal returns are calculated based on whether the firm acquired within the 1st year of going public.

Panel A. Abnormal Returns (n = 3,547)

Variable	Mean	Unadjusted *p*-Value	Cluster-Adjusted *p*-Value
$AR_{0,1}$ (market adj.)	−5.51%	0.0001	0.1760
$AR_{0,1}$ (size-BM adj.)	−3.80%	0.0494	0.3967
$AR_{0,2}$ (market adj.)	−9.16%	0.0030	0.2937
$AR_{0,2}$ (size-BM adj.)	−2.56%	0.4892	0.7771
$AR_{0,3}$ (market adj.)	−17.09%	<0.0001	0.0170
$AR_{0,3}$ (size-BM adj.)	−5.50%	0.2882	0.4912
$AR_{0,4}$ (market adj.)	−21.84%	<0.0001	0.0010
$AR_{0,4}$ (size-BM adj.)	−7.08%	0.2344	0.5209
$AR_{0,5}$ (market adj.)	−25.69%	0.0002	0.0002
$AR_{0,5}$ (size-BM adj.)	−10.69%	0.2065	0.4943

Panel B. Abnormal Returns for 1-Year Acquirers and Nonacquirers

	Acquirers (n = 1,181)			Nonacquirers (n = 2,366)			Difference Tests
Variable	Mean	*p*-Value	Adj. *p*-Value	Mean	*p*-Value	Adj. *p*-Value	*p*-Value
$AR_{0,1}$ (market adj.)	4.63%	0.1450	0.4011	−10.58%	<0.0001	0.0084	<0.0001
$AR_{0,1}$ (size-BM adj.)	2.53%	0.5349	0.7420	−6.95%	0.0007	0.0861	0.0379
$AR_{0,2}$ (market adj.)	−1.47%	0.8230	0.8998	−13.01%	<0.0001	0.1198	0.1154
$AR_{0,2}$ (size-BM adj.)	0.13%	0.9857	0.9940	−3.90%	0.3493	0.5335	0.6327
$AR_{0,3}$ (market adj.)	−16.53%	0.0096	0.0568	−17.37%	<0.0001	0.0187	0.9133
$AR_{0,3}$ (size-BM adj.)	−15.18%	0.1474	0.3273	−0.66%	0.9078	0.9197	0.2242
$AR_{0,4}$ (market adj.)	−29.17%	<0.0001	0.0006	−18.19%	0.0021	0.0152	0.1765
$AR_{0,4}$ (size-BM adj.)	−20.50%	0.0431	0.2537	−0.37%	0.9595	0.9703	0.1108
$AR_{0,5}$ (market adj.)	−34.25%	<0.0001	<0.0001	−21.42%	0.0299	0.0198	0.2847
$AR_{0,5}$ (size-BM adj.)	−30.26%	0.0111	0.1196	−0.92%	0.9344	0.9560	0.0727

CRSP for at least 5 years, have not issued equity within 5 years, and are ±30% market capitalization of the IPO firm. Next, we choose the firm that has the closest market-to-book equity ratio that meets the size requirement. If a matching firm delists before the end of the estimation period, at the delist date, we splice in the next closest market-to-book matching firm, as of the original matching. Panel A of Table 2 indicates that the mean 3-year (5-year) style-adjusted return in our sample is −5.5% (−10.7%). This finding is consistent with previous studies such as Ritter and Welch (2002) that find the mean 3-year style-adjusted return for a similar sample period to be −5.1%. These results are also in line with Brav and Gompers (1997) and others who find that IPO underperformance is sensitive to the benchmark used and notably smaller after controlling for style effects.

In Panel B of Table 2, we compare firms that engage in acquisition activity within their 1st year of going public with firms that do not. The 1st-year market-adjusted returns for acquirers are significantly higher than those for nonacquirers, suggesting that newly public firms that have been performing well are more inclined to become acquirers within the 1st year after going public. While the post-IPO returns tend to be lower for acquirers in the longer performance horizons, the differences are statistically significant at the 10% level only in the 5-year post-IPO

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time frame based on style-adjusted returns.[6] The good performance of acquirers within the 1st year, in conjunction with their poor performance over longer time frames in the post-IPO period, suggests that focusing on performance following the 1st year will provide a better understanding of how acquisition activity affects the performance of newly public firms. In addition, examining the performance following the 1st year is more relevant from a trading-rule perspective, since investors, prior to investing, would be able to distinguish acquirers from nonacquirers.[7] Thus, to see how acquirers perform subsequent to acquisition activity, we look at buy-and-hold returns that exclude the 1st-year holding period. We calculate, for example, the 3-year return for firm i as

$$\text{AR}^{i}_{1,4} = \prod_{t=13}^{48}\left(1+r^{i}_{t}\right) - \prod_{t=13}^{48}\left(1+r^{b}_{t}\right). \tag{2}$$

