THE BAY AREA OFFICE MARKET AND THE TECH SLOWDOWN

by

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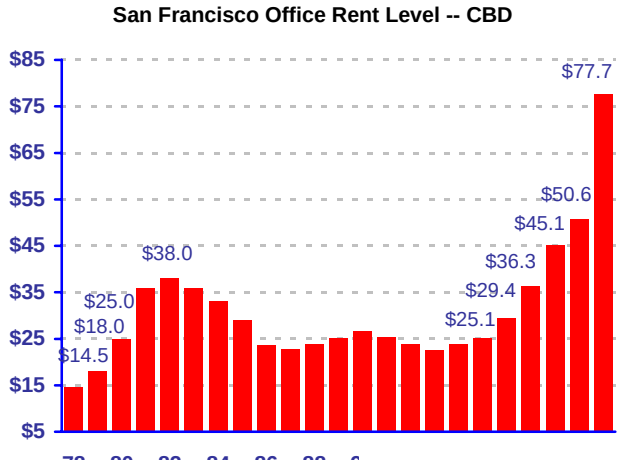
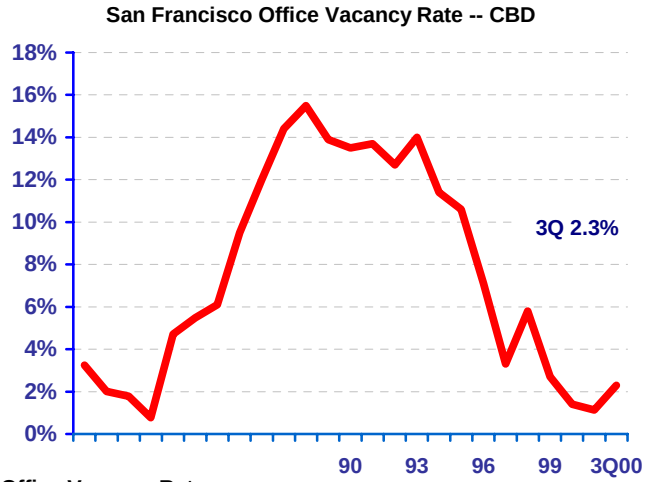
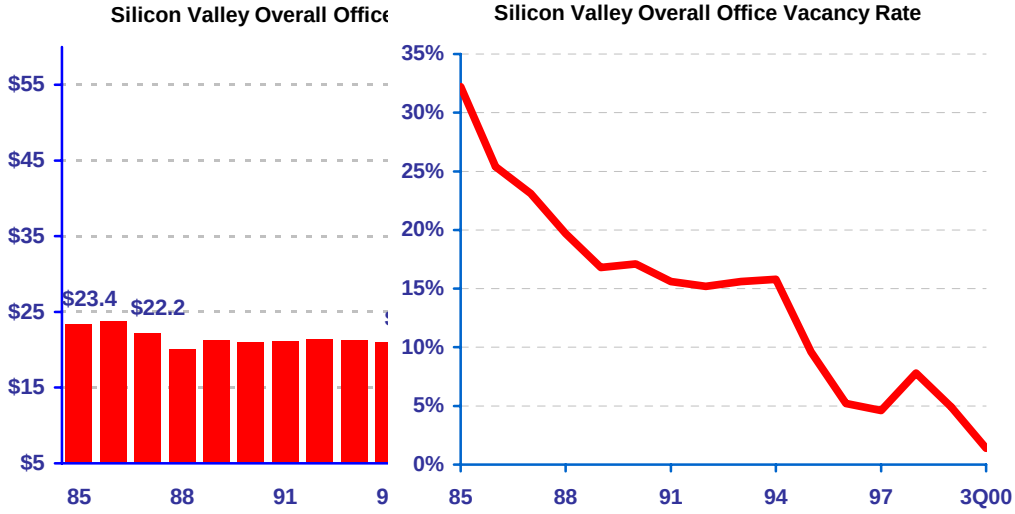
The San Francisco and Silicon Valley real estate markets have experienced unparalleled growth in rents and values during the last five years as venture funding has escalated and Internet and high-tech firms have multiplied. The question then emerges: Is the Bay Area real estate expansion the result of growth in risk capital, and how exposed are these markets to a significant slowdown in the new economy and a related web-firm contraction? To answer that question, our examination is four-fold: 1) identify the extent to which such astounding rent growth is attributable to the technology sector and venture-backed firm expansion, 2) determine San Francisco and Silicon Valley vulnerability to a dot-com contraction, 3) evaluate firms' strategic response to escalating occupancy costs and 4) given the above information, forecast future absorption levels, rent growth and vacancy rates.

