

The Rise of Fintech

New York's Opportunity
for Tech Leadership



Introduction

New York has a unique opportunity to profit from a technology revolution that plays directly to its strength as a world financial center. Since 2008, global investment in financial services technology ("fintech") ventures has tripled to nearly \$3 billion. The dramatic changes underway in financial services, driven by new digital technology, regulations, consumer behavior and the need to reduce costs, mean this trend is set to continue, with global investment on track to grow to up to \$8 billion by 2018 (see Figure 1).

Open source software and cloud technology have lowered barriers to entry for new technology startups, contributing to the proliferation of new fintech ventures. At the same time, financial institutions are under increasing pressure to cut costs and exploit the growth opportunities offered by the digital revolution at a time when the legacy of the financial crisis and tougher capital requirements has made it more difficult to do so in-house. Rather like the pharmaceutical industry, more and more innovation and new product development is being done by small, independent firms.

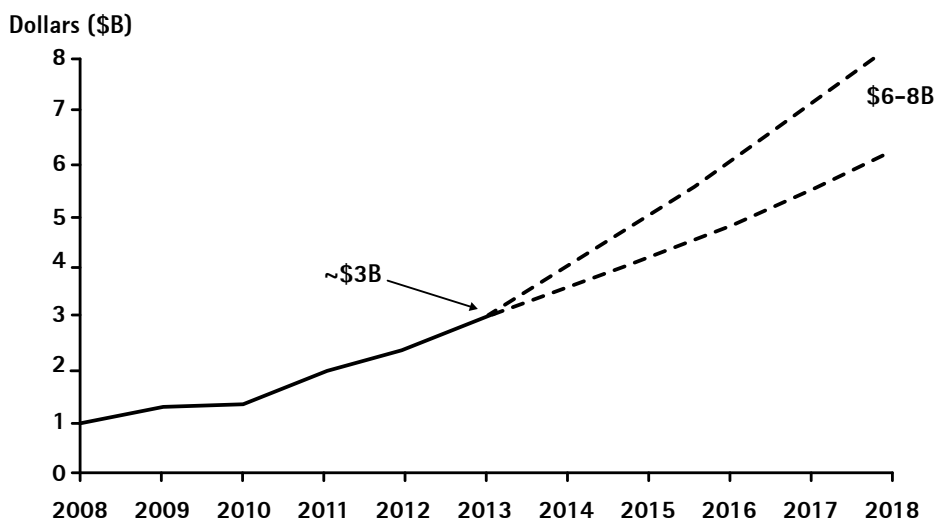
The opportunity for New York, with its huge financial center, lies in the fact that banks, capital markets firms and insurers have increasingly opened their eyes to the benefits of having a fintech cluster close to home. It allows entrepreneurs and financial institutions to work closely together to ensure that innovations are tailored to the specific needs of the financial industry and its customers.

The FinTech Innovation Lab, now in its fourth year, shows how effective this relationship can be. An elite mentoring program designed to help the brightest fintech entrepreneurs engage with the city's financial services leaders, the Lab has had significant success in fostering new innovations for the financial industry. In fact, since participating in the program, the Lab's 18 previous alumni have raised \$76 million and one company was acquired for \$175 million.

New York's fintech sector has grown at twice the rate of Silicon Valley's over the past five years. While Silicon Valley is the biggest fintech cluster in the world, New York ranks second. Silicon Valley's preeminence in the broad technology sector remains unchallenged, but New York has the opportunity to evolve as a complementary center dominant in fintech.

Unlike Silicon Valley, New York offers proximity to a huge potential customer base of financial institutions and a vast existing financial technology workforce, in addition to its burgeoning venture ecosystem. This makes the city a natural contender to be a world-leading fintech capital, bringing new jobs and capital to New York and helping to secure the long-term competitiveness of the US financial services industry.

Figure 1. Global fintech investment will more than double by 2018



Source: Accenture, Partnership Fund analysis of CB Insights data

Financial institutions are realizing the benefits of having a fintech cluster close to home.



Demand for fintech is booming

Over the past three years, global investment in fintech companies has grown four times faster than venture investing overall. Since 2008, deal flow has increased at a compound annual growth rate of 27 percent and the value of deals has increased by 26 percent. The first quarter of 2014 was the most active quarter yet for global fintech investment, with \$1.7 billion invested and 167 deals closed.