Statistics for abnormal returns excluding the 1st-year returns are given in Table 3. As presented in Panel A, the mean market-adjusted (style-adjusted) return for years 2–4 (months 13–48) is −6.2% (−1.3%).[8] In Panel B, we present the abnormal returns excluding the 1st-year returns based on whether IPO firms engage in acquisition activity or not within the 1st year after going public. The results show that, after the 1st post-IPO year, the abnormal returns for acquirers are significantly lower than the abnormal returns for nonacquirers in the 3–5 years following the IPO (excluding the 1st year), regardless of the benchmark used. For example, in years 2–4 (months 13–48) after the IPO, the mean style-adjusted return for acquirers is −15.6%, while the comparable return for nonacquirers is 5.9%. The difference in returns between acquirers and nonacquirers is significant under the 5% level. These findings, and those from Table 2, suggest that, whereas acquirers perform relatively well in the 1st year after the IPO, these firms show poor performance in the years following the acquisition.[9]

Panels C–E of Table 3 provide similar analysis for firms that acquire within 2–4 years following the IPO. While the abnormal returns are lower for acquirers than for nonacquirers over most time frames, the results are generally not significantly different for the 2 groups in the 5-year post-IPO period. Thus, it appears that firms that wait longer than a year to acquire do not show the same underperformance as newly public firms that acquire shortly after going public. These findings are consistent with the idea that newly public firms that become acquirers are more susceptible to overoptimism. If investor enthusiasm toward an IPO

[6] All difference-in-means tests control for difference in variances.

[7] We thank the reviewer for helpful comments on this point. If the sample of acquirers is truncated to include IPO firms that acquire *only* in the 1st year and do not acquire in subsequent years, then the negative abnormal 2- and 3-year returns in Panel B of Table 2 become statistically significant. However, because of the look-ahead bias implicit in such an approach, we do not focus on these results.

[8] We examined the median buy-and-hold returns and found similar results. However, given that long-run buy-and-hold returns are right-skewed, the long-run market-adjusted returns will tend to be negative. Thus, we do not present a statistical analysis of the buy-and-hold median returns. We thank the referee for pointing this out.

[9] The 1st-year returns likely reflect the endogenous acquisition decision, since firms that are doing well are more inclined to acquire, while firms that are doing poorly are not.

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TABLE 3

Mean Abnormal Returns for Acquirers and Nonacquirers

Panel A of Table 3 reports aggregate mean buy-and-hold abnormal returns excluding the 1st year of being public. Panels B–E compare abnormal returns for firms that acquire within a specific time frame after their IPO date versus firms that do not acquire within this time frame. So, for example, in Panel C the variable $AR_{2,5}$ represents the 3-year buy-and-hold abnormal returns starting the 2nd year after IPO through the 5th year after IPO for *acquirers* who acquire within 2 years of going public compared to *nonacquirers* who do not acquire within 2 years of going public. The benchmark return adjustments are based on either the CRSP value-weighted index ("market-adj.") or style-matched firms according to size and book-to-market ratio ("size-BM adj."). The cluster-adjusted *p*-values account for year effects. The *p*-values for *t*-tests of significant differences in means are also given in Panels B–E.

Panel A. Abnormal Returns Excluding 1st Year ($n = 3{,}547$)

Variable	Mean	Unadjusted *p*-Value	Cluster-Adjusted *p*-Value
$AR_{1,2}$ (market adj.)	−5.31%	0.0010	0.1966
$AR_{1,2}$ (size-BM adj.)	−4.18%	0.0404	0.3212
$AR_{1,3}$ (market adj.)	−5.35%	0.0647	0.2939
$AR_{1,3}$ (size-BM adj.)	−0.89%	0.8062	0.8982
$AR_{1,4}$ (market adj.)	−6.21%	0.1077	0.4302
$AR_{1,4}$ (size-BM adj.)	−1.26%	0.7910	0.8854
$AR_{1,5}$ (market adj.)	−15.38%	<0.0001	0.0113
$AR_{1,5}$ (size-BM adj.)	−6.95%	0.1797	0.4549

Panel B. Abnormal Returns for Acquirers within 1 Year and Nonacquirers

	Acquirers ($n = 1{,}181$)			Nonacquirers ($n = 2{,}366$)			Difference Tests
Variable	Mean	*p*-Value	Adj. *p*-Value	Mean	*p*-Value	Adj. *p*-Value	*p*-Value
$AR_{1,2}$ (market-adj.)	−11.13%	<0.0001	0.0228	−2.41%	0.2441	0.6040	0.0074
$AR_{1,2}$ (size-BM-adj.)	−13.97%	0.0001	0.0883	0.71%	0.7738	0.8535	0.0007
$AR_{1,3}$ (market-adj.)	−16.32%	0.0008	0.0090	0.12%	0.9727	0.9838	0.0067
$AR_{1,3}$ (size-BM-adj.)	−17.73%	0.0068	0.2210	7.52%	0.0826	0.1593	0.0013
$AR_{1,4}$ (market-adj.)	−20.14%	<0.0001	0.0145	0.74%	0.8879	0.9341	0.0039
$AR_{1,4}$ (size-BM-adj.)	−15.56%	0.0197	0.2167	5.88%	0.3493	0.4659	0.0193
$AR_{1,5}$ (market-adj.)	−26.49%	<0.0001	0.0032	−9.83%	0.0506	0.0852	0.0364
$AR_{1,5}$ (size-BM-adj.)	−23.06%	0.0090	0.0533	1.10%	0.8635	0.9075	0.0278