OVERVIEW

With vacancy rates averaging two percent during 2000, San Francisco is now among the top ten most expensive office markets in the world. CBD rents have skyrocketed, increasing nearly 60 percent since the fourth quarter of 1999, from $50 per square foot to a record high of $78 in the third quarter of 2000; several leases were signed for more than $100 per square foot. Supporting such astronomical rent growth is a rapidly expanding labor force. Approximately 130,000 jobs were created in San Francisco between 1995 and 1999, the most significant job growth in the city's history. The year 2000 continues this trend, with more than 19,000 total jobs created. However, office employment growth has begun to decelerate, rising only one percent in 2000, versus 3.1 percent in 1999.







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$36 per square foot in the fourth quarter of 1999 to $57 in the third quarter of 2000. Rents in the Palo Alto, Mountain View and Menlo Park submarkets now rival those in London and Hong Kong, ranging between $90 and $120 per square foot (triple net) in the third quarter of 2000. Feeding these spectacular conditions has been a booming high-tech market. For the top 150 companies in Silicon Valley, profits increased 88 percent in the first half of 2000, compared with the national average of 18 percent. Total market value rose 42 percent during the same period to $2.6 trillion. Such extraordinary tech-sector strength has translated into an equally extraordinary number of new jobs. A record 140,000 jobs were created in Silicon Valley during the last five years, more than triple the number of jobs created during the last half of the 1980s. Foreign immigrants with H-1B visas fill a significant proportion of these jobs; the Bay Area accounts for nearly 12 percent of Labor Department applications to fill jobs with H-1B workers (23,361 jobs). Northern California has benefited from a human capital flow matching the flow of venture capital.

Source: Cushman & Wakefield, RCG
Figure 3

Source: Cushman & Wakefield, RCG
Figure 4

DEMAND

Despite the tremendous spike in rents, demand for San Francisco and Silicon Valley office space at year-end 2000 continues to outpace supply. To better understand the sustainability of these conditions, we reviewed more than 800 lease transactions, which we broadly categorized into six subgroups based on risk of default. From lowest to highest risk, these subgroups are: 1) traditional (off-line) consumer product and indust companies; 2) traditional (off-line) service firms, including consulting, financial service, advertising, accounting, legal service, and media companies; 3) the Internet departments of traditional businesses (e.g. Schwab, GM, Sears and Wal-Mart, all of which leased space in San Francisco during 2000 for their web operations); 4) traditional firms in the high technology and software industry (e.g. Intel, Hewlett-Packard, Oracle, Sun Microsystems and Cisco Systems); 5) Internet service and start-up Internet infrastructure firms, which focus on serving pure Internet companies through capital raising, technology deployment, business services, etc. (we include web-focused venture capital firms in this category); and 6) pure Internet commerce and Internet portal firms, including B2C and B2B businesses.

3Q 1.4%

Risk of Default on Leases by Sector

Source: RCG
Figure 5

The risk continuum reflects the fact that pure Internet and Internet service and infrastructure firms are generally non-credit tenants, while traditional off-line firms are generally credit tenants. Although the high-tech sector is largely established in terms of profitability, we rank this sector medium risk because of the considerable investments in and exposure to the Internet sub-sector and because of the potential fall-out from a more substantial NASDAQ correction. Further, profit warnings from Intel, Cisco, Apple and other high-tech firms confirm a slowdown in this sector.

From our examination of San Francisco leasing activity, we learned that more than 50 percent of the leases signed were medium to high risk during 1999 and the first half of 2000. Of the 5.7 million square feet leased in 1999, 62 percent (3.5 million square feet) was leased to high-tech, pure Internet, and Internet service and infrastructure firms. The majority of these at-risk leases (52 percent or 2.9 million square feet) were to pure, high-risk dot.coms and dot.service firms. The first six months of 2000 showed a similar pattern. Of the 150 largest leases signed during the first two quarters of 2000, 50 percent (2.4 million square feet) were leased to medium- and high-risk high-tech, Internet and Internet service firms; 44 percent (2.1 million square feet) of leases signed were to high-risk Internet tenants.

Internet and e-service firms have been a dominant source of demand in San Francisco. We estimate that high-tech and web-based companies currently occupy approximately 14 percent of the space in the city, or 11 million square feet. The majority of these tenants (75 percent) reside outside the CBD in the area south of Market Street.

