Riding the Next Wave in M&A
Where Are the Opportunities to Create Value?
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Riding the Next Wave in M&A

After two years of decline, the mergers and acquisitions (M&A) market is recovering at a gathering pace. The number and value of deals rose in 2010, financial markets continued their revival, and private equity (PE) began to return to M&A. A recent BCG survey found that large European companies were optimistic about the outlook for deals in 2011, with growth in emerging markets a priority for many. While concerns remain about the anemic recovery in developed markets and the threat of sovereign-debt crises, many of the ingredients are in place for a new wave of M&A.

This latest edition of BCG’s annual M&A report looks at the opportunities for companies to transform their competitive position through M&A. It sets out the findings of new research by the BCG M&A Research Center into the patterns and behaviors of the world’s most successful acquirers. Drawing on a unique global database that now contains information on more than 26,000 M&A transactions since 1988, the research confirms that the majority of acquisitions of public companies by other public companies destroy value for the acquirer. But it also casts light on the factors that help a minority of acquisitions to produce positive returns, identifying the drivers of value in M&A.

The critical factors in successful acquisitions are the selection of targets, the timing of bids, and the management of the whole M&A process. Companies that understand those issues will be better placed to ride the latest wave of M&A.

The M&A market continued to recover in 2010, raising the prospect of a new wave of M&A.

◊ The number of deals rose 7.6 percent in 2010, while their value was up 19 percent. Numbers and values are now back to levels previously seen in 2004, at the start of the last wave of M&A activity, which ended with the financial crisis in 2007.

◊ Bid premiums have remained above the long-term average despite the collapse in deal value starting in 2007. The dominant type of M&A activity in 2010 was horizontal consolidation deals, in which acquirers are prepared to pay higher premiums because cost savings and synergies are easier to find.

◊ The share of global acquisitions by companies from the Asia-Pacific region continues to grow, accounting for almost one in five acquisitions in 2010.

◊ PE firms are ramping up their M&A activities: the number of deals rose by around one-third in 2010 and their value more than doubled. While M&A is not yet back to precrisis levels, these firms are once again competing for targets as renewed access to debt financing complements their swollen war chests.

◊ Fees paid to professional advisors in connection with M&A deals rose sharply in 2010 and were 50 percent higher as a proportion of deal value than they were during the M&A boom between 2004 and 2008.

When publicly listed companies acquire other public companies, the deal on average destroys value for the acquirer in both the short and longer term. This clear conclusion of successive BCG research has been confirmed by analysis of our greatly expanded database, which also provides intriguing insights into the minority of deals that create value.

◊ Acquisitions by public companies of private companies and subsidiaries on average produce positive share-
holder returns during the seven-day period surrounding the announcement date. A year later, the proportion of deals that create value for the acquirer drops below 50 percent, and it falls further in the second year after the announcement. Acquisitions of subsidiaries, however, are more likely to create value than acquisitions of public companies or private companies.

- Companies enjoy higher returns on average on their cross-border transactions than on their domestic acquisitions. This is true whether the target company is on the same continent or a different one.

- Companies that make acquisitions in their core sectors are much more likely to deliver long-term value to their owners than those that diversify into other sectors. This is true whether the target is a publicly listed company, a private company, or the subsidiary of a public company.

- Acquirers buying public companies with cash on average outperform acquirers paying wholly or partly in stock. However, when public companies buy private companies, the returns are higher on average when the acquirer pays with stock.

The timing of acquisitions is central to the creation of value through M&A.

- Being first off the blocks as the global economy recovers is more likely to create value for acquirers. Acquisitions made at the start of a recovery produce higher short-term returns than those made earlier in a downturn.

- The early bird gets the worm: short-term returns from acquisitions made during the first phase of an industry M&A wave are higher on average than short-term returns from deals done in the second or third phase.

- In the later phases of an industry M&A wave, acquisitions abroad produce higher returns on average than domestic acquisitions.

- In the past, returns were higher for acquisitions made when bid premiums were below average. Throughout the recent downturn, however, returns have risen despite above-average bid premiums.

Serial acquirers earn significantly lower returns on average than single acquirers. But just over half of serial acquirers create value because they choose the right targets, make their acquisitions at the optimal time, and expertly manage the M&A process.

- The returns from buying relatively small companies are higher on average than those from acquiring relatively large companies. Targeting businesses with smaller sales enables serial acquirers to limit their risks and to build up experience as they go along.

- Successful serial acquirers excel at extracting value from complex deals such as the acquisition of distressed businesses, private companies, and targets on other continents.

- Successful serial acquirers are particularly adept at launching bids at two optimal moments: at the start of an upturn and at the start of an industry M&A wave.

- Successful serial acquirers treat M&A as an industrial process, with dedicated teams, standardized processes, and robust measures of performance.

A recent BCG survey found that large European companies were optimistic about the outlook for deals in 2011.

- Acquisitions were seen as playing a significant role in corporate growth plans for 2011.

- Only one in five companies saw domestic deals as the big story, while two-thirds expected to see cross-border M&A making the headlines. Acquisitions in emerging markets were a general growth priority.

- Optimism about the prospects for deal making in 2011 was tempered by caution because of weak growth in many developed countries, market jitters over sovereign-debt crises, and the potential for unforeseen geopolitical developments.

- Prospective acquirers hoping to ride a new M&A wave must heed the lessons of the world’s most successful acquirers. The timing of acquisitions, the selection of targets, and the management of the whole M&A process are critical factors in creating value through M&A.
As the fourth anniversary of the start of the financial crisis approaches, the global economy continues to recover—and with it, the M&A market. The number and value of deals crept up in 2010 after two successive years of decline, and 2011 had a promising start. As fears of a double-dip recession recede, well-prepared companies are taking advantage of a more benign M&A environment to transform their competitive position.

A New Wave of M&A in the Making?

M&A downturns are typically marked by two years of decline in both the number and value of deals before the start of a recovery. (See Accelerating Out of the Great Recession: Seize the Opportunities in M&A, BCG report, June 2010.) This has proved to be the case with the financial crisis that began in 2007, a record year for M&A activity in the global economy. The sharp fall in deal making that followed came to an end in the middle of 2009, when a slow and tentative return to growth began.

In the months since, the recovery has become firmer, raising the prospect of a new wave of M&A. The number of deals in 2010 was up 7.6 percent from the previous year, while the value of M&A deals rose 19 percent to $1.5 trillion. (See Exhibit 1.) Numbers and values are now back to the levels previously seen in 2004, at the start of the last wave of M&A activity. One indication of the increasing buoyancy of the M&A market is the sharp increase in fees charged by professional advisors, following the deal famine in 2009. (See the sidebar on page 9.)