Panel C. Abnormal Returns for Acquirers within 2 Years and Nonacquirers

	Acquirers ($n = 1{,}680$)			Nonacquirers ($n = 1{,}867$)			Difference Tests
Variable	Mean	*p*-Value	Adj. *p*-Value	Mean	*p*-Value	Adj. *p*-Value	*p*-Value
$AR_{2,3}$ (market-adj.)	−2.68%	0.1684	0.3597	4.18%	0.0796	0.3881	0.0258
$AR_{2,3}$ (size-BM adj.)	−2.95%	0.3501	0.6373	1.86%	0.6081	0.5482	0.3173
$AR_{2,4}$ (market-adj.)	−0.12%	0.9734	0.9848	4.87%	0.1061	0.4709	0.2769
$AR_{2,4}$ (size-BM-adj.)	1.43%	0.7541	0.8356	−1.38%	0.7997	0.8231	0.6924
$AR_{2,5}$ (market-adj.)	−2.76%	0.5639	0.7234	−0.51%	0.8857	0.9444	0.7066
$AR_{2,5}$ (size-BM-adj.)	−0.85%	0.9043	0.9100	−1.33%	0.8184	0.8635	0.9584

Panel D. Abnormal Returns for Acquirers within 3 Years and Nonacquirers

	Acquirers ($n = 1{,}946$)			Nonacquirers ($n = 1{,}601$)			Difference Tests
Variable	Mean	*p*-Value	Adj. *p*-Value	Mean	*p*-Value	Adj. *p*-Value	*p*-Value
$AR_{3,4}$ (market-adj.)	4.59%	0.0232	0.3989	9.35%	<0.0001	0.1159	0.1227
$AR_{3,4}$ (size-BM adj.)	0.14%	0.9524	0.9693	6.31%	0.0388	0.0940	0.1136
$AR_{3,5}$ (market-adj.)	3.89%	0.2623	0.5863	8.92%	0.0054	0.2131	0.2866
$AR_{3,5}$ (size-BM-adj.)	0.16%	0.9710	0.9454	10.28%	0.0067	0.0080	0.0772

Panel E. Abnormal Returns for Acquirers within 4 Years and Nonacquirers

	Acquirers ($n = 2{,}103$)			Nonacquirers ($n = 1{,}444$)			Difference Tests
Variable	Mean	*p*-Value	Adj. *p*-Value	Mean	*p*-Value	Adj. *p*-Value	*p*-Value
$AR_{4,5}$ (market-adj.)	4.11%	0.0301	0.3095	2.65%	0.1947	0.3479	0.5993
$AR_{4,5}$ (size-BM-adj.)	2.82%	0.2256	0.0971	2.85%	0.2513	0.1697	0.9917

wears off after the firm becomes more seasoned, then firms that make acquisitions after a year or more may not be affected as much by excess optimism. Thus, these more seasoned firms would not experience the same degree of underperformance. Furthermore, as managers become more experienced running a publicly traded company, they may become more realistic about the benefits and costs of their investment decisions.

Next, we decompose the 1st-year abnormal returns of acquirers into returns accruing to investors before and after the 1st acquisition. The results are presented in Table 4. We find that returns for newly public firms are, on average, significantly positive before the 1st acquisition date, indicating that these firms were performing well prior to the acquisition. However, after the acquisition date, the abnormal returns for the acquirers are negative. In particular, as indicated in Panel A of Table 4, the mean market-adjusted (style-adjusted) return for acquirers before the acquisition date is 10.84% (9.14%) compared to −6.15% (−8.33%) after the acquisition date, stopping at 12 months after the IPO date. As indicated in Panel B of Table 4, measuring these returns around the announcement date of the 1st acquisition, rather than the acquisition date, slightly strengthens this before-versus-after effect.[10] These findings provide further evidence that the underperformance of acquiring firms begins after acquisition activity begins. This finding also suggests a possible causal relation between positive abnormal performance and acquisition activity, as explored in Hovakimian and Hutton (2010).

TABLE 4

Decomposition of 1st-Year Returns

Table 4 presents the means of buy-and-hold abnormal returns for firms that acquire within the 1st year after going public. The variable $AR_{0,t}$ represents the holding period abnormal returns from the IPO date to the acquisition date of the 1st acquisition in Panel A and from the IPO date to the announcement date of the 1st acquisition in Panel B. The variable $AR_{t,1}$ represents the holding period abnormal returns after the acquisition date in Panel A and after the announcement date in Panel B, to the end of the 1st year after going public. The benchmark returns are either the CRSP value-weighted index ("market adj.") or style-matched firms based on size and book-to-market ratio ("size-BM adj."). Cluster-adjusted *p*-value statistics account for year effects.