The United States attracts the lion's share of fintech investment – it received 83 percent of global investment in 2013 (see Figure 2). In the first quarter of 2014, nearly \$1 billion (\$946 million) was invested in US fintech ventures, a new quarterly record, and 109 deals closed.

Banks, capital markets firms and insurers are key drivers of this demand. The financial services industry is more focused on technology innovation than at any other point in its history; and it has serious buying power. Banking and securities institutions will spend \$486 billion on information technology overall in 2014, according to Gartner.¹ That is more than any other sector.

"The number of fintech companies serving financial enterprises will continue to grow dramatically due to the capacity of the cloud, Web 2.0 and mobile to improve the way institutions do business," said James D. Robinson III, co-founder and general partner of RRE Ventures, a supporter of New York's FinTech Innovation Lab.

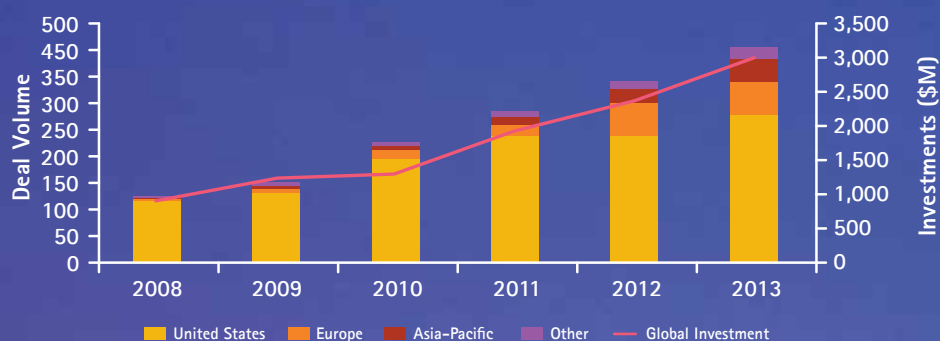
Mobile, analytics, cloud, compliance and security are driving demand

These new technologies represent significant entrepreneurial opportunities. Mobile technology is transforming financial services and has huge headroom for growth – particularly in banking and payments. CEB TowerGroup predicts bank investment in mobile banking technologies will grow at an annualized rate of 13.4 percent through 2017 (see Figure 3).² New frontiers for mobile development are also emerging in personal financial management, biometric security, peer-to-peer and social payments, location-based commerce and other areas.

Meanwhile, a new generation of Big Data and analytics tools that can sift through unstructured data from customer service calls, email exchanges and social media enable institutions to improve customer services. Cloud-based offerings can transform the financial services experience for consumers by enabling new, low-cost application innovations. Private clouds may soon be integral to banks' core IT infrastructure, allowing them to control sensitive customer data, while dramatically cutting costs. Some researchers believe that within just a few years' time most banks will be processing the bulk of their transactions in the cloud.

Cybersecurity is another rapidly growing area of fintech, as consumer adoption of Internet and mobile technology creates sophisticated new threats. At the same time, post-crisis regulations have created a complex compliance burden for financial services companies, which can be solved in large part by new technologies.

Figure 2. Global Fintech Financing Activity



Source: Accenture analysis of CB Insights data

"The financial crisis was extremely important in ushering in the current wave of fintech innovation," said Matt Harris, managing director of Bain Capital Ventures, another venture capital (VC) participant in the FinTech Innovation Lab. "On the one hand the need for banks to innovate was clear; on the other hand they had far fewer resources to do so themselves."

Many senior bankers are keenly aware that the digital revolution is a threat as well as an opportunity for their industry. They face new competition from digital entrants in the consumer financial space that can establish themselves quickly in new markets.

By partnering with innovative startups, financial services companies can strengthen their competitive position and cut the time needed to develop new products and bring them to market. For instance, collaborations between financial institutions and startups in the FinTech Innovation Lab have helped develop new mobile, cloud, analytic, cybersecurity and regulatory solutions.

For example, cybersecurity start up Centripetal Networks has developed a software and hardware solution that can locate and block cyberattacks in real time anywhere within a

bank's network. Another Lab startup, Digital Reasoning has developed analytics software that can read unstructured files using natural language processing technology to detect employee fraud or ensure compliance with regulatory procedures. And a third such company, True Office, produces video games that financial services firms can use to train staff on regulatory and compliance issues in an engaging way.

