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Silicon Valley Bank

State of the Markets

**Inside Views on the Health and Productivity
of the Global Innovation Economy**

Third Quarter 2018



**SPECIAL REPORT:
China's Tech Growth Strategy**

State of the Markets: Third Quarter 2018

- 4 Bull Run:** Tech Outswings the Market
- 8 Exit Conditions:** Dual-Tracks Open
- 13 Emerging Sectors:** Tech in the Real World
- 17 Venture in China:** Investment Playbook
- 21 Spotlight on Shenzhen:** Entrepreneurial Success
- 24 Southeast Asia:** Expanding Influence

State of the Markets: Third Quarter 2018

Tech Titans Dominate

Recent headlines might be all about tariffs, potential trade wars and turmoil, but investors' appetite for tech appears unabated. Tech titans continue to lead this bull market and monopolize top slots as the most valuable U.S. companies. Yet while the IPO window remains open for emerging companies and both strategic and financial buyers have ample cash on hand for deals, investors and operators would be wise to acknowledge the underlying risks. The venture economy is not immune to economic downturns, so global growth rates bear watching.

Of course investors' love affair with tech is not a U.S. phenomenon. This quarter we travel to China, which has quickly established itself as a leading innovation economy with a proliferation of young unicorns. The "hardware capital" of Shenzhen offers a fascinating case study, evolving from sleepy fishing village, to low-value manufacturing, to global tech powerhouse in just a generation. China's influence is spreading to Southeast Asia by exporting tech and establishing programs to partner with neighboring countries. The influence of Chinese tech is not a passing phase, but rather it's just the beginning.

Bob Blee
Head of Corporate Finance
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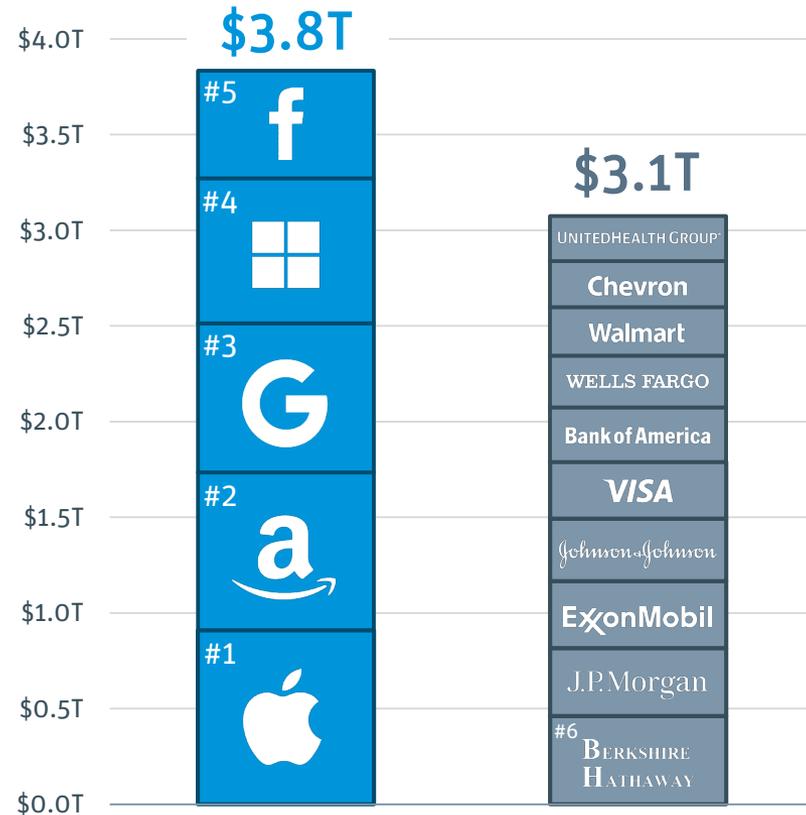


Bull Run: Tech Outswings the Market

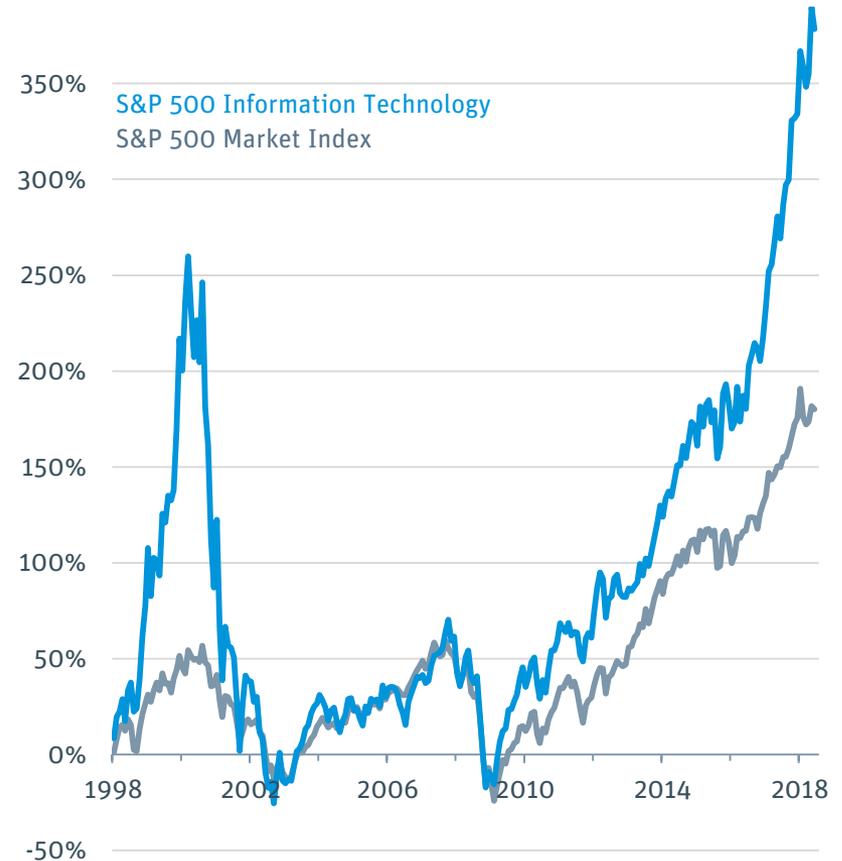
U.S. Tech Giants Worth More Than Next 10 Companies

A decade of robust consumer and business spending has helped tech lock down the top five slots as the most valuable U.S. companies. Still, tech is susceptible to larger swings than the overall market.

Top 5 vs. Next 10: Highest Market Cap at 6/30/18



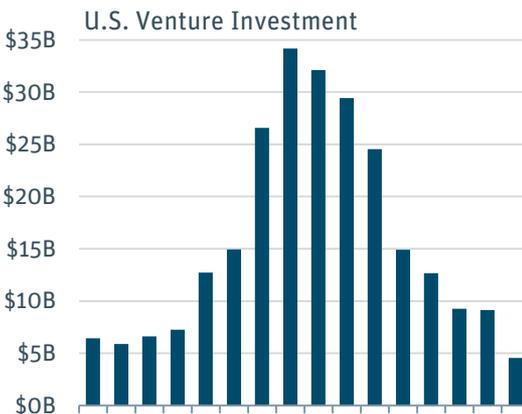
Cumulative Returns for S&P 500 Tech vs. S&P 500



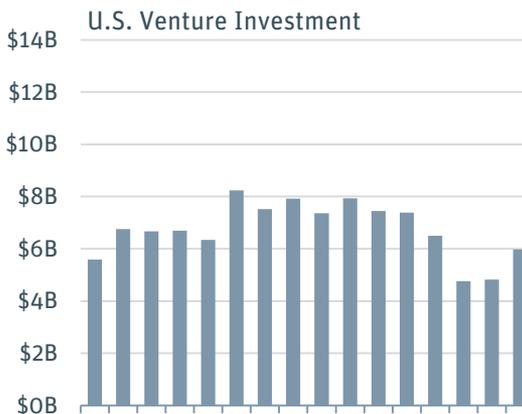
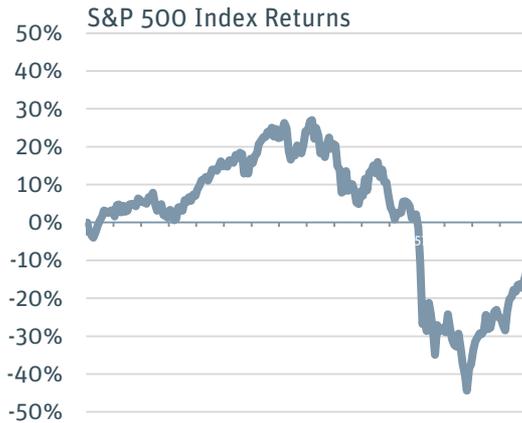
Could Market Turmoil Spoil the Party for Venture?

