Internal versus External growth: impact on operational and market performance

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Abstract

We examine the operational and market performance of all industrial US companies listed in the NYSE, AMEX and NASDAQ between January 1990 and December 2004. The results indicate that growing up internally and externally has a significantly positive effect on the abnormal returns of the firm. Moreover, growing up internally increases abnormal returns significantly more than growing up externally. In addition, firms that grew up internally increased their cumulated cash flow returns – up to a certain point of internal growth – and enjoyed significantly higher cumulated cash flow returns than the companies that grew up externally.

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1. Introduction

A firm can grow in two ways: either by performing mergers and acquisitions (external growth), or by increasing its own assets or output through the reinvestment of its cash flows in existing businesses (internal or organic growth). Both types of growth strategies are regularly used simultaneously, and have advantages and drawbacks. External growth creates synergies and market power, but it can also destroy value if the management reinvests the firm's resources or free cash flows in inefficient projects for their own personal interest. Alternatively, internal growth provides more corporate control, encourages internal entrepreneurship, and protects organizational culture, but it often is a slower way of growth compared to M&As since it requires the development of new resources internally. Therefore, the managerial choice between those two types of growth will have a consequential impact on the firm's operational and market performance. The business risk associated with each type of growth varies, and depends on various determinants such as the industry or the economical environment.

Moreover, consulting firms such as Bain[1] or BCG[2] are encouraging companies to perform M&As, arguing that the more external growth they do, the more their financial and economic performance will increase. BCG's report quotes that the highly acquisitive companies of their US sample have the highest mean total shareholder return, and that the most successful acquisitive growers outperformed the most successful organic growers, allowing them to gain market share more rapidly than their counterparts.

On the other hand, General Electric has recently praised the advantages of organic growth[3] and encourages companies to pursue it because of the lower costs, the better return of investment and the incentives that it gives to pursue innovation. GE also emphasizes that when Procter & Gamble and Gillette appeared at a meeting in Arizona soon after announcing their merger, A.G. Lafley, P&G's CEO, explained that his company is no longer dependent on mergers to continue sales and profit growth and insisted that "[his] growth has been quality growth because of organic growth". Lafley has often been credited with revitalizing the company by building on P&G's core brands such as Crest and Pampers. Another interesting example is Starbucks. While Starbucks has made some acquisitions, such as the 60-outlet Seattle Coffee Company to enter the U.K. market in 1998, their main objective has been the development of internal growth which brought the total number of their worldwide outlets beyond 13000 as of 2007.

Should the companies focus on M&As or would they be better off by investing those resources internally instead? This paper will attempt to provide an answer to that question. More specifically, we will analyse the operational and financial performance of US companies between January 1990 and December 2004, and compare the performance of the firms that performed internal growth with those that did external growth.

In section 4, we find evidence that growing up internally and externally has a significantly positive effect on the abnormal returns of the firm. Moreover, growing up internally increases abnormal returns significantly more than growing up externally. In addition, firms that grew up internally increased their cumulated cash flow returns – up to a certain point of internal

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[1] Source : Bain & Company Global Learning Curve Study (2003)

[2] Source : The Boston Consulting Group, Growing through Acquisitions : The successful Value Creation record of Acquisitive Growth Strategies (2004)

[3] Source : General Electric Commercial Finance report : Leading views from GE (May 2005)

growth – and enjoyed significantly higher cash flow returns than the companies that grew up externally.

The rest of the paper is presented as follows. The next section provides an overview of the literature review. Section 3 describes the sample and the research design. Section 4 provides the results of the operational and market performance for each type of growth strategy. Section 5 concludes this paper.

2. Literature review

Past literature typically studies either the corporate performance or the market performance of firms following mergers and acquisitions. Nevertheless, little research has been made about the performance related to internal growth. This section will first analyze the different rationales for each type of growth strategies, and will then summarize the main findings of previous empirical research on market (short term and long term) and operational performance.

