

2014 GLOBAL TECHNOLOGY LEADERS SUMMIT  
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# TECHNOLOGY LEADERS FORECAST SURVEY 2014

Developed by DLA Piper and PitchBook

# EXECUTIVE SUMMARY

## Tech Leaders Burst Bubble Talk: Execs See No Signs of Irrational Exuberance, Just Steady Growth Ahead

With a thriving tech economy, ballooning valuations and an IPO market humming at a level unseen since the dot-com boom of the late 1990s, headlines have lately, inevitably been raising the specter of another tech bubble — and asking whether a corresponding collapse is at hand. The answer, according to technology leaders, is a resounding no.

That's the conclusion from the fourth annual Technology Leaders Forecast Survey, a poll of more than 200 technology executives and investors developed by DLA Piper, the global business law firm, and PitchBook, a research firm for private equity and venture capital.

After years of uncertainty, technology leaders see an economy that's found its footing and a tech industry that's primed for sustainable expansion. Refuting concerns about a new bubble, more than three-quarters of technology executives say the US economy at large will experience at least moderate growth over the next 12 months. Technology executives are even more bullish regarding their own companies, with over a quarter of executives expecting significant sales growth and almost 90 percent expecting at least moderate growth. Expectations around employment growth are a bit more subdued, with 13 percent of executives expecting significant growth and 64 percent expecting at least moderate growth.

That positive attitude carried over to their analysis of the domestic IPO market, where almost 70 percent expect to see at least moderate growth, which stands in sharp contrast to the prevailing, almost bearish sentiment of just two years ago, when 75 percent of executives told us they didn't expect the IPO market would ever return to the levels of the late 1990s and early 2000s. Further, coming off the robust IPO market of the past year — capped off with the recent Alibaba offering — an expectation of moderate growth shows considerable confidence. Improved underlying market and economic conditions form the most popular rationale for the continued strength of the IPO market, followed by increasing investor demand and higher valuations.

The idea that growth in the tech sector has settled into a rational, steady pace stands in stark contrast to the worrisome rhetoric that's accompanied the Nasdaq's climb back above 4,000 — for the first time since the 2000 bubble burst — and the yawning price-to-earnings ratios associated with some of Silicon Valley's more ballyhooed IPOs. But the tech leaders who responded to our survey reject the idea that the market has become overheated.

Industry leaders are far less sanguine about Silicon Valley's prospects for maintaining its place as the global leader in tech development and innovation. They cite talent shortages and talent flight as the biggest threat to the Valley's continued dominance, with government regulation and the rise of other global and domestic tech centers also representing significant threats. And this year we note, for the first time, that tech executives now consider China a threat in the technology innovation realm. Respondents to our survey now clearly believe the world's largest nation, and second-largest economy, will become an even greater force to be reckoned with as it evolves from a largely manufacturing-oriented contributor to the technology economy into an innovator as well. Just two years ago only 10 percent of technology leaders expected China would be a major contributor to technology development and innovation in the near term. But in this year's survey, two-thirds say they believe China will be a source of major tech innovation within the next five to 10 years, and 65 percent believe that the Chinese tech sector will be a serious competitor in the global tech market by the end of the next decade.

Data privacy and security breaches are seen as the greatest threats to individual tech companies. Executives' anxieties aren't limited to the incursions of individual bad actors. A majority of those surveyed believe that the most significant future breaches will come at the hands of state-sponsored agencies.

## Key Takeaways:

### **The Economy: Steady as She Goes**

Leaders are nearly unanimous in their appraisal of the not-too-hot, not-too-cold American economy, with 83 percent anticipating at least continued moderate growth over the next 12 months. Only five percent expect the United States to experience significant economic growth in the next year, with a similar percentage believing the pace of growth will be negative.

### **Sales and Hiring: Pockets of Optimism**

Respondents are far more bullish about their own business prospects, with more than a quarter reporting that they expect significant growth in the next year. Another 69 percent believe sales will grow at a moderate pace. Combining the answers to those questions, a full 89 percent of respondents report a positive outlook — a 12 percent jump from 2012 and an 18 percent jump from 2010. Two-thirds of respondents also anticipate increasing their payrolls in the coming year.

