NATIONAL VENTURE CAPITAL ASSOCIATION









YEARBOOK

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#### Credits & Contact

National Venture Capital Association (NVCA)

25 Massachusetts Avenue NW, Suite 730 Washington, DC 20001

nvca.org

info@nvca.org

Phone: +1 202-864-5920

BOBBY FRANKLIN President and CEO ROBERTA CATUCCI Vice President of Administration

JEFF FARRAH Vice President of Government Affairs
JUSTIN FIELD Vice President of Government Affairs
MARYAM HAQUE Vice President of Research
JESSICA STRAUS Vice President of Development
BEN VEGHTE Vice President of Communications and
Marketing

ALLYSON CHAPPELL Director of Conferences and Events

HANNAH MUNIZZA Director of Business Development and Marketing

CHARLOTTE SAVERCOOL Director of Government Affairs

MICHELE SOLOMON Director of Administration DEVIN MILLER Manager of Communications and Digital Strategy

#### PitchBook Data, Inc.

pitchbook.com
RESEARCH
reports@pitchbook.com
EDITORIAL
editorial@pitchbook.com
SALES
sales@pitchbook.com
JOHN GABBERT Founder, CEO
ADLEY BOWDEN Vice President,
Market Development & Analysis

DATA AND DESIGN

ANDY WHITE Data Analysis Manager BRYAN HANSON Data Analyst JENNIFER SAM Senior Graphic Designer NVCA Board of Directors 2016-2017 EXECUTIVE COMMITTEE

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# Dear Readers

#### March 2017

With much excitement, we present the 20th edition of NVCA's Yearbook, our annual compendium of venture capital data, trends, and insights. The Yearbook continues to cover venture capital data—fundraising, investment, and exit activity—to highlight where the venture industry has been, where it is today, and where we think it is going. We also showcase the impact of venture capital and the out-sized power the industry brings to the U.S. economy.

Last year proved a busy year for venture investors and the companies they fund and help grow. Venture firms posted their best fundraising year in a decade, while capital invested into startups reached its second highest annual investment total in the past 11 years. On the exit side, venture-backed IPOs fell to their lowest level since 2009. Against the backdrop of a busy venture environment, NVCA also continued our efforts to advocate for policies impacting venture investors and the companies in which they invest. As the U.S. presidential election unfolded in 2016 and as we look to 2017, we remain at the forefront in Washington, DC, representing the industry and serving as the voice of the ecosystem to advance a robust proinnovation policy agenda.

As our industry evolves, so do we. For the 20th anniversary edition of the Yearbook, we are presenting a new format and layout for the data tables, expand the highlights of NVCA and our role within the ecosystem, and perhaps most importantly reference a new data source—PitchBook, now the official data provider of NVCA. Commentary with some supporting charts/tables appear in this section of the report, and the full list of charts/tables now appear in a supporting PDF and XLS data pack.

We hope you enjoy our new Yearbook, and as always, we welcome your feedback. Please feel free to contact us via the details below.



Bobby Franklin President and CEO +1 202-864-5920



Maryam Haque
Vice President of Research
mhaque@nvca.org

#### Access the Full Yearbook

- 1. This PDF
- 2. PDF data pack (available to public)
- 3. XLS data pack (available only to NVCA members)





# Executive Summary

The U.S. venture capital (VC) industry has witnessed steady growth in recent years, with increases in the number of VC firms, VC funds, and assets under management. In 2016, data shows 898 venture firms in existence, managing 1,562 active venture funds and translating to approximately \$333 billion in U.S. venture capital assets under management. This growth has coincided with demand from high-growth startups across the U.S. who increasingly look to VC firms for working capital and strategic guidance to develop their innovative products and services.

This industry growth and startup demand has led to three consecutive years of nearly \$70 billion invested into U.S. venture-backed companies. However, after peaking in 2015, venture investment levels normalized to healthy levels in 2016, marking a year of recalibration and a return to a steadier investment pace. Fundraising and exits also have an important impact on the overall health of the U.S. venture capital ecosystem. The influx in capital raised by venture funds and the dearth of venture-backed IPOs tended to draw the bigger industry headlines last year.

#### Highlights of the U.S. venture ecosystem in 2016:

#### Capital Commitments to Venture Funds

- In 2016, 253 venture capital funds raised \$41.6 billion, a ten-year high, to deploy into promising startups.
- Twenty-two first-time funds raised \$2.2 billion in commitments last year, the largest amount by first-time managers since 2008.
- The concentration of capital managed by fewer funds increased in 2016 as seven funds closed with more than \$1 billion in commitments, driving the annual median VC fund size to \$75 million (the highest median since 2008).
- Outside of California, Massachusetts, and New York, VC fund sizes remained relatively small, with a median 2016 fund size of \$23.5 million.

#### Capital Deployed to Startups

- More than 7,750 venture-backed companies received \$69.1 billion in funding in 2016, representing the second highest annual total—after 2015—in the past 11 years.
- Startups receiving venture funding in 2016 represented approximately 370,000 employees.
- First-time financings (i.e., first round of equity funding in a startup by an institutional venture investor) dipped in 2016 to 2,340 companies receiving an aggregate of \$6.6 billion.
- Angel/seed and early stage VC investments accounted for more than 6,600 (81%) of 2016 deal count and \$30.7 billion (44%) of venture dollars.





- Software companies attracted the lion's share of venture investment (\$33 billion or 48% of total venture dollars invested) in 2016. Within the software sector, social/platform software companies led the way.
- While the overall number of investments (1,016) and venture dollars invested (\$11.7 billion) into life science companies declined year-over-year, the number of life science deals as a share of overall venture deal count increased to 12.5% in 2016.
- For the fourth straight year, more than 1,000 venture investments involved corporate
  venture capital (CVC) participation. Though the number of CVC deals in 2016 dipped from
  2015, the percentage of all VC deals involving CVC continued to increase, hitting 13.1% in
  2016.
- Similar to venture investment activity, growth equity\* investment declined in 2016 after peaking in 2015. Investors deployed \$28.3 billion across 526 growth equity investments last year.
- Venture funding reached startups in all 50 states and the District of Columbia—and 226
   Metropolitan Statistical Areas and 386 Congressional Districts.
- The U.S. continues to attract a majority of global venture investment dollars; however, its share dropped from 81% in 2006 to 54% in 2016.

#### Exit Landscape

- The exit environment for venture-backed companies remained challenging in 2016, with only 39 initial public offerings (IPOs) completed.
- At the end of 2016, 20 venture-backed companies were in IPO registration, suggesting optimism for a more active IPO window in 2017.
- Disclosed mergers and acquisitions (M&As) accounted for 82% of the 726 VC-backed exits in 2016, which yielded a total of \$46.8 billion in disclosed exit value.

While investors and startups were busy driving innovation and building companies in 2016, NVCA was also busy on the policy and programming front. Look back at NVCA's 2016 "Year in Review," starting on page 33 and learn more about what is in store for 2017 and how to stay engaged.

\*Growth equity is a unique dataset, partially included in the overall VC data in this publication. More details on the methodology are on pages 28 and 51.





# Venture Capital 101

Venture capital has enabled the United States to support its entrepreneurial talent by turning ideas and basic research into products and services that are the envy of the world. Venture capital funds build companies from the simplest form—perhaps just the entrepreneur and an idea expressed as a business plan—to freestanding, mature organizations.

#### Risk Capital for Business

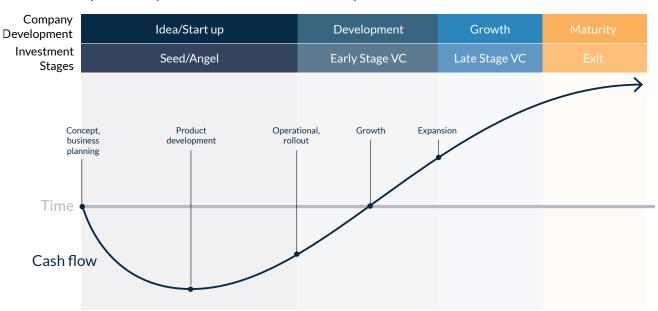
Venture capital firms are professional, institutional managers of risk capital that enable and support the most innovative and promising companies. Venture capital supports new ideas that 1) could not be financed with traditional bank financing; 2) threaten established products and services

in a corporation; and 3) typically require five to eight years (or longer!) to reach maturity. Venture capital is quite unique as an institutional investor asset class. Venture capital funds make equity investments in a company whose stock is essentially illiquid and worthless until a company matures five to eight years down the road. Follow-on investment provides additional funding as the company grows. These "rounds," typically occurring every year or two, are also based on equity in the company, with the shares allocated among the investors and management team based on an agreed "valuation." However, unless a company is acquired or goes public, there is little actual value. Venture capital is a long-term investment.

#### A Partner to Entrepreneurs

The U.S. venture industry provides the capital to create some of the most innovative and successful companies. However, venture capital is more than money. A venture capital professional's most precious asset is time. According to a 2016 study, How Do Venture Capitalists Make Decisions<sup>1</sup>, for every company in which a venture firm eventually invests, the firm considers roughly 100 potential opportunities. The same study, which included results from a survey of 889 venture capital professionals at 681 firms, showed that the median venture firm closes about four deals per year. Team, business model, product, market, valuation, fit, ability to add value, and industry are all important factors venture investors

#### Venture Capital Plays a Vital Role in a Startup's Growth



Sources of funding: VCs, angel investors, incubators, accelerators, strategic investors (corporate groups), growth equity investors, private equity firms, debt investors

<sup>&</sup>lt;sup>1</sup>Gompers, Paul A. and Gornall, Will and Kaplan, Steven N. and Strebulaev, Ilya A., How Do Venture Capitalists Make Decisions? (August 1, 2016). Stanford University Graduate School of Business Research Paper No. 16-33; European Corporate Governance Institute (ECGI) - Finance Working Paper No. 477/2016. Available at SSRN: https://srn.com/abstract=2801385





consider when evaluating investments into startups. Venture capital investors are seeking entrepreneurs who are addressing global markets, have superb scalability, demonstrate success within a reasonable timeframe, and are truly innovative.

A venture capitalist's competitive advantage is the expertise and guidance they provide to the entrepreneurs in their portfolio. Once the investment into a company has been made, venture capital partners actively engage with a company, providing strategic and operational guidance, connecting entrepreneurs with investors and customers, taking a board seat at the company, and hiring employees. With a startup, daily interaction with the management team is common. This active engagement with a fledgling startup is critical to the company's success and often limits the number of startups into which any single fund can invest. Many one- and two-person companies have received funding, but no one- or two-person company has ever gone public! Along the way, the company must recruit talent and scale up. Any venture capitalist who has had an ultra-successful investment will tell you that the companies capable of breaking through the gravity

were able to evolve the original business plan concept due to careful input from an experienced hand.

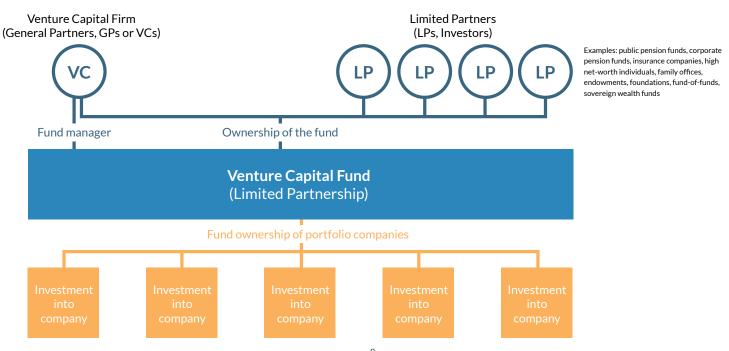
### Common Structure—Unique Results

While the legal and economic structures used to create a venture capital fund are similar to those used by other alternative investment asset classes, venture capital itself is unique. Typically, a venture capital firm will create a Limited Partnership with the investors as LPs and the firm itself as the General Partner. Examples of LPs include public pension funds, corporate pension funds, insurance companies, family offices, endowments, and foundations. Each "fund," or portfolio, is a separate partnership. A new fund is established when the venture capital firm obtains necessary commitments from its investors, say \$100 million. The money is taken from Limited Partners as the investments are made through what are referred to as "capital calls." Typically, an initial funding of a company will cause the venture fund to reserve three or four times that first investment for follow-on financing. Over the next three to eight years, the venture firm works with the founding entrepreneur to grow the company. The payoff comes after the company is acquired or goes public. Although the investor has high hopes for any company getting funded, the 2016 study *How Do Venture Capitalists Make Decisions?* found that, on average, 15% of a venture firm's portfolio exits are through IPOs while about half are through an M&A.