Silicon Valley has also experienced unprecedented levels of demand from high-tech and venture-backed companies. In 1999, 53 percent (1.6 million square feet) of leases were to web firms. Of the five million square feet leased during the first half of 2000, 54 percent (2.8 million square feet) was to Internet commerce, Internet service and infrastructure companies. However, unlike San Francisco, Internet infrastructure firms are considerably more active in the Valley's leasing market; 40 percent (1.2 million square feet) of office leases in 1999 and 33 percent (1.7 million square feet) of leases during the first six months of 2000 were to Internet infrastructure ventures. None of the infrastructure firms that leased space in Silicon Valley in 2000 had credit ratings. For the few companies that did report earnings, the average price-earnings (P/E) multiple was a fantastic 317. In contrast to San Francisco, where dot.coms are highly concentrated in the area south of Market Street, Internet firms in Silicon Valley are geographically scattered. Although not as localized in Silicon Valley, venture-backed companies represent a larger portion of the total office market. We conservatively estimate that Internet firms account for approximately 24 percent (6.6 million square feet) of the Silicon Valley office market.

In addition to reviewing San Francisco/ Silicon Valley leases, we surveyed 50 of the top firms in the Bay Area, both old- and new-economy, representing more than 16 million square feet of space and nearly 45,000 employees, and spoke with a number of brokers and developers. Record rent levels and minimal supply have forced many companies to re-evaluate their Bay Area growth strategies. Such decisions are aggravated by an overburdened infrastructure and services sector, caused by the creation

of nearly 300,000 jobs in five years. The lack of affordable housing and high levels of freeway congestion are collectively putting a cap on the Bay Area's ability to accommodate further expansion. From our interviews, five trends are clear.

First, small service and insurance firms are relocating. While the great majority of the companies we surveyed plan to keep their headquarters in the Bay Area, some non-profit, insurance and small law and architecture firms are finding that $80 CBD rents do not fit their revenue models, making the East Bay and markets such as Sacramento and Los Angeles attractive alternatives.

Second, Internet firms are staying (although the number of firms will diminish). While Internet firms are staunchly dedicated to the Bay Area, in light of reduced venture funding and premium rent requirements, they are struggling to better utilize existing space.

Third, off-line and non-venture-backed high-tech firms are also rethinking their use of existing space. High-tech Silicon Valley businesses in particular are examining satellite office options or telecommuting alternatives to reduce commute stress and square footage. High rents have encouraged several firms to consolidate in order to sublease for a profit.

Fourth, companies with offices outside of Northern California are encouraging growth in those locations. Many firms said they were not planning to add significantly to their Bay Area employee base and in fact were looking to outsource or relocate non-core functions to other states.

Finally, at the same time that some companies are looking for ways to minimize occupancy costs, many major businesses are building their Internet departments in the Bay Area. Wal-Mart, Sears, GM, Daimler Chrysler, Schwab and others all signed large leases in 2000 to accommodate growth in their web divisions.

Ultimately, our interviews support the hypothesis that demand for Bay Area office space will slow significantly during the next few years, apart from the decline in demand from web companies, as traditional off-line firms redirect growth to adjust to record high rents, expensive housing, and a slowing economy.

SUPPLY

While demand analysis allows us to predict future absorption rates, supply analysis helps us to determine the intensity of the resulting impact. Steep rent increases and vacancy rates between one and two percent have not encouraged excessive levels of new construction in San Francisco and Silicon Valley, as was the case in the early 1980s, when a huge supply response occurred from 1980 to 1986. In other words, a potential drop-off in demand would not be made more severe by the existence of a glut of new space.

In San Francisco, rents have risen to levels that justify new construction. Assuming all-in development costs of $375 per square foot and an expected return of 10 percent, an effective gross rent of $53 is needed to make new construction economically viable. After several years of inactivity, and with CBD rents in excess of $78 per square foot, San Francisco is expected to add just under five million square feet of space to the downtown market during the next three years; another three million square feet is on the drawing boards. Of the planned five million square feet, approximately 63 percent (three

million square feet) is pre-leased. However, one million of that is to non-credit Internet and Internet service firms that may find additional space unnecessary as funding evaporates. In addition to a medium-sized pipeline of new construction, San Francisco has a growing sublease market. In anticipation of continued rapid growth (and funding) and in a market with limited supply, many firms leased excess space. As profits remain absent, stock prices plummet, the credit market tightens and the economy slows, these companies are returning that space to the market. Approximately two million square feet of space was offered for sublease during the last half of 2000, 85 percent of it from web businesses. The majority of that supply has served to alleviate significant pent-up demand, although rents in the south of Market area have begun to decline. Continued sub-leasing, together with five million square feet of new space, could push vacancy rates into the high single digits.