Venture capital by its very nature is a riskier asset. The last two bouts of U.S. market turmoil had a marked effect on investment flows into emerging tech and life sciences companies.

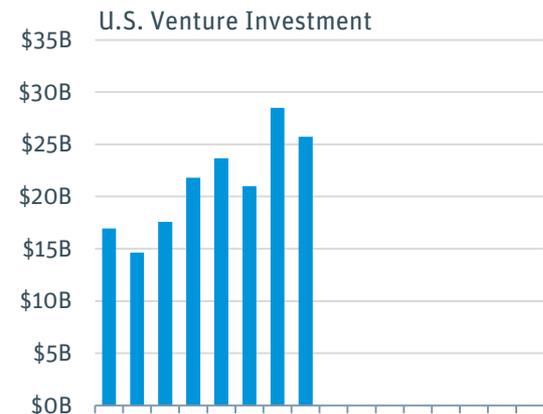
Dot-com Era: Q2'98–Q1'02



Financial Crisis: Q4'05–Q3'09



Current Bull Run: Q3'16–Q2'18



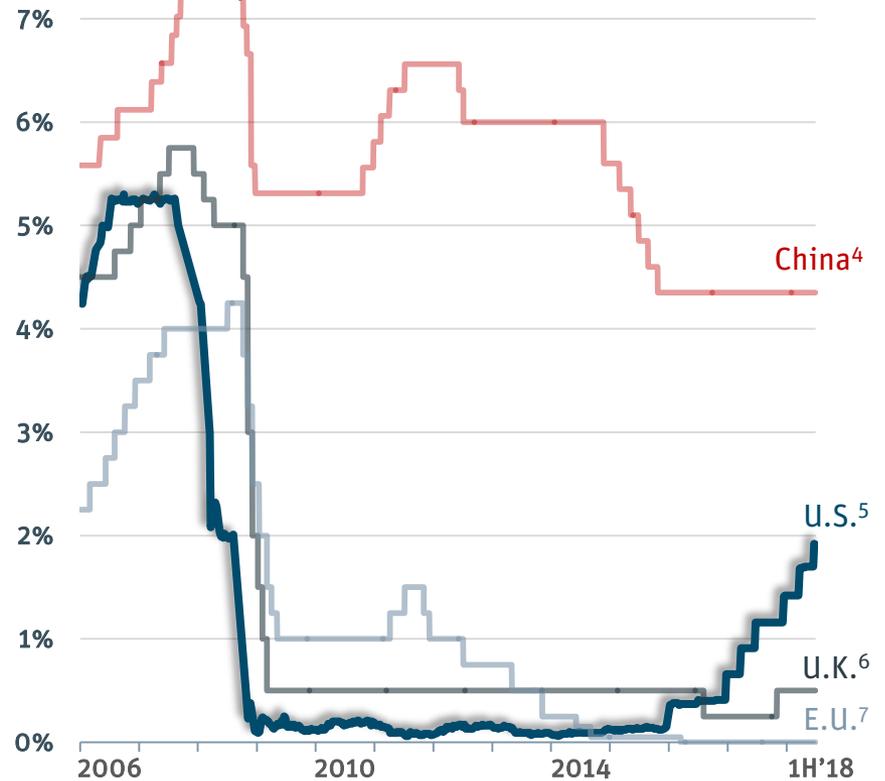
Coordinated Global Growth Falls Out of Sync

The U.S. economy is powering global growth after stumbles in Europe and emerging markets in early 2018. To avoid overheating, the Federal Reserve continues to raise rates, and is now out of step with other major economies. Tech companies, at scale, rely on global growth to substantiate lofty valuations.

Cumulative Equity Market Returns: Q3'17–Q2'18



Benchmark Rates for Major Economies: 2006–1H'18



Notes: 1) OMSCI USA. 2) OMSCI EM. 3) OMSCI EAFE. 4) China 1 Year Benchmark Lending Rates, PBOC.
 5) U.S. Fed Funds Rate. 6) UK Bank of England Official Bank Rate. 7) ECB Main Refinancing Operations Rate.
 Source: S&P Capital IQ, Bloomberg, Federal Reserve Bank of New York and SVB analysis.

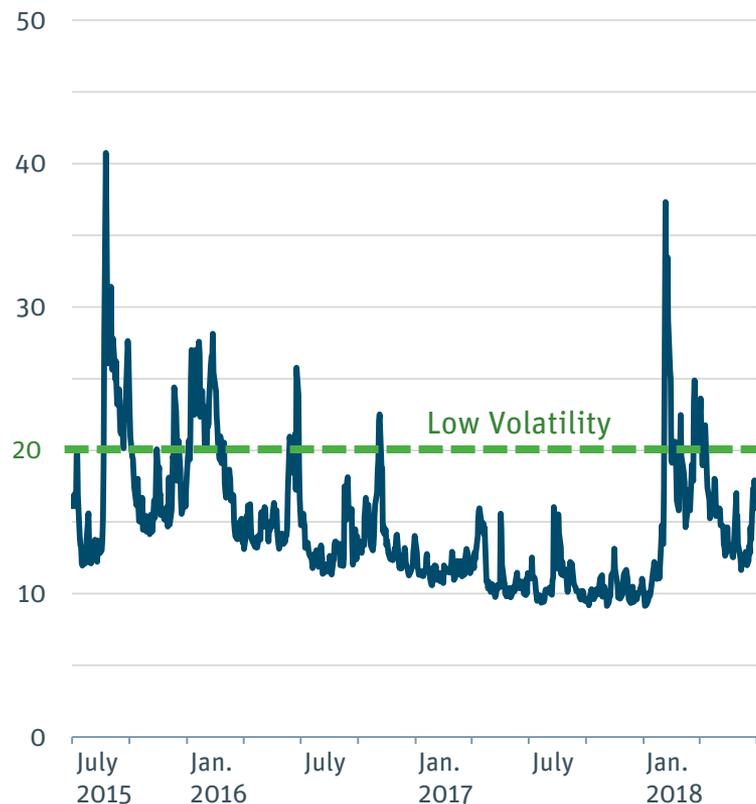


Exit Conditions: Dual-Tracks Open

IPOs Look More Attractive in 2018

The backlog of companies looking to access liquidity and capital with an IPO found low valuations to start 2016 and high volatility to start 2018. However, heading into the summer of 2018 both indications appear ripe for public debuts. IPOs are likely to follow.