Variable	Mean	Unadjusted *p*-Value	Cluster-Adjusted *p*-Value
Panel A. By Acquisition Date			
$AR_{0,t}$ (market adj.)	10.84%	<0.0001	0.1239
$AR_{0,t}$ (size-BM adj.)	9.14%	0.0052	0.0583
$AR_{t,1}$ (market adj.)	−6.15%	0.0099	0.1743
$AR_{t,1}$ (size-BM adj.)	−8.33%	0.0177	0.4557
Panel B. By Announcement Date			
$AR_{0,t}$ (market adj.)	12.60%	<0.0001	0.0939
$AR_{0,t}$ (size-BM adj.)	10.75%	0.0006	0.0251
$AR_{t,1}$ (market adj.)	−7.13%	0.0058	0.2069
$AR_{t,1}$ (size-BM adj.)	−9.50%	0.0088	0.4438

[10]We use the acquisition date (i.e., effective date) instead of the announcement date in our other tables, since not all announced acquisitions are executed, creating a look-ahead bias from a trading perspective. We have, however, checked our results using announcement instead of acquisition dates, and the results are practically the same.

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These initial univariate comparisons demonstrate that acquirers perform worse than nonacquirers after the 1st year and that this effect can help explain IPO underperformance. In the next section we investigate the robustness of these findings by controlling for other IPO characteristics that may influence post-IPO performance.

III. Multivariate Results

In this section, we incorporate other factors that may influence post-IPO performance and control for these variables in a multivariate regression analysis. Subsequently, to further test the robustness of these findings, we use different calendar-time factor model regressions to examine the long-run performance of acquiring and nonacquiring IPOs.

A. Controlling for Other Sources of Underperformance

Prior research has documented that underwriter prestige and VC backing can impact IPO long-run performance (e.g., Carter et al. (1998), Brav and Gompers (1997)). Thus, we include variables indicating whether the IPO firm is VC-backed or uses a prestigious underwriter (UW_RANK), using the rankings of Loughran and Ritter (2004). We also control for the owners' share retention and public float using OVERHANG, which equals shares retained divided by primary shares sold (Bradley and Jordan (2002)). Firm age is captured by $\ln(1 + \text{AGE})$, the log of 1 + the number of years from firm founding to the IPO year using data from Loughran and Ritter (2004). Finally, following Purnanandam and Swaminathan (2004), we use the IPO firm's sales from Compustat to control for firm size, measured as the log of inflation-adjusted annual sales, as reported on the 1st available annual statement after the IPO. The descriptive statistics for these control variables are given in Table 5.

TABLE 5

Descriptive Statistics of Control Variables

Table 5 presents the statistics for acquirer IPOs and nonacquirer IPOs. Difference tests are calculated using a *t*-test for the difference in means. The sample is composed of 3,547 IPOs from 1985 to 2003. UW_RANK refers to the underwriter rank, based on the rankings of Loughran and Ritter (2004). VC equals 1 if the IPO is VC-backed. The age of the firm at the time of the IPO (AGE) is also obtained from Loughran and Ritter (2004). OVERHANG, a proxy for share retention, is defined as shares retained divided by primary shares sold, following Bradley and Jordan (2002). SALES is annual firm sales for the fiscal year-end following the IPO date, as reported on the 1st available annual statement after the IPO.

	Full Sample		Acquirers		Nonacquirers		Difference Tests
Variable	Mean	Median	Mean	Median	Mean	Median	*p*-Value
UW_RANK	7.56	8.10	7.72	8.10	7.47	8.10	0.0004
VC	0.46	0.00	0.46	0.00	0.46	0.00	0.7658
AGE (years)	15.16	8.00	14.96	8.00	15.23	8.00	0.6959
OVERHANG	3.78	2.88	3.66	2.71	3.84	2.94	0.1319
SALES ($ millions)	246.75	56.03	330.10	63.07	196.83	52.32	0.0138

The descriptive statistics for the control variables show that the average IPO employs a lead underwriter with a UW_RANK of 7.56 on a 1–9 scale. We also find that 46% of our firms have VC backing. The median firm in the sample is about

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8 years old at the time of the IPO. The average OVERHANG for the sample is 3.8 (indicating a public float of nearly 26%). The average SALES for the IPO firms are $246.75 million expressed in terms of 2003 purchasing power.[11]

Looking at other characteristics of the 2 samples, we find that acquirers' underwriters are statistically more prestigious than those of nonacquirers (7.72 vs. 7.47 means, difference in means $p = 0.0004$). At the same time, acquirer and nonacquirer IPO firms have similar incidence of VC backing, tend to be around the same age at the time of going public, and have similar overhang. The acquirer IPOs have higher levels of sales, on average, than the nonacquirer IPOs ($330.10 million vs. $196.83 million, $p = 0.0138$).