#### Economic Alignment of All Stakeholders — An American Success Story

Venture capital is rare among asset classes in that success is truly shared. It is not driven by quick returns, financial engineering, debt, or transaction fees. Economic success occurs when the stock price increases above the purchase price. When a company is successful and has a strong public stock offering, or is acquired, the stock price of the company reflects its success. The entrepreneur benefits from appreciated stock and stock options. The rank and file employees throughout the organization historically also do well with their stock options. The venture capital fund and its

#### The VC Fund Structure







investors split the capital gains per a preagreed formula. Many college endowments, pension funds, charities, individuals, and corporations have benefited far beyond the risk-adjusted returns of the public markets. At the same time, the risk capital that funds startups can bring benefits to local economies in the form of company growth, competitiveness, and job creation.

#### Measuring the Impact **Beyond Financial Returns**

While venture investing has generated billions of dollars for investors and their institutions, the impact of venture-backed companies has been even more far-reaching. Many venture-backed companies have scaled, gone public, and become household names, and at the same time have generated high-skilled jobs and trillions of dollars of benefit for the U.S. economy. A 2015 study, The Economic Impact of Venture Capital: Evidence from Public Companies<sup>2</sup>, analyzed the impact venture-backed companies, as a subset of all U.S. public companies founded after 1974, have had on the economy. The study found that of the 1,339 U.S. public companies founded after 1974, 556 (or 42%) are venture-backed. These 556 companies

represent 63% of the market capitalization and 85% of total research and development of the post-1974 public companies.

The U.S. economy—thanks in part to the venture capital industry—reached an important milestone in August 2016. On August 1st, five venture-backed companies-Apple, Alphabet, Microsoft, Amazon, and Facebook—held the top five spots on the ranking of largest U.S. public companies by market capitalization.

#### What's Ahead

Much of venture capital's success has come from the vibrant entrepreneurial spirit in the U.S., financial recognition of success, access to good science, access to talent, and fair and open capital markets. It is dependent upon investment in scientific research, motivated entrepreneurs, protection of intellectual property, and a skilled workforce. The nascent deployment of venture capital in other countries is gated by a country's or region's cultural fit, tolerance for failure, services infrastructure that supports developing companies, intellectual property protection, efficient capital markets, and the willingness of big business to purchase from small companies.

#### **Five Largest Companies** by Market Cap as of August 1, 2016

	VC- backed?	Market Cap (\$B)	Employees
Apple	yes	\$571.40	116,000
Alphabet	yes	\$549.50	69,952
Microsoft	yes	\$440.90	114,000
Amazon	yes	\$364.00	230,800
Facebook	yes	\$356.00	12,691

Note: Market capitalization is from MarketWatch as of August 1, 2016. Number of employees is from MarketWatch as of January 31, 2017.

#### **How Venture Capital Works**



#### VCs raise capital for funds from LPs

#### Investment

VCs typically invest in young, high-growth companies in need of capital to scale.

VCs provide active management and act as advisors & mentors, taking board seats. providing strategic advice, facilitating

introductions.

#### Exit

After about 5-10 years of creating a high-growth company, the VC exits its stake via an acquisition or IPO. IPOs have more advantages: greater capital raised, higher returns, local iob creation.

#### Returns

In addition to companies benefitting, VCs and I Ps make a profit on their investment High-quality jobs are created more capital is available for university research. retirees have more for retirement. foundations have more resources to fund their work.

#### Re-investment

The fund ends when all investments have been exited and proceeds have beem distributed to LPs LPs can then reinvest earnings in a new crop of funds.

<sup>&</sup>lt;sup>2</sup> Gornall, Will and Strebulaev, Ilya A., The Economic Impact of Venture Capital: Evidence from Public Companies (November 1, 2015). Stanford University Graduate School of Business Research Paper No. 15-55. Available at SSRN: https://ssrn.com/abstract=2681841 or http://dx.doi.org/10.2139/ssrn.2681841





# The U.S. Venture Industry At-A-Glance

The venture capital industry has been growing. In 2016, data shows 898 venture firms in existence, defined as a rolling count of firms that have raised a fund in the last eight years. These 898 firms managed 1,562 venture funds, translating to approximately \$333 billion in U.S. venture capital assets under management at the end of 2016. The industry's uptick in assets under management corresponded to three consecutive years of strong venture capital fundraising, capped by a banner fundraising year in 2016. The prevalence of smaller firms-sometimes referred to as "micro VCs"—and those with niche investment strategies for seed and early companies has factored into the growing number of firms actively investing in the venture ecosystem.

The growth of the VC industry has coincided with demand from high-growth startups across the U.S. who increasingly look to VC firms for working capital and strategic guidance to develop their innovative products and services. However, while the size of the industry in dollar terms has seen an increase, the number of participants has not increased at the same pace. In 2016, 2,105 VC firms completed at least one investment in a U.S.-based startup, of which 738 firms participated in startups' first round of institutional funding. At the same time, the median venture fund size increased to \$75 million.

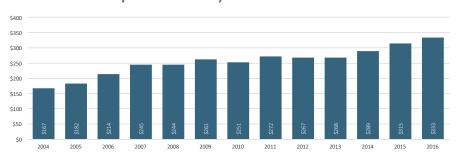
While the industry has become more concentrated in terms of large pools of capital managed by few venture firms, smaller firms are many and mighty. Contrary to some popular misconceptions, only 68 firms managed more than \$1 billion of U.S. venture capital assets under management at the end of 2016. By comparison, 334 firms managed \$50 million or less.

#### **VC AUM Summary Statistics**

	2004	2010	2016
# of VC Firms in Existence*	872	791	898
# of VC Funds in Existence*	1,670	1,294	1,562
# of First Time VC Funds Raised	37	34	22
# of VC Funds Raising Money this Year	158	153	253
VC Funds Raised this Year (\$B)	17.6	19.6	41.6
VC AUM (\$B)*	166.9	251.5	333.5
Avg VC AUM per Firm (\$M)	110.5	215.5	243.6
Avg VC Fund Size to Date (\$M)	116.5	134.8	138.3
Avg VC Fund Size Raised this Year (\$M)	117.1	137.8	170.6
Median VC AUM per Firm (\$M)	190.6	197.4	130.9
Median VC Fund Size to Date (\$M)	51.0	56.0	50.8
Median VC Fund Size Raised this Year (\$M)	50.0	45.3	75.0
Largest VC Fund Raised to Date (\$M)	2,322.0	4,300.0	4,300.0

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### US Venture Capital AUM by Year

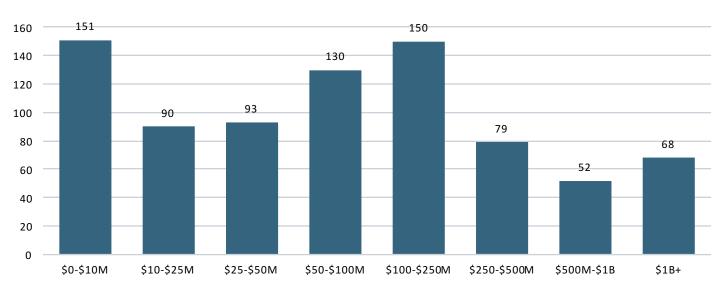


<sup>\*</sup> Number of firms in existence is based on a rolling count of firms that raised a fund in the last 8 vintage years; Number of VC funds in existence is based on a rolling count of funds that have closed in the last 8 vintage years; AUM is calculated by adding together a firm's total remaining value and their total dry powder.





#### Distribution of Firms by AUM in 2016



 $Source: NVCA\ 2017\ Yearbook, Data\ Provided\ by\ PitchBook.\ Note: Exact\ AUM\ unknown\ for\ 85\ firms.$ 

#### Fund and Firm Analysis

	Total Cumulative Funds	Total Cumulative Firms	Total Cumulative Capital (\$B)	Existing Funds	Firms that Raised Funds in the Last 8 Vintage Years	AUM (\$B)	Avg Fund Size (\$M)	Avg Firm Size (\$M)	Median Fund Size (\$M)	Median Firm Size (\$M)
2004	2386	983	264.80	1670	872	166.95	99.97	110.49	50.00	190.60
2005	2563	1046	291.39	1676	917	182.22	108.73	119.65	71.00	192.75
2006	2757	1108	326.70	1688	947	213.70	126.60	139.67	100.00	240.19
2007	2948	1168	366.17	1599	939	245.24	153.37	168.67	110.80	250.00
2008	3152	1231	399.25	1411	841	244.02	172.94	191.39	86.00	235.50
2009	3270	1271	414.74	1276	791	261.35	204.82	226.47	50.00	224.59
2010	3415	1328	431.96	1294	791	251.46	194.33	215.48	46.38	197.38
2011	3571	1386	454.32	1344	815	272.27	202.58	225.39	40.00	192.72
2012	3758	1462	478.90	1372	844	267.15	194.71	216.49	30.00	174.51
2013	3971	1543	499.84	1408	869	267.90	190.27	212.62	37.08	161.95
2014	4238	1651	534.73	1481	898	288.53	194.82	218.42	30.00	154.85
2015	4476	1737	569.04	1528	906	315.20	206.28	233.83	48.50	128.18
2016	4714	1807	608.47	1562	898	333.49	213.50	243.60	75.00	130.87





Many of the firms that have recently raised large pools of capital also have their geographic location in common: California. This, coupled with the relocation of some east coast firms to the west coast, has corresponded to a geographic concentration of capital managed by venture firms. California firms managed 54% of the capital at the end of 2016, slightly higher than 53% a year earlier. Collectively, the top three states by capital under management in 2016— California, Massachusetts, and New Yorkheld 83% of the capital actively managed at the end of 2016, compared with 81% in 2015. However, putting this into context, venture firms tend to invest across a broad geographic footprint and openly invest in startups outside of their headquarter state, as noted in other sections of the Yearbook. Furthermore, venture capital under management in states such as Ohio, Tennessee, Montana, Illinois, Michigan, and North Carolina increased in 2016 compared to 2015.

In the global context, the U.S. continues to attract a majority of venture fundraising, investment, and exit dollars. However, the U.S. share has dropped compared to levels a decade ago, as countries around the world have gained ground after strengthening domestic entrepreneurial ecosystems in recent years.

#### Number of Active Investors (#)

	# of Active Investors	# of Active 1st Round Investors	# of Active Life Science Investors	# of Active VC Investors	# of Active VC 1st Round Investors	# of Active VC Life Science Investors
2004	2158	855	698	1287	574	464
2005	2239	917	713	1313	595	476
2006	2474	1157	760	1388	694	485
2007	2891	1315	862	1571	770	547
2008	3038	1279	879	1634	735	559
2009	2643	1107	755	1453	609	501
2010	3045	1432	745	1589	723	499
2011	3595	1876	786	1766	889	504
2012	4177	2241	852	1999	1010	528
2013	4700	2327	921	2142	1025	561
2014	5217	2303	1007	2317	1073	549
2015	5179	1959	1042	2337	961	585
2016	4127	1263	756	2105	738	474

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. as a % of Global VC Fundraising by Year

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
US as % of Global (\$)	77%	74%	73%	64%	63%	53%	53%	52%	62%	66%	72%	64%	65%
US as % of Global (#)	68%	60%	48%	46%	44%	37%	40%	34%	46%	57%	65%	65%	68%

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. as a % of Global VC Deal Flow by Year

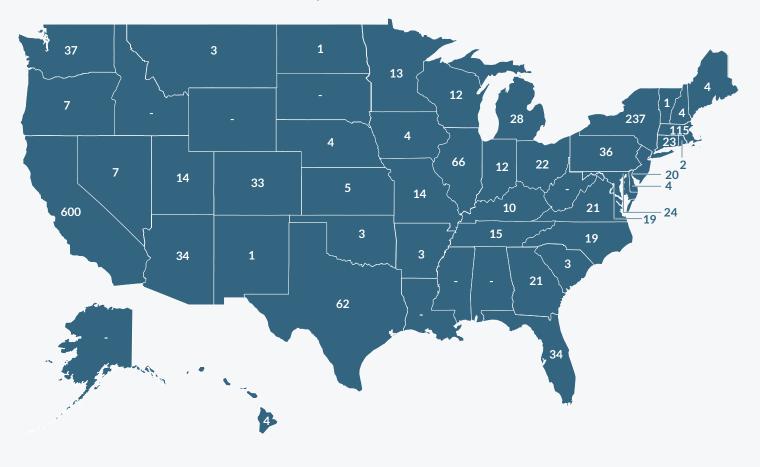
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
US as % of Global (\$)	85%	81%	81%	78%	76%	75%	69%	70%	69%	69%	64%	56%	54%
US as % of Global (#)	77%	73%	69%	68%	68%	67%	64%	62%	61%	59%	58%	58%	60%

<sup>\*</sup>VC investors include entities with primary investor type as: Venture Capital, Corporate Venture Capital, or Not-for-profit Venture Capital. Active investors includes any investor that made at least one investment in a venture-backed company in a given year. Active VC investors includes primary entity types of Venture Capital, Corporate Venture Capital, or Not-for-profit Venture Capital that made at least one investment in a venture-backed company in a given year.