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In addition to partnering with startups like these through third-party initiatives, a growing number of financial institutions are establishing their own innovation labs and accelerators. Capital One set up its Digital Innovation Lab several years ago and Bank of America Merrill Lynch and JP Morgan each hold annual technology innovation summits. Perhaps the strongest sign of banks' increasing focus on fintech is the growing number of dedicated VC arms being formed – backed by hundreds of millions of dollars – to fund promising fintech innovations (see sidebar).

Banks are launching fintech VC funds of their own

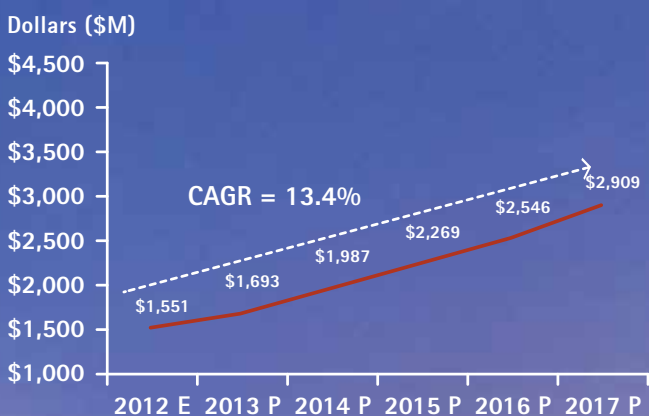
The VC industry has traditionally been the main source of funding for early-stage fintech companies, but now financial institutions are allocating hundreds of millions of dollars to invest in these companies themselves. For Cristobal Conde, former CEO of SunGard and executive-in-residence of the FinTech Innovation Lab, this helps fintech companies leapfrog one of the biggest barriers to entry associated with working with banks. "Bank VCs expose bankers to new innovations that typically get held up by the procurement office, which is more focused on reducing and rationalizing IT vendor relationships."

The number of bank-sponsored fintech VC funds is still small compared to traditional firms, but it has grown quickly in recent years. BBVA and Sberbank each launched \$100 million funds to invest in fintech startups in recent years, and Capital One launched a new fintech VC fund this year.

Jaidev Shergill, Capital One's head of digital venture investing and startup business development, thinks this is just the beginning. "Financial services-sponsored VC will continue to grow as institutions recognize that the go-it-alone approach of in-house development isn't enough," he said.

Graduates of the FinTech Innovation Lab have already benefitted from the trend. In January, Lab participant Enigma, which makes vast public data accessible through one interface, received funding from American Express, which has made more than 15 investments since its fintech fund launched in 2011 and is now emphasizing startups that focus on financial inclusion.

Figure 3. Mobile banking investment is taking off



Source: CEB TowerGroup

New York is the fastest growing fintech cluster in the US

Fintech companies have thrived in New York for decades. In 1981, Michael Bloomberg launched Bloomberg LP, which revolutionized the way securities data was stored and consumed and now employs more than 15,000 people in 192 countries. He was one of the first to realize that financial institutions would pay for a high-quality product from a startup if they were offered a truly unique technology solution. During the 1990s and 2000s, companies such as Creditex and Liquidnet followed Bloomberg's path.

Today, New York is home to an entirely new generation of fintech companies writing a new chapter in the city's history as a technology hub. LearnVest, the personal finance platform founded by an ex-Morgan Stanley trader in 2009 provides customized financial planning and personal financial management tools online and via mobile. It added \$28 million of VC funding in April 2014. Kickstarter, the largest crowd funding platform for creative projects, has raised \$1.1 billion from 6.4 million participants supporting 63,000 projects. It has received \$10 million in VC funding.

OnDeck, a small business peer-to-peer lending platform that analyzes social media and other unconventional data-sources to make credit decisions, has advanced more than \$1 billion in loans. It recently secured \$77 million in VC financing and reached an agreement with BBVA through which the bank will refer small-business customers to OnDeck when they do not qualify for its traditional loans.

Lenddo, a FinTech Innovation Lab alum, also leverages social media to enable borrowing. It provides loans of up to one month's salary to people in emerging markets based on the strength of their social contacts, and has acquired more than 350,000 members globally.