Next we employ a multivariate cross-sectional regression analysis to determine if the acquisition activity of IPOs affects the long-run aftermarket returns of IPOs after controlling for the factors discussed above. The variable we use to measure underperformance is the abnormal return for the 3-year holding period following the 1st year after the IPO. The abnormal returns are based on either a CRSP value-weighted market index benchmark or size and book-to-market-matched benchmarks described earlier. The base benchmark holding period return regression model can be written as

$$\begin{aligned}(3)\qquad AR^{i}_{1,4} \;=\; & \alpha + \beta_1 \text{ACQUIRE}_i + \beta_2 \text{UW_RANK}_i + \beta_3 \text{VC}_i \\ & + \beta_4 \ln(1 + \text{AGE})_i + \beta_5 \text{OVERHANG}_i + \beta_6 \ln(\text{SALES})_i \\ & + \beta_{7-24} \text{YEAR_DUMMIES}_i \\ & + \beta_{25-32} \text{INDUSTRY_DUMMIES}_i + \varepsilon_i.\end{aligned}$$

Our primary variable of interest is the acquisition indicator, ACQUIRE, which equals 1 for firms that acquire at least 1 firm in the 1st year after going public. In addition to the control variables discussed earlier, we include industry and calendar-year dummy variables to control for influential industries and time periods as demonstrated in the Table 1 frequency distributions.

As indicated in Panel A of Table 6, whether the firm makes an acquisition in the 1st year after the IPO is a key factor associated with long-run underperformance, consistent with our earlier univariate findings. Specifically, making an acquisition within the 1st year (ACQUIRE) lowers the abnormal returns by almost 30% over years 2–4 after going public, based on the market-adjusted return. This relationship between acquisition activity and long-run underperformance is significant at a p-value of 0.0014. Using style-adjusted returns based on size and book-to-market benchmarks shows that the abnormal returns are almost 23% lower for 1st-year acquirers, with a p-value of 0.0402. These findings suggest that, while acquisition activity seems to be an important motivation for going public, quick acquisitions end up being destructive to long-term shareholder wealth, on average.[12]

[11] Since a few of these variables have a large difference between their mean and median values, we checked the sensitivity of our results to extreme observations but did not find significant differences in our results. Firms with 0 sales are not included in the analysis.

[12] We also employed an alternative dependent variable, which began measuring long-run returns immediately after the 1st acquisition, as in Table 4. Our regression results are robust to the use of this alternate dependent variable.

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TABLE 6

Multivariate Regressions Explaining Post-IPO Performance

Table 6 gives the coefficients and heteroskedasticity-consistent *p*-values for the independent variables used to explain the buy-and-hold abnormal returns for IPOs in the 3-year period following the 1st year after going public (i.e., the dependent variable is $AR_{1,4}$). Panel A presents results for the full sample ($n = 3{,}165$), based on market-adjusted and style-adjusted returns (i.e., using size and book-to-market benchmarks). Panel B gives results excluding firms that went public during the bubble years from 1999 to 2000. ACQUIRE is a dummy variable equal to 1 if the IPO firm made an acquisition within 1 year after going public, and 0 otherwise. UW_RANK refers to the underwriter rank, based on the rankings of Loughran and Ritter (2004). VC equals 1 if the IPO is VC-backed. ln(1+AGE) is the natural logarithm of the age of the firm at the time of the IPO plus 1 and is also obtained from Loughran and Ritter (2004). OVERHANG, a proxy for share retention, is defined as shares retained divided by primary shares sold, following Bradley and Jordan (2002). ln(SALES) is the natural logarithm of inflation-adjusted annual firm sales from the Compustat database, as reported on the 1st available annual statement after the IPO. Year and Industry dummy variables are defined according to the year the IPO went public and the IPO firm's industry according to the definitions in Panel B of Table 1. The year 2003 dummy and the industry dummy variables with SIC codes 70–89 are omitted in the regressions.

	Dependent Variable: 1–4 Year Abnormal Return			
	Market-Adjusted		Style-Adjusted	
Variable	Coefficient	*p*-Value	Coefficient	*p*-Value
Panel A. Full Sample (n = 3,165)				
ACQUIRE	−29.40	0.0014	−22.61	0.0402
UW_RANK	4.05	0.0196	9.77	0.0008
VC	30.78	<0.0001	10.22	0.3280
ln(1+AGE)	−5.39	0.1280	−7.77	0.0969
OVERHANG	1.60	0.1327	1.22	0.3216
ln(SALES)	2.33	0.2252	1.25	0.6647
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Intercept	−40.73	0.1518	−55.84	0.1149
Adj. R^2 (%)	2.11	<0.0001	1.57	<0.0001
Panel B. Without Bubble Year IPOs (n = 2,653)				
ACQUIRE	−34.01	0.0018	−27.59	0.0347
UW_RANK	5.29	0.0054	9.74	0.0016
VC	35.28	0.0001	14.26	0.2337
ln(1+AGE)	−7.06	0.0711	−8.85	0.0812
OVERHANG	2.98	0.0378	1.55	0.3268
ln(SALES)	0.90	0.6888	1.73	0.6035
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Intercept	−42.22	0.1506	−52.78	0.1521
Adj. R^2 (%)	2.36	<0.0001	1.33	0.0002