2.1 Value effects of external and internal growth strategies

As mentioned before, two of the rationales for conducting external growth are synergies between the combining firms and the creation market power.

Synergy gains can be defined as the ability of a combination to be more profitable than the individual units that are combining (Gaughan, 2002). The origins of these synergies are diverse. Firstly, they can originate from economies of scale or scope (Peteraf, 1993). For example, Dranove and Shanley (1995) analyzed the source of the gains of economies in production, administration and marketing in hospital systems consequential to mergers and acquisitions. Secondly, synergies may derive from better corporate control on the target firm (Jensen, 1988) because managers often have trouble abandoning old strategies and habits that are unhealthy for their company. Takeovers can help solving those problems because it's easier for new top-level managers that had no close bound with the company to make the adequate changes. Moreover, resistance to organizational change is usually significantly lower when top-level managers have been recently appointed. Finally, synergies may appear from new co-specialized assets, as explained theoretically by Teece (1986), and verified empirically by Capron (1999).

Another rationale for merging is market power. Market power refers to the capacity of a company to act independently of its competitors and clients (Carlton and Perlof, 1990; Hay and Morris, 1991). Eckbo (1983) tested the collusion hypothesis (i.e., "that rivals of the merging firms benefit from the merger since successful collusion limits output and raises product prices and/or lower factor prices") and finds little evidence indicating that the mergers

would have had collusive effects. Eckbo (1992) also compared the Canadian market, which lacked any antitrust policy for a long period of time, with the US market to test the deterrence hypothesis (i.e., "that the probability of a horizontal merger being anti-competitive is higher in Canada than in the US"). Again, there was no solid evidence supporting the hypothesis. Several other empirical studies, such as Sharma and Thistle (1996) in the US market, implied a lack of significant post-merger market power gains to be able to influence the product markets.

Acquisitions can also destroy value if the management reinvests the firm's resources, or free cash flows, for their own personal interest in inefficient projects. Amihud and Lev (1981) empirically examined the motives for the widespread and persisting phenomenon of conglomerate mergers. Why do managers perform these conglomerate mergers if investors can achieve the same diversification effect in their own portfolios, according to their own risk aversion? They conclude that managers are engaging in conglomerate mergers "to decrease their largely undiversifiable "employment risk" (i.e., risk of losing job, professional reputation, etc.)". Jensen (1986) brings his free cash flow theory to explain why mergers occur. Free cash flows are cash flows in excess of what is required to fund all projects with positive net present value. Agency costs occur when there are substantial free-cash flows that are reinvested inefficiently by the managers (e.g. by performing firm combinations), instead of redistributing them directly to their shareholders through dividend payments. Yet another example is the paper from Shleifer and Vishny (1989) that describes how managers can entrench themselves with manager-specific investments that make it costly for shareholder to replace them. Those manager-specific investments also provide the opportunity for managers to extract higher wages and to have more control over the corporate strategy of the company. A last source of value-destruction in combinations is poor post-merger integration. Datta (1991) empirically examines the organizational differences between US bidders and targets of M&As on post-acquisition performance. He concludes that differences in top management styles negatively impact post-acquisition performance. However, difference in reward and evaluation systems didn't seem to impact the post-acquisition performance significantly.

On the other hand, internal growth provides more corporate control, encourages internal entrepreneurship and protects organizational culture for different reasons. First of all, managers have a better knowledge of their own firm and assets, and the internal investment is likely to be better planned and efficient. In addition, synergies may also be costly to exploit,

making it again more interesting to invest internally (Denrell, Fang and Winter, 2003). Moreover, as explained earlier, internal growth prevents top management styles and firm structures differences which destroy value in combinations (Datta, 1991). Finally, companies that are investing internally are also able to create sustainable competitive advantages since their value-creating processes and positions are less likely to be duplicated or imitated by other firms. Internal growth strategies are more private and less prone to any hostile action from other companies. This leads to better rewards from the capital market (Barney, 1998).