Fintech startups in New York are realizing big ideas on a small budget.

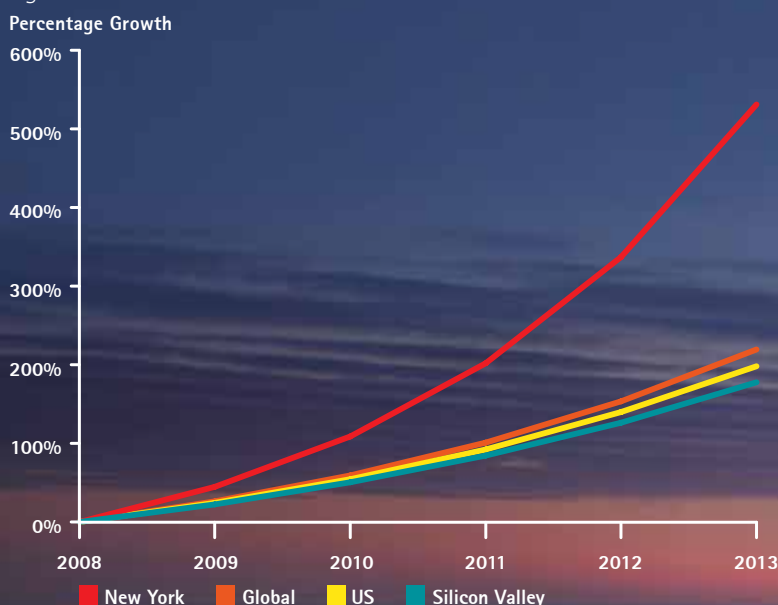
Using open source and on-demand (or "pay-by-the-drink") software solutions, those working on new fintech applications can do so for a fraction of what it used to cost. They no longer need heavy VC support to develop a proof of concept; often small rounds or angel investment will do. The proliferation of shared computing and office facilities in New York has lowered costs even further.

The result is that there are more companies exploring a greater variety of fintech applications in New York than ever before. "The city has become an incredible hot bed of innovation that is unprecedented in my career," said Cristobal Conde, former CEO of SunGard and executive-in-residence of the FinTech Innovation Lab (see sidebar).

New York has become the fastest growing market for fintech investment in the US and second in the world after Silicon Valley for annual deal flow and investment. New York saw 17 new fintech deals in the first quarter of 2014, its most ever, and total investments of \$151.4 million – the third-highest amount on record.

It is still some way behind Silicon Valley, which saw more than \$376 million of total investment in the same period, but the gap is narrowing. New York's fintech cluster has grown twice as fast as Silicon Valley's over the last five years – deal volume grew 31 percent annually, compared to Silicon Valley's 13 percent, and investment grew 45 percent annually, compared to Silicon Valley's 23 percent – and could double in size over the next five years (see Figures 4-6). To put it in context, Boston, which typically ranks second or third in the nation as a technology center, saw less than one-third as many fintech deals or dollars as New York between 2011 and the first quarter of 2014.

Figure 4. Five-Year Fintech Investment Growth Normalized



Source: Accenture, Partnership Fund analysis of CB Insights data

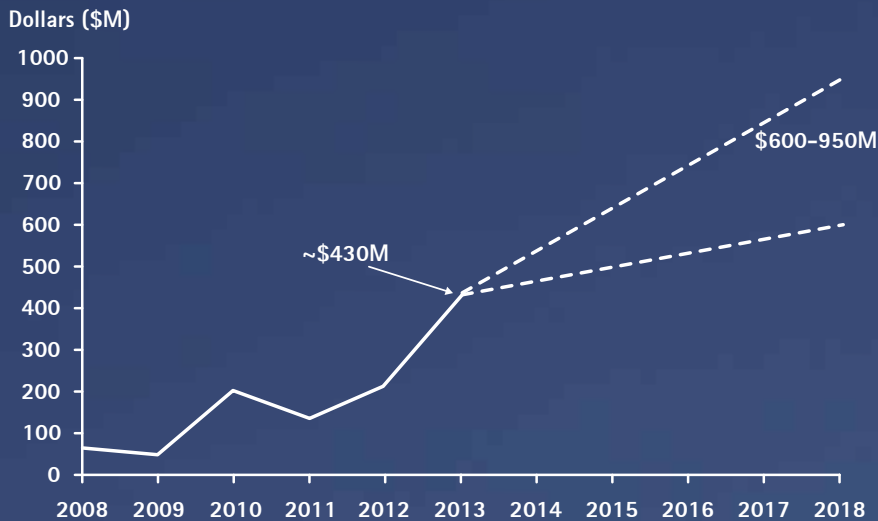
Five-Year Compound Annual Growth Rate, Investments and Deals