Controlling new supply and moderating vacancy rate increases is Proposition M, which was established in 1986 to limit the amount of new office construction in San Francisco to 950,000 square feet per year. However, creative "business services" interpretations of the statute have allowed annual growth in office stock in excess of that cap. Propositions K and L emerged to combat such perceived manipulation. Although defeated in the November 2000 election, the drive to suppress "over-growth" remains intense.

Silicon Valley rents are also now at levels that makes new construction attractive. Assuming an average all-in development cost of $350 per square foot for a mid-rise building and an expected return of 10 percent, an effective rent of $51 per square foot is needed to make new construction profitable. This replacement rent, however, varies considerably by submarket, being lower in downtown San Jose and much higher in Palo Alto and Menlo Park, where land costs are well above $100 per square foot. Silicon Valley is expected to add approximately five million square feet of space to the market during the next three years, much of it in downtown San Jose. In fact, San Jose's downtown is expected to double in size during the next five years. However, for Silicon Valley, a market with 30 million square feet of office stock, five million square feet is a significant increase. Although about 66 percent of the new projects are pre-leased, 55 percent (2.8 million square feet) are pre-leased to web firms. The Valley has also seen an increase in sub-leasing activity, which has gained momentum during the last quarter of 2000. With a vacancy rate below one percent, this excess space has been quickly absorbed. However, the combination of continued sublease supply together with 5.2 million square feet of new construction could push overall vacancy rates into the mid to high single digits.

DOT.COM DECLINE

The U.S. venture capital bubble is epic in size. As much venture capital has been raised in the past two years in the U.S. as in the previous 20 years. In 1999, venture capital funds received a record $37 billion, more than 90 percent of which was directed toward Internet-related businesses. In 2000, $69 billion was raised, 83 percent of which was invested in Internet ventures. Of this $69 billion, nearly 40 percent was deposited in Silicon Valley and San Francisco firms and more than 45 percent of venture-backed IPOs

are Bay-Area-based. Accordingly, the implications of a correction will be significant for this region.

Five indicators mark the beginnings of what will be a pervasive dot.com contraction: 1) exorbitant burn-rates; 2) a rising number of failures; 3) escalating M&A activity; 4) fewer venture-backed IPOs; and 5) mounting layoffs. Despite the Internet sector's growing infirmity, a recent survey by Pegasus Research International found that nearly 350 venture-backed start-ups consumed $2.0 billion in the third quarter of 2000, exceeding the $1.7 billion spent in the first quarter. At least one-third of these firms are expected to run out of money before the second quarter of 2001.

Dot.coms are dying daily. More than 450 dot.coms have laid-off employees, cancelled plans for a public offering, or filed for bankruptcy, according to ISI Group. Since January 2000, 198 Internet firms have failed, including heavily funded Pop.com (backed by Steven Spielberg and Ron Howard), Walt Disney's Toysmart, Priceline WebHouse, which ran through $363 million in two years before closing, and Pets.com, the first publicly traded web company to shut down. The Gartner Group predicts that 95 percent of all e-tailers will go out of business. Furthermore, a study by Getzler & Co, found that the recent strict cost-cutting initiatives among Internet firms have not improved their profitability, but in fact have resulted in significantly lower growth rates, evidence that lack of profitability may be structural rather than transitory. Without earnings and with reduced funding prospects, the number of mergers and acquisitions of venture-backed firms has accelerated, rising 130 percent during the first three quarters of 2000, from the same period in 1999, according to WebMergers. Such escalation in M&A activity reflects the erosion of value among Internet firms and points to the wave of consolidation still to come.

In 2000 there were fewer venture-backed IPOs and more IPO withdrawals; an estimated 193 Internet firms went public, while 87 firms withdrew plans to go public compared with 244 IPOs and 20 withdrawals in 1999. The average 58 percent decline in prices for the major Internet indexes has contributed to the sharp drop in third quarter returns for venture capital funds (6.4 percent versus 59.6 percent in the fourth quarter of 1999). While the stock prices of online firms gained an average of 94 percent in the first day of trading in 1999, in 2000 Internet IPOs traded at an average 15.9 percent discount to their offering price. Shares of some companies have fallen so low that NASDAQ sent out 200 delisting warning notices in November 2000, and expects to send out another 200 in December.