2.2 External Growth and performance

2.2.1 Market performance

Short term and long term market performance around the announcement dates of the combinations have been broadly studied in the past literature.

Although target companies levered significantly positive abnormal returns in most short term studies (Datta, Pinches and Narayanan, 1992; Jensen, 1988), acquiring companies have had mixed results. Some studies show a drop in the acquirer's post-acquisition value (Lorderer and Martin, 1992), while others find no significant changes (Franks, Harris and Titman, 1991; Capron and Pistre, 2002). Therefore, the overall effect at the announcement date is either slightly positive, or zero. If there are no aggregate gains in the combination, M&As may be caused by hubris (Roll, 1986), which suggests that managers are overconfident and destroy value by miss-selecting or over-valuing the target's value. Under this value neutral hypothesis, there is a transfer of value between the bidding and the target company. Moreover, Barney (1988) and Capron and Pistre (2002) find that during the bidding process, the target's shareholders will absorb the gains when the bidding companies have similar resources than the acquiring firm. Acquirers will gain positive abnormal returns when they are able to transfer their resources to the target (i.e., when the synergy is not easily imitable), but they get no abnormal returns when they are only able to get resources from the target.

In addition, most studies about long-term market performance[4] following mergers, such as Asquith (1983) or Agrawal, Jaffe, and Mandelker (1992) show significantly positive long-term pre-event returns for the acquiring firm, zero announcement returns and significantly negative long-term post-event returns.

2.2.2 Operational performance

The first attempts to measure post-merger accounting corporate performance go back to Healy et al. (1992). They examined the performance of the 50 largest mergers between U.S. public industrial companies between 1979 and 1983, and found higher post-merger operating cash flow returns relative to their industries. Empirical data also indicated that firms did not reduce their long-term investments after mergers.

However, acquiring firms usually undertake acquisitions when they are bigger than industry-median firms (Ghosh, 2001) and following a period of superior performance (Morck et al., 1990). Using firms matched on performance and size as a benchmark on the hundred largest US acquisitions in 1998, Ghosh (2001) finds no evidence of any improvement in cash flow returns following corporate acquisitions. Improvements are due to higher sales growth, and not cost reductions. Moreover, cash flow returns increase following cash acquisitions and decline for stock acquisitions.

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[4] Extending these frameworks to measure market performance for longer horizons requires the use different metrics: the buy and hold returns (BHAR) or the calendar-time abnormal returns (CTAR). Although both models show misspecification problems (Barber and Lyon (1997)), there are several techniques available to improve the models, such as the ones presented by Lyon and al. (1999).

3. Data and research design

3.1. Data

Our sample includes all US companies listed on the NYSE, AMEX and NASDAQ, which were bidders on M&As performed between January 1990 and December 2004. The study uses data from SDC Platinum Mergers and Acquisition database to identify the bidding companies. Management and leveraged buy-outs were not included in the sample[5]. Accounting and market data was obtained from the Compustat and CRSP databases. Banks and utilities were also excluded because they are subject to different accounting rules.

The search resulted in a final sample of 9311 companies and 1468 completed deals for which the data was available. Table 1 reports descriptive statistics on the time and industry distribution of the sample mergers[6]. Panel A of the table shows that most of the mergers are clustered in time and that the sample firms' post-merger performance is likely to be influenced by economy-wide changes. Therefore, our tests control for these factors by adjusting the company's performance with their corresponding industry (Healy et al., 1992). Panel B shows that the acquirers came from 34 different industries, with the Services (#36) sector being the most widely represented in our sample (29.6% of total acquirers).

Table 2 shows summary statistics on merger transaction accounting methods, number of bidders, method of payment, and merger type. Panel A shows that most acquisitions are accounted using the purchase method (70.9%). Panel B indicates that most mergers are uncontested (96%), while Panel C shows that the mergers of our sample are made more often by stock (45.5%) than by cash (21.3%).