In examining the influence of IPO-related characteristics, we find that the prestige of the underwriter (UW_RANK) is positively and significantly related to performance in the style-adjusted model, consistent with Carter et al. (1998) and Chan, Cooney, Kim, and Singh (2008). Also, in this model, the coefficient for AGE has a significant negative relationship, at the 10% level, with the IPO's long-run abnormal returns. The amount of share retention by owners (OVERHANG) does not significantly affect performance in the post-IPO period examined. In the market-adjusted returns model, VC backing is associated with better long-run performance, consistent with Brav and Gompers (1997) and Chan et al.[13]

A potential concern in the examination of the performance of newly public firms is the effect of the stock market bubble in the late 1990s. Thus, as a

[13]In robustness tests, we also included the IPO firm's debt ratio, market-to-book equity ratio, investment-to-assets (Lyandres et al. (2008)), and growth in assets (Cooper et al. (2008)). These variables were insignificant and did not affect our results. When we use abnormal returns beginning at the IPO date, as in Table 2 and in traditional IPO research, many of the control variables are significant.

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robustness test, we reestimate the regressions excluding firms that went public during the bubble years (i.e., 1999 and 2000). The results are given in Panel B of Table 6. The findings are largely the same as our previous findings for the full sample. The ACQUIRE indicator variable shows that newly public firms that acquire shortly after going public underperform nonacquirers by 34%, significant with a p-value of 0.0018, based on market-adjusted returns. Using the size and book-to-market benchmarks, we find that 1st-year acquirers underperform nonacquirers by almost 28% (p-value = 0.0347). The findings for the control variables are similar to those in Panel A. The results in Panel B provide evidence that our primary findings are not driven by bubble effects. Overall, the cross-sectional regression results show a strong negative influence of 1st-year acquisitions on IPO performance, after controlling for other relevant factors.

B. Calendar-Time Factor Model Regressions

As an alternative method for examining long-run returns, we use different calendar-time factor model regressions. We start with the Fama-French (1993) 3-factor model, using the IPO/SEO purged factors provided on Jay Ritter's Web site (http://bear.warrington.ufl.edu/ritter/ipodata.htm) through 2003 (Loughran and Ritter (2000)). To extend the period of analysis through the end of 2007, we compute the factors, purged of IPO and seasoned equity offering (SEO) firms, for 2004–2007. The model is

$$(4) \qquad R_{pt} - r_{ft} = \mathrm{AR}_t + \alpha_1(R_{mt} - r_{ft}) + \alpha_2 \mathrm{SMB}_t + \alpha_3 \mathrm{HML}_t + \varepsilon_t,$$

where

R_{pt} = the monthly return on an equal-weighted calendar-time portfolio of IPOs;

r_{ft} = the monthly return on the 3-month T-bill;

AR_t = the intercept term, alpha, which provides the mean monthly abnormal return on the calendar-time portfolio;

R_{mt} = the monthly return on the value-weighted market index; thus, $R_{mt} - r_{ft}$ is the market risk premium (MRP);

SMB_t = the difference, each month, between the returns of a value-weighted portfolio of small and big stocks, purged of IPO and SEO firms;

HML_t = the difference, each month, between the returns of a value-weighted portfolio of high book-to-market stocks and low book-to-market stocks, purged of IPO and SEO firms.

We use the traditional Fama-French (1993) 3-factor model as our base case (see Panel A of Table 7) of acquiring and nonacquiring IPOs to determine the interplay of acquisition activity and IPO long-run returns. We then add other factors that studies have recently shown to be potentially important asset pricing factors. The factor models are run separately for acquiring and nonacquiring IPO firms. The returns for the portfolio of acquiring IPO firms are an equal-weighted average of returns for firms that went public between 12 and 48 months prior to the current month and engaged in acquisition activity within the 1st 12 months of going public. The returns for the portfolio of nonacquiring IPO firms are an equal-weighted

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average of returns of firms that went public between 12 and 48 months prior to the current month and did not engage in acquisition activity within the 1st 12 months of going public.[14] We also report our Fama-French regression results, excluding firms that went public during the bubble years of 1999 and 2000, in Panel B. In Panel C, we use a 4-factor model that includes the investment factor of Lyandres et al. (2008), who find that adding this factor into the standard 3-factor model helps to explain the underperformance of new issues. In Panel D, we incorporate the asset growth factor documented in Cooper et al. (2008), who find that firms' asset growth helps to explain the cross section of stock returns. Both the investment factor and the asset growth factor are purged of IPO and SEO firms. We include all 5 factors in Panel E.

