Cross-Border Acquisitions of U.S. Technology Assets

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There has been a boom in mergers and acquisitions (M&A) activity in Silicon-Valley-type technology sectors of the U.S. economy.[1] Analysis of the Securities Data Corporation (SDC) M&A database reveals that during the 1990s there were over 11,500 such acquisitions in the U.S., for a total value exceeding $1.75 trillion. To put these numbers into perspective, consider that such technology acquisitions accounted for over one-fifth of all M&A activity in the United States by number and, even more impressive, two-fifths of all U.S. M&A activity by value. Moreover, the trend toward such acquisitions has accelerated dramatically in recent years. The year-and-a-half since January 1998 accounted for nearly 57% of the $1.75 trillion in assets acquired (a more detailed analysis of M&A activity in U.S. technology sectors is presented later).

Although still predominantly a U.S. game—since nearly nine out of ten technology acquisitions in the United States are made by U.S. acquirers—the proportion of cross-border acquisitions has been growing significantly. During the 1990s, non-U.S. firms acquired nearly $250 billion worth of technology acquisitions in the U.S, and three-quarters of this occurred during the year-and-a-half since January 1998.

To gain more insight into this important trend, this article examines non-U.S. acquisitions of technology-based companies in the United States. We focus on European acquisitions of Silicon-Valley-type target firms and conclude that European firms have struggled with their acquisitions and, in particular, with the integration and governance of the acquired firms. Our emphasis on

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European acquirers is driven by two primary considerations. One, out of the $250 billion in non-U.S. acquisitions of technology companies, 60% were done by acquirers from the European Union (EU). Two, we believe that the issues raised in this article apply to the Asian context. Asia is closer to the EU than to the U.S. in governance and management styles with respect to issues involving the acquisition of U.S. technology assets.

Motivation for the Study

Potential acquirers in any industry must keep in mind the following. One of the most compelling pieces of both domestic and international business research evidence is that, based on accounting and stock market performance measures, acquisitions do not, on average, create value for acquiring firms.[2] In other words, acquiring firms' shareholders do not get more than they pay for, and often get less. In contrast, the shareholders of acquired firms walk away with stock price gains of anywhere from 20% to 30%.[3] When acquisitions are made using shares as the medium of exchange (rather than cash), this evidence holds up even stronger. In addition to not creating value for the acquiring firm, acquisitions often have negative impacts on the employees and managers of acquired firms.[4] Consider, for example, the network communications industry, an industry with a major presence in Silicon Valley. This industry consists of the firms that provide the backbone of telecommunications and, more importantly, data communications. When Nortel of Canada, seeking a stronger position in internet and data communications, announced its $9.1 billion stock-based acquisition of the Silicon Valley firm Bay Networks in June 1998, Nortel's share price dropped by about 15% upon the announcement. There was a similar negative stock price reaction of about 10%, again in June 1998, when Alcatel of France announced the purchase of DSC Communications for $4.4 billion.

Managers cannot ignore such evidence: value creation through acquisitions, measured by long-term gains in excess of the price paid, is extremely difficult. Target firms' shareholders are adept at extracting synergy-related acquisition gains up-front. Notwithstanding the evidence that value creation through M&A is extremely difficult, we live in an era in which M&A activity dominates the competitive landscape. The year 1998 alone witnessed more than $1.8 trillion of M&A of 14,000 assets in just the United States, with another $900 billion or so in such activity abroad. Going forward, virtually all major firms anticipate more acquisitions rather than less and many of the acquisitions will be cross-border transactions.

Given the importance of M&A in today's economic environment and the poor track record of many firms in the M&A area, there is clearly a need for more research into its key success factors. This need is amplified when one considers the history of research on M&As. Although there have been many studies of acquisitions in the finance and economics literatures, there is limited understanding of the complex organizational implications of acquisitions. For instance,

Larsson and Finkelstein reported that the various streams of research in the M&A area are only marginally informed by one another. In particular, strategic, economic, and financial M&A research tends to disregard the organizational and governance issues that are central to the acquisition process. These, in turn, are issues that play a large role in determining the success or failure of M&As.[5]

Toward that end, this study examines cross-border technology acquisitions with a focus on post-acquisition integration and corporate governance issues. With the movement towards global technological convergence, non-U.S. companies are becoming more active in acquiring computer- and communications-related companies, especially in the Silicon Valley area. However, many of these acquisitions have encountered significant challenges, particularly with post-merger integration. In this study we examine the following questions:

- What is the nature and extent of M&A activity in Silicon-Valley-type technology sectors in the U.S.?
- What are the key factors in acquisition integration success in Silicon Valley?
- What are the critical corporate governance factors that non-U.S. firms must address when acquiring Silicon-Valley-type assets?
- Do non-U.S. firms have an inherent disadvantage when it comes to chances of success in Silicon-Valley-type acquisitions?

The two most commonly cited reasons for acquisition failure are differences in management styles and practices and inadequate planning for post-acquisition integration.[6] These issues are exacerbated in the cross-border setting. In cross-border acquisitions, differences in management styles and practices incorporate questions of corporate culture, national culture, and corporate governance. Non-U.S. culture and corporate governance are different from American culture and corporate governance; American organizational culture, in turn, is different from technology culture; and technology culture is different from Silicon Valley technology culture.

Methodology

We examined all the technology-based M&A activity involving U.S. targets that were the closest approximation to Silicon-Valley-type firms: firms in the communications- and computers-related industries (but excluding media companies and telecommunications service providers; for the specific industries included see note 15) for the period January 1990 to July 1999. We used the comprehensive Mergers & Acquisitions databases published by SDC. This list included approximately 11,600 acquisitions completed by both U.S. and non-U.S. firms.

The initial list of 11,600 acquisitions was narrowed to include only targets in California and then to those acquired by non-U.S. firms. From this larger pool of Silicon-Valley-type M&As by non-U.S acquirers, several firms were selected

for detailed clinical study and interviews. Six case studies of Silicon-Valley-type companies acquired by non-U.S firms (all from the EU) were conducted. In addition, interviews were conducted with various individuals and analysts associated with Silicon Valley M&As, including consultants, entrepreneurs, and journalists. The majority of interviews were conducted on-site in Silicon Valley, although several were conducted via e-mail.