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[5] Our paper focuses on acquisitions of public companies only. For an analysis of earnings performance subsequent to leverage buyouts, the literature includes Kaplan (1988) or Smith (1990). Literature about performance subsequent to management buyouts includes Bull (1988), Kaplan (1989) or Smith (1990).

[6] Industries definitions can be found in Appendix A and follow the classification in 38 categories by Kenneth French (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/).

Table 1

Descriptive statistics on the time distribution of the sample mergers and their industry distribution

Panel A : Distribution of Merger Years

Year	Number of firms	Percent of firms	Year	Number of firms	Percent of firms
1990	38	2.6%	1998	187	12.7%
1991	38	2.6%	1999	197	13.4%
1992	32	2.2%	2000	139	9.5%
1993	47	3.2%	2001	103	7.0%
1994	74	5.0%	2002	62	4.2%
1995	114	7.8%	2003	71	4.8%
1996	134	9.1%	2004	72	4.9%
1997	160	10.9%	Total	1468	100%

Panel B : Distribution of Acquiring Firms' Industries

Industry	# of firms	% of firms	Industry	# of firms	% of firms
1	1	0.1%	20	16	1.1%
2	6	0.4%	21	86	5.9%
3	62	4.2%	22	118	8.0%
4	0	0.0%	23	35	2.4%
5	10	0.7%	24	102	6.9%
6	14	1.0%	25	18	1.2%
7	1	0.1%	26	18	1.2%
8	1	0.1%	27	63	4.3%
9	12	0.8%	28	36	2.5%
10	1	0.1%	29	2	0.1%
11	3	0.2%	30	0	0.0%
12	12	0.8%	31	0	0.0%
13	11	0.7%	32	0	0.0%
14	84	5.7%	33	60	4.1%
15	10	0.7%	34	66	4.5%
16	7	0.5%	35	154	10.5%
17	0	0.0%	36	434	29.6%
18	3	0.2%	37	1	0.1%
19	17	1.2%	38	4	0.3%

Table 2

Summary statistics on merger transaction accounting methods, number of bidders, method of payment, and merger type for all the merger and acquisitions

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Panel A : Distribution of firms by method of accounting for merger

<u>Accounting method</u>

Purchase	70.9%
Pooling	29.1%

Panel B : Distribution of firms by number of bidders

<u>Number of Bidders</u>

1	96.0%
2	3.3%
3 or more	0.7%

Panel C : Distribution of firms by merger method of payment

<u>Method of Payment</u>

100% stock	45.5%
100% cash	21.3%
mix	33.2%

3.2. Growth Measures

For each company of our sample, we create a measure of internal and external growth. The approach is similar to Frank (2007), but has been slightly improved to fit better to our research topic and framework. The total growth rate in fiscal year t, $Ga(t)$, is defined as $[(TA_t/TA_{t-1})-1]$, where TA_t are the total assets of the firm at the end of fiscal year t. If this firm made no M&As or asset divestments during a given year t, then it only grew through its internal resources, and the internal growth rate, $Gi(t)$, is equal to the total growth rate $Ga(t)$. However, if the company has made combinations during a given year, the total growth rate reflects three processes: (1) the internal growth rate of the original assets TA_{t-1}; (2) the addition of the acquired target's assets, *ta*, which is added at instant $(1-\tau)$, $\tau \leq 1$, with the fiscal year being regarded as length 1 in time. For example, if the merger happens at the first of September, then τ, the part of the year that is hasn't yet elapsed, is equal to 1/3.; (3) the internal growth of the acquired assets over the time fraction τ.