Panel A of Table 7 reports that for the group of acquirers, the intercept term of monthly abnormal returns is −0.56% with a *t*-statistic of −2.10, while the nonacquirer abnormal return is 0.05% and insignificant. The 3 factors all have their expected signs. These findings confirm that IPO firms that make acquisitions within the 1st year after the IPO experience significant, negative mean monthly abnormal returns after their 1st year of being public, whereas IPO firms that do not engage in acquisition activity within the 1st year do not.

We conduct further robustness tests of the influence of the bubble period using our Fama-French (1993) regressions. Specifically, in Panel B of Table 7, we examine the abnormal returns for the acquirer and nonacquirer subsamples, excluding firms that went public from 1999 through 2000. Our findings show that acquirers still perform worse than nonacquirers, with a significant average monthly abnormal return of −0.44% for acquirers and an insignificant −0.01% for nonacquirers.

In Panel C of Table 7, following Lyandres et al. (2008), we add an investment factor to the 3-factor regressions for acquirers and nonacquirers.[15] Similar to the previous results, the average monthly abnormal return for acquirers is −0.57%, as compared to 0.05% for nonacquirers. These findings indicate that the IPO decision to acquire shortly after going public has a significantly negative impact on long-run shareholder wealth, separate and distinct from the investment factor's influence on abnormal returns. Furthermore, after controlling for the Cooper et al. (2008) asset growth factor in Panel D, we find a similar significant negative abnormal monthly return of −0.56% for acquirers and an insignificant monthly return for nonacquirers. In Panel E, we include all 5 factors in the same model and find results that are consistent with the previous findings. Thus, the newly public acquirer effect does not appear to be subsumed by other relevant asset pricing factors.[16]

[14]We begin our sample in 1986, since the monthly returns over the 1st year after going public are excluded. This leaves us with 264 monthly return observations.

[15]We follow Chen, Novy-Marx, and Zhang (2010) in constructing the investment factor.

[16]The results shown are based on factors that are purged of IPO and SEO firms. We also examine our findings using nonpurged factors. These robustness tests show that purging the factors decreases the investment factor loading (INV) and its significance but does not materially affect the intercepts in our factor model regressions.

TABLE 7

Calendar-Time Factor Model Regressions (Jan. 1986–Dec. 2007)

Table 7 reports estimates from Fama-French (1993) 3-factor model regressions, along with *t*-statistics and *p*-values. The base model is $R_{pt} - r_{ft} = AR_t + \alpha_1(R_{mt} - r_{ft}) + \alpha_2 SMB_t + \alpha_3 HML_t$, where R_t = the monthly return on an equal-weighted calendar-time portfolio; r_{ft} = the monthly return on the 3-month T-bill; AR_t = the intercept term, the mean monthly abnormal return on the calendar-time portfolio; R_{mt} = the monthly return on the value-weighted market index; SMB_t = the difference, each month, between the returns of a value-weighted portfolio of small and big stocks purged of IPO and SEO firms; and HML_t = the difference, each month, between the returns of a value-weighted portfolio of high and low book-to-market stocks purged of IPO and SEO firms. All panels include 264 monthly observations, from 1986 through 2007. Panel B excludes firms that went public during the bubble years of 1999 and 2000. In Panel C, we add an IPO/SEO purged investment factor, INV, constructed following Chen et al. (2010). The returns for the portfolio of acquiring IPO firms are an equal-weighted average of returns for firms that went public between 12 and 48 months prior to the current month and engaged in acquisition activity within the 1st 12 months of going public. The returns for the portfolio of nonacquiring IPO firms are an equal-weighted average of returns of firms that went public between 12 and 48 months prior to the current month and did *not* engage in acquisition activity within the 1st 12 months of going public. Panel D includes an IPO/SEO purged asset growth factor (see Cooper et al. (2008)), and Panel E includes all 5 factors.