U.S. Equity Volatility Index (^VIX): 2H'15–1H'18



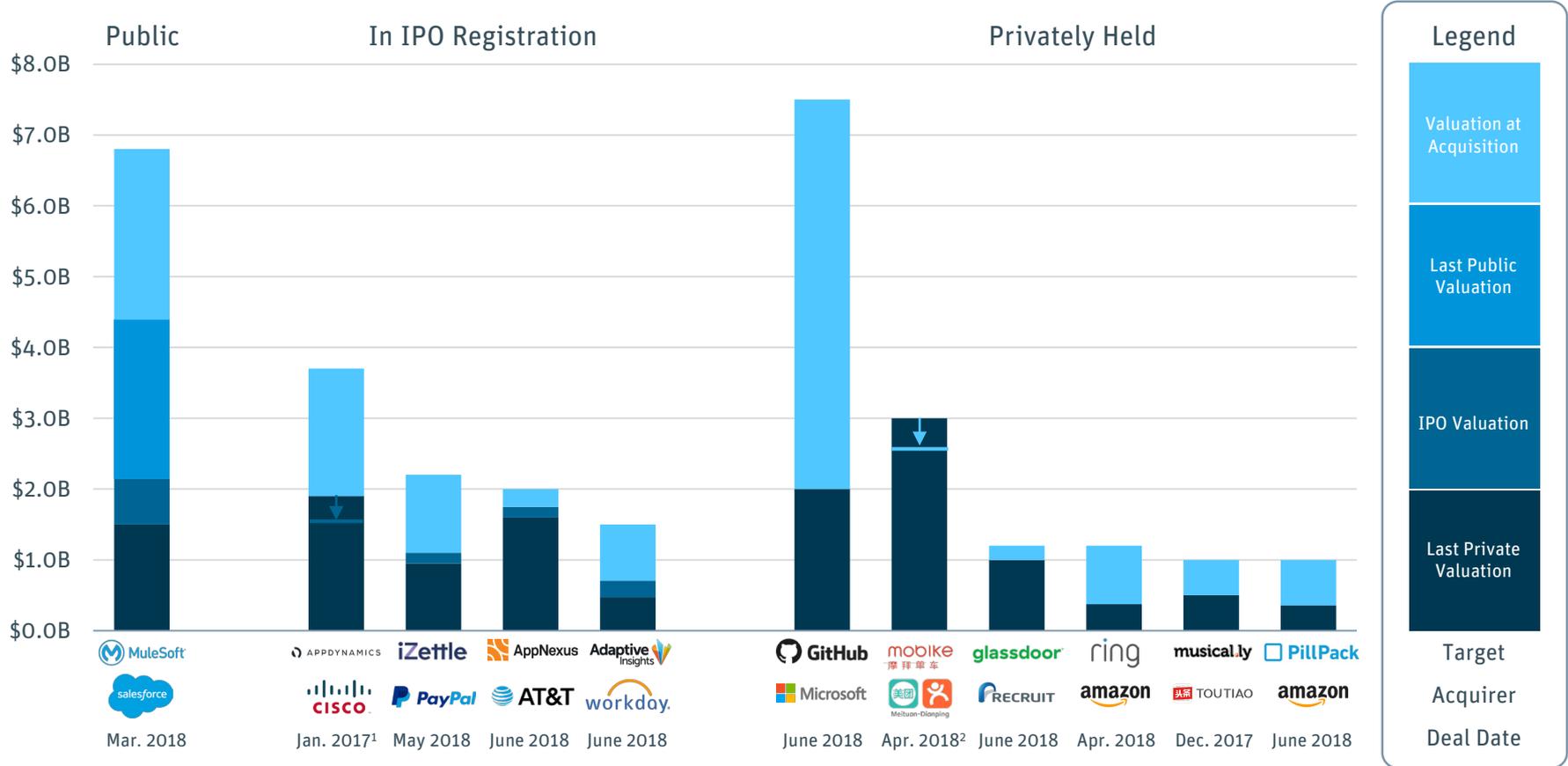
BVP Cloud Index¹: Rev. Run Rate Multiple (Median)²



IPOs Provide Price Discovery for Acquisitions

Strategics have been willing to pay up in 2018. Acquirers are so hungry for tech assets that several companies in IPO registration have been acquired for healthy premiums before hitting the market.

Notable \$1B+ Tech Acquisitions: 2017–1H'18

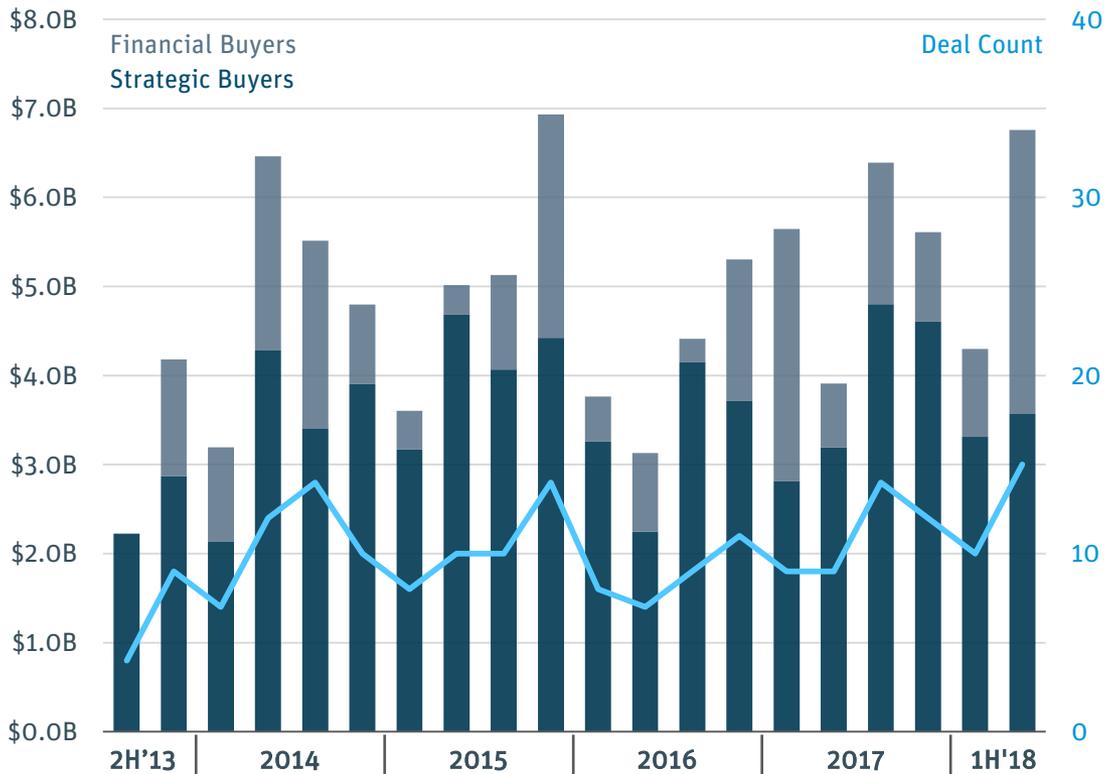


Notes: 1) AppDynamics was reportedly pricing IPO below last private round.
 2) Mobike was acquired at a 10% discount to their last private round.
 Source: PitchBook, S&P Capital IQ, The Wall Street Journal, CNBC and SVB analysis.

Continued M&A for Scaled Mid-Market Companies

Beneath the megadeals, financial buyers continue to offer another exit path for companies at <\$1B. Private equity deals accounted for more than one-third of 1H'18 transaction value in this range.

U.S. Venture-Backed Tech Acquisitions \$250M–999M: Q3'13–Q2'18



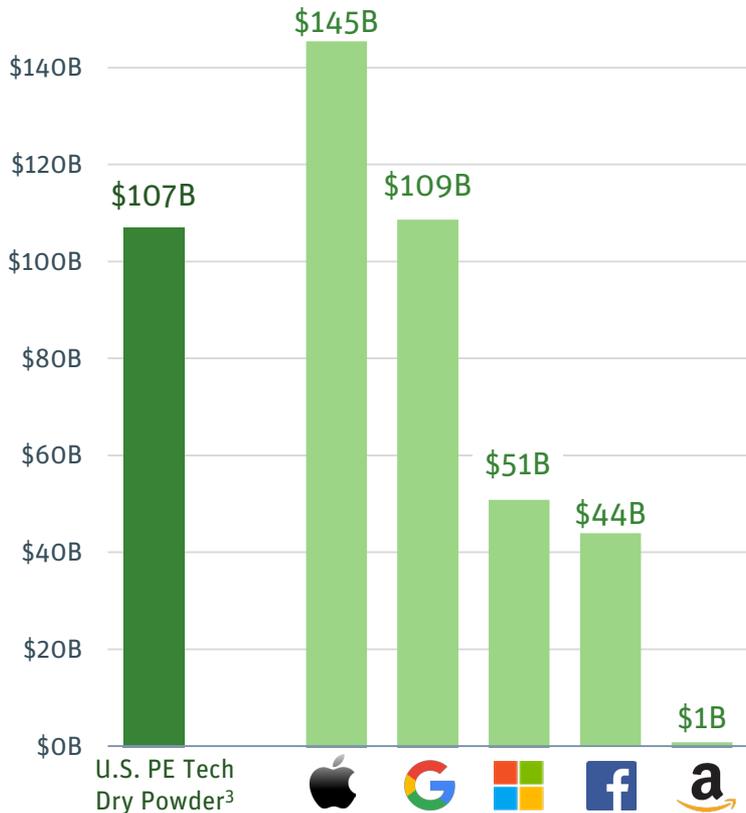
Most Active Acquirers¹

Most Active	Deals	Capital
Cisco	8	\$3.1B
Oracle	6	\$3.5B
Thoma Bravo	5	\$2.4B
Vista Equity	4	\$2.4B
Salesforce	4	\$2.3B
GTCR	3	\$1.7B
Intel	3	\$1.1B
U.S. Tech Giants		
Alphabet	2	\$0.9B
Microsoft	2	\$0.8B
Amazon	1	\$0.5B
Facebook	1	\$0.5B
Apple	0	\$0.0B