More than 270 Internet firms have laid-off 22,267 workers between December 1999 and October 2000, according to Challenger, Gray & Christmas. The rate of layoffs is increasing, from 301 in December 1999 to 2,194 in July to 8,789 in November 2000, a 55 percent increase over the previous month. As the public markets dry up and venture capital firms lose interest in subsidizing continuing losses (without the hope of an IPO), Internet firm layoffs will rise. In a conservative Correction scenario, we estimate that layoffs will increase from the current rate of 2.7 percent per year to a rate of 5.0 percent per year, resulting in the loss of nearly 47,000 jobs in 2001 (Table 1). At least one-third of those jobs are located in the Bay Area. However, venture capital has not only enabled the growth of Internet firms, it has indirectly generated jobs for the companies that support them, including financial, consulting, advertising and legal service firms. A contraction within the venture-backed sector would therefore affect employment in other

industries. Accounting for this multiplier effect, the estimated web-related job loss per year in the Bay Area (in a Correction scenario) is approximately 23,000. In a Deep Correction scenario, the job loss rises to nearly 35,000 in 2001. Even during the boom of the last five years the average increase in overall employment in San Francisco has been less than this potential decline.

Table 1 Scenarios for Internet Company Layoffs

Scenario	*Estimated Dot.Com Employees*	*Lay-off Rate/ Year*	*Estimated Dot.Com Jobs Lost.*	*Percent of Dot.Com Jobs, Bay Area*	*Estimated Dot.Com Jobs Lost, Bay Area*	*Multiplier*	*Estimated Total Jobs Lost, Bay Area*
Current	961,000	2.7%	26,359	33%	8,699	1.5	**13,048**
Correction	961,000	5.0%	46,732	33%	15,422	1.5	**23,132**
Deep Correction	961,000	7.5%	70,098	33%	23,132	1.5	**34,699**

Source: RCG, Bureau of Labor Statistics, CNBC, Challenger, Gray & Christmas

MARKET FORECASTS

To reflect the complex nature of the Bay Area office market and the regional economy in general, we developed three scenarios in which we forecast absorption, vacancy rates and rents for San Francisco and Silicon Valley markets through 2005. These scenarios include: a Current Trends Continue scenario; a Correction scenario; and a Deep Correction scenario. The general results for these three scenarios are summarized in Table 2 below.

Table 2 Three Scenarios for Office Employment

Scenario	*2000E*	*Current Trends Continue 2005*	*Correction 2005*	*Deep Correction 2005*
SF CBD				
Gross Rent	$80.16	$94.90	$56.80	$45.10
Vacancy Rate	2.9%	6.5%	8.1%	9.2%
Net Absorption (SF)	831,000	855,000	414,000	404,000
Silicon Valley				
Gross Rent	$54.25	$63.30	$41.70	$31.70
Vacancy Rate	2.6%	4.8%	8.2%	10.9%
Net Absorption (SF)	1.77mm	1.93mm	1.28mm	1.06mm

One of the key components of our model is an employment forecast. This forecast has three major assumptions. First, we anticipate that under any scenario office employment growth will slow, from its current five-year average annual rate of 3.8 percent in San Francisco and 5.5 percent in Silicon Valley, to reflect company consolidation, efforts to increase efficiency, and plans to limit growth in the Bay Area. Second, we expect a

percentage of finance, insurance and real estate (FIRE) employment to relocate out of the Bay Area, as high rents squeeze already-thin margins. Finally, we subtract from our base increase, our estimate for web-firm layoffs, which varies according to the expected intensity of the compression.

In the Current Trends Continue scenario, Internet firm layoffs level-off at one percent per year (in line with the national average) after 2001, one percent of traditional businesses in San Francisco and two percent in Silicon Valley relocate or otherwise reduce their demand for space, and the economy softens moderately without incidence of recession. In this scenario, base demand continues at a robust pace, with office employment growth averaging approximately 3.5 percent per year for San Francisco and 4.8 percent per year for Silicon Valley, just slightly below the average growth rate during the last five years. New construction averages 1.1 million square feet per year in San Francisco and 1.7 million square feet per year in Silicon Valley, an amount easily absorbed by continued strong new economy demand.