	Acquirers			Nonacquirers		
Variable	Estimate	*t*-Value	*p*-Value	Estimate	*t*-Value	*p*-Value
Panel A. Full Sample						
Intercept	−0.56%	−2.1	0.0342	0.05%	0.2	0.8347
MRP	1.35%	20.0	<0.0001	1.30%	19.8	<0.0001
SMB	1.11%	12.1	<0.0001	1.30%	14.5	<0.0001
HML	−0.30%	−2.7	0.0079	−0.43%	−4.0	<0.0001
Panel B. Excluding Bubble Year IPOs						
Intercept	−0.44%	−2.1	0.0347	−0.01%	0.0	0.9812
MRP	1.19%	22.6	<0.0001	1.28%	20.2	<0.0001
SMB	1.07%	15.0	<0.0001	1.26%	14.6	<0.0001
HML	−0.15%	−1.8	0.0818	−0.34%	−3.3	0.0012
Panel C. Including INV Factor (full sample)						
Intercept	−0.57%	−2.1	0.0330	0.05%	0.2	0.8455
MRP	1.34%	19.8	<0.0001	1.29%	19.5	<0.0001
SMB	1.09%	11.7	<0.0001	1.28%	14.1	<0.0001
HML	−0.26%	−2.2	0.0270	−0.39%	−3.4	0.0007
INV	−0.20%	−1.2	0.2330	−0.22%	−1.3	0.1817
Panel D. Including ASSET Factor (full sample)						
Intercept	−0.56%	−2.1	0.0338	0.06%	0.2	0.8284
MRP	1.36%	20.3	<0.0001	1.31%	19.9	<0.0001
SMB	1.10%	12.2	<0.0001	1.30%	14.6	<0.0001
HML	−0.42%	−3.4	0.0008	−0.52%	−4.3	<0.0001
ASSET	0.42%	2.2	0.0295	0.29%	1.6	0.1162
Panel E. Including INV and ASSET Factors (full sample)						
Intercept	−0.57%	−2.2	0.0310	0.05%	0.2	0.8425
MRP	1.35%	20.2	<0.0001	1.30%	19.8	<0.0001
SMB	1.07%	11.7	<0.0001	1.27%	14.1	<0.0001
HML	−0.38%	−3.1	0.0019	−0.49%	−4.0	<0.0001
INV	−0.38%	−2.1	0.0335	−0.36%	−2.1	0.0414
ASSET	0.57%	2.8	0.0051	0.44%	2.2	0.0278

Given these results, it is of interest to test an investment strategy using the newly public acquirers and nonacquirers. Following Massa, Rehman, and Vermaelen (2007), we construct a hedged portfolio that goes short in an equal-weighted portfolio of IPO firms that acquired within the 1st post-IPO year and goes long in an equal-weighted portfolio of IPO firms that did not acquire within the 1st year after the IPO. Stocks are added 12 months after the IPO and deleted 48 months after the IPO. The mean (median) monthly return on the hedged portfolio is 1.2% (1.5%), with a p-value < 0.0001.

In examining the performance of newly public firms that acquire in the 1st year, we find that the poor performance of acquirers is more pronounced among

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acquirers that make acquisitions in the 1st year only and not in the subsequent years in the 5-year post-IPO period. In particular, this group of acquirers experiences an average monthly abnormal return of −1.37% (p-value = 0.0028) in the calendar-time factor model regressions. The magnitude of this poor performance is robust to the inclusion of different factors in the model. While focusing on this subset of acquirers does not provide a testable trading strategy, the dramatic underperformance of this group of newly public acquirers provides important evidence in understanding the IPO long-run performance anomaly.

IV. Conclusion

Our study provides evidence that the takeover activity of IPO firms helps to explain the long-run underperformance for IPOs. IPO firms that become acquirers within the 1st year after going public experience significantly negative excess returns in the following 3 years. Univariate results show that for a sample of IPOs issuing between 1985 and 2003, IPOs that acquire in the 1st year experience a style-adjusted 3-year buy-and-hold return of −15.6%, as compared to 5.9% for nonacquirers (difference in means p-value = 0.0193).

Next, we use buy-and-hold multivariate regressions to control for factors such as underwriter reputation and VC backing, which previous literature has shown affect the long-run performance of IPOs. After controlling for these other relevant influences, a dummy variable indicating the IPO made an acquisition in the 1st year shows that acquirers underperform nonacquirers by over 29% in the subsequent 3 years.

Continuing the analysis, we conduct a series of calendar-time-series regressions using different factor models to determine whether the acquisition effect is accounted for in previously documented asset pricing factors. Using a traditional Fama-French (1993) 3-factor model, the results show a monthly alpha of −0.56% ($p = 0.0342$) for acquiring IPOs, compared to a monthly alpha of 0.05% ($p = 0.8347$) for nonacquiring IPOs. Supplementing the 3-factor model with the investment factor of Lyandres et al. (2008) provides similar evidence that newly public acquirers significantly underperform, while nonacquirer IPOs do not. Thus, the newly public acquisition effect appears to be separate and distinct from the investment factor that influences IPO long-run performance.

Having separated the acquisition effect from the investment factor, we next incorporate the asset growth effect of Cooper et al. (2008) and find that the underperformance of 1st-year acquirers is robust in this model as well. Based on these findings, we test a trading strategy that goes short in IPO firms that acquired within the 1st post-IPO year and long in IPO firms that did not acquire within the 1st year after the IPO. The mean monthly return on this hedged portfolio is a significant 1.2%. Given the poor long-run performance of newly public acquirers, our findings suggest that investors tend to underestimate the overinvestment potential of acquisitions made by newly public firms. Overall, these results provide new empirical evidence on the importance of the acquisition decision in affecting the long-run stock price performance of IPO firms.

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