#### Active Investor Count in 2016 Deals by Investor HQ State



Source: NVCA 2017 Yearbook, Data Provided by PitchBook. Note: This map breaks out the 2,105 active VC investors by their HQ state. Note that active VC investors headquartered outside of the U.S. are not included in this map.

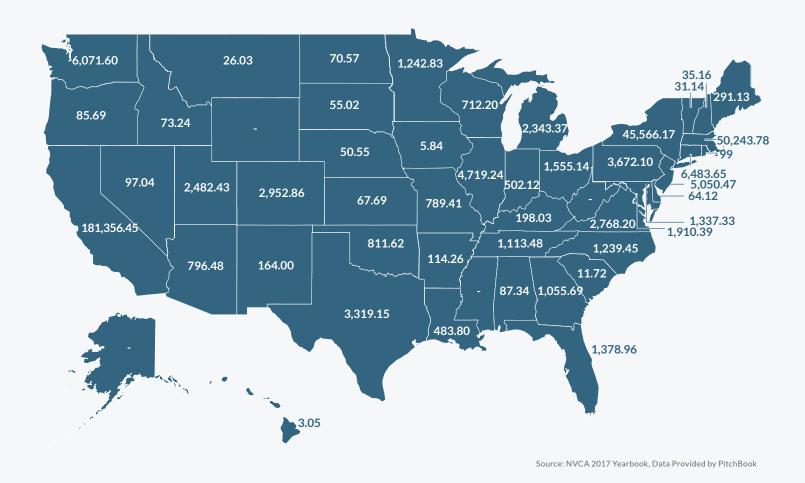
#### U.S. as a % of Global VC Exits by Year

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
US as % of Global (\$)	77%	63%	70%	69%	71%	65%	70%	69%	86%	58%	71%	63%	68%
US as % of Global (#)	67%	63%	62%	60%	61%	64%	61%	61%	63%	60%	57%	55%	57%





#### U.S. Venture Capital AUM as of 2016 by State (\$M)



Top 5 States by AUM in 2016 (\$B)

	AUM
California	\$181.36B
Massachusetts	\$50.24B
New York	\$45.57B
Connecticut	\$6.48B
Washington	\$6.07B







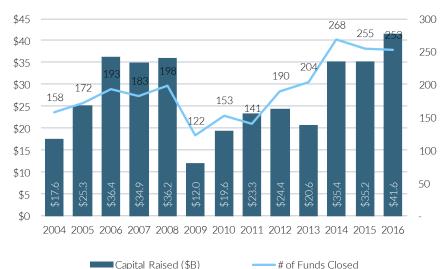
# Capital Commitments: Venture Fundraising

The venture industry had its best fundraising year in more than a decade in 2016, capping a three-year run of posting strong capital commitments to deploy to the entrepreneurial ecosystem. Compared to 2015, commitments to venture funds increased 18% in 2016, with \$41.6 billion raised across 253 funds, a testament to limited partners who are increasingly attracted to venture capital for both financial returns and access to the innovation economy. Twenty-two first-time funds raised \$2.2 billion in commitments last year, the largest amount by first-time managers since 2008, indicating a positive sign for emerging managers entering the venture ecosystem.

Despite the banner year for capital raised by venture funds, the total number of funds closed in 2016 declined slightly for the second straight year. Seven firms-including Andreessen Horowitz, Kleiner Perkins Caufield & Byers and Greylock Partnersraised \$1 billion-plus venture funds in 2016, accounting for nearly one-quarter of total capital raised, driving the annual median venture fund size to \$75 million, the highest median since 2008. Venture capital fundraising tends to follow a cyclical pattern, evidenced by a number of larger venture firms coming back to market closing large funds. The small number of funds raising large pools of capital coupled with fewer firms closing funds last year translated to an increased concentration of capital in the hands of fewer venture fund managers.

Venture funds raised by California-based firms increased as a percentage of total U.S. fundraising from 57% in 2015 to 66% in 2016, again partly due to a few firms closing large funds last year. Massachusetts

#### U.S. VC Fundraising by Year









accounted for 14% of total U.S. fundraising in 2016, while New York comprised 7%. While California, Massachusetts, and New York have established themselves as hubs for the venture ecosystem, it is important to note that the location of a venture firm is somewhat inconsequential since many of these firms tend to actively invest across a broad geographic footprint. Outside of these three states, venture fund sizes remained relatively small, with a median 2016 fund size of \$23.5 million. However, many states posted year-over-year fundraising increases, including Ohio, New Jersey, Tennessee, Missouri. North Carolina. and Arkansas.

This is the tenth consecutive year in which more capital was invested into the venture ecosystem than raised in new fund commitments by venture fund managers. It is important to note that this not a true apples-to-apples comparison since 1) firms generally do not deploy all of their capital into startups in one year or in the year they close their fund; and 2) there are additional investors, many who have become more active in the venture ecosystem, who do not invest through venture funds, e.g., corporate venture groups and non-traditional investors such as hedge funds, mutual funds, and sovereign wealth funds.

Though a healthy amount of additional capital was allocated to the venture asset class in 2016 and many venture firms are well-equipped with capital to deploy to promising startups, raising a venture fund remains a challenge for others, particularly given the long-term nature of the asset class and its inherent risk-return profile.

#### 10 Largest U.S. VC Funds in 2016

Fund Name	Fund Size (\$M)	Close Date	Fund State
TCVIX	2,500	8/1/16	California
Andreessen Horowitz Fund V	1,576	6/10/16	California
The Founders Fund VI	1,300	3/17/16	California
Norwest Venture Partners XIII	1,200	1/20/16	California
Greylock XV	1,105	10/11/16	California
KPCB Digital Growth Fund III	1,000	6/29/16	California
GSR Go Global Fund	1,000	4/18/16	California
GGV Capital VI	900	4/12/16	California
General Catalyst Group VIII	845	2/4/16	Massachusetts
Lightspeed Venture Partners XI	715	3/8/16	California

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### 2016 Top States by VC Capital Raised

	# of Funds	Capital Raised (\$M)
California	111	27,592.18
Massachusetts	25	5,825.74
New York	43	2,941.75
Illinois	9	717.39
Colorado	5	640.55
Washington	10	600.06
District of Columbia	2	561.22
Ohio	9	419.87
New Jersey	3	401.47
Tennessee	3	377.00
Missouri	3	374.00
Utah	3	346.00
Michigan	3	305.00





#### VC Fundraising by State by Year (\$M)

	2004	2005	2006	2007	2008	2009	2010
labama	56.60	23.00	21.90		25.70		
Arizona			550.00		20.00		
Arkansas		6.58					
Alaska							
California	8,310.56	12,278.12	18,516.75	14,579.51	17,885.09	5,289.02	10,831.84
Colorado	80.00	25.00	22.33	420.80	111.94	5.00	328.00
Connecticut	1,946.00	795.01	3,605.00	45.00	900.00	30.60	1,204.70
Delaware			13.00				15.00
District of Columbia	475.10		200.00	1,058.50	340.00		
Florida	4.08	345.00		348.50	164.13	140.00	180.00
Georgia	54.70	3.50	200.00	255.10	138.00	155.00	43.21
Hawaii	3.00				1.78		
daho				75.00			
llinois	149.00	165.50	201.95	413.26	839.57	88.20	47.00
ndiana	80.00	6.00			34.00	210.00	11.00
owa							
Kansas							
Kentucky		25.10	36.44		175.00		
Louisiana	175.52	73.50	70.00	28.00	60.00	70.00	56.00
Maine	180.00			65.00			
Maryland	200.00	25.00	327.00	575.00	63.30	21.00	
Massachusetts	2,257.12	3,736.68	4,828.05	6,994.16	3,539.76	3,158.81	2,746.03
Michigan	56.00		20.00	65.00	910.00	254.30	241.40
Minnesota	49.80	275.00	398.00	330.00	475.10	30.00	
Mississsippi							
Missouri	43.00	66.00	75.00	210.20	53.90	10.00	2.00
Montana							
Nebraska							3.00
Nevada					50.00		
New Hampshire			50.00				
New Jersey	212.90	1,176.80	1,063.00	895.22	9.00	516.00	250.00
New Mexico		47.50	5.20				15.50
New York	796.07	3,439.37	3,049.59	5,011.21	5,449.00	499.20	2,314.89
North Carolina	42.51	232.00	340.00	28.00	83.00	102.00	1.54
North Dakota					11.00		
Ohio	203.45	16.41	101.50	24.50	81.77	27.70	61.90
Oklahoma		500.63	15.00				212.82
Oregon				0.90	2.55	3.00	20.35
Pennsylvania	423.60	378.80	382.20	192.49	749.61	941.51	140.00
Rhode Island							
South Carolina							
South Dakota		10.00			32.48		16.00
[ennessee	66.20	83.30	54.00	40.00	94.90	14.00	74.24
exas	768.70	268.15	892.08	303.30	336.40	5.10	176.21
Jtah	97.10		129.20	352.00	186.60	160.00	71.35
/ermont					28.00		5.00
/irginia	123.70	564.05	478.00	276.00	331.84	274.58	441.00
Washington	708.90	722.17	537.95	2,331.00	2,935.13	2.50	10.30
West Virginia	, 55.76	, 22.1/	557.75	2,001.00	2,703.10	2.30	10.00
Visconsin		10.73	168.00		57.30		51.51
Wyoming		10.73	100.00		37.30		31.31





	2011	2012	2013	2014	2015	2016
Alabama		5.00				
Arizona	38.20	56.11	150.30	156.55	6.19	7.45
Arkansas				10.00		90.00
Alaska						
California	13,235.95	14,646.94	10,138.88	21,729.22	19,997.26	27,592.18
Colorado		88.70	233.04	193.83	639.82	640.55
Connecticut	15.00	617.50	193.10	500.00	1.00	12.01
Delaware		4.90		26.00	2.38	
District of Columbia		20.50	200.00	2.50	102.55	561.22
Florida	97.62	268.00		52.23	164.00	34.95
Georgia		50.00	40.70	40.31	242.10	
Hawaii						
Idaho						
Illinois	632.93	152.80	230.37	410.86	345.95	717.39
Indiana		18.95	41.00	13.74		
lowa		3.00	1.80			
Kansas	2.60		50.00			
Kentucky		10.70				
Louisiana		6.00	14.20	10.39	1.83	
Maine		10.14			123.00	
Maryland		145.00	60.30	132.18	81.15	0.81
Massachusetts	3,963.95	2,257.16	4,653.03	2,751.47	4,910.90	5,825.74
Michigan	221.65	30.16	70.01	94.11	333.05	305.00
Minnesota		150.00	107.36	70.00	5.50	
Mississsippi						
Missouri			305.00	1.50	83.20	374.00
Montana					2.75	21.13
Nebraska	37.30				0.60	
Nevada		50.00				
New Hampshire						
New Jersey	500.00	350.00	20.00	18.60		401.47
New Mexico	10.00			50.00		
New York	4,092.54	4,358.32	1,632.41	7,380.88	5,811.40	2,941.75
North Carolina		2.50	215.00	50.60	15.10	185.20
North Dakota			45.00	3.50		
Ohio	27.61	70.03	40.32	536.20		419.87
Oklahoma					203.18	
Oregon	3.35	7.76	13.20	7.68	17.51	
Pennsylvania	100.00	254.30	171.59	202.51	237.00	59.00
Rhode Island						
South Carolina			6.00	3.42		
South Dakota						3.00
Tennessee	22.00	180.00	114.40	15.00		377.00
Texas	130.10	31.18	463.85	438.51	156.94	79.17
Utah	33.00	131.88	570.88	154.50	280.20	346.00
Vermont		<del>-</del>	- · · · · <del>-</del>	23.50	· · <del>-</del>	
Virginia	110.00	80.15	225.00	3.50	641.60	
Washington	110.00	328.20	551.20	49.75	764.64	600.06
West Virginia		520,20	301.20	.,,, 5		
Wisconsin	40.00	34.87	82.60	217.68	0.62	29.70
Wyoming	+0.00	J-1.07	52.00	217.00	0.02	27.70
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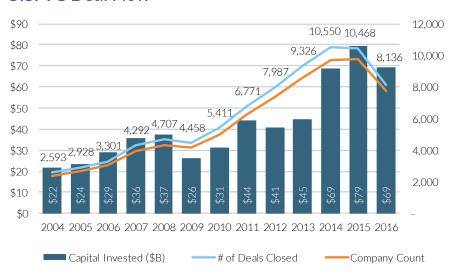




# Capital Deployed: Venture Investment into Companies

Through the first half of 2016, U.S. venture activity continued at the frenetic pace of 2015, when VC investment peaked. However, activity began to slow in the second half of the year. Throughout 2016, investors deployed more than \$69.1 billion into the U.S. venture ecosystem, representing the second highest annual total-after 2015-in the past 13 years. More than 7.750 companies raised capital across 8,136 deals in 2016, with both measures reverting to levels last seen in 2012. The slowdown in venture activity was somewhat expected and represented less of a decline and more of a return to normalcy for the industry, given the high levels of activity recorded in 2014 and 2015.