As is often the case, M&A activity fell slightly in the first two months of the year in 2011. However, several high-profile bids were announced in the first five months. In February, an agreed merger between the London Stock Exchange Group and Canada’s TMX Group was unveiled, which led to other M&A announcements in the stock exchange sector—including a counterbid for TMX from Canadian banks and pension funds. A week later, Sanofi-Aventis of France bought Genzyme Corporation for $20.1 billion, with more cash payments to come if specified milestones are met. In March, AT&T made an agreed $39 billion bid for Deutsche Telekom’s T-Mobile USA operation. And in May, Microsoft Corporation paid $8.5 billion to buy Skype Global, the Luxembourg-based Internet communications service.

The recovery in the debt markets, too, has continued. Global issues of high-yield debt were higher in 2010 than before the financial crisis, while investment-grade debt issuance is almost back to precrisis levels. Although this has made it easier for acquirers to raise financing, a very high proportion of new debt since 2008 has been issued to refinance existing debt rather than to finance new deals.

Acquirers that have turned to the revived debt markets have been able to finance deals at rates that are cheap compared with those that prevailed when the financial turmoil was greatest. Credit spreads over Treasury bills have also remained below the peak reached at that time. Nevertheless, the recovery in the debt markets has been susceptible to anxiety over sovereign-debt crises in the European Union, which has led to volatility in rates and spreads.
A notable feature of the recovery is the level of bid premiums. Premiums normally fall when M&A activity decreases, but they have remained above the long-term average, despite the collapse in deal values in 2008. (See Exhibit 2.) This unusual situation is probably the result of a combination of two factors:

- The dominant type of M&A activity in 2010 was horizontal consolidation deals, in which acquirers are prepared to pay higher premiums because cost savings and synergies are easier to find.
- Sellers saw the downturn as a financial crisis that would be relatively short-lived and thus were not willing to scale back their expectation of high premiums to more normal levels.

Despite these high premiums, 2010 was an extraordinarily good year for acquisitions as measured by share price performance. Average short-term returns when public companies bought other public companies were at a 15-year high for both buyers and targets.¹ (See Exhibit 3.) For the first time in that period, returns for acquirers were positive on average, albeit modestly so. Average returns for targets—consistently positive over the last 15 years—were also at record highs.

### Where the Deals Were Done

The top sector for M&A in 2010 was again financial services, as restructuring after the financial crisis continued. Large deals included Visa’s $2 billion purchase of CyberSource and the $1.6 billion acquisition of certain assets of RBS Sempra Commodities by JPMorgan Chase. The financial services industry has dominated M&A activity for the last two decades, closing more than 6,500 deals worth more than $25 million, for a total value of $3.8 trillion.

Energy extraction was the next-biggest sector in 2010, with acquisitions continuing to create the scale needed to meet rapidly growing global demand. The largest deals

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¹. Short-term returns were analyzed using standard event-study analysis to measure cumulative abnormal returns over the seven-day window centered around the announcement date. For details on the event study approach, see the Appendix.
Rising Transaction Fees for Completed Deals in 2010

Fees paid to professional advisors in connection with M&A transactions rise with the size of the deal and simultaneously fall as a percentage of its value. For deals worth less than $50 million, fees from 2008 through 2010 averaged less than $1 million, which could be as much as 4.8 percent of the value of the smallest transactions. (See the exhibit below.) Fees on transactions worth $10 billion or more averaged $51 million—just 0.2 percent of the total value of these large deals.

Transaction Fees Were Higher in 2010 Than During the M&A Boom

Transaction fees rose sharply in 2010, from an average of 0.27 percent of deal value in 2009 to 0.60 percent. This proportion was higher than in the boom times between 2004 and 2008, when deal fees averaged around 0.4 percent of deal value. While many large advisory institutions laid off entire deal teams during the crisis, those that survived have been able to command higher-than-normal fees. They have thus used the upturn in M&A to recover some of the costs they incurred in 2009, when deals were in short supply.

Included the acquisition by Apache Corporation—the U.S. oil-and-gas exploration company—of Mariner Energy of the U.S. for $2.7 billion, of BP’s natural-gas business in Western Canada for $3.3 billion, and of BP’s West Texas assets for $3.1 billion.

Other hot sectors in 2010 included health care, which has featured strongly in M&A activity since 1990. The largest deal was the $4.9 billion purchase of Ratiopharm of Germany by Teva Pharmaceutical Industries, the Israeli serial acquirer. This was followed by the $3.7 billion merger of Canada’s Biovail Corporation with Valeant Pharmaceuticals International of the United States through a reverse takeover. In addition, there was a spate of acquisitions in utilities and consumer nondurables, which lifted deal making in both these sectors.
Exhibit 2. Deal Premiums Since 2008 Have Remained Above the Long-Term Average

Exhibit 3. On Average, 2010 Was a Very Good Year for Public-to-Public Deals
above their annual average for the last two decades. M&A activity was less pronounced during 2010 in telecommunications, a sector that had seen deals worth $1.7 trillion in the previous 20 years. And while there were acquisitions in manufacturing, chemicals, and consumer durables, deal making in these sectors remained relatively subdued.

One global trend of the last two decades has been the growth in the number of acquisitions worldwide by companies from the Asia-Pacific region. M&A activity in 2010 was still dominated by Western companies, which were responsible for more than 80 percent of acquisitions. However, Asia-Pacific buyers were involved in around 18 percent of acquisitions—above the average for the first ten years of the century and double their share in the 1990s.

Asian forays into Western markets included the $1.7 billion acquisition of Bare Escentuals of the U.S. by Japan’s Shiseido, and the $884 million purchase of France’s MW Brands by Thai Union Frozen Products of Thailand.

Private Equity Is Back in the Game

One factor behind the increase in deal making has been a revival in M&A activity by PE firms. After two years of decline, the number of PE deals rose by around one-third in 2010, and their value more than doubled. (See Exhibit 4.) The number of PE deals was still below 2005 levels, while their value was barely above values in 2004—and both were substantially below their peak levels in 2006 and 2007.

However, the upward trend since the low point reached in 2009 remained strong. Large deals in 2010 included the $5.3 billion management buyout of Del Monte Foods Company, which was financed by Kohlberg Kravis Roberts and Company along with two other PE firms, and the £2.9 billion purchase of Tomkins, the U.K. manufacturing group, by Pinafore Acquisitions, a consortium backed by buyout firm Onex Partners. And in March 2011, Blackstone Real Estate Partners paid €6.8 billion to acquire the U.S. operations of Centro Properties Group, an Australian real-estate investment trust.