Therefore, assuming that all the assets owned by the firm grow at the same rate, the internal growth rate Gi(t) solves the following equation :

$$TA_t = [1 + Gi(t)]TA_{t-1} + [1 + Gi(t)]^\tau \, ta \qquad (1)$$

Once both Ga(t) and Gi(t) are computed, we can compute the external growth rate Gx(t) for each company at any given year :

$$Gx(t) = Ga(t) - Gi(t) \qquad (2)$$

Extending this framework to the case of several combinations and divestments in a year is straightforward:

$$TA_t = [1+Gi(t)] \, TA_{t-1} + \sum [1+Gi(t)]^\tau_j \, ta_j - \sum [1+Gi(t)]^\tau_k \, ta_k \qquad (3)$$

with j, the number of mergers and acquisitions at a given year t, and k, the number of divestments of the given year.

In addition, the accounting methods used to record the business combination (pooling of interests or purchase method[7]), the means of payment (cash, stock, debt or a mix), the percentage of control of the target, and the price paid can significantly influence the data and introduce biases in our computations. Therefore, we have to adjust the total assets in our formulas for all the possible cases.

Let's first take a look at the two different types of accounting methods: the pooling method and the purchase method. The pooling method presumes that two companies merge as equal, resulting with either the creation of a new company, or with one company becoming part of the other. Therefore, both previous entities retain their operating activities and identities. Moreover, companies that are willing to merge under the pooling method have to meet 12 criteria from the SEC (including similar size and type criteria). No news assets or liabilities are created by the combination, and the values for the assets and liabilities that are carried

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[7] After the issuance of FASB Statement No. 141 in July 2001, all business combinations must be accounted for using the purchase method. However, both methods coexisted before the fiscal year 2002.

forward are the book values of each company. On the other hand, the purchase method is based on the notion that one company acquires another company. As a result, assets and liabilities are recognized by the surviving company at their fair market value, and any excess of purchase price paid over the net fair value is considered as goodwill. The assets and liabilities of the acquired company assume new values, and the goodwill, as well as the difference between the fair market value and the book value, have to be amortized against expense.

As a result, we have to correct the total assets according to the accounting regime used for each combination. The adjusted total assets, $\widetilde{TA}_t$, are presented in the table below and are similar to the ones made by Frank (2007) to correct for the different accounting methods:

- Pooling of interests method :

$$\widetilde{TA}_t = TA_t - (GW_{t-1} + GW_{ta}) \qquad (4)$$

- Purchase method :

$$\widetilde{TA}_t = TA_t - (GW_{t-1} + GW_{ta} + \alpha P + \beta\ TgtLiabMV - \beta ta) \qquad (5)$$

$$0 \leq \alpha \leq 1\ ;\ 0.5 < \beta \leq 1$$

P refers to the price paid for the control-achieving transaction (the only transaction if the control is not achieved through step-by-step purchases); α refers to the weight of equity and/or debt securities paid in the price of the combination deal (in contrast to payments in the form of cash or other assets), so that $P\alpha$ represents the portion of price paid in the form of equity and/or debt securities; β refers to the accumulated controlled portion of the target from this deal and the previous deals (if any), β must be bigger than 0.5 for the control of the target to be obtained; *TgtLiabMV* is the market value of the target firm's liabilities, so that *TgtLiabMV* β represents the amount of target's liabilities assumed by the acquirer during the business combination; GW_t is the goodwill of the company at time t, GW_{ta} is the goodwill of the target company at the combination date ; the other items are defined as before.

3.3. Research design for market performance (Fama-French three factor model[8])

In this section, we will assess the market performance of each growth strategy with calendar-time abnormal returns and the Fama-French (1992) three factor model. The complete procedure is detailed thereafter.

3.3.1. Constructing the size and value sorted portfolios

The firm specific risk is diversified by grouping the stocks of companies into portfolios. This leads to estimating more accurate betas, and therefore we have to construct portfolios which are sorted on size and value, rather than using individual stocks.

In each year of the sample period, firms with a market capitalization higher than the sample median at the end of June of every year are put into the big group (B), and the others are put into the small group (S). Similar computations are done for the book equity to market equity ratios at the end of June for each company, resulting in the creation of three additional groups: the low BE/ME ratio group (L), the medium group (M) and the high group (H). The low group consists of the bottom 30% companies, the medium of the middle 40%, and the high of the top 30%.