Finally, as a basis of comparison and in order to benchmark against best practices, the M&A integration process of Cisco Systems was examined. Cisco is widely recognized as one of the most successful Silicon Valley acquirers and offers a stunning counter-example to years of M&A research. Cisco, the leading provider of network communications equipment (called routers) for the internet-based economy, went public in 1990 at a market value of $226 million. In less than a decade, Cisco grew to a market value of nearly $230 billion by end of July 1999, an astounding stock price growth of over 100,000% during this period. As of the time of writing, Cisco had become the 4th most valuable company in the United States and had announced its eighth stock split in nine years.

What makes this stock price growth and financial performance truly impressive is the fact that Cisco has used "growth by acquisition and partnership" as the centerpiece of its strategy. During the seven-year period 1993–October 1999, the company grew through 42 carefully executed, related and strategic acquisitions of often unknown and usually small firms, almost always using its own shares as the medium of exchange. Only two acquisitions were for more than $1 billion.[7] Cisco also made various minority equity investments during this time. Although it may be a cliché in the M&A world to say that "if the assets walk out the door every evening, the acquirer had better make sure that they want to come back the next morning," Cisco's assets do appear to come back the next morning. In fact, Cisco management claims that employee turnover in acquired companies is lower than Cisco's average employee turnover.[8]

The Silicon Valley Environment

As Cohen and Fields point out, it is difficult to imagine an example of regional economic development that is more successful, or more famous, than Silicon Valley.[9] It is an economic area dominated by rapid innovation and commercialization in many new technologies. However, Silicon Valley (and, to a lesser degree, other technology-driven geographical clusters such as Route 128 in Boston) is more than a random cluster of technology firms located geographically close to one another.[10] In much the same idea as a natural ecosystem, Silicon Valley's growth can be attributed to a constant formation of diverse companies that support and interact with one another. Constituents of this ecosystem include venture capitalists, a pool of knowledge-workers from around the world, universities and research institutes, and a sophisticated service infrastructure, as well as many customers, lead-users, and early adopters of new

technologies.[11] Although one must be careful in generalizing about a region as diverse as Silicon Valley, several key cultural characteristics do exist.

First and most important, there is an entrepreneurial culture driven by innovation and commercialization of new ideas.[12] Innovation is largely the result of collaboration between the various constituents of the ecosystem. The close proximity of companies, the fast-moving nature of high-technology industries, the high mobility rate of engineers and other professionals, and the frequent formation of alliances support the cross-pollination of knowledge and ideas. Together with short product cycles and market windows, this implies that the competitive challenge is not just in knowing what new products existing markets are looking for but also in developing new products which can then look for or create new markets.

A second characteristic is learning through failure. In Silicon Valley, there is little stigma attached to honest failure, although there is a stigma associated with resting on laurels. Entrepreneurs are measured by what they are currently doing, not by whether their previous venture was a success or a failure. A third characteristic is the nature of the labor market. Aspiring entrepreneurs from around the United States and the world flock to Silicon Valley, creating an internationally diverse group of highly educated and motivated people. These people work under exceedingly high levels of pressure and are perhaps more loyal to technology and innovation than to employers and firms.[13] The result is an extraordinarily high level of labor mobility.

Given these unique cultural characteristics, our research proposition was that firms from outside Silicon Valley would have difficulty in successfully managing and integrating acquisitions of Silicon Valley-based firms. As we heard early in the study from a Silicon Valley HR director, "It's not just Europeans who experience difficulties in Silicon Valley acquisitions, but everybody in the technology industry." The problem is not that Silicon Valley is closed to new ideas or outsiders. Quite the contrary: new ideas and outsiders are the lifeblood of the region. However, it was expected that firms from outside the United States without experience in Silicon Valley would struggle with their acquisitions. As we were told by Alex Gove, a journalist with *Red Herring* magazine:[14]

> "Foreign companies have had problems dealing with issues involving control and compensation. Startups in Silicon Valley flourish because they are free agents; because of distance and culture, foreign companies often restrict this freedom. Also, foreign companies are not accustomed to granting large amounts of stock to key employees or creating financial structures such as spinouts that reward high-powered teams."

TABLE 1. Mergers and Acquisitions of Silicon-Valley-Type Assets in the United States: January 1990–July 1999

Attribute	All Acquisitions	U.S. Acquisitions	European Acquisitions
Number	11,639	10,309	446
Value (US$ billion)	1,760	1,510	145
Average Size (US$ million)	151	155	326
Deal Value ≤ $200 mn (%)	94.2%	95.0%	89.9%
Four-Week Premium[a]	—	14.2%	43.4%
One-Week Premium[a]	—	13.7%	34.4%
One-Day Premium[a]	—	11.8%	31.8%
Extent of Information Leakage[b] (%)	—	2.1%	8.8%
% Using Cash Only[c]	54.5%	53.2%	66.9%
% Using Some or All Stock[c]	45.5%	46.8%	30.1%

Source: Securities Data Corporation

Notes:

a. 'Premium' is the excess of price paid as a percentage of pre-bid price as of relevant time. Not available for the whole sample.

b. Measured as the percentage increase in pre-bid price during the period spanning four weeks prior to the acquisition announcement to one day before; not available for the whole sample.

c. Medium of exchange data are not available for the whole sample.

Evidence on Silicon-Valley-type Acquisitions in the United States

During the decade of the 1990s, there were over 11,500 acquisitions of Silicon-Valley-type assets in the U.S., for a total value slightly exceeding $1.75 trillion (see Table 1).[15] These numbers are quite impressive given that during this period, the sum total of *all* mergers and acquisitions involving a U.S. company (as either an acquirer or a target) amounted to 54,500 deals for a value total of approximately $4.52 trillion. In other words, Silicon-Valley-type assets in the United States as acquisition targets accounted for about 21% of *all* U.S. M&A activity by number and, even more impressive, 39% by value.