	New York	Global	US	Silicon Valley
Deal Volume	31%	27%	19%	13%
Investments (\$M)	45%	26%	24%	23%

"Technology is critical to New York's place as a 21st century city."

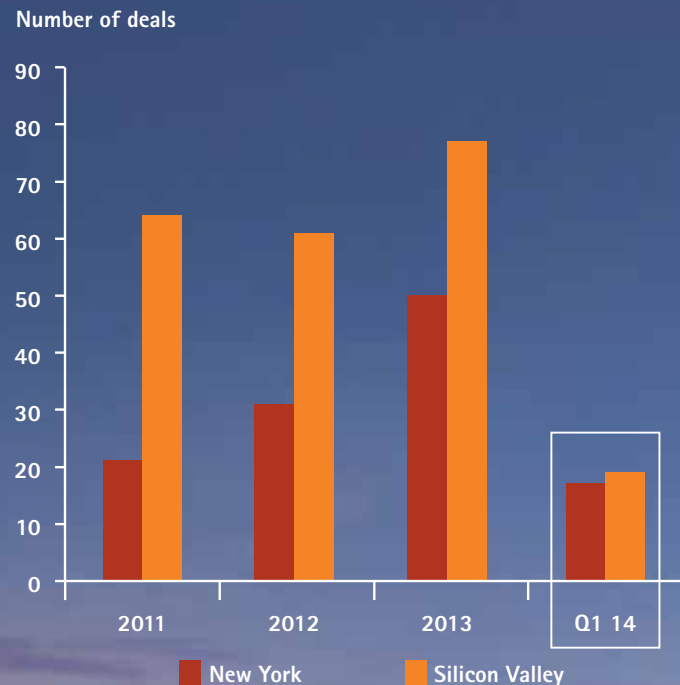
New York City Mayor Bill de Blasio

Figure 5. Forecasted Fintech Investment, New York



Source: Accenture, Partnership Fund analysis of CB Insights data

Figure 6. Recent Fintech Deal Volume



Source: Accenture, Partnership Fund analysis of CB Insights data

The city is a formidable technology center

High tech employment in New York has been on a tear. Since 2006, the city has seen 21 percent growth or nearly twice the national average.³ In March 2014, there was more demand for tech talent in New York than anywhere else in the country including Silicon Valley.⁴

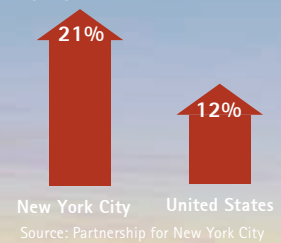
New York City boasts 150,000 tech jobs, and the city's leaders, conscious of the tech sector's potential to create more jobs and wealth, have been encouraging the emergence of skilled IT graduates.

Former Mayor Michael Bloomberg launched Applied Sciences NYC in 2010, a program to fund and create world-class applied sciences and engineering campuses in New York. The new \$2 billion engineering and computer science campus being built on the city's Roosevelt Island and a new NYU Center for Urban Science and Progress in Brooklyn are two results of the program.

New York City Mayor Bill de Blasio, elected in 2013, launched "Tech Talent Pipeline," a program with a \$10 million budget that comes from a mix of city, state, federal, philanthropic and private funding to prepare New York's students for careers in the tech sector.

In announcing the project in May 2014, de Blasio said, "Technology is critical to New York's place as a 21st century city. Not just because tech brings a lot of investment and jobs – but because successful cities have always thrived on the disruption new technology brings."

Tech Employment Growth 2006–2012



Facing down obstacles

New York has made much progress in establishing itself as a leading fintech center, but it has yet to give birth to a new generation fintech company the size of Bloomberg LP that could solidify its standing.