Then, six new portfolios are constructed with each of the groups that were just created: S/L, S/M, S/H, B/L, B/M, and B/H. For example, the portfolio S/L consists of stocks that are in the small size group and the low BE/ME group.

Monthly equally weighted returns series for all the portfolios are calculated from July of year t to June of year t+1. The process of dividing stocks into six portfolios is carried out every year in June. By this time of the year, the accounting information to calculate BE/ME for the previous year is publicly available by the annual reports published at the end of the financial year.

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[8] The value of the three factors for the NYSE, AMEX and NASDAQ markets are available at Kenneth French's website : http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/.

3.3.2. Factor Portfolios

The Fama and French model uses three explanatory variables for explaining the cross section of stock returns: (1) the excess market return factor, proposed by the CAPM, computed by subtracting the risk-free return from the market index return (the S&P 500 index in our case); (2) the risk factor in returns relating to size – small minus big (SMB). The monthly return of the SMB factor is:

$$SMB_t = 1/3(S/L + S/M + S/H)_t - 1/3(B/L + B/M + B/H)_t \qquad (6)$$

This factor is relatively free from value effects as it has about the same weighted-average BE/ME; (3) the risk factor in returns relating to value - high minus low (HML). The monthly return of the HML factor is:

$$HML_t = 1/2(S/H + B/H)_t - 1/2(S/L + B/L)_t \qquad (7)$$

Again, it is relatively free of size effects.

3.3.3. Model specification and regressions

The Fama and French three factor time-series regression estimated is :

$$R_{jt} - - R_{ft} = a_j + b_j (R_m - R_f)_t + s_j SMB_t + h_j HML_t + \varepsilon_{jt} \qquad (8) \qquad j = 1,\dots, N \; ; t = 1,\dots,T$$

where R_{mt} is the market return, R_f is the risk-free asset return, b_j is the factor sensitivities of excess return on market portfolio factor, s_j is the same for the size factor portfolio, and h_j for the value factor portfolio. R_{jt} denotes the stock returns for each company in month t. a_j is the mean calendar-time abnormal return, and ε_{jt} is the mean-zero asset-specific return. The Ordinary Least Squares method of estimation is used for econometric analysis.

Finally, we cumulate our internal and external growth measures, and we estimate which growth strategy performed better, by regressing the abnormal mean returns of this equation on the cumulated internal and external growth rates (CGi and CGx):

$$a_{j,t} = \gamma_0 + \gamma_1 \, CGi_{j,t} + \gamma_2 \, CGx_{j,t} + \varepsilon_{j,t} \qquad (9)$$

3.4. Research design for operational performance

We use cash flows measures in order to assess the operational performance of the firms. Those measures have two advantages compared to other standard accounting measures: they moderate the impact of the financing of the acquisition (cash, stock or mixed) and the impact of the method of accounting for the transaction (purchase or pooling accounting) as mentioned by Healy et al. (1992). Operating cash flows are defined as sales, minus the cost of good sold, and selling and administrative expenses, plus depreciation and goodwill expenses. The cash flows are then deflated by the firm's total assets or sales to obtain a comparable metric. We prefer not to use the market value of assets as a deflator because a post-acquisition increase (or decline) in market value will decrease (increase) cash flow ratios even if the operating cash flows stay steady.

Because cash flows variables are affected by firm-specific and industry-wide factors, we adjust them using industry performance as a benchmark, by subtracting every year the industry median from the firm value. However, acquiring firms usually undertake acquisitions when they are bigger than industry-median firms (Ghosh, 2001) and following a period of superior performance (Morck et al., 1990). Therefore, firms are also matched as in Loughran and Ritter (1997) and Ghosh (2001) with the following method: all firms from the industry of our sample's companies with total assets between 25% and 200% are ranked by their operating cash flows, and we select the firms whose cash flows are the closest of our sample's companies.