Acquisitions of such assets are predominantly a U.S. domestic activity. As shown in Table 1, U.S. acquirers accounted for 88.5% of all such acquisitions by number, followed by 3.8% from the European Union.[16] Asia accounted for only 2.4% and Latin American acquirers accounted for less than one-quarter of one percentage point. The breakdown by value is roughly similar: U.S. acquirers accounted for 86% by value, while European acquirers accounted for 8.3%, a slightly higher share of value relative to number of acquisitions. European buyers are, on average, buying assets that are more than twice as large as those of U.S. acquirers ($325.5 million versus $155 million). Two possible reasons could

explain this difference: one, Europeans are buying assets that are twice as large by paying about the same premium as a U.S. company does; or two, Europeans are buying a less-than-twice as large asset by paying a much higher premium.

Table 1 reveals that the latter is true. The average premium paid by a European acquirer of a Silicon-Valley-type asset in the United States (measured by the price paid relative to the target firm's stock price one month prior to the acquisition announcement date) is over 43%, compared to just 14.23% for U.S. acquirers. In other words, European acquirers appear to be paying about three times the premium that U.S. acquirers are paying.[17] An ancillary piece of evidence is that there appears to be much more "information leakage" with acquisitions made by European companies, compared to that made by U.S. companies. The premium paid by European firms relative to the target's price one day prior to the acquisition announcement is 31.8%, implying an 8.8% pre-bid run-up in the target's prices during the month prior to the announcement. The one-day premium paid by U.S. acquirers is 11.8%, implying a smaller 2.1% pre-bid run-up.

There is also tremendous size-related skewness in the data, in that the typical acquisition of a Silicon-Valley-type asset is a small acquisition. We see that of the 11,637 deals reported by the SDC database, 94.2% were acquisitions valued at $200 million or less. This proportion is 95% for U.S. firms and 90% for European firms.

As we might expect, given that European companies are less likely to be listed on U.S. stock exchanges and hence less able to use stock as a medium of exchange in acquisitions, there is a marked difference in the medium of exchange used. Approximately 47% of all acquisitions by U.S. acquirers involved some or all stock as a medium of exchange (26% used all stock), compared to 30% for European firms (less than 10% used all stock).

Table 2 replicates the same analysis as in Table 1, but for the more recent year-and-a-half period January 1998 to July 1999. Basically, the table makes the evidence above even more compelling. This recent year-and-a-half period accounted for 33% of all the activity during the 1990s by number and 57% of the activity by value. While the proportion of deals made by U.S. companies remains about the same (90%), there is an increase in the share of European activity (from 3.8% to 4.8%).

Deal sizes have become larger (average deal size of $537 million for Europeans versus $237 million for U.S. firms), the premiums being paid have become higher (one-month premium of 53.4% for Europeans compared to 19.5% for U.S. firms), the extent of information leakage continues to be higher for European firms, and most of the deals still continue to be smaller deals (of size less than or equal to $200 million). The proportion of deals involving stock as a medium of exchange is nearly 60% for U.S. companies, while it remains a much lower 35% for European companies.

TABLE 2. Mergers and Acquisitions of Silicon-Valley-Type Assets in the United States: January 1998–July 1999

Attribute	All Acquisitions	U.S. Acquisitions	European Acquisitions
Number	3,871	3,477	185
Value (US$ billion)	1,008	825	99
Average Size (US$ million)	281	237	537
Deal Value ≤$200 mn (%)	92.5%	92.9%	84.8%
Four-Week Premium[a]	—	19.5%	53.4%
One-Week Premium[a]	—	18.0%	40.8%
One-Day Premium[a]	—	15.1%	34.8%
Extent of Information Leakage[b] (%)	—	3.8%	13.8%
% Using Cash Only[c]	42.6%	40.4%	64.6%
% Using Some or All Stock[c]	57.4%	59.6%	35.4%

Source: Securities Data Corporation

Notes:

a. 'Premium' is the excess of price paid as a percentage of pre-bid price as of relevant time. Not available for the whole sample.

b. Measured as the percentage increase in pre-bid price during the period spanning four weeks prior to the acquisition announcement to one day before; not available for the whole sample.

c. Medium of exchange data are not available for the whole sample.

In summary, Silicon-Valley-type assets are being acquired in impressive numbers but non-U.S. companies are still minor players. Non-U.S. companies tend to buy larger assets, pay a much higher premium, and appear less able to hide their acquisition intentions from the financial markets. Finally, non-U.S. companies are more likely to use cash rather than stock as the medium of exchange.

Acquisition Integration: Findings from the Case Studies

In our case study research, key issues surfaced in interviews and, in particular, around the areas where the European firms struggled to adapt. European firms' acquisitions of technology companies in Silicon Valley tended to be for two reasons: to enhance an existing product line and/or to access the target's technology and existing customer relationships. The primary reasons why targets accepted acquisition offers were equally straightforward: a need for a stronger brand name, a need for expanded marketing and distribution capability, and a need for more operating and investment capital.

Four organizational factors emerged as important drivers of successful post-merger integration: speed in integration and the nature of decision making,

acquirer communication styles and vision creation, networking and socialization, and the target employees' sense of "who is in charge?"

Integration Speed and Decision Making

The speed with which acquired firms are integrated—i.e., melded with the acquirer's culture and systems—is a vital issue in any acquisition. GE Capital, for example, tries to create a 100-day plan for acquisition integration on the basis that since change is inevitable when firms are acquired, it is best to create the change as quickly as possible.[18] We found little consistency in how acquiring companies integrated their acquisitions. In one case, the target company retained almost total autonomy in its daily operations and the European acquirer's view was strictly "hands off." At the opposite end of the integration continuum, an acquirer and target firm were combined into one company with a fully vertical functional structure, which was the third structure tried in the span of a year.

A particularly problematic area for European acquirer firms was in adjusting to the style of Silicon Valley decision making. Given the nature of technology products and the culture of innovation in Silicon Valley, decision making must happen quickly, particularly if it involves technological issues. The target firms reported that:

- The European decision making process is slower than that in Silicon Valley, often relying on a consensus method of decision making that was viewed by target firms as inappropriate in Silicon Valley.
- European acquirers exhibit an excessive dependence on data and information. The result is that the newly acquired organizations often lost market opportunities.
- A general lack of personal accountability on the part of acquirer management was reported, with "nobody willing to be the decision maker." In one case, the existing target management team was left in place far too long, even though it was acknowledged to be one of the worst in Silicon Valley. However, the European acquirer was unable to move quickly to make the changes.
- Change is regarded as positive in Silicon Valley, whereas European acquirers think that change is often negative.
- European acquirers' development teams "are not fast enough" and, as a result, market opportunities have been lost.
- European acquirers are considered too risk averse. Consider the following comments from target management:

  "They [European acquirer management] should be more concerned with getting a product out the door than with making sure it is 100 percent perfect."