Exhibit 4. Private-Equity Deal Value More Than Doubled in 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of deals</th>
<th>Value of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>90</td>
<td>$149 million</td>
</tr>
<tr>
<td>2001</td>
<td>103</td>
<td>$234 million</td>
</tr>
<tr>
<td>2002</td>
<td>133</td>
<td>$443 million</td>
</tr>
<tr>
<td>2003</td>
<td>234</td>
<td>$572 million</td>
</tr>
<tr>
<td>2004</td>
<td>264</td>
<td>$984 million</td>
</tr>
<tr>
<td>2005</td>
<td>369</td>
<td>$259 million</td>
</tr>
<tr>
<td>2006</td>
<td>129</td>
<td>$1,170 million</td>
</tr>
<tr>
<td>2007</td>
<td>369</td>
<td>$1,010 million</td>
</tr>
<tr>
<td>2008</td>
<td>129</td>
<td>$800 million</td>
</tr>
<tr>
<td>2009</td>
<td>259</td>
<td>$1,360 million</td>
</tr>
<tr>
<td>2010</td>
<td>642</td>
<td>$2,280 million</td>
</tr>
</tbody>
</table>

Sources: BCG M&A Research Center; Thomson Reuters SDC Platinum; BCG analysis.

Note: Analysis based on completed deals, including buyouts or financial-sponsor involvement with at least 75 percent of shares acquired. Apparent discrepancies in calculations are due to rounding.
PE war chests are still bulging, despite the financial crisis. Buyout funds had $444 billion of dry powder available in January 2011—close to the amount in December 2007. (See Exhibit 5.) Almost 18 percent of this total was held by just five PE firms: TPG Capital, The Carlyle Group, CVC Capital Partners, The Blackstone Group, and Goldman Sachs.

One reason for these swollen war chests was the closure of the capital markets during the financial crisis: unable to raise debt financing, PE firms sat on their capital rather than using it for M&A. The more successful PE firms, meanwhile, continued to attract new capital—their returns had fallen but still remained higher than those from many other types of investment.

The recovery in the debt markets has allowed PE firms renewed access to the financing needed to return to deal making, although it is not yet back to business as usual. Their leverage is still below levels at the peak of M&A activity by PE firms in 2007, when the total amount of senior and subordinated debt was 6.1 times earnings before interest, taxes, depreciation, and amortization (EBITDA) on average. (See Exhibit 6.) Total debt multiples fell to 3.8 times EBITDA before beginning to pick up in 2009—reaching 4.8 times EBITDA in the third quarter of 2010.

As a result of these lower debt multiples, PE firms have had to put more of their own capital into acquisitions. Equity supplied almost half (49 percent) of the cost of leveraged buyouts in 2009, although that amount fell back to 45 percent by the third quarter of 2010. Nevertheless, it remains well above the equity contribution of around 35 percent in the four years before the financial crisis.

These leverage constraints mean that the nature of PE deals is changing. Many now involve taking minority stakes in businesses rather than making outright acquisitions. For example, CVC Capital Partners paid €1.7 billion in August 2010 for a net 15.5 percent stake in ACS Actividades de Construcción y Servicios, a Spanish infrastructure group. PE firms must also rely less...
on financial engineering to create value, focusing more on operational measures to increase the profitability of their acquisitions. However, obituaries for the PE sector at the height of the financial crisis have proved premature. Its growing recovery is creating greater competition for targets and is a significant factor behind rising acquisition premiums.
When publicly listed companies acquire other public companies, the deal on average destroys value for the acquirer. This has been the clear conclusion of successive BCG analyses, which have drawn on our global database containing information on thousands of acquisitions made by publicly listed companies. This wealth of data has also cast light on the factors that help a minority of acquisitions produce positive returns, identifying the drivers of value in M&A.

Our M&A database has now been greatly expanded by the addition of information on acquisitions by public companies of private companies and subsidiaries of listed companies. With data on more than 26,000 transactions since 1988, we believe it to be the most comprehensive source of information combining M&A deals, background company information, and short- and long-term share-price performance figures. Analysis of this database provides intriguing insights into the patterns and behaviors of the world’s most successful acquirers. This chapter sets out the latest findings on the nature of deals that produce the highest returns.

**Public, Private, or Subsidiary Targets?**

As noted above, public companies that buy other public companies earn negative returns on average in both the short and the longer term. The data on acquisitions by public companies of private companies and subsidiaries show that these deals on average produce positive shareholder returns during the seven-day period surrounding the announcement date. A year later, the proportion of public-to-private and public-to-subsidiary deals that create value for the acquirer drops below 50 percent, and it falls further in the second year after the announcement. (See Exhibit 7.)

However, acquisitions of subsidiaries are more likely to create value than acquisitions of public companies and private companies over both the short and longer term. For example, the $4.6 billion acquisition by Abbott Laboratories of Guidant Corporation’s vascular-device business from Boston Scientific in 2006 produced returns of 2.6 percent in the short term, 15.7 percent after a year, and 31.7 percent after two years. Exceptional returns such as these highlight the importance of identifying the factors that helped more than 40 percent of the acquirers in our study create value in the short and longer term.

**At Home or Abroad?**

It is commonly thought that cross-border acquisitions are inherently riskier—especially when they are on another continent. Yet companies enjoy higher returns on average on their cross-border transactions than on their domestic acquisitions. (See Exhibit 8.) This is true whether the target company is on the same continent or a different one: the proximity of the target country does not, on average, further affect value creation.

One explanation for this is that investors see greater growth potential in overseas acquisitions by companies based in developed countries where their market is mature—especially if their target is in a rapidly developing...
Exhibit 7. More Than Half of M&A Transactions Destroy Value in the Longer Term

**Public-to-public transactions**

<table>
<thead>
<tr>
<th>CAR¹</th>
<th>1-year relative TSR²</th>
<th>2-year relative TSR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.7</td>
<td>46.9</td>
<td>45.7</td>
</tr>
</tbody>
</table>

**Public-to-private transactions**

<table>
<thead>
<tr>
<th>CAR¹</th>
<th>1-year relative TSR²</th>
<th>2-year relative TSR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.9</td>
<td>44.7</td>
<td>40.2</td>
</tr>
</tbody>
</table>

**Public-to-subsidiary transactions**

<table>
<thead>
<tr>
<th>CAR¹</th>
<th>1-year relative TSR²</th>
<th>2-year relative TSR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>57.5</td>
<td>49.1</td>
<td>46.8</td>
</tr>
</tbody>
</table>

% of deals with positive returns

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.

Note: Analysis based on 5,846 public-to-public deals, 8,241 public-to-private deals, and 8,930 public-to-subsidiary deals. The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples.

¹CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).

²Relative total shareholder return for one year and two years after the announcement date.