### **China Awakens**

China's innovation economy is emerging, according to our respondents, and it's developing much sooner than they'd anticipated. Sixty-seven percent believe it'll be a source of major innovation in the short term, a precipitous jump from 2012, when nine out of 10 leaders didn't see the country as a serious contributor to global technology development.

### **The Enduring Challenge: Talent**

Attracting and retaining talent continues to be a major concern. More than a quarter of technology executives believe that the talent shortage poses a serious threat to Silicon Valley's stature as the global epicenter of technology innovation, and a further 44 percent are moderately concerned about talent shortages and flight.

### **The Looming Threat: Data Security**

Technology leaders are worried about how to protect their intellectual property and proprietary data, and they're concerned that they might have to protect their IP from forces more imposing than black-hat hackers. Fifty-three percent believe that state-sponsored organizations will pose a primary threat to information security in 2015.

### **Long on Mobile, Short on Social**

Executives eye mobile, big data and cloud computing as the three most promising sectors of the technology economy. Tech leaders are less bullish on social media. The same goes for high-profile digital currencies like Bitcoin. Fewer than 20 percent of respondents find either sector to be a promising place for investment and entrepreneurship.

## CAUTIOUS OPTIMISM REIGNS

While others fret about a potentially inflated tech sector, tech leaders see a far different path ahead. They feel good about the US economy and about their own businesses, but their confidence is not boundless. Rather, they project a sense of calm certainty that moderate expansion lies ahead, and they show no signs of exhibiting the unfounded enthusiasm that bubbles are made of.

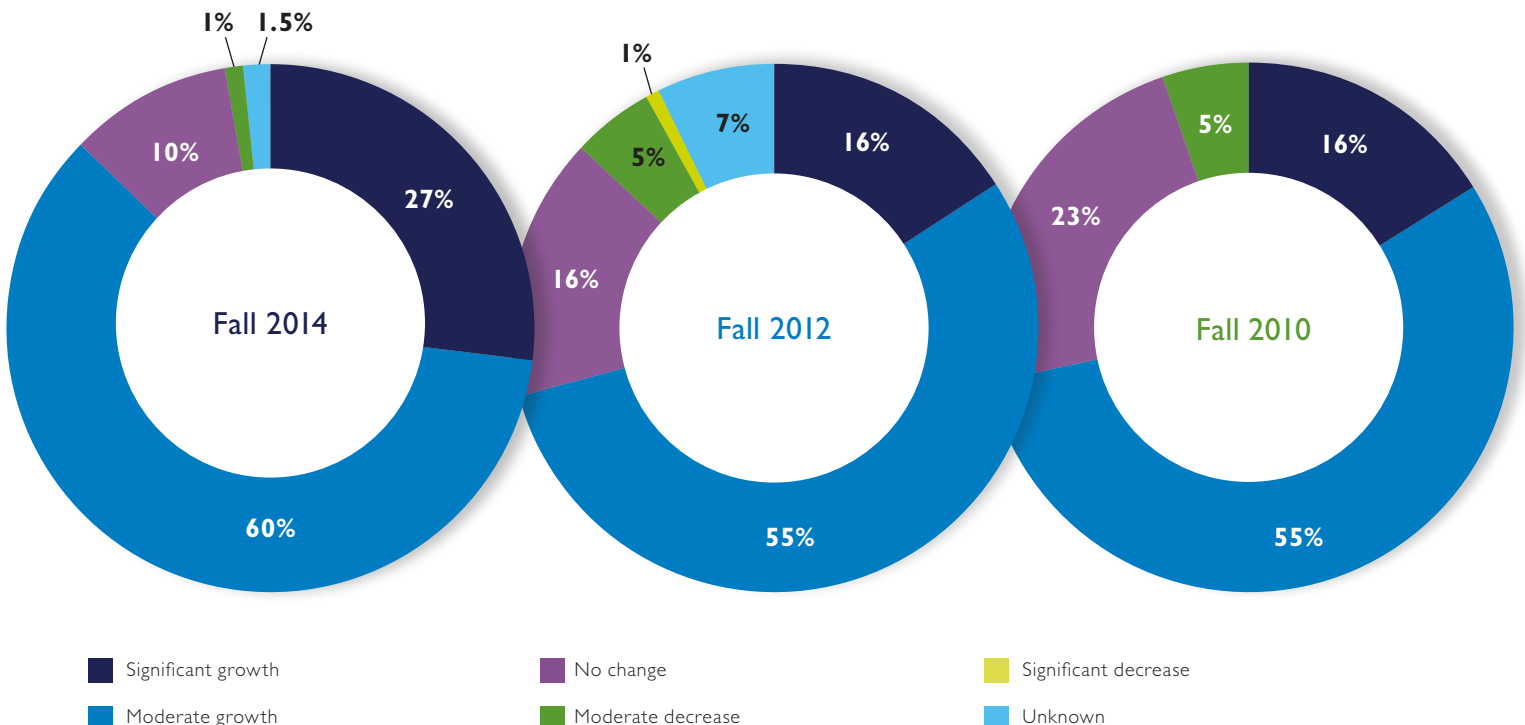
### What are your expectations for the growth of the US economy over the next 12 months?