#### U.S. VC Deal Flow



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. VC Deal Flow by Stage (#)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Angel/Seed	234	292	431	744	902	1141	1672	2603	3556	4641	5452	5683	4115
Early VC	1452	1660	1812	2224	2322	1941	2223	2519	2707	2873	3147	3013	2496
Later VC	907	976	1058	1324	1483	1376	1516	1649	1724	1812	1951	1772	1525





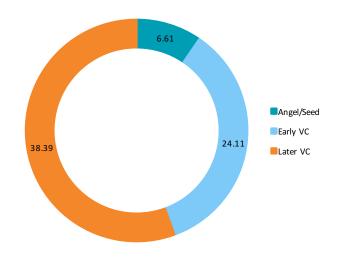
#### Sectors

Software companies attracted the lion's share of venture investment in 2016: \$33 billion across 3.100 investments. representing 48% of total dollars invested and 38% of all deals completed. Within the software sector, social/platform software companies led the way with notable investments including transportation mobile app Uber Technologies, photo messaging mobile app Snap, on-demand ride sharing platform Lyft, property rental marketplace Airbnb, and cloud-based business management platform Domo. Though the overall industry saw a drop in VC dollars invested in 2016, the software and IT hardware sectors were the only major sectors with year-over-year increases.

While the overall number of investments (1.016) and venture dollars invested (\$11.7 billion) into life science companies (defined as pharmaceuticals, biotechnology, and healthcare devices and supplies) declined year-over-year, the number of life science deals as a share of overall venture deal count increased to 12.5% in 2016. Notable investments into venture-backed life science companies included: Moderna, a drug developer for genetic disorders, hemophilic and blood factors, and oncology; Human Longevity, a developer of genomics and cell therapy-based diagnostic and therapeutic technology; and CVRx, a developer of implantable technology for the treatment of high blood pressure and heart failure.

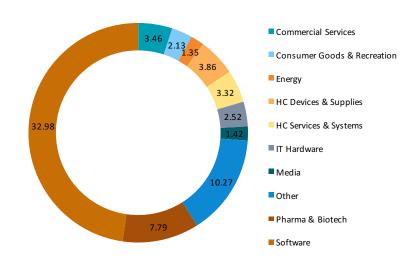
Across each investment stage, the number of completed deals and capital invested fell in 2016 compared to 2015. Angel/seed deals—typically smaller investments into younger companies—accounted for 51% of the number of investments and 10% of the capital invested into the venture ecosystem last year. In 2016, 1,525 late stage investments garnered \$38.4 billion in venture funding, representing year-overyear declines of 14% and 17%, respectively. The drop in capital invested into early stage companies was less pronounced, as investors deployed \$24 billion (2% yearover-year decrease) into about 2,500 early stage investments (17% decrease). Though there were fewer angel/seed and early

#### 2016 U.S. VC Deals by Stage (\$B)



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### 2016 US VC Deals by Sector (\$B)







stage investments last year, the size of these deals increased. The median angel/seed investment grew from \$0.8 million in 2015 to \$1 million in 2016. Similarly, the median early stage investment increased from \$4.5 million in 2015 to \$5.3 million in 2016.

Aligned with the investment slowdown by stages, first-time fundings—defined as the first round of equity funding in a startup by an institutional venture investor—also declined in 2016. The number of companies receiving first-time fundings last year (2,340) fell to its lowest annual level since 2010, and the capital invested into first-time fundings (\$6.6 billion) reverted to 2013 levels. Software companies saw the largest number of first-time fundings, followed by commercial services and healthcare services & systems.

The fundraising focus for many firms and the industry's collective awareness to step off the gas pedal after an overly active 2015 provides some context for the investment pace slowdown in 2016. An uptick in valuations, particularly for late stage companies, in 2015 not surprisingly also affected late stage investment activity in 2016. Venture investors adopted a renewed focus of maintaining existing portfolio companies, supporting them with financial capital and "sweat equity," and assessing new investments with a more critical eye on where and how to deploy their funds to the right startups.

#### Geographical Spread

Across the U.S., entrepreneurs in all 50 states and the District of Columbia, 226 Metropolitan Statistical Areas, and 386 of 435 Congressional Districts raised venture funding in 2016. Startups in California, Massachusetts, and New York continued to attract the most VC investment. These three states accounted for 75% of U.S. VC dollars invested in 2016; however, their collective dominance as a proportion of the total number of U.S. VC deals declined to 52%, a positive sign for burgeoning entrepreneurial ecosystems in the rest of the country. Venture deal count decreased yearover-year for all states except ten, notably: Indiana, Alabama, Montana, Rhode Island, North Dakota and Maine.

Beyond the domestic geographic spread, venture capital activity outside of the U.S. has been on the rise. Global VC investment reached \$127 billion in 2016, after peaking in 2015 and mirroring the trend in the U.S. Countries around the world see the value VC activity brings to their economies and fuels domestic innovation. While overall global VC investment has increased in recent years, the U.S.'s share has not kept its pace. In the 1990s, the U.S. accounted for more than 90% of global VC investment. In 2016, the \$69.1 billion deployed into U.S. startups represented 54% of the global share.

#### 2016 U.S. VC Deals by Sector (\$B)

Commercial Services	3.46
Consumer Goods & Recreation	2.13
Energy	1.35
HC Devices & Supplies	3.86
HC Services & Systems	3.32

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

IT Hardware	2.52
Media	1.42
Other	10.27
Pharma & Biotech	7.79
Software	32.98

\*Other industry groups below:

Commercial Products
Commercial Transportation
Other Business Products and Services
Consumer Durables
Consumer Non-Durables
Services (Non-Financial)
Transportation
Other Consumer Products and Services
Utilities
Other Energy
Capital Markets/
Institutions

Commercial Banks
Insurance
Other Financial Services
Other Healthcare
IT Services
Other Information
Technology
Agriculture
Chemicals and Gases
Construction (Non-Wood)
Containers and Packaging
Forestry
Metals, Minerals and Mining
Textiles

Other Materials





#### Company Count, Deals Closed, and Capital Invested by State in 2016

State	Company Count	# of Deals Closed	Capital Invested (\$M)	State	Company Count	# of Deals Closed	Capital Invested (\$M)
California	2658	2801	38,060.29	South Carolina	35	35	53.27
New York	875	928	7,361.49	Kentucky	33	35	91.82
Massachusetts	508	535	6,099.65	Delaware	29	30	88.34
Texas	439	456	1,989.26	Rhode Island	28	28	41.55
Washington	292	311	1,579.69	New Hampshire	27	27	134.93
Colorado	241	255	911.88	Alabama	25	26	48.79
Illinois	239	247	1,282.86	Arkansas	22	22	37.84
Pennsylvania	228	235	1,090.20	Maine	22	23	24.03
Florida	208	212	1,678.32	Louisiana	22	23	21.19
North Carolina	143	148	764.86	Iowa	20	20	74.66
Virginia	136	143	569.53	Montana	20	22	45.70
Maryland	132	138	518.32	Idaho	20	21	16.36
Ohio	128	135	362.33	Kansas	16	16	22.32
Georgia	118	126	767.74	Nebraska	16	16	17.72
Utah	99	106	1,169.77	Vermont	14	14	51.64
Oregon	93	96	306.99	New Mexico	12	12	31.47
Tennessee	92	95	379.29	Hawaii	12	14	30.68
New Jersey	86	88	516.45	South Dakota	11	11	89.14
Arizona	84	92	296.76	North Dakota	10	10	10.86
Minnesota	83	88	475.79	Oklahoma	10	10	7.56
Connecticut	76	79	412.45	Mississippi	6	6	6.25
Michigan	73	75	252.60	Alaska	4	4	2.38
Indiana	73	77	169.31	Puerto Rico	4	4	1.79
Wisconsin	66	68	240.61	West Virginia	3	3	9.40
Missouri	57	61	300.24	Wyoming	2	2	1.64
District of Columbia	52	56	399.35	Unknown	7	7	22.05
Nevada	42	44	167.62				
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Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### Top 10 U.S. VC Deals in 2016

Company Name	Deal Size (\$M)	Deal Type	Industry Sector	State
Uber Technologies	5,600.00	Later Stage VC	Information Technology	California
Snap	1,808.56	Later Stage VC	Information Technology	California
Lyft	1,000.00	Later Stage VC	Information Technology	California
Palantir Technologies	880.00	Later Stage VC	Information Technology	California
Magic Leap	793.50	Early Stage VC	Information Technology	Florida
Pivotal Software	653.00	Later Stage VC	Information Technology	California
Moderna	474.00	Later Stage VC	Healthcare	Massachusetts
Oscar	400.00	Later Stage VC	Information Technology	New York
Domo	366.03	Later Stage VC	Information Technology	Utah
EVA Automation	252.00	Early Stage VC	Consumer Products and Services (B2C)	California





#### Share of 2016 U.S. VC Activity by State

State	Company Count	% of Total	Capital Invested (\$M)	% of Total
California	2,658	34.29%	38,060.29	55.07%
New York	875	11.29%	7,361.49	10.65%
Massachusetts	508	6.55%	6,099.65	8.83%
Texas	439	5.66%	1,989.26	2.88%
Florida	208	2.68%	1,678.32	2.43%
Washington	292	3.77%	1,579.69	2.29%
Illinois	239	3.08%	1,282.86	1.86%
Utah	99	1.28%	1,169.77	1.69%
Pennsylvania	228	2.94%	1,090.20	1.58%
Colorado	241	3.11%	911.88	1.32%

#### # of States Invested into by Investor HQ State

Investor HQ State	# of States Invested In
California	40
New York	36
Massachusetts	33
Illinois	31
Texas	30
Missouri	25
Maryland	24
Florida	24
North Carolina	23
Pennsylvania	23
Virginia	23
Colorado	22
Michigan	20
Connecticut	20
Tennessee	19
Washington	19
District of Columbia	18
Georgia	17
New Jersey	17
Ohio	15
Arizona	15
Indiana	14
Minnesota	13
Wisconsin	12
Utah	11
Kansas	11
Nebraska	11

#### # of States California Investors Invested into

Year	# of States Invested In
2004	34
2010	38
2016	40

## Top 5 States by Percentage of 2016 Deals Done Within Investor's HQ State

Investor HQ State	% Invested Within State
Oregon	70%
California	67%
Wisconsin	64%
Ohio	62%
Utah	59%

Example of how to read this table: In 2016, 70% of deals done by Oregon based investors were investments into Oregon based companies.

#### Top 5 States by Percentage of 2016 Deals Done in State which Feature Investor(s) from that State

Company HQ State	% Invested Within State
California	77%
New York	63%
Massachusetts	63%
Texas	59%
Washington	56%

Example of how to read this table: In 2016, 77% of investments in California based companies featured at least one California based investor.