Exhibit 8. Returns on Cross-Border Deals Are Higher Than on Domestic Deals

**Acquirers benefit from cross-border transactions ...**

Average CAR¹ (%)

- Domestic acquisitions: 0.9
- Cross-border acquisitions: 1.2

= number of transactions

+0.3 percentage points

**... but proximity does not further improve performance**

Average CAR¹ (%)

- Cross-border acquisitions on the acquirer’s continent: 1.2
- Cross-border acquisitions on another continent: 1.2

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.

Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples. Deals are classified according to the location of the headquarters of acquirers and targets.

¹CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).
economy (RDE). While acquisitions in Asia-Pacific still account for a small percentage of the M&A activity of North American and European companies, these considerations have led to a sharp increase in such acquisitions over the past two decades, reaching record levels in 2010.

This preference of investors for cross-border acquisitions does not apply to every type of target. It is purchases of public companies abroad that produce higher short-term returns, perhaps because investors believe they can more easily assess the value of a foreign target if it is listed. When the target is a private company or a subsidiary of a listed company, domestic deals produce marginally higher short-term returns than acquisitions abroad. The value of a private company or a divested subsidiary in another country is much harder for investors to gauge.

Targets, too, benefit when acquired by companies outside their own country. Their average short-term returns are just under 14 percent when the acquirer is a domestic company, compared with 17 percent when the buyer is foreign—and 18 percent when the buyer is from another continent. These higher returns for targets acquired by foreign buyers are likely to reflect the belief among investors that targets are able to extract higher prices from acquirers entering a relatively unfamiliar market.

To Diversify or Not to Diversify?

When public companies buy other public companies in their core sector, they are much more likely to deliver long-term value to their owners. (See Accelerating Out of the Great Recession: Seize the Opportunities in M&A, BCG report, June 2010.) Our expanded database shows that the same is true for acquisitions of private companies and subsidiaries. Two years after the deal, “sticking to the knitting” produces a small positive return on average, while diversification results in a negative return of almost –3 percent.

An exception to this rule is companies with low profitability—those in the bottom quartile of acquirers when measured by return on assets; for these companies, diversification can create superior value. If they buy a business outside their core sector in another industry, they average short-term returns of 1.8 percent, compared with 0.1 percent when they stay within their sector. (See Exhibit 9.)

Investors reward companies that use M&A to expand from a low-margin sector into a higher-margin sector rather than buying another low-margin peer—although breaking into a new industry can be a tough strategy to execute.

For highly profitable buyers, there is almost no difference in the short-term returns of focused and diversifying acquisitions. For these companies, the optimal M&A strategy is to maintain margins by selectively making acquisitions in both core and noncore sectors.

Cash or Stock?

Acquirers buying public companies for a cash consideration on average outperform acquirers paying wholly or partly in stock, in terms of both short-term announcement gains and long-term gains over the two years following the deal. (See Exhibit 10.) The likely explanation is that investors view a stock deal as a signal that the acquirer’s shares are overpriced. Payment in precious cash is seen as evidence that the acquirer has thoroughly assessed the target and therefore has a good chance of success in executing the deal.

When public companies buy private companies, however, investors are less keen on payment in cash. Although there are positive short-term returns on average for cash acquisitions, the returns are higher when the acquirer pays with stock. Paying in stock for a private company makes it more likely that the target’s managers will stay on to ensure the success of the deal, because they have an economic interest in the postmerger company. In contrast, paying the owners in cash allows them to leave the company, which they are especially likely to do if they think the acquirer has overpaid.

A further advantage for investors in a company that pays for a private company in stock is that it gives the owners a sizable block of the acquiring company’s shares. Such stockholders can be effective monitors of managerial performance, which improves returns.

“Stick to the knitting”: core sector acquisitions create value.

3.

Exhibit 9. Diversification by Low-Margin Acquirers Is Rewarded

High-profitability acquirers\(^1\)

<table>
<thead>
<tr>
<th>Average CAR(^2) (%)</th>
<th>Target within acquirer’s core sector</th>
<th>Target outside acquirer’s core sector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Number of transactions</td>
<td>4,342</td>
<td>1,937</td>
</tr>
</tbody>
</table>

Low-profitability acquirers\(^1\)

<table>
<thead>
<tr>
<th>Average CAR(^2) (%)</th>
<th>Target within acquirer’s core sector</th>
<th>Target outside acquirer’s core sector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Number of transactions</td>
<td>4,595</td>
<td>1,196</td>
</tr>
</tbody>
</table>

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.
Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples. Industry groups were classified according to the Fama French classifications for 48 industries.
\(^1\)Profitability is measured by average return on assets.
\(^2\)CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).

Exhibit 10. The Method of Payment Is a Key Driver of Returns

Cash is the optimal method of payment in public-to-public deals

<table>
<thead>
<tr>
<th>CAR(^1) (%)</th>
<th>Cash (33% of deals)</th>
<th>Mixed cash and stock (25% of deals)</th>
<th>Stock (42% of deals)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.3</td>
<td>-2.1</td>
<td>2.425</td>
</tr>
<tr>
<td>Number of transactions</td>
<td>1,939</td>
<td>1,451</td>
<td>2,425</td>
</tr>
</tbody>
</table>

Stock or mixed cash and stock is optimal in public-to-private deals

<table>
<thead>
<tr>
<th>CAR(^2) (%)</th>
<th>Cash (49% of deals)</th>
<th>Mixed cash and stock (24% of deals)</th>
<th>Stock (27% of deals)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Number of transactions</td>
<td>3,027</td>
<td>1,508</td>
<td>1,634</td>
</tr>
</tbody>
</table>

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.
Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples.
\(^1\)CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).
The Importance of Timing in M&A

While public-to-public acquisitions produce negative returns on average over the seven-day period surrounding the announcement date, acquirers that get the timing of their deals right are more likely to create value. BCG has already demonstrated that public companies are much more likely to create value from acquisitions of other public companies when global GDP growth is below the long-term average of 3 percent. (See Accelerating Out of the Great Recession: Seize the Opportunities in M&A, BCG report, June 2010.) Analysis of the expanded M&A database shows that this also holds true when they acquire private companies and subsidiaries.

Our latest analysis sheds additional light on the optimal times to make acquisitions. With signs of a continuing recovery in global M&A activity, this is an important issue for acquisitive businesses.

The Early Bird Gets the Worm

One good time to make acquisitions is at the start of a recovery in the global economy, when short-term returns are higher than those from deals done earlier in the downturn. (See Exhibit 11.) This is evidenced by years such as 1993 and 2009, when global GDP was starting to rise but was still below the average growth rate of 3 percent per year. The return over a seven-day window centered around the announcement date in those years averaged 1.9 percent—almost four times the average return of 0.5 percent in other downturn years. Being first off the starting blocks as the global economy recovers is thus more likely to create value for acquirers.