The city also needs to raise awareness of the fintech successes that it has fostered in recent years, says Habib Kairouz, managing partner at Rho Capital Partners and a Fintech Innovation Lab supporter. He cites companies like Multex, bought by Thomson Reuters in 2003, and content management firm Intralinks, which went public in 2010 and now has a market cap of over \$500 million. "Success breeds success," he said. "These are startups that were born in New York and that have been turned into big, successful businesses."

The city's relatively low fintech profile affects its ability to attract influential capital. New York's fintech deal-volume is skyrocketing, but Silicon Valley receives by far the biggest share of fintech dollars. This is in part due to Silicon Valley's culture, where powerful VCs are famous for urging startup CEOs to relocate to the valley. Proximity to the valley's VCs is valuable but, for many fintech companies, proximity to financial institutions is crucial.

New York's relatively low fintech profile is limiting its ability to attract influential capital.

Cristobal Conde believes more Silicon Valley VCs should recognize the opportunity in New York's fintech ecosystem and consider supporting it by opening offices there themselves. "Some have already done this, but not enough," he said. "It would be a great outcome if New York's fintech companies could raise money from more VCs without getting on a plane."

Perhaps the greatest obstacle facing New York's fintech companies is the one that banks have sought to rectify the most in recent years. Historically, financial institutions have been difficult customers for startups to serve because of their compliance, security and legacy infrastructure needs. Long sales cycles and complicated procurement processes are hard for small firms to navigate. "The biggest challenge for B2B fintech companies is that the sales cycle for banks is much longer than in other sectors," said Jaidev Shergill, Capital One's head of digital venture investing, another FinTech Innovation Lab supporter. "They need to have the capital firepower to survive that."

The FinTech Innovation Lab

New York's FinTech Innovation Lab has proven an effective way of addressing the long sales cycle. Past experience shows it can reduce the typical 18-month sales cycle to 12 weeks, by helping startups turn their innovations into the products and services that participating banks need the most. "It means that both client and supplier are operating on the same wavelength. That's a big plus for these fintech companies and for the financial institutions, who can have a hand in the initiatives that could solve their problems," said James D. Robinson III, of RRE Ventures.

Now in its fourth year, the Lab is a 12-week program co-founded by Accenture and the Partnership Fund for New York City that helps early- and growth-stage fintech companies accelerate product and business development by gaining exposure to top bank and venture capital executives. In that time, it has given participating companies a fast track to access bank customers and win business, secure financing and create jobs.

In April 2014, Red Hat announced its \$175 million purchase of Inktank, a graduate of the 2013 Lab that provides open source storage systems. In May, classmate Dashlane, a password manager and digital wallet company, announced a \$22 million Series-B funding round.

"As a consumer tech company, we had a limited understanding of the consumer issues top of mind to large financial institutions," said Dashlane CEO Emmanuel Schalit. "The Lab enabled us to have an open dialogue about those issues, about how our technology could help, and about how to overcome hurdles working with large banks." In total, the first 18 Lab alumni have raised more than \$76 million in venture financing since participating in the Lab.

The Lab's success over the last four years, and the growing maturity of New York's fintech community, has created a virtuous circle. Companies with more developed business ideas, sometimes already tested in other industries, such as national security, have applied to the program, and graduates of the Lab have come back to advise new participants and update bank and venture capital firms on their progress.

It has also created a constant pipeline of innovation for financial institutions to tap at a time when the lightening pace of technology adoption makes this critical. With the FinTech Innovation Lab London approaching its third year, and the FinTech Innovation Lab Asia-Pacific debuting in Hong Kong this year, that pipeline is only getting stronger.

The FinTech Innovation Lab has helped entrepreneurs reduce the typical 18-month fintech sales-cycle to 12 weeks.



Conclusion

The pace of innovation and the depth of demand means that fintech has a strong future. In the US alone, investment could reach \$4.7 billion annually by 2018 (see Figure 7) – with potentially nearly double the rate of deals done today. New York has every chance of being the prime beneficiary.