<sup>\*</sup>This ranking is inclusive of states with 20 or more investments

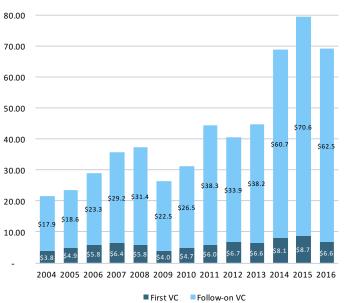
<sup>\*</sup>This ranking is inclusive of states with 20 or more investments





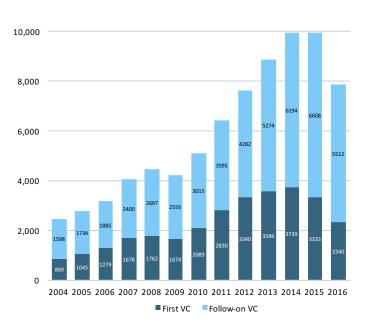
### First-time Financings

#### U.S. First VC & Follow on VC Deal Flow (\$B)



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

## U.S. First VC & Follow on VC Deal Flow (Company Counts)



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

## U.S. VC Deal Flow by Sector: First Round VC in 2016

Sector	Company Count	# of Deals Closed	Capital Raised (\$B)
Commercial Services	201	201	0.36
Consumer Goods & Recreation	113	113	0.28
Energy	28	28	0.05
HC Devices & Supplies	70	70	0.30
HC Services & Systems	129	129	0.39
IT Hardware	32	32	0.22
Media	77	77	0.09
Other	796	796	1.68
Pharma & Biotech	123	123	1.47
Software	771	771	1.81





## Life Sciences

#### U.S. Life Sciences VC Deal Flow

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Capital Invested (\$B)	6.01	6.23	7.51	9.42	9.25	7.46	7.57	8.11	8.56	9.14	11.21	15.31	11.65
# of Deals Closed	523	575	649	811	861	856	958	1,014	1,098	1,155	1,186	1,206	1,016
Company Count	478	530	607	754	786	786	875	935	1005	1061	1101	1115	972
Life Sciences as % of Total US VC (#)	20.2%	19.6%	19.7%	18.9%	18.3%	19.2%	17.7%	15.0%	13.7%	12.4%	11.2%	11.5%	12.5%
Life Sciences as % of Total US VC (\$)	27.7%	26.5%	25.8%	26.5%	24.9%	28.2%	24.3%	18.3%	21.1%	20.4%	16.3%	19.3%	16.9%

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. Life Sciences VC Invested (\$M) by Sector

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Biotechnology	860.7	710.6	1,057.2	1,401.5	1,006.7	1,445.0	1,515.7	1,428.7	1,515.9	1,515.9	2,596.7	4,637.3	4,071.6
Diagnostic Equipment	336.2	558.5	470.6	814.4	813.7	451.9	866.2	735.6	649.1	964.6	910.7	1,168.3	918.1
Discovery Tools (Healthcare)	193.3	118.9	31.7	121.0	136.1	126.9	72.6	102.0	28.8	102.2	160.8	67.7	136.9
Drug Delivery	151.5	209.1	251.8	477.5	600.0	230.1	184.3	448.1	421.9	377.8	458.9	768.8	731.0
Drug Discovery	1,030.6	1,035.9	1,181.6	1,326.0	1,144.3	1,196.5	1,125.8	1,214.8	2,069.4	2,184.8	2,881.7	3,925.1	2,333.8
Medical Supplies	279.6	153.8	153.0	301.7	227.0	126.5	91.6	189.3	328.5	109.2	585.6	85.6	216.9
Monitoring Equipment	120.1	148.2	238.6	227.2	336.6	182.4	218.2	140.4	294.3	430.1	497.3	999.2	377.1
Other Devices and Supplies	108.1	149.3	180.4	308.8	214.9	149.3	230.9	301.6	267.6	344.6	320.0	390.1	325.9
Other Pharma & Biotech	64.3	123.1	76.7	115.8	225.9	83.9	121.3	73.6	109.9	29.6	80.3	80.7	164.3
Pharmaceuticals	1,663.1	1,680.6	1,962.2	1,908.3	1,573.4	1,392.1	1,090.5	920.8	634.2	583.2	555.8	414.5	352.0
Surgical Devices	591.4	684.1	982.6	1,189.6	1,483.0	809.8	1,110.7	1,155.6	1,040.5	1,056.3	1,022.0	748.3	793.2
Therapeutic Devices	607.6	662.2	928.1	1,224.3	1,486.0	1,267.7	940.9	1,394.5	1,199.1	1,438.9	1,137.6	2,020.7	1,227.6





#### U.S. Life Sciences VC Deal Count by Sector

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Biotechnology	88	86	93	141	140	152	197	202	222	255	274	319	289
Diagnostic Equipment	52	60	77	105	116	95	126	128	139	140	140	129	117
Discovery Tools (Healthcare)	12	16	8	13	14	11	13	13	12	14	17	13	11
Drug Delivery	14	20	20	31	27	25	26	26	27	28	28	27	17
Drug Discovery	81	72	93	112	113	119	135	123	149	173	176	167	135
Medical Supplies	27	17	25	38	31	38	36	38	59	44	45	33	44
Monitoring Equipment	16	19	37	25	33	41	42	45	68	69	72	73	65
Other Devices and Supplies	15	31	32	34	48	50	69	76	86	91	98	108	83
Other Pharma & Biotech	5	10	12	14	19	10	16	15	19	20	17	26	14
Pharmaceuticals	92	79	79	94	84	81	86	80	68	57	53	57	49
Surgical Devices	56	73	81	83	114	92	101	111	99	94	107	92	73
Therapeutic Devices	65	92	92	121	122	142	111	157	150	170	159	162	119





### Corporate Venture Capital

Corporate venture groups increased their involved in the entrepreneurial ecosystem in 2016. For the fourth straight year, more than 1,000 venture investments involved corporate venture capital (CVC) participation. Though the number of CVC deals in 2016 dipped from 2015 (1,069 vs. 1,268), the percentage of all VC deals involving CVC continued to increase, hitting 13.1% in 2016. The aggregate deal size (including non-corporate venture groups) of these 1,069 deals where at least one corporate investor participated reached \$30.3 billion, a slight decline compared to \$31.2 billion in 2015.

Some of the most active corporate venture groups in the U.S. venture ecosystem last year included: GV, Comcast Ventures, Intel Capital, GE Ventures, and Salesforce Ventures. The industry has also seen a number of corporations recently form new venture arms—such as Campbell Soup Company, JetBlue, Sesame Street, Kellogg Company, and Airbus—highlighting the value corporations view that startups can bring to them in terms of research and development, operational efficiencies, talent, data, and potential acquisition target. However, the value is a two-way street, as startups also benefit from bringing on

corporate investors, who provide not only working capital but also strategic guidance, sales and marketing channels, business development opportunities, and specific domain expertise. This mutually beneficial relationship between startups and large corporations will remain an important one in the ecosystem, and looking ahead, it is likely corporate venture groups will continue to be active across sectors.

#### Corporate VC Investment by Year

	# of All VC Deals	# of VC Deals with CVC Involvement	% of VC Deals with CVC Involvement (#)	Average Deal Value (All VC, \$M)	Average Deal Value (CVC, \$M)	Median Deal Value (All VC, \$M)	Median Deal Value (CVC, \$M)	Average Post Valuation (All VC, \$M)	Average Post Valuation (CVC, \$M)	Median Post Valuation (All VC, \$M)	Median Post Valuation (CVC, \$M)	Total VC Capital Raised (\$M)	Total CVC Capital Raised (\$M)	% of VC Deals with CVC Involvement (\$)
2004	2,593	527	20%	8.9	13.8	5.5	10.0	36.6	54.1	21.5	31.2	21,670.2	7,009.9	32%
2005	2,928	525	18%	8.5	12.0	5.0	8.2	39.4	52.8	21.6	31.2	23,525.3	5,956.4	25%
2006	3,301	537	16%	9.5	17.6	5.0	10.0	46.2	66.5	23.5	40.8	29,080.6	9,057.5	31%
2007	4,292	675	16%	9.0	16.7	4.5	10.2	48.7	80.3	23.2	45.2	35,549.5	10,830.6	30%
2008	4,707	677	14%	8.5	15.7	3.9	9.1	57.7	76.7	21.7	36.0	37,155.6	10,313.6	28%
2009	4,458	464	10%	6.5	14.6	2.5	9.0	48.4	77.6	18.2	37.9	26,475.2	6,379.7	24%
2010	5,411	545	10%	6.3	15.1	2.0	8.7	49.2	88.7	18.0	35.4	31,183.5	7,753.5	25%
2011	6,771	704	10%	7.4	19.0	1.7	8.5	94.8	150.1	18.1	41.6	44,295.2	12,520.0	28%
2012	7,987	799	10%	5.8	15.3	1.5	8.5	63.7	123.6	16.5	40.2	40,631.3	11,291.2	28%
2013	9,326	1,004	11%	5.5	14.6	1.4	6.6	60.7	123.0	16.7	40.1	44,818.0	13,472.2	30%
2014	10,550	1,207	11%	7.6	21.4	1.5	8.0	116.4	210.9	18.9	45.9	68,855.8	23,842.5	35%
2015	10,468	1,268	12%	8.7	26.7	1.8	10.0	138.2	326.5	21.0	55.9	79,259.8	31,215.6	39%
2016	8,136	1,069	13%	9.3	30.4	2.1	11.7	127.4	330.5	23.2	59.9	69,107.0	30,251.3	44%





### Growth Equity

Growth equity investments also play an important role in the entrepreneurial ecosystem. Growth equity sits at the end of the venture capital spectrum and is adjacent to buyouts, filling a gap for mature businesses that do not have a need for early stage venture capital nor would a buyout by a private equity firm make sense for their growth. Many growth equity deals are also included in the venture capital statistics in the Yearbook; however, others are classified as growth/expansion and are not included.

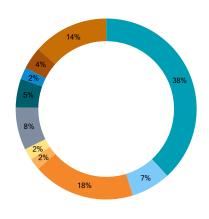
In an effort to provide clarity to what may seem like a confusing investment stage, NVCA—through its Growth Equity Group—has defined most growth equity investments as having the following key characteristics:

- 1) company has a proven business model (established product and/or technology and existing customers);
- 2) company's revenues are growing rapidly;3) company is often cash flow positive,profitable or approaching profitability;
- 4) company is often founder-owned and / or managed;
- 5) investor is agnostic about control and purchases minority ownership positions more often than not;

- 6) industry investment mix is similar to that of earlier stage venture capital investors;
- 7) capital is used for company needs or shareholder liquidity;
- 8) additional financing rounds are not usually expected until exit;
- 9) investments are often unlevered or use light leverage at purchase; and
- 10) investment returns are primarily a function of growth, not leverage, with a lower expected loss ratio than venture capital portfolios. Additional details on the criteria used to identifying growth equity investments from the PitchBook Platform are available on page 51.

Similar to venture investment activity, growth equity\* investment declined in 2016 after peaking in 2015. Investors deployed \$28.3 billion across 526 growth equity investments last year, representing a year-over-year drop of 23% and 20%, respectively. Software companies accounted for the highest share of the number of growth equity deals completed (38%) and dollars deployed (61%).

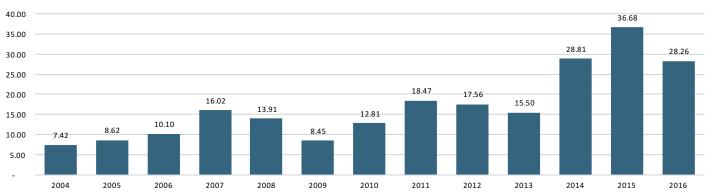
#### U.S. Growth Equity Investments in 2016 by Sector (#)





Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. Growth Equity Deal Flow by Year (\$B)







# Exit Landscape: IPOs & M&As

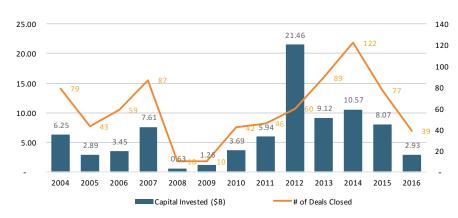
Once successful portfolio startups mature, venture funds generally exit their positions in those companies by taking them public through an initial public offering (IPO) or by selling them to presumably larger entities (via an acquisition, merger, or trade sale) or to a financial buyer (e.g., a private equity buyer). This exit in the company allows the venture firm to distribute the proceeds to investors, raise a new fund for future investment, and invest in the next generation of companies. This section collectively refers to any type of sale to a corporate entity or to a financial buyer as a merger and acquisition (M&A), and considers IPOs separately.

#### U.S. IPOs by Year

	# of All IPOs	# of VC Backed IPOs
2004	281	79
2005	258	43
2006	260	59
2007	294	87
2008	137	10
2009	87	10
2010	173	42
2011	177	46
2012	198	60
2013	320	89
2014	373	122
2015	226	77
2016	138	39

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. VC-backed IPOs by Year



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### Top 10 U.S. VC-backed IPOs in 2016

Company Name	Raised at IPO (\$M)	Industry Sector	State
Nutanix	237.92	Information Technology	California
Intellia Therapeutics	150.00	Healthcare	Massachusetts
Twilio	150.00	Information Technology	California
Coupa Software	133.20	Information Technology	California
AquaVenture Holdings	117.00	Energy	Florida
Quantenna Communications	107.20	Information Technology	California
iRhythm Technologies	107.00	Healthcare	California
Acacia Communications	103.50	Information Technology	Massachusetts
AveXis	96.00	Healthcare	Illinois
Apptio	96.00	Information Technology	Washington





Though 726 venture-backed exits were completed, valued at \$46.8 billion, the exit environment remained a challenge for the venture ecosystem in 2016. Both the IPO and M&A markets for venture-backed companies sustained a two-year slide in 2016, after peaking in 2014. M&As continued to account for the largest share (82%) of all venture-backed exits.