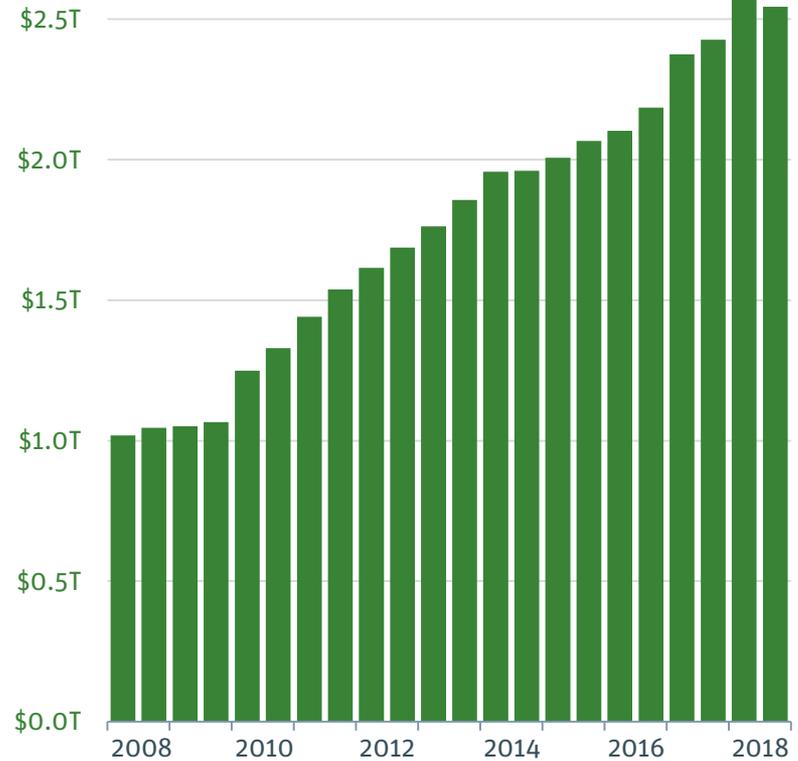
Ample Cash at the Ready for Tech M&A

Capital remains plentiful for traditional acquirers: Private equity firms are nearing all-time highs for dry powder, and strategics are cash- and equity-rich. As tech moves to disrupt all industries, note that current S&P 500 constituents have doubled their cash over the last decade.

Net Cash: Financial and Strategic Buyers¹



S&P 500²: Cash and Cash Equivalents: 2008–1H'18



Notes: 1) Net cash for strategic acquirers includes cash and ST & LT investments, net ST & LT debt. No consideration was given to domicile of holdings. 2) Based on constituents of the S&P 500 as of June 30, 2018. 3) Based on dry powder for private equity as of September 30, 2017, multiplied by SVB estimate of amount invested in technology deals. Source: PitchBook and SVB analysis.

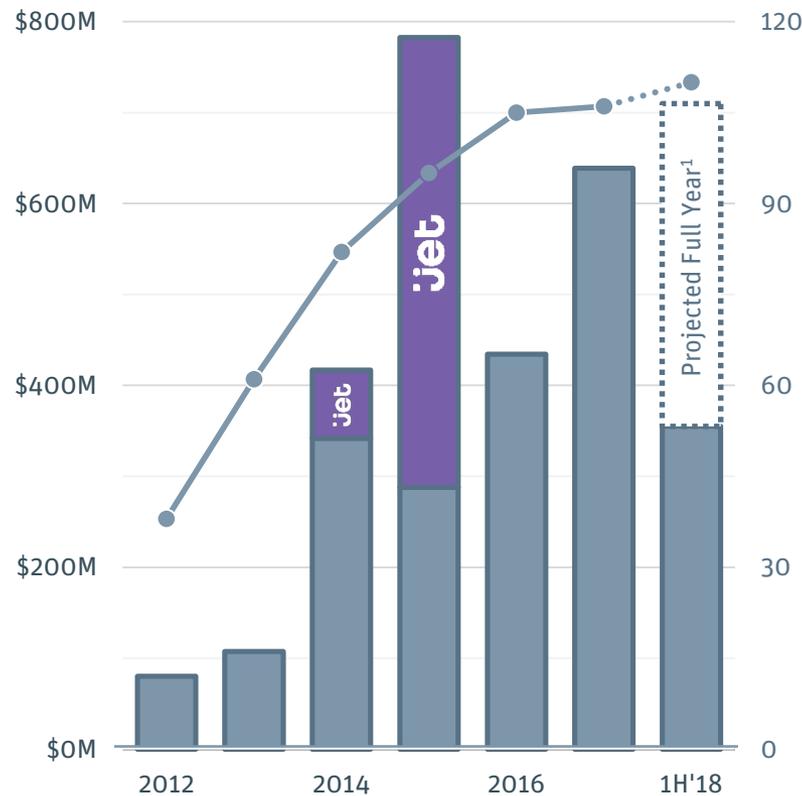


Emerging Sectors: Tech in the Real World

Shifting Retail Trends Attract Capital

Consumer expectations are shifting, and retail continues to migrate away from brick and mortar. As e-commerce giants expand their logistics capabilities to cover both domestic and international markets, startup investors are committing capital to the next generation.

Logistics: Venture Capital Raised and Deal Count



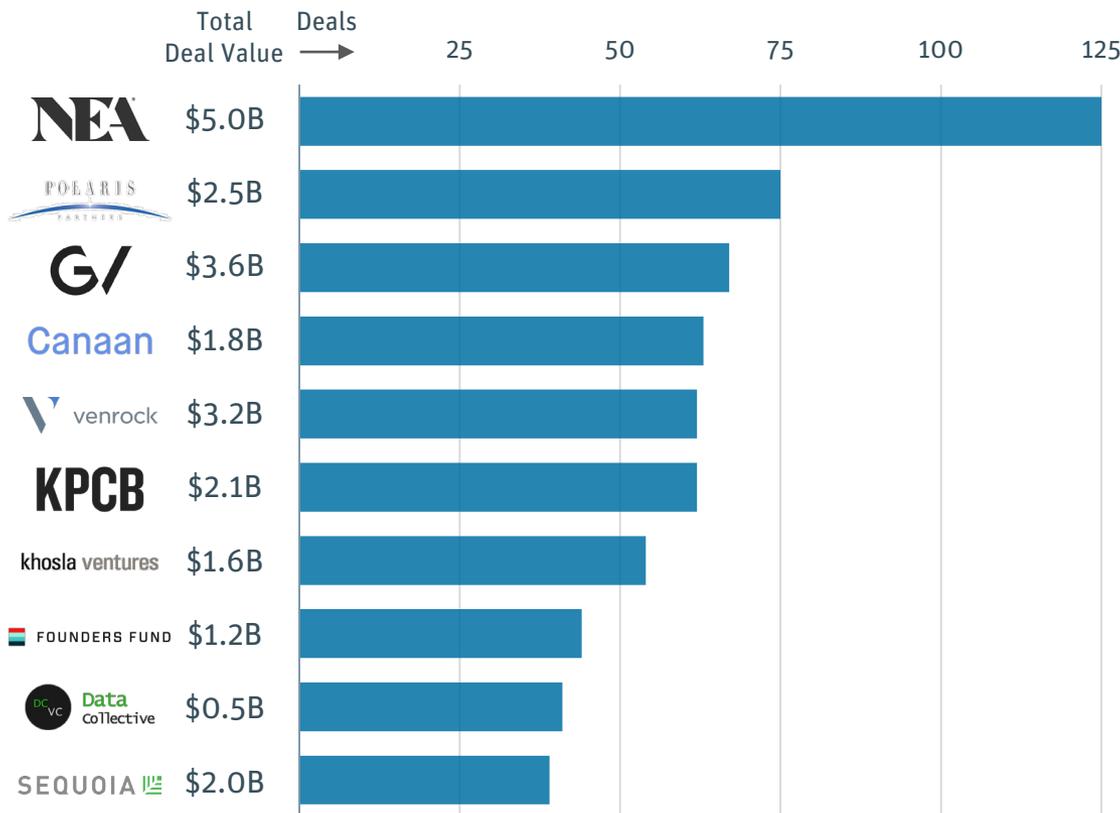
Acquisitions & Investments for E-commerce