Finally, we compute the cumulated (over time) adjusted cash flows returns for companies that performed internal or external growth between 1990 and 2005, and we obtain the performance growth for each company over the period of time. Regressing the cumulated cash flow returns on the internal and external growth rate will provide a view of which subgroup performed better.

4. Performance results

Table 3 reports descriptive statistics for our different growth measures and performance measures. On average, the companies of our sample had a cumulated internal growth rate of 163% between January 1990 and December 2004. The companies that performed at least one acquisition had an average external growth rate of 77% over the same period of time. The average cumulated cash flow returns was 69% when deflated on assets and 22% when deflated on sales.

Table 3

Descriptive statistics on the performance variables

Variable	CGi	CGx[9]	Cumulated Cash flow returns on assets	Cumulated Cash flow returns on sales	CTAR
Mean	1.63	0.77	0.69	0.22	0.00
Median	1.05	0.56	0.07	0.16	0.00
Std Dev	1.81	0.67	2.36	2.73	0.03

Table 4 sums up the results from our regressions of the cumulated internal and external growth rate on market (Panel A) and operational (Panel B) performance. The results from Panel A of Table 4 indicate that an increase of the internal growth rate significantly (<1% level) improves the mean calendar-time abnormal returns of the company that grew up internally. Moreover, an increase in the external growth rate also has a significant (at a 5% level) positive impact on the company's market performance, but the effect is significantly lower (at a 1% level) when comparing with an equivalent increase in internal growth. Panel C classifies the abnormal returns according to the intensity of internal and external growth. It confirms again that the companies which performed the highest in the market were those with the highest cumulated internal and external growth rate.

Panel B of Table 4 presents the coefficients of the regression of both cumulated growth measures on the accounting performance measure. In order to understand why both coefficients are negative, we have to be aware of the following. Since our cash flows are deflated by assets (or sales), an increase in the total assets of a company, following either an internal or an external growth, will tend to decrease the cash flow returns on assets until the

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[9] Only companies that performed at least one acquisition are accounted here

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company is able to generate more cash flows from the merger or the internal investment. This lag, between the moment when the total assets are increased and when the cash flows follow that increase of total assets, partly explains the negative coefficients of the regression. Moreover, Panel D of figure 4 gives another explanation to this phenomenon. It seems that companies which grew up internally the most have the lowest cumulated cash-flows returns. However, when the cumulated internal growth rate decreases up to a certain point, performance again behaves more naturally and increases as the cumulated internal growth rate increases.

Finally, the coefficient of the cumulated internal growth rate is again significantly (at a 5% level) higher than the coefficient of the cumulated external growth rate.

Table 4

Coefficients of the regressions and average performance measures sorted according to the cumulated internal and external growth rate intensity

Panel A : Coefficients of the regressions on the market returns

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error	Tolerance	VIF
1	(Constant)	-.001	.000	-2.802	.005
	CGi	.002	.000	12.787	.000
	CGx	.001	.001	1.998	.046

Dependent Variable: Mean Calendar Time Abnormal Returns

Panel B : Coefficients of the regressions on the accounting performance

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error	Tolerance	VIF
1	(Constant)	.825	.033	24.846	.000
	CGi	-.070	.014	-5.062	.000
	CGx	-.181	.044	-4.147	.000

Dependent Variable: Industry-Adjusted Cash flow returns on assets[10]

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[10] Replacing the cash flow returns on assets by the cash flow returns on sales delivers similar results. Moreover, the results of this Panel were adjusted for industry, but not for the size of the company, in order to make the results more easily interpretable. Adjusting for size yields, again, similar results.