Significant growth	5%
<b>Moderate growth</b>	<b>78%</b>
No change	11%
Moderate decrease	4%
Significant decrease	1%
Unknown	1%

A gradually increasing guarded optimism has been par for the course from tech leaders since the economy hit bottom in 2009. The trend continues in this year's survey. In 2010, 69 percent said they believed that the worst was behind us. In 2012, 85 percent of respondents predicted "weak but sustained growth." Now, although nobody's reaching for the champagne, tech leaders are more comfortable using the sanguine description of "moderate growth."

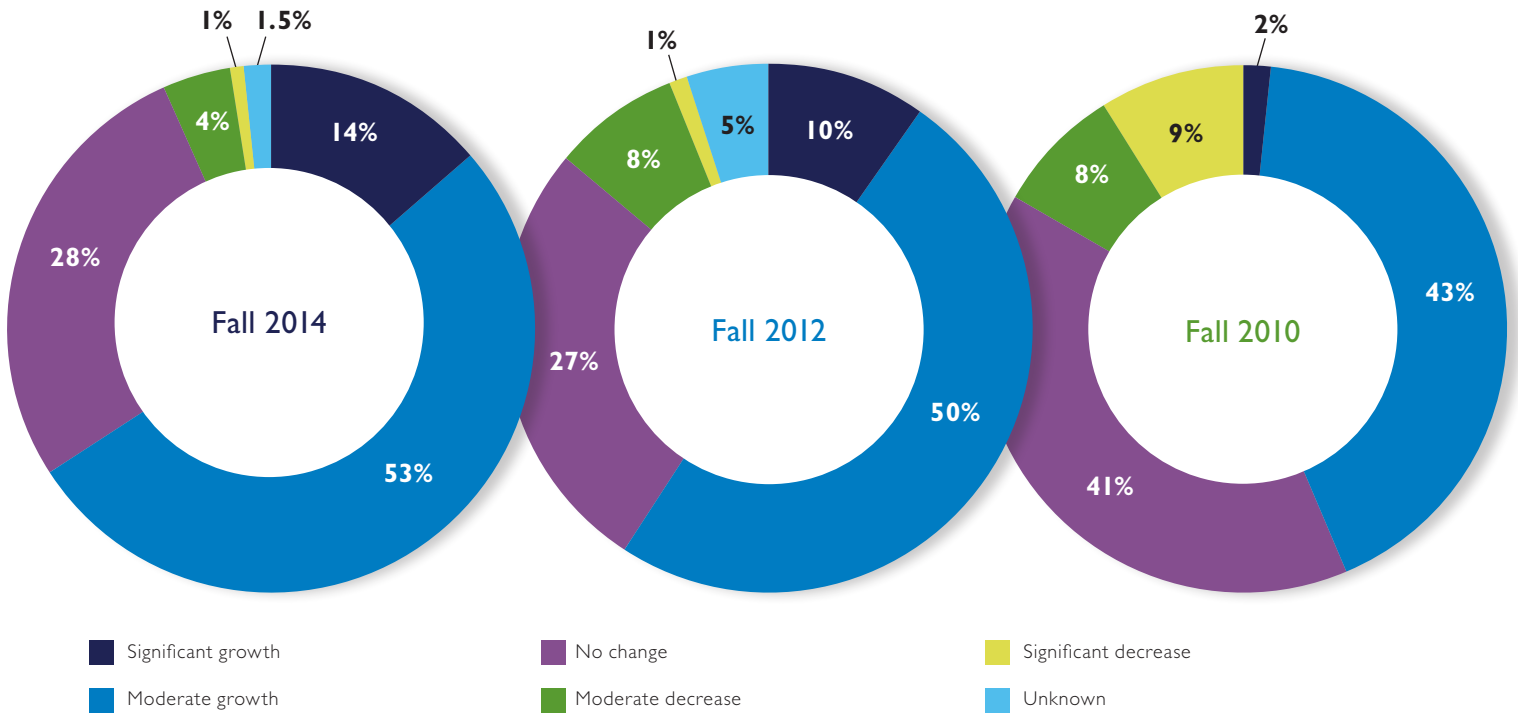
### What are your expectations for your company's sales growth over the next 12 months?