<p>阿里巴巴 Alibaba.com</p> <p>Dominance in local and regional markets</p>	<p>CAINIAO 菜鸟网络</p> <p>China-based logistics firm Acquired majority stake in 2017 at \$20B valuation</p>	<p>LAZADA Effortless Shopping</p> <p>SE Asian e-commerce site Acquired majority stake in 2016 at \$2B valuation</p>
<p>amazon</p> <p>Helping accelerate int'l expansion</p>	<p>SOUQ.com</p> <p>Middle Eastern e-commerce site Acq. in July 2017 for \$580M</p>	<p>WING</p> <p>Middle Eastern logistics firm Acq. in Sept. 2017 by Souq</p>
<p>京东 JD.COM</p> <p>"The rival of my rival is my friend"</p>	<p>Google</p> <p>Invested \$550M into JD.com in June 2018 Invested in Jet in 2015</p>	<p>腾讯 Tencent</p> <p>Invested \$215M into JD.com for 15% stake in March 2014 Invested in Flipkart in 2017</p>
<p>Walmart</p> <p>Adapting to sales moving online</p>	<p>jet</p> <p>U.S. e-commerce and logistics Acquired by Walmart for \$3.3B in Aug. 2016</p>	<p>Flipkart</p> <p>Indian e-commerce site Acquired by Walmart for \$20B in April 2018</p>

Tech Venturing into Healthcare

Healthcare is a massive yet inefficient marketplace ripe for innovation and investment. But tackling healthcare challenges is no easy task. Data-rich use cases for AI/ML in diagnostics and genomics are drawing substantial interest.

Most Active Generalist Investors¹ in U.S. Healthcare: 2H'13–1H'18



Notable Efforts from Tech Giants

amazon

PillPack **BERKSHIRE HATHAWAY J.P.Morgan**

Online pharmacy delivery startup acquired for \$1.0B in June 2018

Announced partnership in Jan. 2018 to combat rising healthcare costs

Google

Calico **verily**

Biotech R&D subsidiary in partnership with AbbVie focused on longevity

Life sciences subsidiary utilizing data to improve patient care and outcomes

Tencent 腾讯

China Invts. **U.S. Invts.**

微医集团 WE DOCTOR GROUP **GRAIL**

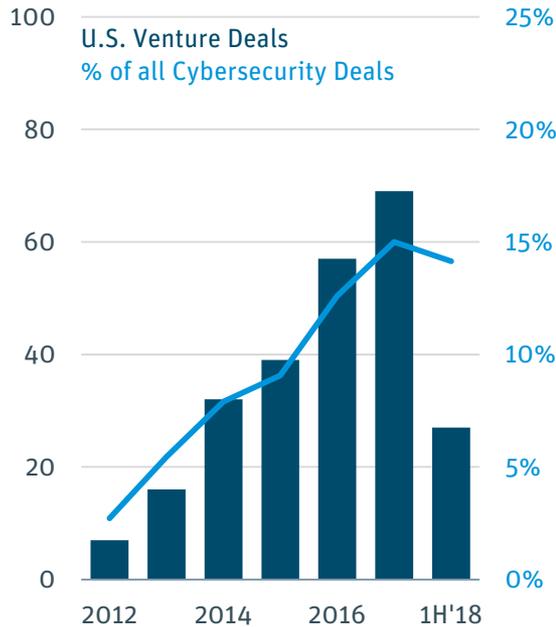
iCarbonX 碳云智能 **VoxelCloud** **KARIUS**

wesure 微保

AI+: Vertical Applications of Artificial Intelligence

The future is out of the lab and into our lives, improving everything from portfolio returns to human lifespans. The percentage of startups using AI has climbed in nearly every category.