Companies can also create superior value by making acquisitions at the start of an M&A wave in their industry. Short-term returns from acquisitions made during an industry M&A wave are more or less the same as those from acquisitions made outside such a wave. But the returns on deals done during the first phase of an M&A wave are higher on average than the returns on deals done in the second or third phase. (See Exhibit 12.)

Companies that make acquisitions toward the end of a downturn or at the start of an M&A wave also face less competition from other bidders. The early bird gets the worm because there is a better chance of finding targets whose valuations have not yet been bid up too high. These advantages of being a first mover lead to significantly better short-term deal performance.

Sandoz provides a good example of optimal timing. It earned exceptional returns when it formed Novartis through the acquisition of its Swiss rival, Ciba-Geigy, in 1996—the start of an M&A wave in the pharmaceutical industry. The company’s short-term returns of 17.7 percent and its returns of 40.7 percent and 69.9 percent after one and two years, respectively, were significantly higher than those of other pharmaceutical companies from acquisitions made later in the same M&A wave.

The advantages of being a first mover lead to significantly better short-term deal performance.

4. Industry M&A waves are periods of at least three years in which there is above-average, clustered M&A activity with an identifiable peak. The first phase of such a cycle comprises its first two years.
Exhibit 11. Downturn Deals Generate Higher Returns—Especially When Done at the Start of a Recovery

![Graph showing average 2-year relative TSR and CAR for upturn and downturn years.](image)

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.

Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples. In upturn years, global GDP growth is above 3 percent, while it is below 3 percent in downturn years. In early recovery years, global GDP growth is recovering but still below 3 percent.

1Relative total shareholder return for two years after the announcement date. For consistency with other downturn analyses, the top and bottom 1 percent of transactions were excluded.

2CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).

Exhibit 12. Returns Are Higher on Acquisitions Made During the First Phase of an M&A Wave

![Graph showing CAR for acquisitions made during different phases of an M&A wave.](image)

Sources: Thomson Reuters Datastream; Thomson Reuters Worldscope; BCG analysis.

Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples. Industry M&A waves are periods of at least three years in which there is above-average, clustered M&A activity with an identifiable peak. The first phase of such a cycle comprises its first two years. This analysis excludes all companies active in the financial services industry (based on Fama French industry classifications).

1CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/−3).
It’s Never Too Late to Look Abroad

As noted in the previous section, companies earn higher average short-term returns on overseas acquisitions than on domestic deals. However, this applies almost exclusively to acquisitions made when an industry is going through a wave of M&A transactions. There is almost no difference between domestic and cross-border acquisitions at other times. (See Exhibit 13.)

Even during the first phase of an industry M&A wave, acquisitions made at home and abroad produce similar returns on average. But in the second and third phases of such a wave, the returns on acquisitions of foreign targets are significantly higher on average than the returns on domestic acquisitions.

Thus, when the attractiveness of acquisitions at home diminishes in the later phases of an M&A wave, acquisitive companies should look abroad. There is often a wider range of targets still to bid for, and investors look more favorably on acquirers that seek growth outside their home markets when domestic consolidation in their industry is well advanced. Once returns from domestic acquisitions begin to decline as prices are bid up, acquisitions abroad will produce higher returns on average.

Returns Are Higher When Premiums Are Lower—or Are They?

Common sense suggests that when companies pay high premiums to acquire targets, the returns are likely to be lower. Analysis of all types of deals since 1995 appears to show that this is indeed the case, which suggests that it is better to make acquisitions when premiums are low. Over this 16-year period, the average premium—the amount by which the offer price exceeds the closing stock price one week before the announcement date—has been 34 percent. The years in which premiums were below the average were marked by short-term returns averaging 1.2 percent, compared with 0.8 percent when premiums were above average. (See Exhibit 14.)

However, short-term returns on acquisitions made since 2007 have been steadily rising, despite above-average premiums. At a time when companies are looking for horizontal consolidation when making acquisitions, in-
In earlier periods of high premiums, acquirers were more likely to go for transformational deals that expanded their business model. Since these can be harder to execute successfully, investors are likely to view them—and their high premiums—with disfavor. Should an upsurge in transformational deals occur, acquirers may find that higher premiums produce lower returns if the deals are perceived by investors as overly ambitious given the nature of the acquisition.
How to Be a Successful Serial Acquirer

Most M&A deals worth more than $25 million are done by frequent acquirers—companies that regularly buy other businesses. Almost a quarter (23 percent) of acquisitions are made by “serial acquirers,” which buy at least four companies every three years. Another 37 percent are made by moderate acquirers, which buy two or three businesses every three years. On average, serial acquirers carry out five transactions every three years, while a significant number do more than 20 deals over that period.

A surprising finding is that practice does not appear to make perfect: serial acquirers earn significantly lower returns than single acquirers—0.3 percent on average in the short term, compared with 1.5 percent for single acquirers. (See Exhibit 15.) For the top quartile in both groups, the differential is an even wider 8.7 percentage points. This could support the theory that serial acquirers underperform because their overconfident CEOs are more interested in building empires using overvalued stock than in creating value.5 Another possible explanation is the “pecking order” theory: the deals done first are those that offer the highest returns, while later deals often suffer from diminishing returns.

But closer analysis demonstrates that many serial acquirers do create significant value. Although their average short-term returns are only 0.3 percent, just over half of these acquirers (52 percent) generate returns averaging 2.3 percent, and these can rise to more than 40 percent in individual cases. The remaining 48 percent of serial acquirers destroy value by roughly 2 percent on average.

Moreover, successful, value-creating serial acquirers are typically half the size of their unsuccessful, value-destroying peers and have more highly valued stock, suggesting that empire building is not their motivation. Successful serial acquirers can be distinguished from their less successful peers by the nature of the targets that they choose and by the timing of their acquisitions. (See Does Practice Make Perfect? How the Top Serial Acquirers Create Value, BCG Focus, April 2011.)

Keep Transactions Small

Serial acquirers are usually large companies with strong operating performance, in addition to substantial leverage and capital expenditures. The average total consideration for their acquisitions is almost $650 million, compared with $425 million for the acquisitions of single acquirers.

In relative terms, however, serial acquirers typically buy targets that have much smaller sales than their own. Large-scale deals are rare: 84 percent of their acquisitions are of companies with less than half their sales, while only 9 percent have sales that exceed the acquirer’s. For single acquirers, almost one-quarter (23 percent) of their targets have sales that exceed their own, while companies with less than half their sales make up 58 percent of their total acquisitions.

The returns of serial acquirers are 1.4 percentage points higher on average when they buy relatively small compa-

panies than when the target has sales greater than their own. Targeting businesses with smaller sales enables serial acquirers to limit their risks and to build up knowledge and experience as they go along. Single acquirers, by contrast, average much the same returns on acquisitions whether the target is relatively large or small.