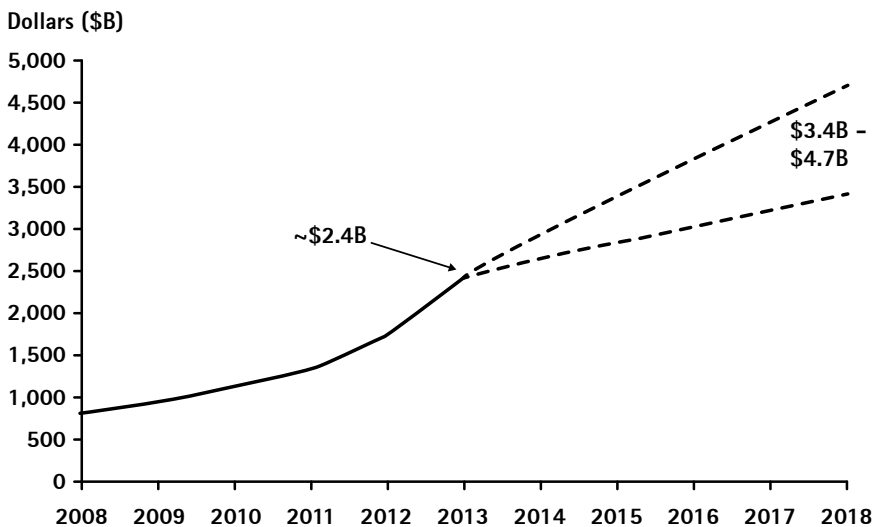
The city has unique advantages in fintech to lead the world as a technology center. New York is already the fastest growing fintech cluster in the US, with a rapidly growing ecosystem comprised of startups, capital, talent, educational resources and fintech accelerators, like the FinTech Innovation Lab.

To realize its full potential, New York's fintech supporters must raise awareness of its advantages and successes. It must build upon its existing momentum to create new champions by capturing the attention not only of leading financial institutions but of entrepreneurs and venture capitalists from all regions.

"Fintech companies want to be where big clients are," said Robinson. "That is what will support the development of New York's tech sector in the future. The city has all the ingredients it needs to be the lead horse in this evolution." It may well have an opportunity to win the race.

US fintech investment could reach \$4.7 billion annually by 2018, and New York has every chance of being the prime beneficiary.

Figure 7. Forecasted Fintech Investment, United States



Source: Accenture, Partnership Fund analysis of CB Insights data



Methodology

The report is based on Accenture and The Partnership Fund for New York City's analysis of fintech investment—data from CB Insights, a global venture finance—data and analytics firm. The analysis included global financing activity from venture capital and private equity firms, corporations and corporate venture—capital divisions, hedge funds, accelerators, and government-backed funds from 2008 through the first quarter of 2014. Fintech companies are defined as those that offer technologies for banking and corporate finance, capital markets, financial data analytics, payments and personal financial management. Forecasts were developed to provide the industry and community with a view on the likely trajectory of fintech investment in light of key drivers, and to illustrate its longevity. The objective was not to deliver a pinpoint forecast or provide investment guidance, but to underscore the macro trend of a growing opportunity for entrepreneurs to help financial institutions solve problems they traditionally solved in-house. Through interviews and surveys with venture capitalists and financial services industry experts, we found a common view that robust growth in fintech investment will continue over the next five years primarily driven by demand for technology in five key categories: mobile, cloud, Big Data / analytics, cybersecurity, and regulatory compliance. To forecast, we used a baseline five-year projection of linear growth based on quarterly CB Insights fintech investment and deal-volume data from 2008 to 2013. We then measured statistical correlations between the fintech data and external historic data and forecasts for financial-services industry investment in the above five technology categories to create an adjusted linear forecast from 2014 to 2018. The low-range of the forecast reflects linear growth adjusted downward for historical volatility; the high-range reflects linear growth adjusted upward for historical volatility and the collectively higher rates of investment growth for the five technology categories based on external forecasts by leading global industry and equity analyst researchers.

Endnotes

1 Gartner, 'Forecast: Enterprise IT Spending for the Banking and Securities Market, Worldwide, 2012–2018, 1Q14 Update', April 2014.

2 CEB TowerGroup, Mobile Banking Solutions Technology Analysis, January 2014.

3 NYC Jobs Blueprint, Partnership for New York City, April 1 2014.

4 Wanted Analytics, "Whose Hiring in the Silicon Cities?"

<https://www.wantedanalytics.com/analysis/posts/who-s-hiring-in-the-silicon-cities>, April 8 2014.

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