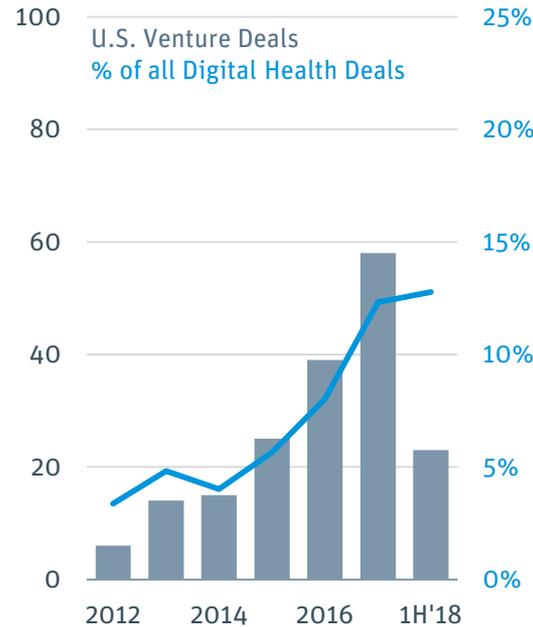
AI + Cybersecurity



Most Well-Funded U.S. Startups: June 2018



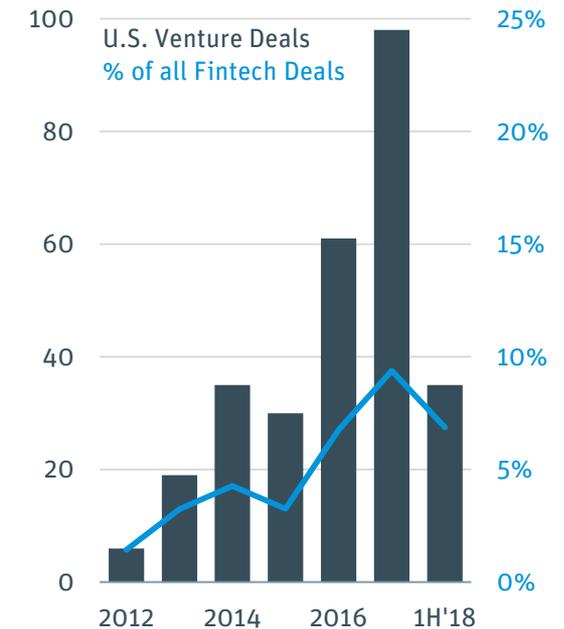
AI + Digital Health



Most Well-Funded U.S. Startups: June 2018



AI + Fintech



Most Well-Funded U.S. Startups: June 2018



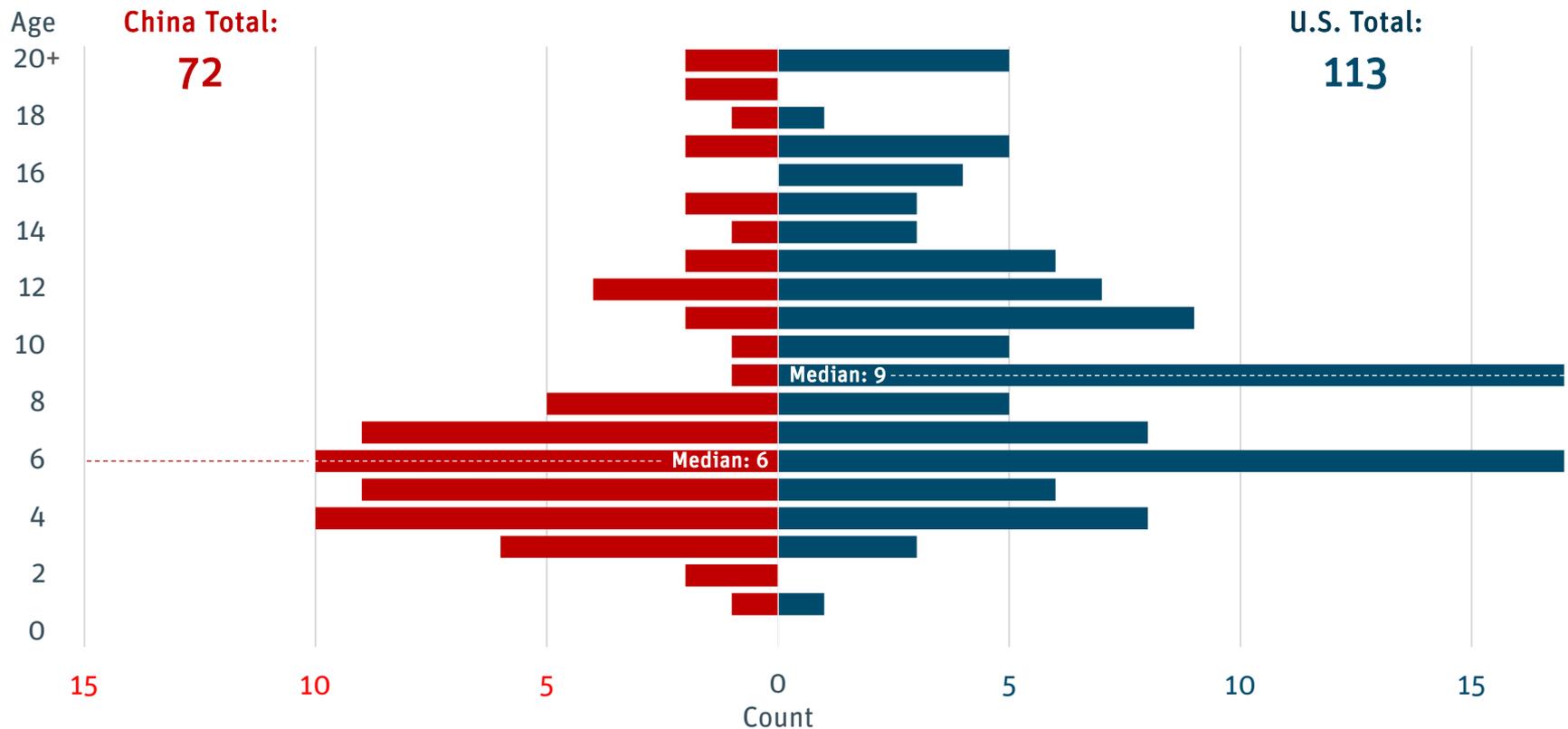


Venture in China: Investment Playbook

A Younger Herd of Unicorns in China

China has quickly established itself as a Top Two venture market. In China, the ratio of younger (<4 years) to older unicorns (>10 years) is 1-to-1. In the U.S., that ratio is 1-to-4. This speaks to how rapidly companies can reach an astronomical scale in this dynamic emerging market.

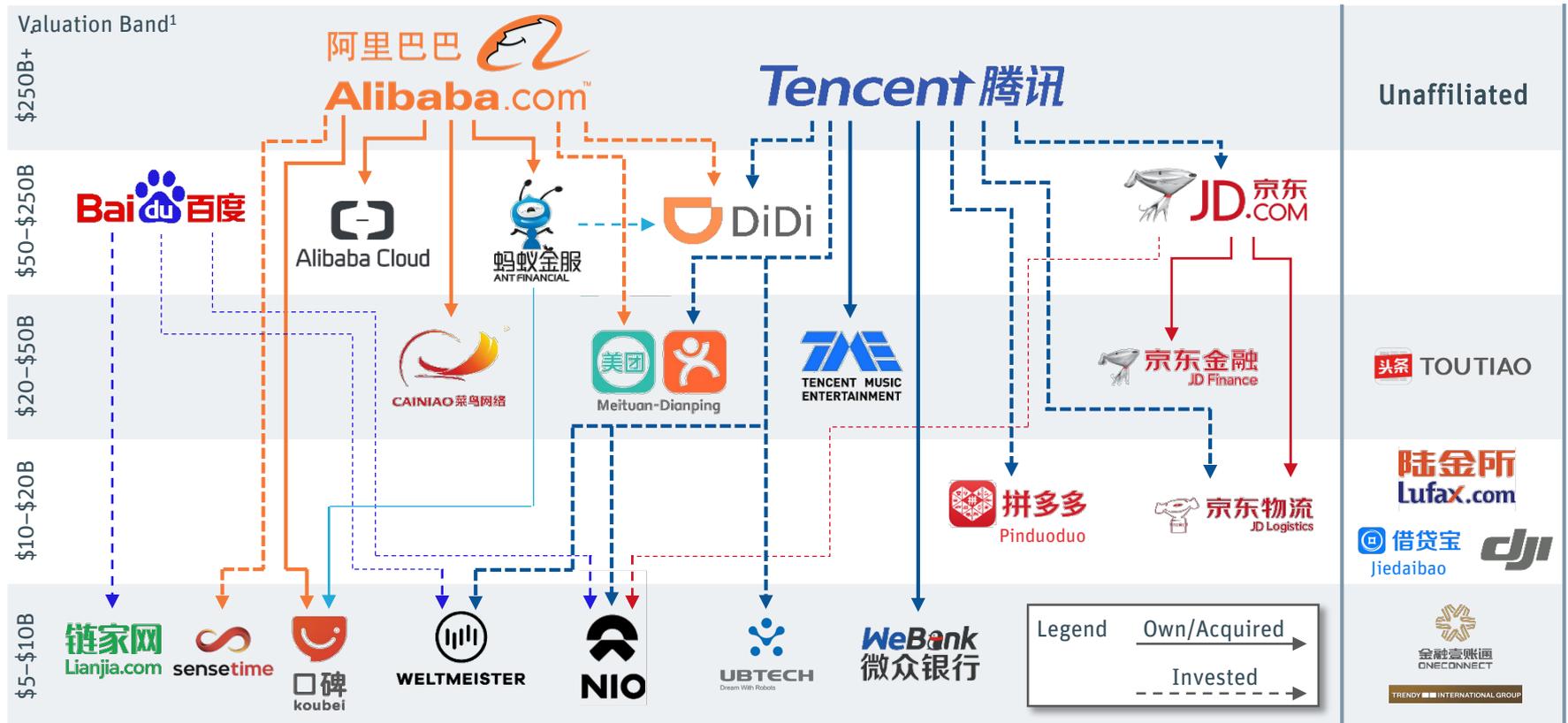
Distribution of Current Unicorns by Age as of June 2018: China vs. U.S.



The Long Reach of China's BATJ

China's internet giants are a dominant presence in the venture ecosystem. More than two-thirds of China's current unicorns with \$5B+ valuations have received investment from at least one of the BATJ. And now, Alibaba and Tencent may look to invest even earlier in companies' life cycles.