But as they temper expectations for the broader economy, respondents express far more enthusiasm for their own business prospects. Eighty-seven percent foresee increased sales on the horizon for their companies, a slight increase from the 82 percent who reported the same in 2012. And nearly a third, 27 percent, expect significant sales growth — while less than 1 percent expect any decrease in sales.



## What are your expectations for your company's employment growth over the next 12 months?

Respondents anticipate staffing up to accommodate the growth. Their expectations for hiring are slightly stronger than they were in 2012, with 67 percent reporting plans for increased hiring in 2014. An economic climate in which two out of three leaders expect to hire would have been hard to imagine during the economic nadir of 2010, when three out of five executives said they'd either slash payroll or try to hold steady. Now, the challenge is finding the talent.



## What are your expectations for the US IPO market over the next 12 months?

Robust market for tech IPOs	15%
Moderate market for tech IPOs	59%
Flat market for tech IPOs	22%
Depressed market for tech IPOs	2%
Unknown	3%

Controlled optimism also extends to the IPO market, where executives see little evidence of the irrational exuberance that has many outside the Valley pondering another bubble. Still, it's significant that a full 74 percent expect at least moderate growth in the IPO market. Given that last year was a record year for US public offerings — the best since the late 1990s — a broad expectation for continued expansion indicates supreme confidence in both the tech economy and the broader markets.

## Rank the biggest drivers for increased IPO activity in 2014:



## CHINA RISING

In a marked shift, tech leaders have begun singing a new tune about China's technology sector. Tech leaders no longer see the world's most populous nation as a mere manufacturing base. Strong majorities now characterize China as a market primed to drum up disruptive technologies in its own right.

### To what extent do you “agree” or “disagree” with the following statements regarding China’s impact on the global technology market?

	Strongly agree	Agree	Somewhat disagree	Strongly disagree
China will be a source of major innovation in specific tech sectors (e.g., consumer electronics, software) within the next five to 10 years	26%	41%	26%	7%
	<b>67%</b>			
China will be a disruptive force in the global technology market within the next five to 10 years	28%	48%	21%	3%
	<b>76%</b>			
China's tech sector will be increasingly competitive with Silicon Valley and the US tech sector within five to 10 years	20%	45%	30%	5%
	<b>65%</b>			

Perhaps the best illustration of the fight that American technologists believe is in store comes in response to the question of head-to-head competition with Silicon Valley. A full 65 percent see China as increasingly competitive with the American tech sector inside of 10 years.