However, based on our careful examination of leasing activity in 1999 and 2000, our survey of off-line firms' response to record market conditions and our analysis of the venture-backed sector in general, we believe that the Correction scenario is most likely, with a 60 percent probability. In this scenario, Internet firm layoffs increase to five percent (of the total dot.com workforce) in 2001 and 2002, before stabilizing at one percent per year in 2003, one-half to one percent of traditional businesses (FIRE) relocate or reduce their use of space, and the economy slows without sparking recession. Under these conditions, base employment growth drops to its 15-year average rate and new supply is moderated by the reduction in demand.

The Deep Correction case represents a downside scenario, (which is becoming increasingly likely), both in terms of Internet sector failure and economic growth. In this scenario venture-backed firm layoffs are more substantial both in size and duration, representing a cumulative loss of 15 percent of total Internet employees and extending through 2003. On the other hand, as rents trend downwards, fewer traditional businesses relocate or encourage growth outside of the Bay Area. Nevertheless, a near-recessionary economic environment together with significant decreases in demand from the Internet and high-tech sectors produces sharply negative employment growth through 2003. Clearly, if a much larger portion of jobs were lost the market would respond more negatively. If half the Internet sector jobs were lost, we would expect to see vacancy rates in the mid teens and rents in the $35 to $40 range in San Francisco.

CONCLUSIONS

The Bay Area office market, under any set of conditions, is unique in terms of political climate, demographic make-up, geographic layout, and economic cycles. In the current market environment, several trends have made strategic real estate decisions unusually difficult: rent growth in excess of 50 percent since the fourth quarter of 1999; limited new supply; a shortage of qualified workers; little differentiation between Class A, B and C building rents; a "cluster" economy, in which ideas, talent, technology and capital converge to create pockets of superior productivity and opportunity; and a disconnect between cap rates and rental rates (rents have doubled, while property values have risen less substantially).

If businesses believe that the Current Trends scenario will continue and the Bay Area will remain the epicenter of strong new economy growth, then an alternative to relocation or co-location (satellite offices) may be to purchase space to accommodate expansion. In such a 'hub' scenario, purchasing space may, in fact, be an opportunistic investment. If we assume that $80 downtown San Francisco rents are sustainable, the current implied cap rate is in the 10 to 15 percent range, versus average historical yields of seven to eight percent. Even if rents decline to $55 per square foot as in our Correction scenario, current values are not excessive.

We believe, however, that the present market is an aberration and a Correction scenario has already begun. With such a scenario in mind, tenant strategies to manage growth might include the following: postpone signing new leases for 12 months; if renewing, sign short-term leases; consider short-term subleases to accommodate growth, particularly for non-core functions or, alternatively, sublet excess space to credit tenants for a profit; propose leases with built-in options in which rent more closely follows the market -- adjustable rate rents.

Development in the current environment requires a careful forecast of rent levels three to four years in the future when the project is complete. The best scenario for developers is to pre-lease to a credit tenant. Build-to-suit projects for, and leases to, non-credit high-tech tenants are highly risky, even with a letter of credit, considering the uncertainty, and the clear tendency toward failure within the Internet sector. In other words, speculative buildings are particularly risky, given the potential for steep rent declines and negative absorption in a recession scenario.

For investors, the prevailing set of real estate conditions may offer opportunities. Values have risen much less than rents, creating a situation in which yields on current in-place rents are very attractive. If rents were to hold at present levels and roll, yields would be extraordinary. However, in a market in which rents have risen so dramatically, analyzing values using cap rates is not particularly meaningful. Capping an existing rent roll when market rents are two to three times existing rents understates value. Similarly, capping a newly leased building at current high rents, which may not be sustainable, would overstate value. The greatest risk lies in the area south of Market Street in San Francisco, a section in which rents have historically been at levels $5 to $15 below those north of Market Street (NOMA). The current symmetry between the two submarkets in terms of rent level is temporary, the result of excessive and erratic demand from heavily funded start-ups. "Functional will replace fashionable" and some second- and third-tier south of Market Street (overflow) space may be un-leasable (or leased at one-third of its peak level) under a Correction or Deep Correction scenario.

Regardless of the direction of job growth and the depth of the impact of an Internet correction, the Bay Area and its unique combination of an elite workforce and cutting-edge ideas will continue to command a premium over other markets. Even in a Deep Correction scenario, rents in San Francisco and in many Silicon Valley submarkets do not drop to the low levels of the early 1990s. Only in a deep recession, in which web-firm layoffs rise to 50 percent of the sector's workforce, do rents fall below the $40 level in San Francisco and below $30 per square foot in Silicon Valley.

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