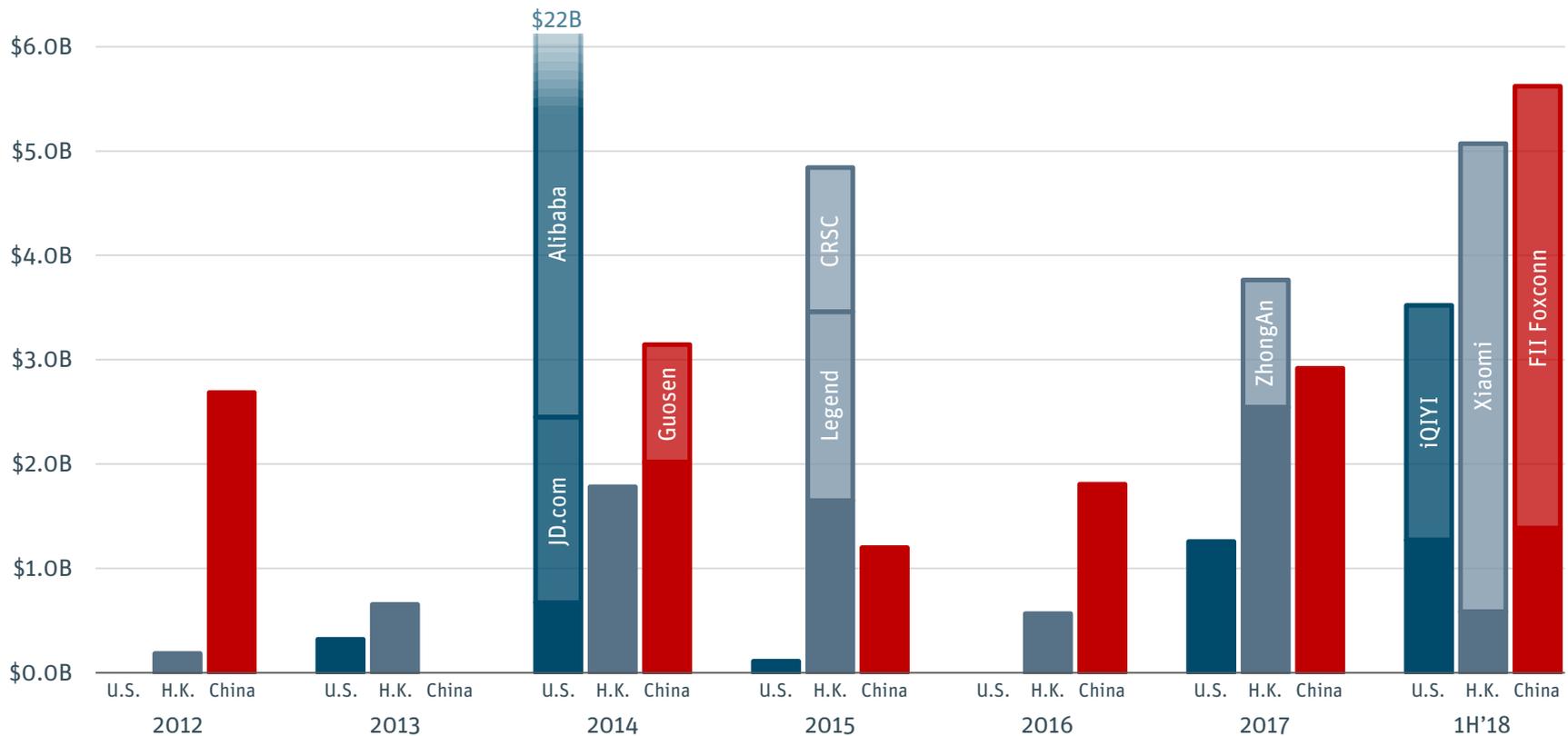
BATJ and \$5B+ China Unicorns



IPOs: How China's Companies Decide Where to List

Scaled companies in China face an international decision when it comes time to list and must consider access to capital, liquidity and regulatory constraints. Six of China's last eight \$1B+ tech IPOs chose exchanges in the U.S. and Hong Kong. Officials would like to see more list domestically.

China Tech IPO Gross Proceeds by Exchange: Capital Raised in \$100M+ IPOs



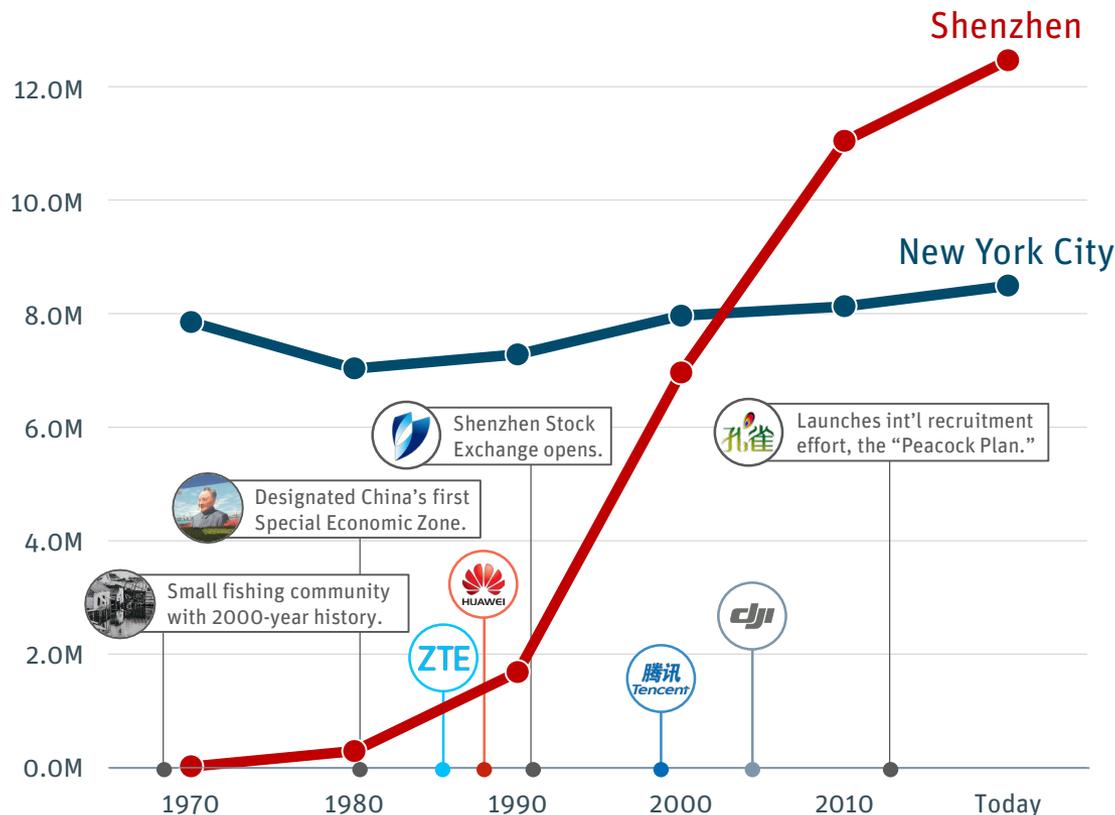


Spotlight on Shenzhen: Entrepreneurial Success

Shenzhen: Economic Experiment Yields Results

In the span of a generation, Shenzhen has climbed from a fishing village to a global tech powerhouse. Deliberate structural planning and talent acquisition efforts, coupled with world-class hardware manufacturing, have equipped a generation of market-oriented companies to compete globally.

City Population, Milestones and Company Formations: 1970–Today



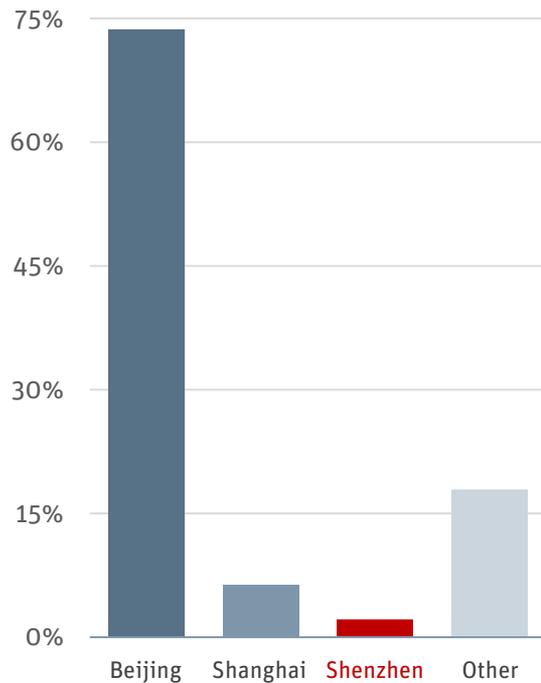
Shenzhen's Tech Giants

 HUAWEI	Telecom equipment developer, manufacturer and distributor Market Cap: Privately Held 2017 Total Revenue: \$92.5B
 腾讯 Tencent	Internet social and gaming platform; e.g. owns WeChat (1B+ MAU) Market Cap (6/30/18): \$473.5B 2017 Total Revenue: \$36.5B
	Consumer aerial drone and camera developer and manufacturer Market Cap (6/30/18): \$15B ¹ 2017 Total Revenue: Unknown
 ZTE	Telecom equipment and other information technology provider Market Cap (6/30/18): \$7.9B 2017 Total Revenue: \$16.7B

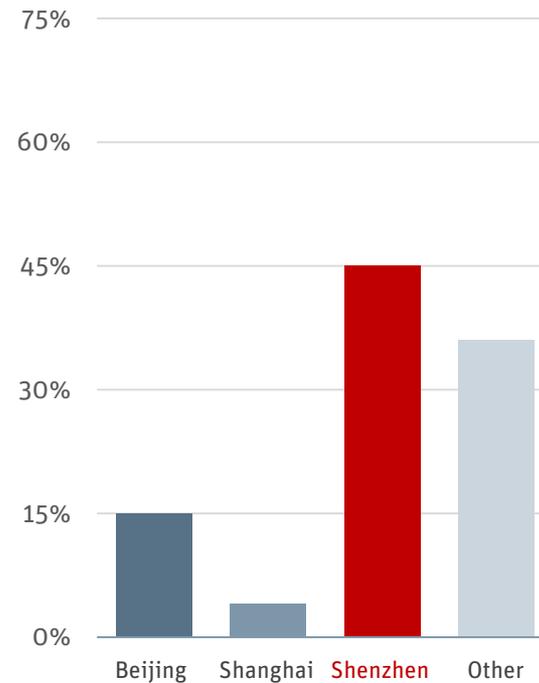
Market-Oriented Approach Spurs Innovation

Shenzhen's short history means little presence from incumbent state-owned enterprises. Instead, special economic incentives attracted entrepreneurs, and free market forces drove them to be innovators. Shenzhen-based companies now hold the top two spots in global patent applications.