  "They [the Europeans] want to make sure the market is great for a product, and they want sales projections and marketing plans. But startups [in the Valley] just introduce a product to market and see how the market reacts."

> "The Europeans always want a 5-year plan and projection. Start-ups laugh because they have 3-year plans. Three-year plans are common in the Valley. Most venture-backed companies have three year plans."

In summary, the findings suggest that because European acquirers are unaccustomed to the nature of Silicon Valley decision making and cultural norms, acquisition integration processes are often poorly implemented. In turn, this jeopardizes product development and market opportunities because of inattention to the need for very fast response times.

Communication and Vision

In any acquisition, communication is essential, particularly to ensure that target employees understand the rationale and objectives of the acquisition. In virtually all acquisitions there will be uncertainty about job status. The high level of labor mobility in Silicon Valley means that uncertainty about jobs will translate into even greater turnover than for acquisitions in other industries and geographic regions. Thus, any acquirer in Silicon Valley is faced with the strong probability that key employees will leave if they are uncomfortable with the acquisition.[19]

An overwhelming conclusion that emerged from our interviews was that the European acquirers did not do well in communicating a vision for the acquired organization. Each target firm in the study reported a lack of clarity as to its role in the combined organization even though having a "story" for the newly acquired firm is a basic integration element. The most immediate downside of a failure to communicate expectations and an atmosphere of uncertainty is that employees will leave. In one target company there was a 50% turnover in R&D and 35% in the company as a whole. As we heard from one acquired company:

> "The combined company is a company without soul. People are leaving because there is no vision and no direction. The president is not getting enough buy-in from senior management [in the European acquirer] to be able to execute. There is a gap between understanding and doing."

And from another company:

> "Good news and bad news can spread very quickly. You need vision to spread good news. In this industry, you only have the technology and the people. If the combined company doesn't clean up quickly, it will only get the B players. . . There is a great job market in the Valley and it is not difficult for qualified people to be hired into another exciting company that has a vision."

In addition to the nature of communication, we found that target firm and European acquirers preferred and used different tools for communication:

- European companies preferred personal contact, then telephone, then fax, then e-mail.

- The Silicon Valley targets used e-mail as a primary method of communication.
- Silicon Valley targets rarely used fax as a method of outgoing communication.

From this we can again surmise that European acquirers move too slowly relative to the firms acquired.

Networking And Socialization

As Cohen and Fields argued, trust is a critical asset in Silicon Valley and it is tied to performance and reputation.[20] This is consistent with observations from a European manager:

> "In the Silicon Valley, the social network is important. Networking builds trust, and Silicon Valley and the software industry are built on trust... If you don't socialize, why are you even here? Both your customer and your competitor are next door. . . It is important to never burn bridges in Silicon Valley because your customer today could be your employer tomorrow."

Saxenian describes how the Silicon Valley social structure was created.[21] Young engineers and entrepreneurs came to Silicon Valley from distant places, often from outside the United States and without friends or family. Anonymity resulted in a willingness to take chances and risk failure. Loyalty to an employer was secondary to doing excellent work and building a reputation by association with exciting projects. Frequent job-hopping became a way of life in Silicon Valley and workers quickly created interlocking networks of former colleagues and personal friends. Trust is willingly extended to outsiders as long as there is a commercial reason for doing so. When individuals or companies experience difficulties, the informal social networks make it easier for companies to help each other in new markets and avoid duplication of effort through joint ventures, special licensing agreements, and common technical standards.

Clearly, networking is critical to the success of Silicon Valley firms. However, based on our case studies, there was a tendency for Europeans to socialize with each other to the exclusion of the target firm employees.[22] While this may be typical behavior in France or Germany or wherever the European firm is based,[23] it is atypical in Silicon Valley and, from a business perspective, very unwise given that networks provide a key source of information about employment, work in progress, new technologies, and so on.

Who Is In Charge?

In all of the cases, the target firms were much smaller than the acquirers. When a small company is acquired by a large one, there is often confusion as to which acquirer managers are responsible for the acquisition and subsequent integration. A typical problem is that acquirer managers appear and then disappear. This problem of managerial continuity was evident in this study. Consider the following examples provided by target managers:

> "About two weeks after the acquisition, a high level manager from the acquirer walked in the door, spent a week meeting with people, assured them that no changes would occur and that he would be back in two weeks to assist with the acquisition. He never returned."
>
> "In the Valley, you lend credibility to a manager's statement that something is broken. In the Valley, managers have a higher ability to listen to employees. In Europe, there is still a class system."
>
> "There is no planning, no vision for the future, and no energy. Our CEO is not even coming to work every day [Because he gets no direction from the acquirer and is extremely demotivated]. As a matter of fact, in mid-March, his secretary sent a company-wide e-mail informing employees that he would be available from 10-5 on Tuesday through Thursday, and on Friday by appointment only. There is no longer any leadership. He is taking dancing lessons and making pottery these days."

A related issue involves information flows and the acquirer responsibility to answer questions. As we heard from the former CEO of an acquired firm:

> "People kept asking me what would happen to their medical plan. Could they still go to the same doctor? I did not have any answers so all I could say was that I don't know. The company that bought us was not providing any information, which was very frustrating to the employees."

Corporate Governance-Related Factors

Clearly, integration issues were problematic for the European firms studied. In addition to integration challenges, four corporate governance-related issues create impediments for European, Asian, and other non-U.S. firms acquiring Silicon Valley assets: differences in compensation structures between Silicon Valley and acquiring companies, the nature of the acquirer's ownership structure, the role of M&A in the acquirer's strategy process, and the roles played by some of the key acquirer stakeholders, especially bankers.

Compensation Systems

Incentive compensation structures and the political climate of established firms can create a chasm between individual motivations and organizational goals. In a start-up, much of an individual's compensation is in the form of stock options, which align individual and organizational goals and generate intense commitment on the part of the employee for the success of the venture. Since technology industries are knowledge-intensive and knowledge resides in people, individual attitudes and motivation levels can make or break a firm and affect its position in an industry.