In 2016, 39 U.S. venture-backed IPOs raised \$2.9 billion and generated \$16.1 billion in post-offer value, which came from \$4.4 billion total venture investment in those companies. The number of IPOs completed in 2016 was the fewest since 2009 when tenventure backed companies debuted on U.S. exchanges.

Venture-backed companies that went public in 2016 waited longer from their initial venture funding to IPO, as the median time to exit reached 8.3 years, a 13-year high. For the fourth straight year, pharmaceuticals

#### Ratio of IPO Pre Valuation to Total VC Invested

	Post Value (\$B)	Capital Raised (\$B)	IPO Pre Value (\$B)	Total VC Raised to Date (\$B)	Ratio
2004	41.8	6.3	35.6	4.2	8.5
2005	8.6	2.9	5.8	2.2	2.6
2006	13.9	3.5	10.5	3.0	3.5
2007	33.5	7.6	24.4	5.2	4.6
2008	2.8	0.6	2.2	0.3	6.2
2009	4.8	1.3	3.8	0.8	4.8
2010	15.9	3.7	12.4	4.2	3.0
2011	45.9	5.9	40.1	6.6	6.0
2012	114.8	21.5	93.1	6.8	13.7
2013	52.8	9.1	43.7	10.4	4.2
2014	52.1	10.6	41.4	11.1	3.7
2015	40.8	8.1	30.3	8.2	3.7
2016	16.1	2.9	12.7	4.4	2.9

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

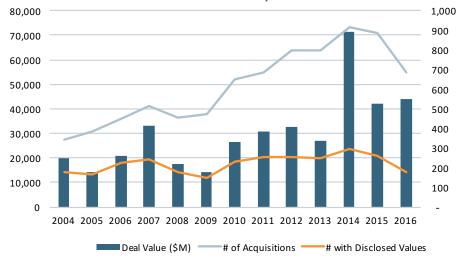
#### U.S. VC Backed IPO Value and Age Characteristics

	# of IPOs	Deal Value (\$M)	Median Deal Value (\$M)	Average Deal Value (\$M)	Post Value (\$M)	Median Post Value (\$M)	Average Post Value (\$M)	Median Time from 1st VC to Exit	Average Time from 1st VC to Exit
2004	79	6,250.6	49.8	84.5	41,826.0	220.8	580.9	5.16	5.20
2005	43	2,892.0	53.8	72.3	8,628.8	199.3	227.1	4.77	4.52
2006	59	3,452.9	55.5	63.9	13,908.9	219.8	252.9	4.79	5.09
2007	87	7,611.2	75.0	96.3	33,492.2	333.8	418.7	5.17	5.54
2008	10	626.2	61.8	69.6	2,773.4	237.0	396.2	2.82	4.61
2009	10	1,255.0	86.6	125.5	4,824.2	342.1	536.0	7.32	7.50
2010	42	3,691.9	69.8	87.9	15,903.4	278.7	378.7	6.90	7.38
2011	46	5,938.9	87.7	138.1	45,877.3	423.6	1,092.3	5.88	6.87
2012	60	1,457.5	81.0	390.1	114,752.5	360.3	,206.8	7.14	7.64
2013	89	9,116.7	75.0	107.3	52,808.8	319.5	628.7	6.77	7.30
2014	122	10,565.5	65.6	88.0	52,081.5	249.4	437.7	6.85	7.04
2015	77	8,072.7	74.8	104.8	40,814.5	289.5	551.5	6.94	6.75
2016	39	2,928.5	70.5	75.1	16,079.3	250.6	412.3	8.27	7.61





#### U.S. Venture-backed M&A Activity



Source: NVCA 2017 Yearbook, Data Provided by PitchBook

#### U.S. VC Backed M&A Value and Age Characteristics

	# of Acquisitions	# with Disclosed Values	Deal Value (\$M)	Average Deal Value (\$M)	Median Deal Value (\$M)	Median Time from 1st VC to Exit	Average Time from 1st VC to Exit
2004	341	179	19,745.0	110.3	43.7	3.90	4.07
2005	386	166	14,086.9	84.9	38.1	4.74	4.59
2006	451	227	20,666.5	91.0	44.7	4.70	4.72
2007	515	245	33,180.1	135.4	50.0	4.57	4.82
2008	455	177	17,523.4	99.0	36.0	4.75	4.89
2009	472	146	14,437.0	98.9	25.0	4.34	4.86
2010	651	232	26,583.8	114.6	36.5	4.36	5.00
2011	687	257	30,956.5	120.5	50.0	4.21	4.89
2012	799	252	32,478.5	128.9	48.5	4.51	4.99
2013	796	247	27,124.0	109.8	37.3	4.08	5.05
2014	918	297	71,176.4	239.7	52.0	4.44	5.29
2015	884	258	42,299.5	164.0	50.0	4.31	5.42
2016	687	177	43,894.6	248.0	90.0	4.67	5.83

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

and biotechnology companies represented the largest proportion of venture-backed IPOs in 2016. The sector accounted for 17 of the companies and \$1.2 billion of total raised at IPO, representing 44% and 39%, respectively, of all venture-backed IPOs in 2016.

Notable 2016 venture-backed IPOs included Nutanix (NASDAQ: NTNX), a San Jose-based enterprise cloud platform; Twilio (NYSE: TWLO), a San Francisco-based cloud communications platform; and Intellia Therapeutics (NASDAQ: NTLA), a Cambridge, MA-based developer of therapeutic gene editing treatments. At the time of IPO, Nutanix employed approximately 2,000, Twilio 624, and Intellia 61.

The decline in venture-backed IPOs was in line with an overall decline in filings on U.S. public stock exchanges though the 39 venture-backed IPOs accounted for 28% of all IPOs last year, relatively on par with 2014 and 2015. However, the overall decline in U.S. IPOs remains a larger issue NVCA's Government Affairs team is actively engaging with policymakers on re-opening capital markets to venturebacked companies. Unfortunately, data show that the U.S. is averaging less than half the number of IPOs annually post-2000 than pre-2000. At the same time, the total number of public companies has drastically dropped by half in 20 years. Public markets play a critical role in helping startups mature and grow, and the health of capital markets is critical to the U.S. economy. At least in the short-term, there remains optimism for a relatively more active IPO window in 2017, with around 20 venture-backed companies currently in IPO registration.

There were 687 disclosed venture-backed M&As in 2016, of which 177 had a disclosed exit value totaling \$43.9 billion. The median value of disclosed M&As reached \$90 million in 2016, an 12-year high. Software companies accounted for approximately half of the number of M&A transactions reported, followed by life science companies (includes pharmaceuticals and biotechnology and healthcare devices and supplies all combined together), and commercial services companies.





Notable venture-backed M&As in 2016 included Walmart's acquisition of Hoboken, NJ-based e-commerce website Jet; Unilever's acquisition of Santa Monica, CA-based grooming products company Dollar Shave Club; AbbVie's acquisition of South San Francisco-based cancer research and drug development company Stemcentrx; and General Motors' acquisition of San Francisco-based self-driving technology company Cruise Automation.

Many large corporations are increasingly investing—for both strategic and financial value—in startups, as described earlier in the Yearbook. Corporate acquisitions also play an important role in the venture ecosystem, providing startups and their talent and technology the opportunity to persist under the umbrella of a corporate parent. In return, startups fill research and development needs for the corporation, which benefits from the startup's technological innovation and operational adjustments. Looking to 2017, M&A activity will likely remain robust given the levels of cash on corporate balance sheets and a low interest rate environment.

#### Top 10 U.S. VC-backed M&A in 2016

Company Name	Deal Size (\$M)	Industry Sector	State
Stemcentrx	10,000.00	Healthcare	California
Jet	3,300.00	Consumer Products and Services (B2C)	New Jersey
Jasper	1,400.00	Information Technology	California
Afferent Pharmaceuticals	1,250.00	Healthcare	California
Cruise Automation	1,000.00	Information Technology	California
Dollar Shave Club	1,000.00	Consumer Products and Services (B2C)	California
Chase Pharmaceuticals	1,000.00	Healthcare	District of Columbia
Telogis	900.00	Information Technology	California
Krux Digital	800.00	Information Technology	California
IronPlanet	758.50	Consumer Products and Services (B2C)	California

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

## U.S. VC backed IPO Post Valuation by Range (Company Count)

	>\$10B	\$1B-\$10B	\$500M-\$1B	\$100M-\$500M	<\$100M
2004	1	1	6	57	7
2005	-	-	4	24	10
2006	-	-	6	41	8
2007	-	4	16	55	5
2008	-	1	-	5	1
2009	-	1	2	6	-
2010	-	3	5	29	5
2011	1	8	9	19	5
2012	1	8	10	31	2
2013	1	9	12	49	13
2014	-	10	18	73	18
2015	-	9	13	36	16
2016	-	3	8	22	6

Source: NVCA 2017 Yearbook, Data Provided by PitchBook

## U.S. VC backed M&A by Range (Company Count)

>\$10B	\$1B-\$10B	\$500M-\$1B	\$100M-\$500M	<\$100M
1	3	36	139	7
-	2	47	117	10
1	3	54	169	8
2	10	78	155	5
2	5	41	129	1
1	6	34	105	-
1	10	66	155	5
3	8	68	178	5
5	7	83	157	2
3	6	77	161	13
10	16	98	173	18
8	12	84	154	16
7	13	64	93	6





# NVCA Year in Review

From championing legislation supporting entrepreneurship, to testifying before Congress on behalf of the venture industry and responding to the impact of the presidential election, 2016 was a busy year for NVCA representing the entrepreneurial ecosystem in Washington. NVCA also put out reports on industry demographics and partnered with a new data provider. In addition, NVCA convened the industry at our Leadership Gala, boot camps, policy roundtables and other events throughout the year. Revisit NVCA's highlights in our 2016 Year in Review timeline.

January 13: Annual Life Science Dinner at J.P. Morgan Conference.

January 25: NVCA appointed Jeff Farrah as Vice President of Government Affairs and promoted Jessica Straus to Vice President of Development.

February 11: NVCA was pleased that lawmakers passed a conference report that included making the Internet Tax Freedom Act (ITFA) permanent.

February 23: The NVCA Chairman's Reception featuring Jon Callaghan provided the chance to meet Jon and hear his views on the important role of venture capital.

February 25: NVCA hosted the D.C. Women in VC & PE Winter Happy Hour. March 8: NVCA released the 19th edition of the NVCA Yearbook documenting trends and analysis of venture capital activity in the U.S. during 2015.

March 16: NVCA President and CEO Bobby Franklin presented at the 10th Annual Southeast Venture Conference in Tysons Corner, VA. April 13: Illinois Venture Capital Association (IVCA) and NVCA hosted a luncheon and NVCA presented at MedCity Invest in Chicago.

April 14: NVCA supported efforts in the House to ensure that startups have the best chance for success on public markets post-IPO.

April 15: NVCA President and CEO Bobby Franklin spoke at the 10th Annual Utah Economic Summit hosted by Utah Governor Gary Herbert in Salt Lake City.

April 19: NVCA co-hosted with the U.S. Small Business Administration and Crunchbase Bridging the Gender Gap: Entrepreneurship, Women, and Investing in San Francisco.

April 26: In response to a Senate Finance Committee hearing, NVCA argued that business tax reform should focus on strengthening startup creation.



May 5: Leaders from the venture industry were honored at the NVCA Leadership Gala & Summit in San Francisco. In addition, Venky Ganesan of Menlo Ventures was appointed Chair of the NVCA board of directors.

May 23: NVCA came out in support of H.R. 4139, the Fostering Innovation Act.

June 15: NVCA held a members-only Public Policy Boot Camp in Washington, D.C. with policymakers to learn how member firms could take policy action.

June 24: After the House Republican blueprint for tax reform was unveiled, NVCA offered support and recommendations for improvement.

June 28: NVCA joined SIFMA and the Chamber of Commerce in filing an amicus brief with the Supreme Court of the United States.



Outgoing NVCA Chair Jon Callaghan of True Ventures passes the gavel to incoming NVCA Chair Venky Ganesan of Menlo Ventures at the NVCA Leadership Gala & Summit in San Francisco on May 5





Attendees at the NVCA Leadership Gala and Summit



July 14: Venture investors Scott Kupor and Ali Behbahani testified before a Senate committee, offering lawmakers recommendations for strengthening the entrepreneurial ecosystem.