GlaxoSmithKline illustrates the benefits of smaller transactions. Since 2007, the pharmaceutical giant has had a vigorous acquisition strategy—doing 17 deals in just 30 months at one point—with a focus on high-growth, low-risk targets. Acquisitions included one large deal, five medium-size transactions, and a continuous flow of smaller acquisitions. But it was the smaller deals that produced the highest returns. Moreover, GlaxoSmithKline’s M&A strategy is clearly focused on creating superior value rather than on expansion for its own sake. For example, before acquisition bids are approved, they must meet strategic and financial targets measured by internal rate of return and return on invested capital. They also have to compete for funding with R&D licensing, capital expenditures, and other investments. The board of directors’ explicit focus on post-merger integration (PMI) also ensures that planned synergies are captured.

**Choose the Right Targets**

The experience of serial acquirers gives them a particularly strong edge when doing complex deals. Although all acquisitions are complex, especially during the critical PMI stage, some are particularly difficult, and serial acquirers appear to excel at turning this complexity into value.

The acquisition of a distressed company, for example, is often very complex because there is an urgent need to restructure the target, and there may be limited access to the information needed during the due diligence process. The superior ability of serial acquirers to handle such issues leads to short-term returns on distressed assets that are 1.4 percentage points higher than the returns of single acquirers. (See Exhibit 16.) Indeed, single acquirers on average destroy value with acquisitions.

---

**Exhibit 15. Single Acquirers Outperform Serial Acquirers on Average**

<table>
<thead>
<tr>
<th>All acquirers</th>
<th>Top-quartile acquirers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average CAR1 (%)</strong></td>
<td><strong>Average CAR1 (%)</strong></td>
</tr>
<tr>
<td>1.5</td>
<td>13.5</td>
</tr>
<tr>
<td>(10,530)</td>
<td>(2,630)</td>
</tr>
<tr>
<td>0.3</td>
<td>4.8</td>
</tr>
<tr>
<td>(6,185)</td>
<td>(1,181)</td>
</tr>
</tbody>
</table>

Serial acquirers excel at turning the complexity of some M&A deals into value.

---

Note: The underlying sample comprises 26,444 M&A transactions between 1988 and 2010; the total number of individual analyses is smaller because of limited data availability for certain subsamples. Serial acquirers are those that buy at least four companies every three years. The definition of top-quartile serial acquirers is based on the average deal performance of one acquirer, so the top quartile is not exactly equal to one-quarter of all serial acquirers.

1 CAR = cumulative abnormal return calculated over a seven-day window centered around the announcement date (+3/-3).
tions of distressed targets. Investors have more confidence in the ability of serial acquirers to turn distressed assets around than they have in that of single acquirers to do so. Moreover, it pays top-quartile serial acquirers to target distressed targets rather than healthy businesses: their returns from such acquisitions are 2.4 percentage points higher on average than those of top-quartile single acquirers. One contributing factor is that the acquisition of distressed assets, which usually means less competition for the target, enables buyers to pay lower deal premiums.

Acquiring private companies, too, can be complex. Because these businesses are less liquid, they can often be bought for a lower price. But they require a different due-diligence process from that applied to publicly listed companies, as well as different negotiation skills and, frequently, industry expertise. This specialized knowledge is quite rare and can usually be developed only through serial experience, limiting competition for private targets. Serial acquirers enjoy an added advantage when buying private companies in their own industry: being better known to their competitors, they are likely to enjoy better access than anonymous PE buyers. These advantages are demonstrated in the higher returns generated by serial acquirers when they focus their acquisition strategy on private companies. (See Exhibit 17.)

Another group of potentially complex transactions are intercontinental acquisitions. Here, too, serial acquirers seem to thrive compared with single acquirers. Serial and single acquirers do similar proportions of intercontinental deals, and for both the returns are somewhat higher than from acquisitions on the same continent. However, the differential is on average three times higher for serial acquirers than for single acquirers: 0.6 percentage points compared with 0.2 percentage points. This indicates that investors have greater confidence in the ability of serial acquirers to manage geographic complexity.

The U.K. retailer Tesco is a case in point. Since the late 1990s, the company has gradually expanded from its low-growth home market into emerging markets such as Poland, Turkey, and Thailand through a succession of relatively small, step-by-step acquisitions. While the company’s goal is to gain scale in its target markets, it learns as it goes along—for example, by initially forging joint ventures and later purchasing its partners. This stra-
egy helped Tesco outperform the World Retail Index by 5 percent per year between 1995 and 2010.

### Strike When the Time Is Right

As demonstrated in the previous section, the timing of an acquisition is a critical factor in creating value—whatever the target and wherever it is. Successful serial acquirers are particularly adept at launching bids at two optimal moments:

- **At the Start of an Economic Recovery.** Deals done at the start of an upturn produce significantly higher returns on average. Successful serial acquirers are better at spotting and executing value-creating deals in the early years of a recovery than their unsuccessful peers. Their returns from such deals are 7.0 percentage points higher on average than those of unsuccessful serial acquirers.

- **At the Start of an Industry M&A Wave.** Short-term returns from acquisitions made at the beginning of an M&A wave are higher than from those made in the later phases of the wave. On average, 39 percent of serial acquirers’ deals occur in the first phase of an M&A wave, compared with just 28 percent of single acquirers’ transactions. Correspondingly, a smaller proportion of serial acquisitions occur in the final, more barren phase of the wave.

Thus, timing joins target selection as an important factor in differentiating successful serial acquirers. The advantage that many such acquirers bring to deals is that they treat M&A as an industrial process. They establish dedicated deal teams of internal staff and external advisors with clear lines of responsibility; they standardize their M&A processes; they strive for efficiency and effectiveness; and they establish robust measures of performance. Above all, they systematically align their transactions with their strategic priorities, buying what they know at a time when they know it will deliver the optimal returns.
The recovery in M&A activity has caused large European companies to be optimistic about the outlook for deals in 2011, according to the latest survey of their plans carried out by BCG and UBS. (See M&A: Back to the New Reality, BCG White Paper, November 2010.) Polled in the autumn of 2010, nearly one in six was planning to make at least one acquisition of a business with sales of more than €500 million in 2011. (See Exhibit 18.) Almost one in three of the largest companies was expecting to do deals on this scale, and expectations were also high among midsize companies. The sectors most likely to see large-scale acquisitions were aerospace and defense, mining and steel, utilities, energy, insurance, health care, banks, and chemicals.

Even when companies were not planning a deal themselves, many saw public takeover activity in their industry as likely. One in three expected to see acquisitions of European public companies in 2011, and almost half of those that expected such acquisitions said that two or more companies in their own sector could be targets. With large companies holding record amounts of cash, these findings suggest that there will be continuing growth in M&A activity in 2011.