In Silicon Valley, stock options are taken for granted. This has created a major problem since few non-Anglo-American firms have stock option plans. There are various legal, tax, and cultural reasons why European and Asian

firms do not use stock options. For example, Daimler-Benz (now part of DaimlerChrysler) did not introduce a stock option program until 1996 (and it was not finally approved by the board until 1998). In 1998, Deutsche Bank AG was the first German bank (and among the first non–U.K. European firms) to introduce a management stock option plan. In 1998, the District Court of Braunschweig rejected the management share option scheme proposed by the Volkswagen AG board adopted in the 1997 general meeting by VW's shareholders. Among other concerns, the court was of the opinion that, given the present compensation plus bonus for members of the board, additional incentives through share options were hardly justifiable. In Sweden, until recently, the benefits of granted stock options were included in taxable income in the year when the options become available to be exercised as opposed to when they actually were exercised. Similarly, in Japan, only a few firms (for example, Sony) have introduced employee stock option plans, and only in the last two or three years. Indeed, outside of the Anglo-American system of corporate governance, management and employee (even CEO) salaries are almost entirely based on a fixed salary plus a bonus, something unthinkable in the United States. According to a manager we interviewed in a European firm that has made acquisitions:

> "Europeans don't get it. For retention and attraction, options can be compared to a company car in Europe. The only difference is that the company car is a special perk and options are almost an expected norm."

In our study, the European acquirers that maintained options plans had difficulties with the structure of the plans. For example, in one company, existing target options were converted to options on the European company's stock, which was worth less per share and growing at a much slower rate than the target company's stock had been growing. In another case, the stock option plan was replaced by a phantom option plan, which created dissatisfaction because it did not share ownership. As well, the calculations leading to the valuations of such phantom options are often opaque, compounding the information flow problems referred to earlier. The larger issue that looms for many non-U.S. acquirers is the problem that if they were to introduce such plans in one part of the organization (such as a recently acquired firm), they face the prospect of compensation upheaval in the rest of the organization. This can be a daunting problem. As one acquiring firm's manager put it:

> "We are over 100 years old, in more than a 100 countries worldwide, and have more than 100,000 employees. We have been extremely successful without stock options. If we were to introduce stock options over an acquisition worth a couple of hundred million dollars, we would be creating a compensation nightmare in the rest of the multi-billion dollar company. We feel like we are in a bind."

Ownership Structure

In the U.S. system of governance, the concept of one share-one vote and the belief in shareholder democracy are taken for granted. In much of the rest

of the world, especially Europe and Asia, this is not the case. There is often substantial asymmetry between ownership and control proportions. Multiple classes of stock are common and some classes (often called A class stock) have multiple voting rights relative to those of other classes. For instance, in one of the acquiring companies in our case study data, the majority owners of the company have a class of shares that have 1000 times the voting rights as those traded on the NASDAQ; as a result, although U.S. stockholders *own* 49% of the company, they *control* less than 2% of the shareholder vote. A related problem is that the bylaws of many European and Asian companies impose the condition that regardless of the proportion owned, non-controlling shareholders cannot exercise more than, say, 5% or 10% of the shareholder votes.

Compounding ownership versus control asymmetry is that majority owners in many non-U.S. companies are often old, patriarchal families that have owned the company for decades (often having founded them as well). Not only are such owners unwilling to cede control to managers (since managers with stocks and stock options would dilute their own ownership stakes), their vintage does not often lend itself to understanding or comfort with the norms and nuances of a fast-moving Silicon-Valley-type culture. To quote an acquiring firm manager:

> "[Our owners] don't wake up every morning worrying about Cisco or the Silicon Valley. We, unfortunately, do. But, we are just another holding in a vast multi-billion dollar family empire of everything from A to Z."

This unwillingness to cede control also constrains the ability of non-U.S. acquirers to use their stock as the medium of exchange in acquisitions. To use stocks for acquisitions in the United States requires non-U.S. companies to be listed on one of the major U.S. stock exchanges. However, that also means greater required disclosure since they have to report under U.S. GAAP accounting standards and fall under the purview of oversight by the SEC, just as any U.S. company would, giving up ownership stakes to a new group of outside investors and, perhaps most unappealing, increased and incessant scrutiny by analysts, Wall Street, institutional investors and the like. Indeed, as noted earlier, this was reflected in the fact that, compared to U.S. acquirers, European firms were substantially less likely to use stock as the medium of exchange.

The Role of M&A in the Strategy Process

The market for M&A—and, more generally, the market for corporate control—is extremely well-developed, mature, and ingrained in the U.S. corporate culture. For instance, during the period 1981-1998, there were over 82,000 mergers and acquisitions in the United States, for a total value exceeding $6 trillion (in other words, more than eight deals on average per listed company). During the same period, the rest of the world had perhaps $4 trillion worth. Thus, the United States alone has accounted for about 60% of the world's market share in M&A. Equally important, the market for M&A is closely related to

the market for corporate restructuring. Firms are continuously revamping themselves through asset sales, spin-offs, equity carve-outs, divestitures, and so forth. As has been well-documented by numerous strategy researchers, the United States has been witness to an unprecedented era of return to focus in industry after industry.

In the 1990s, M&A activity in the United States has increasingly shifted from a corporate, CEO-level, investment banker-driven activity to one that is being conducted by managers at the divisional level, as firms have (arguably) used M&As as an important means of implement strategies. Consider that in 1998, the peak year of M&A activity thus far (and the year of dozens of mega-mergers), over 93% of all acquisitions in the United States were for assets valued at less than $200 million. In fact, while headline-grabbing mergers such as Exxon-Mobil and Citibank-Travellers got much of the attention in the press, the 93% that were less than $200 million in size collectively accounted for only about one-eighth of the total value of acquisitions in 1998. Paralleling this shift in M&A from corporate to divisional levels, dozens of successful organizations such as Cisco, GE Capital, Lucent, and Textron have set up their own internal M&A units that are responsible for everything from merger valuation, to due diligence, to managing post-merger integration. It is not uncommon for many U.S. companies to have an M&A budget whereby managers are encouraged to seek out and acquire strategically attractive firms, and then be evaluated on the performance of the acquisitions.