July 27: NVCA issued a new report, Building a More Inclusive Entrepreneurial Ecosystem, which highlighted the work of the NVCA Diversity Task Force over the past year and half.

August 11: NVCA responded to both Presidential candidates regarding their misguided proposals to eliminate the current tax treatment of carried interest capital gains.

August 30: NVCA hosted an innovation policy roundtable discussion with Congressman Michael McCaul and Congressman Will Hurd at the Capital Factory in Austin, Texas.

September 21: NVCA announced that it chose PitchBook to be its new official data provider and will partner with PitchBook to produce the quarterly PitchBook-**NVCA Venture Monitor** report.

September 22: NVCA supported the passage of the Empowering Employees Through Stock Ownership Act.



September 27-28: NVCA held a day and a half long CFO Boot Camp focused on the critical role CFOs play in venture firms.



October 6: PitchBook and NVCA launched the first-ever PitchBook-**NVCA Venture Monitor** report for Q3 2016. The new report serves as the definitive source of information on U.S. venture capital activity.

October 13: NVCA applauded President Obama's International Entrepreneur Rule.

October 13: NVCA joined the U.S. Small Business Administration and LinkedIn as a supporting partner of the Open Network for Board Diversity (ONBOARD) Initiative.

October 25: NVCA President and CEO Bobby Franklin presented on Midwest and Central U.S. venture capital markets at the Kauffman Fellows Reunion VC Summit in Kansas City, MO.



November 1: NVCA engaged in a media campaign to educate policymakers about the role of venture capital in investing in companies that are bringing groundbreaking medical innovation to market.



November 2: NVCA hosted a Growth Equity Reception in New York, where participants heard from keynote speaker Chris Campbell, Staff Director of the Senate Finance Committee.

November 14: NVCA was pleased to have Charlotte Savercool join NVCA as its new Director of Government Affairs.

November 30: NVCA praised passage of the 21st Century Cures Act in the House and reiterated that additional reform is needed to support venture investment in medical innovation.

December 1: NVCA wrote a letter to President-elect Donald J. Trump outlining key policy priorities to strengthen venture capital and economic growth.



December 8: NVCA held an Election & Policy Roundtable presentation and discussion at Andreessen Horowitz's offices

December 15: NVCA released the first ever NVCA-Deloitte U.S. Human Capital Survey, which assessed the demographic makeup of the venture capital industry.



October 28: NVCA partnered with Global Corporate Venturing (GCV) on SHIFT, a one-day event that facilitated information between corporates on best practices.





# 2017 Events Calendar

2017 is a busy year for NVCA! Join us in-person or virtually at one of our events. Contact Hannah Munizza (née Veith) (hmunizza@nvca.org) to learn more or if you are interested in sponsorship or speaking opportunities. Events and dates are subject to change. Stay up-to-date by visiting nvca.org/events.

JAN	6 Election Analysis & Policy Discussion with Regional Venture Capital Associations Webinar	11 Life Sciences Dinner at J.P. Morgan Healthcare Conference San Francisco, CA	13 Social Media Best Practices for RIA and ERA Firms and Their Portfolio Companies Webinar	19 Q4 PitchBook- NVCA Venture Monitor Insights & Analysis Webinar	25 Venture Capital Dinner Dallas, TX	
FEB	3 Emerging Manager Webinar I: What do you wish someone had told you when you set out to raise your first VC fund?	7 Growth Equity Investor Dinner San Francisco, CA	8 Policy Roundtable in Michigan Ann Arbor, MI	10 Tax Policy Roundtable Chicago, IL	DC Women in PE/VC Happy Hour TBD Washington, DC	
MAR	7 Policies Driving Innovation Two-part event: Diversity & Inclusion and Public Policy San Francisco, CA	7 Strategic Communications Group Happy Hour San Francisco, CA	8 NVCA Leadership Gala Menlo Park, CA	17 Emerging Manager Webinar II: How to develop an investment thesis (core beliefs/fund ideology)?	30 Venture Capital General Counsel Annual Meeting Boulder, CO	
APR	5 Emerging Manager Webinar III: Limited Partners	Q1 PitchBook-NVCA Venture Monitor Insights & Analysis Webinar TBD	18 Corporate Venture Event Boston, MA	10 NVCA Annual Meeting Washington, DC	11 NVCA Policy Boot Camp Washington, DC NVCA Big Tent	12 Event with Regional Venture Capital Associations Washington, DC
JUN	Webinar TBD	Q2 PitchBook- NVCA Venture Monitor Insights & Analysis Webinar TBD	August Recess Policy Events with Members in Key Regions TBD	NVCA Educational Event for Emerging Managers & Young VCs TBD In-person		

Q3 PitchBook-**NVCA Venture** Monitor Insights & Analysis Webinar TBD

NVCA & Global Corporate Venturing Conference TBD In-person

**Growth Equity Investor Reception** TRD New York, NY

7 NVCA/WAVC December Luncheon Menlo Park, CA



Allyson Chappell Director of Conferences and **Events** achappell@nvca.org



Hannah Munizza (née Veith) **Director of Business** Development and Marketing hmunizza@nvca.org





# NVCA 2017 Public Policy Priorities

The election of President Donald Trump and Republican control of both chambers of Congress means that 2017 will be a critical year for the venture industry. The first two years of a presidency are typically the busiest, and action on many policy priorities will be considered during the legislative agenda. Below is a list of the key priorities for NVCA that have an impact on the entrepreneurial ecosystem and a brief description on the current state-of-play.



#### Supporting Tax Policy that Encourages New Company Formation

We strongly believe that tax reform must encourage new company formation in order to best achieve the goals of job creation, economic growth, and expansion of economic opportunity. While the tax code has been effective in encouraging patient, long-term risk investment, it has been hostile to entrepreneurial companies. For instance, the benefit of the R&D credit remains largely inaccessible to startups while punitive loss limitation rules can arbitrarily punish startups for hiring or investing in innovation. Unfortunately, tax reform proposals so far have ignored these issues while at the same time proposing to increase taxes on the entrepreneurial ecosystem in order to pay for unrelated priorities. Tax reform must protect successful policies such as carried interest capital gains and Qualified Small Business Stock (QSBS) rules that encourage capital formation for startups, and dedicate a chapter in tax reform to entrepreneurship.



#### Encouraging Talented Immigrants to Found and Build Startups

Immigrant entrepreneurs have made an outsized contribution to the U.S. economy, with one-third of U.S. venture-backed companies that went public between 2006 and 2012 having at least one immigrant founder. But their true potential has not been realized because of the lack of a reliable immigration category. A Startup Visa would allow talented immigrant entrepreneurs to build startups in the U.S. and create American jobs. While the odds of comprehensive immigration reform are less likely this year, NVCA strongly supports policies, such as the Startup Visa and the International Entrepreneur Rule, which will bring competition and economic benefits to the industry. We support Senator Jeff Flake's Attracting and Retaining Entrepreneurs Act, which would create a startup visa, and the Startup Act from Senators Jerry Moran and Mark Warner that would also create a startup visa, as well as visas for foreign-born STEM graduates.



#### Technology Policy for Startups

Venture is leading the way on technology startups. In 2016, VC invested \$33 billion in software, \$4.6 billion in fintech, and \$2.6 billion in cybersecurity, just to name a few hot areas. But startups struggle to disrupt the status quo when the laws and regulations designed for large incumbents end up holding back startups, whether that be in government procurement, the sharing economy, financial innovation, or the Internet of Things. Under current congressional and executive branch leadership we may have an opportunity to promote regulatory reform that is friendlier to startups. We are also likely to see a fresh approach to net neutrality rules, data privacy, and legislative efforts to free additional spectrum.







#### **Medical Innovation**

Venture is partnering with startups to combat the world's deadliest diseases to improve American's health. In 2016, venture investment into life science approached \$11.7 billion. NVCA welcomed changes by the FDA that will help bring new therapies for life-threatening diseases to the U.S. market faster and last year's passage of the 21st Century Cures Act, which increased funding for NIH and included efforts to advance precision medicine. Additional reforms are needed to make CMS reimbursement innovation-friendly and encourage investment into next-generation products and services.



#### **Patents**

Startups are often victimized by "patent trolls," but efforts in recent years to crack down on these entities unfortunately would have done more harm than good. For example, both the House and Senate versions created an overly broad fee-shifting standard that gives a significant advantage to large, incumbent companies and even patent trolls with more resources than a startup. The bills also set a disturbing precedent of putting VCs on the hook for the legal fees of the other party if a VC-backed company goes bankrupt. Should lawmakers revisit this issue in 2017 we will push for policy solutions that do not harm entrepreneurs who must maintain the ability to enforce a patent.



Jeff Farrah Vice President of Government Affairs jfarrah@nvca.org



Justin Field
Vice President of
Government Affairs
jfield@nvca.org



### Reopening the Public Markets to Startups

The ability of startups to access the capital markets to grow is critical to the U.S. economy. But the United States is unfortunately averaging less than half the number of IPOs annually post-2000 than we did before, a very troubling statistic for the country's economic health. The total number of public companies in America has dropped by half in only twenty years, which is partly due to a dramatic reduction in the number of IPOs. Simply put, the U.S. public capital markets are no longer hospitable to startups seeking capital to scale into the successful firms of tomorrow.

The Jumpstart Our Business Startups Act (JOBS) was a great first step to reopening our public capital markets to startups and small capitalization companies. But more work remains to make the pathway to the public markets for small companies easier to access and navigate. And policymakers must work to understand and then solve some of the challenges small companies face in the markets post-IPO today.



### Basic research and technology transfer

A foundation to ensuring a healthy innovation ecosystem is a strong federal commitment to basic research funding that turns bold ideas from the laboratory into the next generation of successful American companies. Key technology transfer programs, SBIR and STTR, were recently extended for five years, providing much needed-certainty and funding for future innovation. NVCA also supported the American Innovation and Competitiveness Act, which will bolster basic research opportunities and encourage scientific entrepreneurship. We will continue to collaborate with policymakers, universities, and technology transfer entities to spur further innovation and new company formation.



Charlotte Savercool
Director of
Government Affairs
csavercool@nvca.org





# NVCA Membership Overview

NVCA membership provides leaders in the venture capital ecosystem with the opportunity to shape pro-innovation public policy, access to our community of leading venture capital and corporate venture capital investors, and access to discounts on PitchBook, insurance and Fidelity Charitable. NVCA is an association funded by our members.

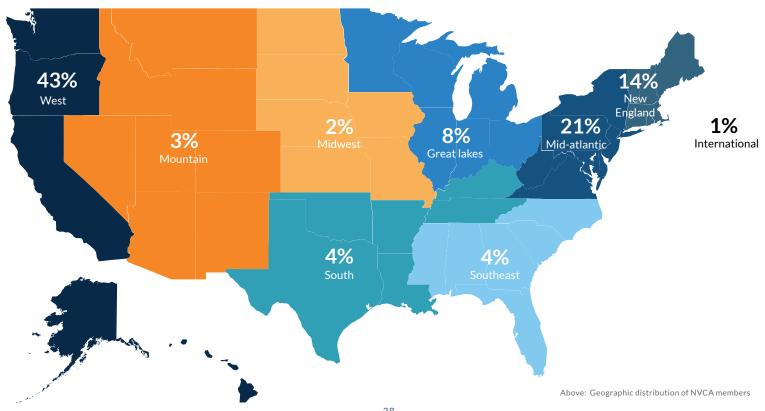
Over the past decade, NVCA is proud to have contributed to the JumpStart Our Business Startups Act, FDA regulatory reforms benefitting medical innovations, advancing a new visa category to support immigrant entrepreneurs, and the launch

of the NVCA Diversity Task Force to help increase the diversity of the venture capital industry.

Our membership comprises over 300 venture capital and corporate venture capital groups. We represent life sciences and tech investors across seed, micro, early-stage, multistage, and growth equity stages of investment. NVCA members are located across the U.S. Our geographic diversity reflects our values: we are committed to fostering vibrant, diverse and active entrepreneurial ecosystems in every region of the U.S.



Jessica Straus Vice President of Development jstraus@nvca.org





### Get Involved

NVCA serves the entrepreneurial ecosystem and we have several ways you can get involved in our mission.

#### Venture Capital and Corporate Venture Capital Investors

Membership is open to venture capital partnerships and corporations actively engaged in investing risk equity capital in the U.S.

- Advocacy on behalf of venture investors and their portfolio companies.
- NVCA Policy team weekly Series D.C. newsletter on DC happenings and their effects on the venture ecosystem.
- Research, data and access to PitchBook discounts.
- Professional development and continuing education.
- NVCA Member Peer Groups to collaborate and learn from your peers.
- NVCA events and webinars.
- Diversity & Inclusion Initiative.
- Discounts on insurance and charitable giving products with TechAssure and Fidelity Charitable.