Cross-Border Deals Will Make the Headlines

European companies in the BCG survey saw acquisitions playing a significant role in their growth plans for 2011. While the need for cost savings remains an important driver of M&A activity, deals to improve sales growth were expected to dominate in 2011—including those involving expansion elsewhere in Europe and further afield.

Only one in five companies saw domestic deals as the big story, while two-thirds expected to see cross-border M&A making the headlines. Of those forecasting cross-border deals, half believed those deals would reach into other continents—both to developed economies outside Europe and to emerging markets. And although only one in six companies overall expected to make key acquisitions in emerging markets, the majority (65 percent) saw emerging markets as a general growth priority. (See Exhibit 19.) With low growth rates in developed countries forecast for some time to come, there are attractive prospects in RDEs, which suffered less in the global recession and have recovered relatively well.

For many companies with ambitions in emerging markets, the preferred means of acquisition are organic growth or partnerships with local companies. But M&A was the preference of 18 percent of these companies. Most of those contemplating M&A expected to acquire local companies in emerging markets, but some planned to expand into these markets by buying companies in developed markets that already have a local presence in RDEs.

As noted earlier, cross-border M&A is not just about companies in developed economies snapping up targets in emerging markets. The growth in acquisitions in Europe and North America by dynamic Asia-Pacific companies is likely to continue. (See Exhibit 20.) Such companies are keen to expand outside their domestic markets and to
move up the value chain by entering the developed economies. (See *The 2011 BCG Global Challengers: Companies on the Move*, BCG report, January 2011.)

**Caution Remains the Watchword**

The optimism among European companies in our survey about the prospects for deal making was tempered by caution. Expectations of a recovery in deal activity in 2010 had failed to materialize, amid economic uncertainties anticipated in last year’s M&A report. (See *Accelerating Out of the Great Recession: Seize the Opportunities in M&A*, BCG report, June 2010.) Fears of an anemic recovery—even a double-dip recession—dampened enthusiasm for M&A. Sovereign-debt crises in countries such as Greece and Ireland had made the markets jittery and led to concerns over credit availability and liquidity.

As a result, the survey found that expectations of transformational deals were low. The focus was firmly on less risky consolidation: adding scale in the core business and “sticking to the knitting” by avoiding any extension of the business model. Horizontal consolidation, cost take-outs,
and joint ventures were seen as the most likely types of deal.

Given the uncertainties that characterized 2010, this preference for staying close to the core business in 2011 is not surprising. There is less risk in deals where the acquirer understands the target company, and it is easier to harvest cost savings and achieve growth through horizontal consolidation. As our earlier analysis of the returns from such deals showed, these features also reassure investors. According to the companies in our survey, investors’ concerns over the risks of M&A in general have grown.

Fears of a double-dip recession are receding in 2011, although growth is still weak in many developed countries, particularly in Europe. And markets remain prone to jitteriness: despite progress on mechanisms for dealing with sovereign-debt issues in the euro zone, uncertainties continue. Finally, unforeseen developments in 2011—political upheavals in the Middle East and the aftereffects of Japan’s earthquake and tsunami—have created new sources of volatility.

The increasing optimism among companies about M&A signals a continuing recovery in deal making. But if the risks outlined above were to materialize, that recovery could be rapidly stifled. And while the cost of credit has fallen to attractive levels, it seems low given the risk environment. The favorable climate for M&A activity could, in other words, prove short-lived.
The M&A market has rebounded from its low point in 2009, as deal numbers and values rise and PE firms return to the game. With global economic growth again above the long-term average, the world economy has emerged from a prerecovery period in which companies could expect to earn higher returns on acquisitions than in previous years of the downturn. This was already apparent in 2010, when average acquirer returns in public-to-public transactions were positive (0.7 percent) for the first time in 15 years. Targets’ shareholder returns also reached an all-time high for the same period.

However, the current M&A environment continues to share some of the characteristics of a prerecovery period. The uncertainties hanging over the financial markets—including fears about sovereign-debt crises in the euro zone and political instability in the Middle East—are weighing heavily on potential bidders. As the M&A wave gathers strength in some industries, there are attractive opportunities for prospective acquirers that are prepared to ride it. Such companies are more likely to be successful if they heed the lessons of the most successful acquirers, which have understood the drivers of value through acquisitions:

- **Deal timing is crucial.** Take advantage of opportunities in the early phase of an industry M&A wave. As the wave progresses, the number of targets will shrink and the price of the remaining targets will rise.

- **Actively target private companies and subsidiaries.** Acquiring these less-liquid targets substantially improves short-term returns from M&A.

- **Foreign acquisitions can be more rewarding.** Buying a publicly listed company abroad produces better returns on average than a domestic deal. Such acquisitions continue to be attractive even in the later phases of an M&A wave—although they are much more complicated in terms of execution and PMI.

- **Select an M&A strategy that matches your profitability.** If your company is highly profitable, making selective acquisitions in core and noncore sectors is the optimal strategy. If your profit margin is low, diversifying into higher-margin noncore businesses in other industries can produce superior returns—although this can be difficult to execute.

- **Choose the optimal method of payment.** Buying public companies with cash and private companies with stock is likely to optimize returns.

- **If you want to be a successful serial acquirer, go for many relatively small targets rather than a few large ones.** That way, you limit the risk and build up knowledge and expertise.

- **If you are an occasional acquirer, be careful about taking on distressed targets and targets outside your country.** Creating value through such complex acquisitions requires expertise best gained through more frequent acquisitions.
Appendix
Methodology

The research that underpins this report was conducted by the BCG M&A Research Center together with the Leipzig Graduate School of Management (HHL) in the first half of 2011. It is based on analyses of two different data sets totaling more than 400,000 M&A transactions.

◊ General Market Trends. We analyzed all reported M&A transactions in North America, Europe, and Asia-Pacific from 1981 through the beginning of 2011. For the analysis of deal values and volumes, we looked at deals with a minimum transaction value of $25 million and excluded those marked as repurchases, exchange offers, recapitalizations, and spinoffs.6

◊ Shareholder Value Created and Destroyed by M&A. We analyzed 26,444 deals with available data involving publicly listed acquirers and all kinds of targets (public companies, private companies, and subsidiaries of listed companies) from 1988 through 2010, focusing on the largest transactions.7 To ensure that sufficient explanatory data would be available, we set the minimum transaction size at $25 million. Shareholder value was measured by total shareholder return and calculated using the event study method. Unless otherwise stated, value creation and destruction refer to the value gained or lost by the acquirer.