The strategic role of M&A activity in Europe, although changing, is very different. Much of the M&A activity is still done at the corporate level and is CEO-driven, rather like the activity in the United States during the 1960s through the 1980s. The market for restructuring activity—especially if it involves downsizing, divestitures, spin-offs, and so forth—still has a long way to go, given the dominant roles that stakeholders such as labor unions, suppliers, and even the government play in the governance process. Many large companies are still a grab-bag of widely diversified businesses that are cobbled together only because the same family group or holding company owns—or, more aptly, controls—those assets. In other words, European firms must go a long way to achieve the kind of de-conglomeration and focus that U.S. companies have achieved during the late 1980s and the 1990s. Moreover, unlike the United States where less than 2% of stock is held by other corporations, inter-corporate shareholdings are extremely common in Europe. For instance, 40% of the shares of German companies and 25% of the shares in Japanese companies are held as inter-corporate holdings.

These attributes of European governance structures play a negative role in successfully executing Silicon-Valley-type acquisitions. Recall that over 95% of such acquisitions are small and valued at less than $200 million. It is unlikely that a CEO of a multi-billion dollar company will devote the same energy or attention to a million dollar deal as he or she would to a billion dollar one; yet M&A activity and related incentives are thin at the divisional level, the level at

which such deals should be executed. This situation is worsened by the diversified nature of the acquirer's businesses, since the technology acquisition simply becomes another "small fish in a large pond" of various divisions, products, and technologies scattered all over the world. Furthermore, this is despite the fact that, as some managers we interviewed suggested, their Silicon Valley assets may hold the key to their technological futures. The ownership problems addressed previously get exacerbated because of the complicated holding company and inter-corporate ownership structures. Further, even if an employee of a target firm does get stocks or options in the acquiring company he or she may be left wondering what exactly is the asset that the stock represents and how it relates to the Silicon-Valley-type company's cash flows and valuations.

The Role of Other Major Stakeholders, Especially Banks

In non-U.S. governance systems, stakeholders other than shareholders play significant roles in the governance of the corporation; e.g., employees in Germany, suppliers and presidents of affiliated ('keiretsu') companies in Japan, the government in France, and so forth. One of the most important such stakeholders worldwide, outside of the Anglo-American system, is banks. Banks play an active role in the governance process and have major board representation in most countries in Continental Europe, Asia, and Latin America. In contrast, bankers are far less common on U.S. boards.

As Bradley, Schipani, Sundaram, and Walsh argue, the active role of banks in the boardroom creates many adverse incentives in the governance and M&A process, especially when it comes to high-technology, human-capital-intensive assets.[24] They argue that the very nature of the banking business—the business of loaning money—dictates focus on the total risk (i.e., systematic plus unsystematic risks), since lenders must always be concerned about the bankruptcy risk of their assets (which, in turn, is driven by the asset's total risk). Shareholders, on the other hand, are driven by the systematic risks of an asset relative to a well-diversified portfolio. A focus on total risks creates a fundamental kind of investment distortion: under-investment in assets with a great deal of cash flow volatility and assets that are seen as non-collateralizable.

Silicon-Valley-type assets are an example of extreme combinations of cash flow volatility and non-collateralizable assets. These assets have a great deal of cash flow risk resulting from competitive and technological uncertainty and from their rapid growth and investment needs. Their primary assets are human capital, which is fundamentally non-collateralizable, and what is more, as we observed earlier, the assets have the habit of walking out the door every evening. A banker interested in cash flow predictability and traditional valuation yardsticks would tend to view a Silicon Valley firm with no bricks and mortar, negative cash flow, and high labor turnover as very high risk. In contrast, a company like Cisco Systems might look at the same firm and see a valuable technology, long-term cash flow expectations, and a workforce that, suitably motivated, will not leave.

Comparison of the Non-U.S. Experience with Cisco Systems

Cisco management believes there are two keys to a successful acquisition: doing the necessary homework to select the right company and applying an effective and replicable integration process once the deal is struck. Cisco has created acquisition rules for itself and nearly every acquisition is completed according to these rules. In order to be considered a potential target by Cisco, a company must be fast-growing, focused, entrepreneurial, culturally similar to Cisco, and geographically desirable. In general, Cisco limits its searches to three geographic areas: the Silicon Valley, the Research Triangle in North Carolina and the Route 128 corridor outside Boston—with a preference for Silicon Valley. According to Cisco, geographic proximity is critical because when targets are too far from headquarters, cultural fit is less likely and the speed of integration is slowed.[25] As Cisco CEO John Chambers has stated:

> "The cultures have to be alike and they've got to be complementary. When you're geographically close you can look the employees in the eye and say, "You know, we're not going to lay anybody off." And the key is, do you have a common vision of where the industry's going and do your product strategies complement each other as opposed to compete? . . . You've got to create some short-term wins. We refer to this industry in dog years. One calendar year is equivalent to seven years of normal growth, and so you have to move at an unbelievable pace. . . . There has to be a long-term win for all those constituencies [customers, shareholders, and employees] that are strategic."[26]

In Cisco's industry, acquisitions are primarily about people. Cisco adheres to a rule whereby no employees in the acquired firm will be terminated until Chambers and the former CEO of the acquired firm give their consent. Cisco strives to ensure that top people in the target firm are given key positions in the new organization.[27] About half of the CEOs of companies acquired by Cisco have stayed with the combined company. Cisco also believes in fast integration and tries to present the acquired company to its customers as part of Cisco as soon as possible, usually within 100 days (similar to the GE Capital model). Similarly, Cisco uses integration teams, something that was not observed in the case studies. Cisco has a department of 12 people dedicated to acquisition integration. The day after a deal closes, the integration team begins an orientation to Cisco that involves Cisco's hiring, sales, and engineering practices.[28] The process takes about 30 days. The acquired company is quickly integrated with Cisco's computer and payroll systems. In contrast, in one of the cases we studied it took four months to link the target company with the acquiring company's network and e-mail system, which generated an inordinate number of complaints in the target firm.