For many years, US tech executives viewed China as an economic powerhouse, but one that brought more muscle than ideas to the technology race. But the Chinese technology sector has matured rapidly, and 2012 apparently feels like ancient history to many respondents. Whereas just two years ago few tech leaders thought of China as an innovator, today a majority believe the Asian giant could rival Silicon Valley as a major innovation center in as little as five to 10 years.

### China will be a source of major technology innovation in the next five to 10 years China?



### What are the biggest threats to the growth of the technology sector in China?

Global economic conditions	40%
Competition from the US	31%
Concerns regarding intellectual property protection	77%
Concerns regarding industrial espionage	59%
Technical proficiency of local talent	31%
Free flow of capital	43%

But if leaders are impressed by the speed with which the Chinese technology sector has evolved, they also remain wary of a regulatory regime that may not have had time to catch up. In a moment of striking humility, technology leaders say China's ability to protect individual intellectual property poses a far greater threat to the country's continued ascent than does competition from US technology companies. What other factors are constraints?

## A SHALLOW TALENT POOL

As they look toward the future, Silicon Valley's leaders don't see the talent crunch easing any time soon. The lack of sufficient qualified engineers has received a great deal of attention in recent years, and tech leaders have headed to Washington to advocate for immigration reforms that would make it easier for their firms to acquire visas for foreign developers. The talent crunch is starting to look like a crisis, according to this year's survey, where respondents list talent shortages and talent flight as the primary threat to Silicon Valley's position as the epicenter of global technology.

### What are the leading "threats" to Silicon Valley remaining the global epicenter of technology innovation?

	Significant threat	Moderate threat	Little or no threat	No opinion
Emerging global tech centers in Asia, South America and Europe	18%	48%	31%	2%
	<b>66%</b>			
Emerging tech centers in the US	8%	40%	<b>49%</b>	3%
Access to capital and growing length of exit time for investors	6%	40%	<b>47%</b>	6%
Talent shortages and talent flight	27%	44%	28%	2%
	<b>71%</b>			
Impacts of regulation and government policy	20%	41%	38%	2%
	<b>61%</b>			

### What is the biggest risk to the retention of leading talent at US tech start-ups?

Their desire/inclination to start new companies	<b>23%</b>
Their desire to return to foreign jurisdictions	<b>6%</b>
Poaching by domestic competition	<b>28%</b>
Talent turnover is a natural, inherent business risk	<b>44%</b>

But even as they hope and push for policy reforms that will ease the talent crunch, the tech leaders also acknowledge that the battle to hire and retain top talent is simply part of doing business, especially in the Valley. Forty-three percent said that turnover is a natural part of any business, and a further 23 percent said that their employees' entrepreneurial ambitions to start and join new firms posed the largest risk to retaining their A players.

## HACKERS CREATE ABUNDANT FEARS

Data breaches affecting well-known tech, finance and retail brands have launched information security squarely to the top of Silicon Valley’s mind. Respondents believe the long-term success of their businesses hinges not only on their ability to keep sensitive customer data out of the wrong hands, but to operate under the patchwork scheme of data security requirements. That muddle creates headaches even for firms that haven’t been breached. And for those that have been hacked, it’s not just a public relations disaster; a consumer-data leak creates a legal minefield that can take years to navigate. Respondents are clearly concerned about the prospect of continually safeguarding millions of personal data points. Outside of increased competition, leaders say that data security is the most pressing risk and compliance issue they face.

Which of the following risk and compliance concerns will have the largest impact on your company in the next 12 months?



To what extent do you “agree” or “disagree” with the following statement: State-sponsored organizations interested in accessing intellectual property will be the primary threat to information security in 2015.

Strongly agree	22%	53%
Agree	31%	
Somewhat disagree	34%	
Disagree	14%	

Complicating matters, a majority of tech leaders believe that state-sponsored organizations will be a primary threat to information security in the coming year.

As firms become privy to more and more sensitive consumer data, they’re being forced to build internal security structures that can fend off renegade hackers. At the same time, they need to keep their proprietary technology out of the hands of black-hat organizations backed by foreign governments. And they have to do so in a manner that satisfies the byzantine regulatory requirements of the various jurisdictions in which they operate. It’s an unenviable task, but one that isn’t going away. Tech leaders see cloud computing and big data as two of the top three growth sectors. That means hackers won’t be running out of targets anytime soon.