Panel C : Cross-sectional average of the mean calendar-time abnormal returns sorted according to the intensity of the internal and the external growth rate

	Sorted by CGi	Sorted by CGx
Highest 25%	0.0083	0.0062
Next Highest 25%	0.0027	0.0058
Next Lowest 25%	0.00029	0.0057
Lowest 25%	-0.0018	0.0028

Panel D : Cross-sectional average of the cumulated cash flow returns on assets sorted according to the intensity of the internal and the external growth rate

	Sorted by CGi	Sorted by CGx
Highest 25%	0.522	0.131
Next Highest 25%	0.759	0.401
Next Lowest 25%	0.747	0.253
Lowest 25%	0.744	0.567

5. Conclusion

This paper addresses the following basic question related to the performance of firms: should the companies focus on M&As or would they be better off by investing those resources internally instead?

In order to answer this question, we analyzed all US companies listed on the NYSE, AMEX and NASDAQ, which were bidders on M&As performed between January 1990 and December 2004.

In order to do that, we constructed an internal and an external growth rate measure for each year and each company of our sample. In addition, we computed and used the mean calendar-time abnormal returns (using the Fama-French three factor model) as a market performance measure and the cumulated cash flow returns over the whole period as a measure for operating performance. Then, we regressed the performance measures on the internal and external growth rates to identify which subgroup performed better.

Using this methodology, we find evidence that growing internally and externally has a significantly positive effect on the abnormal returns of the firm. Moreover, growing up internally increases abnormal returns significantly more than growing up externally. Finally, firms that grew up internally increased their cumulated cash flow returns – up to a certain point of internal growth – and enjoyed higher cash flow returns than the companies that grew up externally.

However, the business risk associated with each type of growth varies, and depends on various determinants such as the industry or the economical environment. Therefore, companies don't always have the choice of growth type they can use, since one type may be considerably more risky or expensive than the other in their environment.

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Appendix A : Industry Classification

Industry Number	Industry Name	SIC Range
1	Agriculture, forestry, and fishing	0100-0999
2	Mining	1000-1299
3	Oil and Gas Extraction	1300-1399
4	Nonmetalic Minerals Except Fuels	1400-1499
5	Construction	1500-1799
6	Food and Kindred Products	2000-2099
7	Tobacco Products	2100-2199
8	Textile Mill Products	2200-2299
9	Apparel and other Textile Products	2300-2399
10	Lumber and Wood Products	2400-2499
11	Furniture and Fixtures	2500-2599
12	Paper and Allied Products	2600-2661
13	Printing and Publishing	2700-2799
14	Chemicals and Allied Products	2800-2899
15	Petroleum and Coal Products	2900-2999
16	Rubber and Miscellaneous Plastics Products	3000-3099
17	Leather and Leather Products	3100-3199
18	Stone, Clay and Glass Products	3200-3299
19	Primary Metal Industries	3300-3399
20	Fabricated Metal Products	3400-3499
21	Machinery, Except Electrical	3500-3599
22	Electrical and Electronic Equipment	3600-3699
23	Transportation Equipment	3700-3799
24	Instruments and Related Products	3800-3879
25	Miscellaneous Manufacturing Industries	3900-3999
26	Transportation	4000-4799
27	Telephone and Telegraph Communication	4800-4829
28	Radio and Television Broadcasting	4830-4899
29	Electric, Gas, and Water Supply	4900-4949
30	Sanitary Services	4950-4959
31	Steam Supply	4960-4969
32	Irrigation Systems	4970-4979
33	Wholesale	5000-5199
34	Retail Stores	5200-5999
35	Finance, Insurance, and Real Estate	6000-6999
36	Services	7000-8999
37	Public Administration	9000-9999
38	Almost Nothing	-

Appendix B: Compustat items

- DATA6/N-Assets - Total (MM$)
- DATA12/N-Sales (Net) (MM$)
- DATA14/N-Depreciation and Amortization (MM$)
- DATA41/N-Cost of Goods Sold (MM$)
- DATA132/N-SG&A Expenses (Restated) (MM$)
- DATA204/N-Goodwill (MM$)