Table 3 shows the significant differences between Cisco and the European acquirers. Obviously, some of the Cisco factors, such as geographic proximity, cannot be implemented by European acquirers. However, given Cisco's acquisition success, Cisco should be viewed as an industry benchmark. Cisco has

TABLE 3. Comparison of Cisco and Non-U.S. Acquirers

Acquisition Issues	Cisco Systems	Non-U.S. Acquirers In Silicon Valley
Integration Speed and Decision Making	Uses integration teams to integrate everything, usually within 100 days. Thinks in internet years and plans quarterly. Acquires close to home, simplifying various integration issues.	Usually do not use integration teams. Slow to make decisions. By default, do not acquire close to home.
Communication and Vision	Immediately lets the new employees know what their roles and titles will be. Has a strong vision for the future of the company(ies) acquired.	Need to improve both the quantity and quality of their communication with the target. Do not communicate a vision to the target.
Networking and Socialization	Finds new markets and acquisition opportunities through socializing and word-of-mouth.	Seem reluctant to socialize.
Who Is In Charge?	Prefers to keep a target's senior managers, if they fit in with Cisco's culture. Otherwise, they are asked to leave. Retains the majority of an acquired company's employees by understanding what is important to them and what motivates them.	Prefer to keep a target's senior managers. Attempt to retain senior management through golden handcuffs. Seem to have no clear plan for retaining other employees.
Stock Options	Continues to give stock options to an acquired company.	Usually discontinue stock option plans.
Integration Approach	Integrates the target as a business unit in charge of its own product development and marketing, but centralizes the target's manufacturing, finance, sales, and distribution. Focuses on the people first, and then on how to drive the business. Is not arrogant. Instead, the company is "paranoid."	Each acquirer created a different, unique structure. Not consistent in focus. Suffer from a stereotype of arrogance.

established an acquisition and integration process that works and creates value for multiple stakeholders.

Can Non-U.S. Acquirers Succeed in Silicon Valley?

Though the findings and analysis presented here seem to indicate that non-U.S. acquirers will experience difficulties in acquiring Silicon Valley targets,

the positive news is that many of these issues are solvable. With respect to integrating acquired firms, and with the exception of geographic proximity, we do not believe that non-U.S. firms are *innately* disadvantaged relative to American firms (although in many cases they behave as if they were operating at a disadvantage). To be more successful with Silicon Valley acquisitions, non-U.S. acquirers do not have to radically invent new management processes. What they must do is understand the realities of Silicon Valley and realize that, for better or worse, it is important to do business the "Valley way." Matters of corporate governance present more challenging problems, particularly those associated with stock ownership, cross-shareholdings, and bank involvement. Clearly, changing corporate governance practices is not something that can happen in a vacuum, since they are often intricately woven into (and derive from) the nature of law, politics, and culture in the various countries. In other words, the evolution of corporate governance structures is characterized by "path dependency."

Some of the corporate culture and merger integration issues—such as speed of integration and decision making, communication of a vision for the acquired firm, and the problem of who is in charge—should be relatively easy to manage by non-U.S. firms. One of the European firms we studied has significantly improved its integration process as the result of experience and familiarity with Silicon Valley business norms. Developing networking and socialization skills that are comparable to leading firms like Cisco will be more difficult to attain, given the implicit or explicit lifetime employment culture in many non-U.S. firms. In this culture, there is the notion that you are employed by the firm rather than the profession, which means the absence of an active managerial labor market along U.S. lines. Even here, however, some acquirers are making the effort. For example, a non-U.S. acquiring company we studied created a Silicon Valley office (ironically, in space formerly used by Cisco) populated by younger, non-traditional managers. These managers have been given a relatively unstructured agenda with the key goal being to understand and assimilate the Silicon Valley culture and bring it into the larger firm (one employee has a business card that reads "Chief Evangelist, Internet and New Media").

The governance issues appear, on the surface, more daunting. However, with the exception of one issue (stocks and options for target firm employees will continue to be difficult for non-U.S. firms unless they change their worldwide compensation practices), it appears that dramatic changes are under way in non-U.S. governance practices. Non-U.S. governance systems, especially those in Europe, are transforming themselves along Anglo-American lines.[29] Traditional ownership structures, including bank ownership, are slowly being dismantled. The result is that an active market for corporate control has taken shape to the point where, by the time all the data are in, the aggregate value of M&A activity in the EU in 1999 may equal or exceed that in the United States. Substantial restructuring activity is under way; hundreds of non-U.S. firms are listing their shares on the New York and NASDAQ stock exchanges; boards and board guidelines are being reconstituted; and, more generally, corporate governance has

become important for top management agendas.[30] The Asia crisis of 1997-1998 and its aftermath are leading to similar changes in countries such as Japan, Korea, Taiwan, and Thailand.

Finally, although there are areas where European firms are lacking, there are some specific areas and situations where European firms could actually add value in acquiring technology firms:

- Many small Silicon Valley firms are characterized by an environment managed by intimidation and tenacity rather than by cooperation and strong leadership. To succeed in the long term, management in the target firms must be professionalized and strengthened. A European acquirer may be able to add these qualities, assuming that issues such as speed of decision making and communication can be properly dealt with.
- Managers and employees below the founder/top management level may welcome a more cooperative, employee- (rather than shareholder-) centered style of management that is found in many European organizations.
- If a company has not yet had an IPO, a large acquirer may be viewed as the next best thing to achieving financial goals for founders and key employees (this also applies for large American acquirers).
- European acquirers may be able to provide access to global markets much faster than U.S. acquirers.

Conclusion

As pressures for globalization and convergence brought about by the computer- and communications-related industries continue, the number of technology-based acquisitions by non-U.S. firms of United States targets will continue to grow. European (and by implication, other similar non-U.S.) firms face some unique challenges with their acquisitions and, in particular, with the integration and governance of the acquired firms. As noted, much of the research in the M&A area ignores or downplays the organizational and governance issues that are central to the acquisition integration process, despite the fact that practitioners are increasingly coming to realize that these issues are the critical determinants of acquisition success. As revealed in this study, a failure to deal with integration properly can lead to demoralized staff and employee defections. In technology-based industries where the main assets are the people, such an outcome can be disastrous. In fact, in one of the cases studied, turnover escalated to the point that in a few months, the acquired firm bore little resemblance to the original firm acquired and the acquisition was subsequently formally dissolved with its remaining employees absorbed into the various divisions of the larger firm.