# DOING BUSINESS IN EUROPE IS ABOUT TO GET HARDER FOR CLOUD COMPANIES

What will be the impact of the recent decisions and regulations regarding data held in European data centers?

They will create a more difficult sales environment for US cloud and software providers	48%
They will spur the growth of EU-based cloud solution providers	31%
They will cause US cloud providers to increase storage of data overseas	34%
They will cause only minor disruption	17%
No opinion	26%

Recent European regulatory changes and US judicial decisions will make it more difficult for American cloud and software providers to sell into that market, according to nearly half of our respondents. More than a third said the recent changes and decisions will also cause cloud providers to increase data storage overseas, while just over 30 percent believe the regulations will spur the growth of European cloud-computing companies.

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## BIG OPPORTUNITIES IN MOBILE, DATA AND THE CLOUD

What sectors of the tech economy are most promising for entrepreneurs and investors?

Cloud computing	52%
Big data	62%
Enterprise software	35%
Social media	16%
Mobile computing	68%
Cleantech	28%
Electronic currencies	18%

Six years after Apple introduced the iPhone, launching a smartphone revolution and setting off a mobile-computing arms race, tech leaders still see mobile as the most promising sector for entrepreneurs and investors. And despite the constant drumbeat of worrisome news about data security, or perhaps because of it, the executives also rank big data and cloud computing as highly promising sectors. Meanwhile, the executives appear to see social media as played out, at least for startups.

## CORPORATE VCS ARE CHANGING THE VC LANDSCAPE

A large majority of tech executives believe corporate venture-capital investors will compete for important deals with traditional venture funds, providing a viable alternative for founders that could help them demand better terms. The executives also widely believe that corporate investors bring something to the table that VC funds do not: operational expertise. And only about 40 percent say corporate VCs take themselves out of the game by demanding unreasonable terms.

To what extent do you “agree” or “disagree” with the following statements regarding the impact of corporate venture capital investors on the global technology market?

	Strongly agree	Agree	Somewhat disagree	Strongly disagree
Corporate investors will provide an increasingly competitive alternative to traditional venture capital firms	22%	52%	24%	2%
	<b>74%</b>			
Corporate investors provide access to expertise which is not generally available from traditional financial investors	19%	52%	27%	2%
	<b>71%</b>			
Corporate investors demand terms which are inconsistent with the traditional venture capital model, thus making them less desirable investors	5%	36%	47%	12%
			<b>59%</b>	

## AS CAPITAL POURS IN, THE DISRUPTION BAR GETS HIGHER

Two years ago, tech executives ranked access to capital as the biggest challenge facing startups. Today, funding is pouring into the Valley from new players, including corporate venture funds and foreign investors, and traditional VCs and angel investors as the cost of launching a new startup has declined. That has shifted the executives' perspectives, at least slightly. This year they rank the need to demonstrate a disruptive business model as the biggest challenge, with access to capital a very close second and access to talent a close third. The money is out there, they seem to be saying, and it's up to the entrepreneurs to prove they deserve it.

What are the biggest challenges facing technology start-ups in today's market?



## Methodology

In late September and early October 2014, the international law firm DLA Piper distributed its Technology Leaders Forecast Survey via email to a group of thousands of senior executives and advisers in the technology industry, including CEOs, CFOs and other company officers at technology companies, as well as to venture capitalists, entrepreneurs and consultants.

The 2014 survey is the fifth such technology market analysis developed by DLA Piper, with the last survey issued in the fall of 2012 and the inaugural survey issued just prior to the recession in October 2008.

Respondents were asked a series of questions and provided multiple possible responses; they were also given the opportunity to elaborate on their answers with direct commentary.

Due to rounding, all percentages used in some questions may not add up to 100 percent. Percentages in some questions may not add up to 100 percent because respondents were asked to check all answers that applied. A few minor edits were made to verbatim responses to correct spelling mistakes, verb tense and punctuation.