China's Centrally Controlled State-Owned Enterprises by City¹



PCT Applications² by City: Percentage of China Total³



PCT Applications² by Company: Top 5 & Shenzhen Cos. in Top 100⁴

Rank	Company	PCT Apps.
1	Huawei	4,204
2	ZTE	2,965
3	Intel	2,637
4	Mitsubishi	2,521
5	Qualcomm	2,163
18	Shenzhen CSOT	972
32	Tencent	560
34	Yulong	517
85	DJI Technology	238

Notes: 1) Based on list of 96 companies under the supervision of the State-owned Assets Supervision and Administration Commission (SASAC). 2) PCT Applications are applications filed under the Patent Cooperation Treaty. 3) Data as of 2016. 4) Data as of 2017. Source: State-owned Assets Supervision and Administration Commission website, World Intellectual Property Organization, The Economist analysis of WIPO and SIPO data, company websites and SVB analysis.

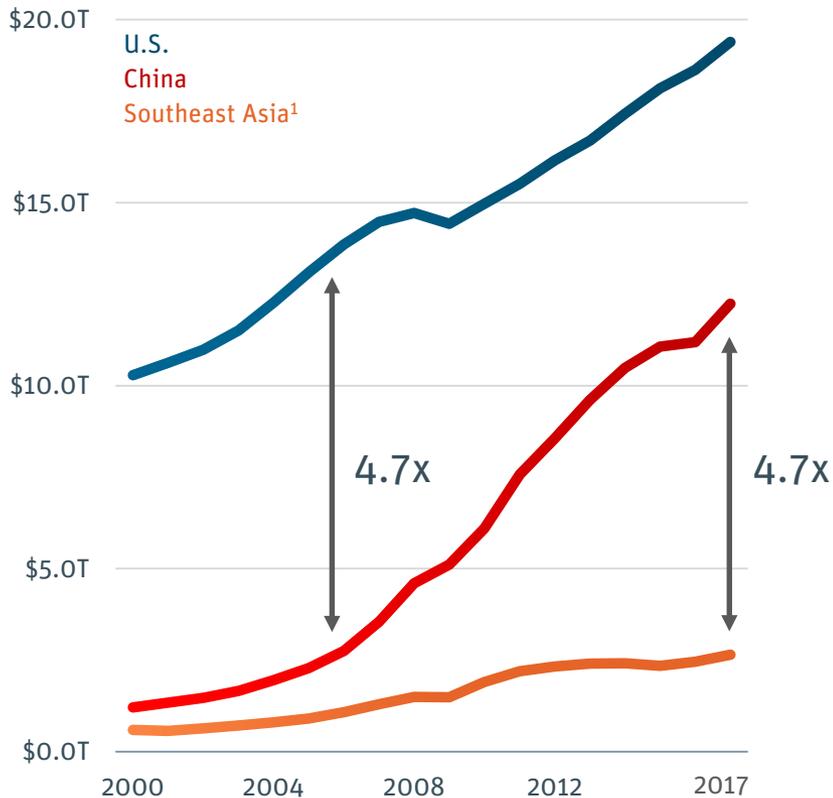


Southeast Asia: Expanding Influence

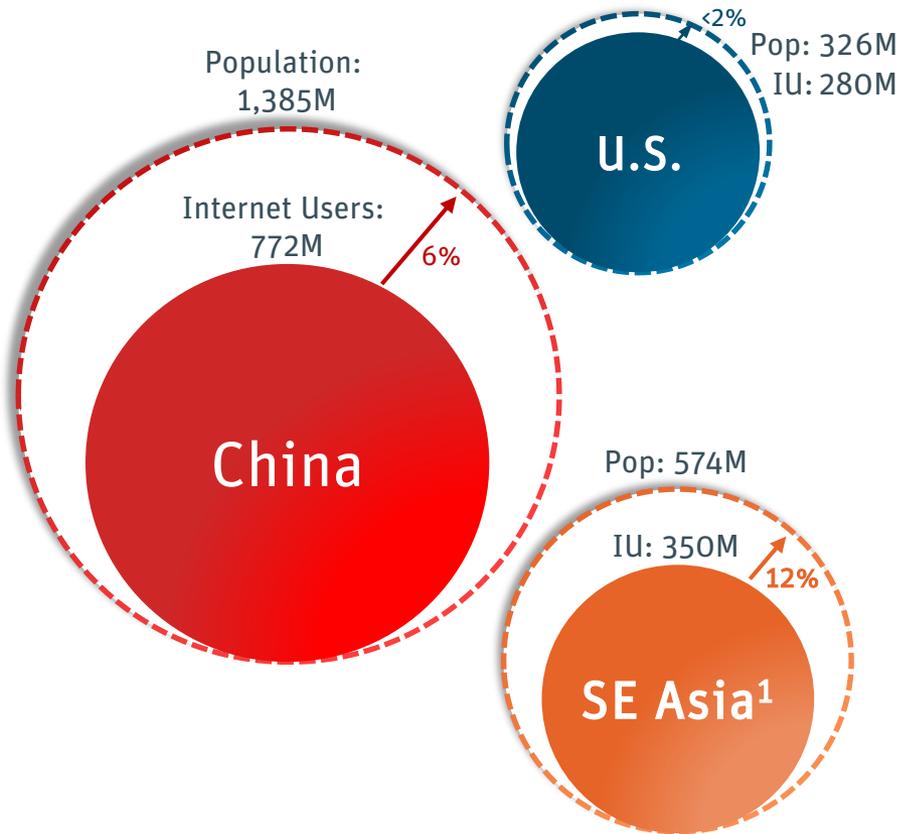
China Sees Itself in Southeast Asia

Today, China is looking to Southeast Asia as their engine of economic growth. With double-digit growth for a user base that's already larger than the U.S., China's tech is finding opportunities to go international.

Gross Domestic Product: 2000–2017



Internet Users (IU) and YoY Growth Rates: Jan. 2018



Finding Familiar Investments in Southeast Asia

The market opportunities in Southeast Asia bear a strong resemblance to those in China a decade ago. This reflects the influence of strategic capital from China's corporate giants and prominent investors. Often, the focus is expanding services to an upgrading consumer class.

Notable SE Asian Companies with Significant Investment from China Companies and Venture Firms



Developing Pathways to New Market Opportunities

To ensure growth beyond opportunities in Southeast Asia, China is laying the groundwork to be a more prominent regional player. The Belt and Road Initiative will establish modern trade routes for goods from China to reach future generations of consumers in Southeast Asia and beyond.

Belt and Road Initiative Infrastructure and Construction Investment by Country: Oct. 2013–June 2018





Appendix

Report Authors



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Bob Blee heads Silicon Valley Bank's Corporate Finance Group, which leads SVB's relationships with public and late stage private companies in the Innovation sector throughout North America, providing a full suite of lending and banking products, as well as guidance as a trusted partner helping our clients succeed and quickly scale.

Previously, Bob held a variety of roles in SVB's California and Midwest geographies, including heading seed, early and mid-stage Infrastructure, Hardware, Consumer Internet and Fintech banking in the Bay Area and Southern California, as well as responsibility for SVB's Mezzanine Lending and Loan Syndications practices.

Bob sits on the nonprofit board of the Network for Teaching Entrepreneurship (NFTE) and the Silicon Valley Advisory Council of the Commonwealth Club. He is also active with his alma mater, the University of Illinois.



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Prior to his research role, Steven managed advisory and valuation engagements for venture-backed technology companies as part of SVB Analytics. Before joining SVB, Steven worked in Minneapolis, MN, as a consultant and entrepreneur in clean energy technology.

Steven earned a Master of Science in Finance from Boston College and a Bachelor of Science Business from the University of Minnesota. In addition, he holds the Chartered Financial Analyst (CFA) designation.

The logo consists of the lowercase letters 'svb' in white, set against a dark blue rectangular background.The name 'Silicon Valley Bank' is written in white, sans-serif font on a dark blue rectangular background.

About Silicon Valley Bank

For more than 35 years, Silicon Valley Bank has helped innovative companies and their investors move bold ideas forward, fast. SVB provides targeted financial services and expertise through its offices in innovation centers around the world. With commercial, international and private banking services, SVB helps address the unique needs of innovators.

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