Understanding the Silicon-Valley-type business culture and attention to integration will help mitigate the kinds of problems documented here. The various areas critical to M&A integration success are: communication, decision-

making, integration speed, networking and socialization, and clearly delineated structures of authority and responsibility. In the area of corporate governance, stock and option-based compensation, alignment between ownership and control, enhancing the role of M&A in the strategy process (especially at the divisional level) and limiting the role of stakeholding constituencies (such as bankers) are key factors for non-U.S. companies to address.

Notes

1. For what we mean by Silicon-Valley-type technology assets, see note 15 below.
2. Robert G. Eccles, Kersten L. Lanes, and Thomas C. Wilson, "Are You Paying Too Much For That Acquisition?" *Harvard Business Review*, 77/4 (1999): 136-146.
3. The earliest evidence in this regard was pointed out more than fifteen years ago by Michael Jensen and Richard Ruback in their famous article, "The Market for Corporate Control: The Scientific Evidence," *Journal of Financial Economics*, 11/1 (1983): 5-50. Subsequently, finance scholars have re-examined this evidence in the context of various types of acquisition activities (e.g., mergers, tender offers, proxy fights, leveraged buyouts, cash versus stock-based offers, and contested versus uncontested bids) and in the context of other countries (e.g., the UK, France, Germany, and Australia). The Jensen and Ruback evidence has held up remarkably well.
4. Amy L. Pablo, "Determinants of Acquisition Integration Level: A Decision Making Perspective," *Academy of Management Journal*, 37 (1994): 803-836.
5. Rikard Larsson and Sydney Finkelstein, "Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Study of Synergy Realization," *Organization Science*, 10 (1999): 1-26.
6. For detailed discussions of the M&A process, see Philippe C. Haspeslagh and David B. Jemison, *Managing Acquisitions: Creating Value Through Corporate Renewal* (New York, NY: Free Press, 1991); Mitchell Lee Marks and Philip H. Mirvis, *Joining Forces: Making One Plus One Equal Three In Mergers, Acquisitions, And Alliances* (San Francisco, CA: Jossey-Bass, 1998).
7. In 1996, Cisco acquired StrataCom Inc. for $4.6 in stock. At the time StrataCom had $330 million in sales and 1,000 employees. In August 1999, Cisco acquired Cerent Corporation for $6.9 billion in stock. When acquired, Cerent had 210 employees and less than $10 million in sales.
8. Glenn Drexhage, "How Cisco Bought its Way to the Top," *Corporate Finance*, 163 (June 1998): 21-25.
9. Stephen S. Cohen and Gary Fields, "Social Capital and Capital Gains in Silicon Valley," *California Management Review*, 41/2(Winter 1999): 108-130.
10. Annalee Saxenian provides clear evidence as to how the cultures of Route 128 and Silicon Valley differ. For example, Saxenian characterizes Route 128 as a continued part of the Puritan culture, where well-defined social hierarchies are important. In contrast, Silicon Valley consists of newer firms with a collegiate atmosphere that emphasized the exchange of information and ideas and also friendly competition. See Annalee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Cambridge, MA: Harvard University Press, 1994).
11. Homa Bahrami and Stuart Evans, "Flexible Re-cycling and High-technology Entrepreneurship," *California Management Review*, 37/3 (Spring 1995): 62-89.
12. Cohen and Fields, op. cit., p. 120.
13. Saxenian, op. cit.

14. *Red Herring* is a monthly magazine based in San Francisco focused on technology issues.
15. The analysis in this section is based on the online Mergers and Acquisitions database of the Securities Data Corporation (SDC), which is now part of Thomson Financial Securities Data. The following SDC-defined sectors represent Silicon-Valley-type assets: all computer and computer-related industries (such as mainframes, workstations, PCs, portables, all computer peripherals, modems, CAD-CAM systems, networking systems such as LANs, software, and computer-related services) and communications-related industries (such as telecommunications equipment, cellular/satellite/mobile communications systems, modems, data communications equipment, internet services, and internet software). The list excludes telecommunications service providers and media companies. If those two were added the numbers would be even more impressive, given that there has been almost $1 trillion in M&A activity in just the U.S. telecommunications service sector in the 1990s.
16. Given that acquirers from the EU are the largest group other than those from the United States, the tables break out the data for this group of countries separately.
17. Note, however, that we are generalizing here based on a subsample of acquisitions: those of target firms whose stocks were publicly traded prior to the acquisitions.
18. Ronald N. Askkenas, Lawrence J. DeMonaco, and Suzanne C. Francis, "Making the Deal Real: How GE Capital Integrates Acquisitions," *Harvard Business Review*, 76/1 (1998): 165-178.
19. In Silicon Valley, if a young engineer or programmer has been in a job for more than two years, he or she risks being considered stale. Along Route 128, an individual with a succession of 2-year positions is seen as having a poor employment history and as posing a risk.
20. Cohen and Fields, op. cit., p. 127.
21. Saxenian, op. cit.
22. This is a common phenomenon in all expatriate communities.
23. Saxenian (op. cit.) reports that the traditional conservatism of Boston society made it harder for the management and staff of Route 128-area firms to risk dramatic innovations in personal lifestyle or company policy. As a result, New England employees tended to be more family- and community-oriented than their Silicon Valley counterparts and they spent less time socializing with fellow workers. A parallel could be drawn with the employees of European firms and their resistance to networking in Silicon Valley.
24. Michael Bradley, Cindy Schipani, Anant Sundaram, and James Walsh, "The Purposes and Accountability of the Corporation: Corporate Governance at a Crossroads," *Law and Contemporary Problems*, 62/4 (Fall 1999).
25. John A. Byrne, "The Corporation of the Future," *Business Week*, August 31, 1998, pp. 102-106.
26. Eric Nee, "Interview with John Chambers of Cisco," www.upside.com, June 30, 1996.
27. *Business Week*, op. cit., p. 106.
28. H. Goldblatt, "Forty-Two Acquisitions and Counting: Cisco's Secrets," *Fortune*, November 8, 1999, pp. 177-181.
29. Bradley et al., op cit.
30. Indeed, the English words corporate governance and shareholder value have made their way into the French and German lexicons, respectively. There was no prior German language equivalent for the term shareholder value.