Short-Term Value Creation

Although distinct samples were required in order to analyze different issues, all valuation analyses employed the same econometric methodology. For any given company i and day t, the abnormal (unexpected) returns (AR_{i,t}) were calculated as the deviation of the observed returns (R_{i,t}) from the expected returns E(R_{i,t}). (See Equation 1.)

\[
AR_{i,t} = R_{i,t} - E(R_{i,t})
\]

Following the most commonly used approach, we employed a market model estimation to calculate expected returns.8 The market model approach runs a one-factor ordinary least squares (OLS) regression of an individual stock’s daily returns against the contemporaneous returns of a benchmark index over an estimation period preceding the actual event. (See Equation 2.)

\[
E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}
\]

The derived alpha (\(\alpha_i\)) and beta (\(\beta_i\)) factors are then combined with the observed market returns (\(R_{m,t}\)) for each day within the event window to calculate the expected return for each day. (See Equation 3.) The market model thus accounts for the overall market return on a given event day, as well as the sensitivity of the particular company’s returns relative to market movements.

\[
AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})
\]

6. These are transactions that do not cause a change in ownership. Exchange offers seek to exchange consideration for equity or securities convertible into equity.

7. Announcement dates include the years 1988 through 2010, while closing dates include the years 1990 through 2010.

In Exhibit 21, we show the event study setup that we used to estimate the value created by an M&A transaction. Using a 180-day period starting 200 days and ending 21 days before the deal’s announcement, we estimate a market model relating the return on an individual stock to the return of a relevant benchmark index.9 We do not consider the 17-day grace period from 20 days to 4 days before an M&A announcement, in order to ensure that the data are not contaminated by leaks during the run-up to the official announcement. We then derive the cumulative abnormal return, or CAR, by aggregating the abnormal returns (that is, the difference between actual stock returns and those predicted by the market model) day by day throughout the event period of 3 days before to 3 days after the announcement date. (See Equation 4.)

Equation 4
\[
\text{CAR}_i = \sum_{t=-3}^{t=3} (R_{i,t} - E(R_{i,t}))
\]

**Long-Term Value Creation**

The long-term value-creation study uses the data sample applied in the event study analysis as a starting point. We then track the stock market performance of the acquirers over a two-year period following the acquisition announcement. Note that we cannot track the targets owing to their delisting from the public-equity markets in most cases.

As with the short-term event study, the starting point for the long-term value-creation analysis is a grace period prior to the actual deal announcement. The starting price is the average stock price during the 30-day trading period between 60 and 30 days prior to the announcement.10 We then capture the long-term value creation in two stages.

First, we measure absolute total shareholder return (ATSR) generated by the acquirer from the starting price \(P_{\text{start}}\) over a 365-day (one-year return) period, \(P_{\text{1yr}}\), as well as over a 730-day (two-year return) holding period, \(P_{\text{2yr}}\). (See Equation 5.) To avoid short-term distortions, we use the average stock-return index in the period from 15 days before to 15 days after the one-year and two-year anniversaries of the announcement.

Equation 5
\[
\begin{align*}
P_{\text{start}} &= \text{average}[P_{t-60}, P_{t-30}] \\
P_{\text{1yr}} &= \text{average}[P_{t+350}, P_{t+380}] \\
P_{\text{2yr}} &= \text{average}[P_{t+715}, P_{t+745}]
\end{align*}
\]

Second, we subtract from the ATSR the return made by a benchmark index over the same period to find the relative total shareholder return (RTSR) generated by the acquirer—in other words, the return in excess of the benchmark return.11 (See Equation 6.)

---

9. As proxies for the market portfolio, we apply Thomson Reuters sector indices, thus controlling for industry idiosyncrasies.
10. For calculation purposes we base our analyses on the stock’s return index, which allows us to control for any dividend payments throughout the year.
11. The benchmark indices we apply are the relevant worldwide Thomson Reuters sector indices.
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Equation 6

\[
\begin{align*}
\text{TSR}_{\text{acq.}} &= \frac{P_{\text{1yr,acq.}}}{P_{\text{start,acq.}}} - 1 \\
\text{TSR}_{\text{index}} &= \frac{P_{\text{1yr,index}}}{P_{\text{start,index}}} - 1 \\
\text{RTSR}_{\text{acq.}} &= \text{TSR}_{\text{acq.}} - \text{TSR}_{\text{index}}
\end{align*}
\]

Note that we cannot include deals undertaken in 2009 and 2010 because the time elapsed since the announcements is too short to calculate the long-term relative returns.

Finally, using macroeconomic time-series data, we further subdivide our sample into periods of economic upturn and downturn. An economic downturn is defined as a period when the average annual growth rate of GDP for the world is below the long-term average of 3 percent. In 2008, the outbreak of the financial crisis caused the first downturn year since the bursting of the Internet bubble. (See Exhibit 22.)
The Boston Consulting Group publishes other reports and articles on the topic of M&A that may be of interest to senior executives. Recent examples include:

**The Art of Planning**
A Focus by The Boston Consulting Group, April 2011

**Does Practice Make Perfect? How the Top Serial Acquirers Create Value**
A Focus by The Boston Consulting Group and the Leipzig Graduate School of Management (HHL), April 2011

**Making Your Company Inflation Ready**
A White Paper by The Boston Consulting Group, March 2011

**Best of Times or Worst of Times?**
An article by The Boston Consulting Group, February 2011

**A Return to Quality?**
An article by The Boston Consulting Group, February 2011

**2011 BCG Global Challengers: Companies on the Move**
A report by The Boston Consulting Group, January 2011

**M&A: Back to the New Reality—A Survey of European Companies’ Merger and Acquisition Plans for 2011**
A White Paper by The Boston Consulting Group and UBS, November 2010

**New Markets, New Rules: Will Emerging Markets Reshape Private Equity?**
A White Paper by The Boston Consulting Group, November 2010

**The 2010 Value Creators Report: Threading the Needle**
A report by The Boston Consulting Group, September 2010

**Value Creators 2010: Investors’ Priorities in the Postdownturn Economy**
An article by The Boston Consulting Group, July 2010

**Accelerating Out of the Great Recession: Seize the Opportunities in M&A**
A report by The Boston Consulting Group, June 2010

**Collateral Damage, Part 9—In the Eye of the Storm: Ignore Short-Term Indicators, Focus on the Long Haul**
A White Paper by The Boston Consulting Group, May 2010

**The Art of And: Growing While Cutting Costs**
An article by The Boston Consulting Group, April 2010

**Strategic Optimism: How to Shape the Future in Times of Crisis**
BCG Perspectives, April 2010

**Time to Engage—or Fade Away: What All Owners Should Learn from the Shakeout in Private Equity**
A White Paper by The Boston Consulting Group, February 2010

**Be Daring When Others Are Fearful: Seizing M&A Opportunities While They Last**
A report by The Boston Consulting Group, September 2009

**The Return of the Strategist: Creating Value with M&A in Downturns**
A report by The Boston Consulting Group, May 2008
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