Contact Jessica Straus (jstraus@nvca.org) to learn more about NVCA membership.

#### Entrepreneurs

Entrepreneurs are the most powerful advocates for the impact of the entrepreneurial ecosystem on our economy, jobs, and society. NVCA works closely with entrepreneurs in our advocacy work.

#### Law Firms, Banks, Consulting Firms, Insurers, and Accounting firms

NVCA Industry Partner Program is a membership for the experts that help startups reach their next milestone are invited to join the NVCA Industry partner program provides a meaningful platform for engagement designed for the experts that shape the innovation ecosystem.

Contact Hannah Munizza (hmunizza@nvca. org) to get involved with NVCA's Industry Partner Program.

#### Regional Venture Capital Associations

NVCA works closely with regional venture capital associations on public policy, research and data, industry affairs, events, and serving our membership. Regional venture capital associations provide key insights about their ecosystems and connect with peers through the NVCA network.

#### Media

Access NVCA research and spokespersons from the venture capital industry.

#### Follow us and stay informed!

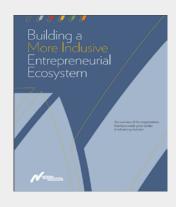


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f facebook.com/nvca.us

nvca.org

nvca@nvca.org



### NVCA's Focus on Diversity & Inclusion in 2016 and Beyond

NVCA is committed to expanding opportunities for women and men of all backgrounds to thrive in the entrepreneurial ecosystem and has a long history of working to increase diversity through public policy, research, events and collaboration.

In July 2016, NVCA released Building a More Inclusive Entrepreneurial Ecosystem, a report about changemakers and pioneers that are making great strides in advancing inclusion, highlighting that every venture capital firm, no matter its size, can make a difference and take action.

In December 2016, we released the NVCA-Deloitte Human Capital Survey (via a report and interactive online dashboard), which captures critical data on the workforce at venture firms and develops a baseline understanding of demographics within the industry.

NVCA remains focused on advancing diversity and inclusion in the venture ecosystem. Engage with us on this topic by emailing diversity@nvca.org, and join us at our diversity-related events in 2017.



Ben Veghte

Vice President of Communications and Marketing

bveghte@nvca.org



Devin Miller

Manager of Communications and Digital Strategy

dmiller@nvca.org





# Glossary

The following definitions are graciously provided by the Center for Private Equity and Entrepreneurship at the Tuck School of Business at Dartmouth (cpee.tuck. dartmouth.edu). Used by permission. NVCA and PitchBook are grateful to the Center for its support.

"A" round – a financing event whereby angel groups and / or venture capitalists become involved in a fast growth company that was previously financed by founders and their friends and families. Typically the first "Institutional" funds raised by a company.

Accredited investor - a person or legal entity, such as a company or trust fund, that meets certain net worth and income qualifications and is considered to be sufficiently sophisticated to make investment decisions in private offerings. Regulation D of the Securities Act of 1933 exempts accredited investors from protection of the Securities Act. The Securities and Exchange Commission has proposed revisions to the accredited investor qualifying rules, which may or may not result in changes for venture investors. The current criteria for a natural person are: \$1 million net worth (excluding the value of a primary residence) or annual income exceeding \$200,000 individually or \$300,000 with a spouse. Directors, general partners and executive officers of the issuer are considered to be accredited investors. See Rule 501 of Regulation D of the SEC for current details.

Alpha – a term derived from statistics and finance theory that is used to describe the return produced by a fund manager in excess of the return of a benchmark index. Manager returns and benchmark returns are measured net of the risk-free rate. In addition, manager returns are adjusted for the risk of the manager's portfolio relative to the risk of the benchmark index. Alpha is a proxy for manager skill.

Alternative asset class – a class of investments that includes venture capital, leverage buyouts, hedge funds, real estate, and oil and gas, but excludes publicly traded securities. Pension plans, college endowments and other relatively large institutional investors typically allocate a certain percentage of their investments to alternative assets with an objective to diversify their portfolios.

**Angel** – a wealthy individual that invests in companies in relatively early stages of development. Usually angels invest less than \$1 million per startup.

Anti-dilution – a contract clause that protects an investor from a substantial reduction in percentage ownership in a company due to the issuance by the company of additional shares to other entities. The mechanism for making an adjustment that maintains the same percentage ownership is called a Full Ratchet. The most commonly used adjustment provides partial protection and is called Weighted Average.

ASC Topic 820 – FASB Accounting Standards Codification (ASC) Topic 820 (formerly known as FAS 157) is the accounting standard that dictates how to measure and disclose fair value for financial reporting purposes. FASB ASC Topic 946 (Investment Companies) dictates that all investments should be reported at fair value.

"B" round – a financing event whereby investors such as venture capitalists and organized angel groups that are sufficiently interested in a company provide additional funds after the "A" round of financing. Subsequent rounds are called "C", "D" and so on.

Basis point ("bp") – one one-hundredth (1/100) of a percentage unit. For example, 50 basis points equals one half of one percent. Banks quote variable loan rates in terms

of an index plus a margin and the margin is often described in basis points, such as LIBOR plus 400 basis points (or, as the experts say, "bips").

Beta – a measure of volatility of a public stock relative to an index or a composite of all stocks in a market or geographical region. A beta of more than one indicates the stock has higher volatility than the index (or composite) and a beta of one indicates volatility equivalent to the index (or composite). For example, the price of a stock with a beta of 1.5 will change by 1.5% if the index value changes by 1%. Typically, the S&P 500 index is used in calculating the beta of a stock.

**Beta product** – a product that is being tested by potential customers prior to being formally launched into the marketplace.

**Board of directors** – a group of individuals, typically composed of managers, investors and experts who have a fiduciary responsibility for the well-being and proper guidance of a corporation. The board is typically elected by the shareholders.

**Book** – see Private placement memorandum.

Bootstrapping – the actions of a startup to minimize expenses and build cash flow, thereby reducing or eliminating the need for outside investors.

**Bp** - see Basis point.

Bridge financing – temporary funding that will eventually be replaced by permanent capital from equity investors or debt lenders. In venture capital, a bridge is usually a short term note (6 to 12 months) that converts to preferred stock. Typically, the bridge lender has the right to convert the note to preferred stock at a price that is a 20% to 25% discount from the price of the preferred stock in the next financing round. See Mezzanine and Wipeout bridge.





#### Broad-based weighted average anti-

dilution - A weighted average anti-dilution method adjusts downward the price per share of the preferred stock of investor A due to the issuance of new preferred shares to new investor B at a price lower than the price investor A originally received. Investor A's preferred stock is repriced to a weighted average of investor A's price and investor B's price. A broad-based anti-dilution method uses all common stock outstanding on a fully diluted basis (including all convertible securities, warrants and options) in the denominator of the formula for determining the new weighted average price. See Narrow-based weighted average antidilution.

**Burn rate** – the rate at which a startup uses available cash to cover expenses in excess of revenue. Usually expressed on a monthly or weekly basis.

Business Development Company (BDC) – a publicly traded company that invests in private companies and is required by law to provide meaningful support and assistance to its portfolio companies.

Business plan – a document that describes a new concept for a business opportunity. A business plan typically includes the following sections: executive summary, market need, solution, technology, competition, marketing, management, operations, exit strategy, and financials (including cash flow projections). For most venture capital funds, fewer than 10 of every 100 business plans eventually receive funding.

**Buyout** – a sector of the private equity industry. Also, the purchase of a controlling interest of a company by an outside investor using substantial debt (in a leveraged buyout) or a management team (in a management buyout).

**Buy-sell agreement** – a contract that sets forth the conditions under which a shareholder must first offer his or her shares for sale to the other shareholders before being allowed to sell to entities outside the company.

**C Corporation** – an ownership structure that allows any number of individuals or

companies to own shares. A C corporation is a stand-alone legal entity so it offers some protection to its owners, managers and investors from liability resulting from its actions.

Capital Asset Pricing Model (CAPM) – a method of estimating the cost of equity capital of a company. The cost of equity capital is equal to the return of a risk-free investment plus a premium that reflects the risk of the company's equity.

Capital call – when a private equity fund manager (usually a "general partner" in a partnership) requests that an investor in the fund (a "limited partner") provide previously committed capital. Usually a limited partner will agree to a maximum investment amount and the general partner will make a series of capital calls over time to the limited partner as opportunities arise to finance startups and buyouts.

Capital gap – the difficulty faced by some entrepreneurs in trying to raise between \$2 million and \$5 million. Friends, family and angel investors are typically good sources for financing rounds of less than \$2 million, while many venture capital funds have become so large that investments in this size range are difficult.

Capitalization table (or Cap Table) – a table showing the owners of a company's shares and their ownership percentages as well as the debt holders. It also lists the forms of ownership, such as common stock, preferred stock, warrants, options, senior debt, and subordinated debt.

Capital gains – a tax classification of investment earnings resulting from the purchase and sale of assets. Typically, a company's investors and founders have earnings classified as long term capital gains (held for a year or longer), which are often taxed at a lower rate than ordinary income.

**Capital stock** – a description of stock that applies when there is only one class of shares. This class is known as "common stock".

**Capital Under Management** – A frequently used metric for sizing total funds managed

by a venture capital or private equity firm. In practice, there are several ways of calculating this. In the US, this is the total committed capital for all funds managed by a firm on which it collects management fees. This calculation ignores whether portions of the committed capital have not yet been called and whether portions of the fund have been liquidated and distributed. It typically does not include aging funds in their "out years" on which fees are not being collected. For purposes of this book in calculating capital managed in figure 1.04, because direct data is not available, the last eight vintage years of capital commitments is considered a proxy for the industry's total capital under management.

#### Capped participating preferred stock

- preferred stock whose participating feature is limited so that an investor cannot receive more than a specified amount. See Participating preferred stock.

Carried interest capital gains – the share in the capital gains of a venture capital fund which is allocated to the General Partner. Typically, a fund must return the capital given to it by limited partners plus any preferential rate of return before the general partner can share in the profits of the fund. The general partner will typically receive a 20% carried interest, although some successful firms receive 25%-30%. Also known as "carry" or "promote."

Clawback – a clause in the agreement between the general partner and the limited partners of a private equity fund. The clawback gives limited partners the right to reclaim a portion of disbursements to a general partner for profitable investments based on significant losses from later investments in a portfolio.

**Closing** – the conclusion of a financing round whereby all necessary legal documents are signed and capital has been transferred.

**Co-investment** – the direct investment by a limited partner alongside a general partner in a portfolio company.

**Collateral** – hard assets of the borrower, such as real estate or equipment, for which a lender has a legal interest until a loan obligation is fully paid off.





**Commitment** – an obligation, typically the maximum amount that a limited partner agrees to invest in a fund. See Capital call.

Common stock – a type of security representing ownership rights in a company. Usually, company founders, management and employees own common stock while outside investors own preferred stock. In the event of a liquidation of the company, the claims of secured and unsecured creditors, bondholders and preferred stockholders take precedence over common stockholders. See Preferred stock.

Comparable – a private or public company with similar characteristics to a private or public company that is being valued. For example, a telecommunications equipment manufacturer whose market value is 2 times revenues can be used to estimate the value of a similar and relatively new company with a new product in the same industry. See Liquidity discount.

Control – the authority of an individual or entity that owns more than 50% of equity in a company or owns the largest block of shares compared to other shareholders. Control can also be granted through special voting rights and protective provisions in a company's organizing documents.

Consolidation - see Rollup.

**Conversion** – the right of an investor or lender to force a company to replace the investor's preferred shares or the lender's debt with common shares at a preset conversion ratio. A conversion feature was first used in railroad bonds in the 1800's.

Convertible debt – a loan that allows the lender to exchange the debt for common shares in a company at a preset conversion ratio. Also known as a "convertible note."

Convertible preferred stock – a type of stock that gives an owner the right to convert preferred shares to common shares of stock. Usually, preferred stock has certain rights that common stock doesn't have, such as decision-making management control, a promised return on investment (dividend), or senior priority in receiving proceeds from a sale or liquidation of the company. Typically,

convertible preferred stock automatically converts to common stock if the company makes an initial public offering (IPO). Convertible preferred is the most common tool for private equity funds to invest in companies.

Co-sale right – a contractual right of an investor to sell some of the investor's stock along with the founder's or majority shareholder's stock if either the founder or majority shareholder elects to sell stock to a third-party. Also known as Tag-along right.

**Cost of capital** – see weighted average cost of capital (WACC).

**Cost of revenue** – the expenses generated by the core operations delivering the product or services of a company.

Covenant – a legal promise to do or not do a certain thing. For example, in a financing arrangement, company management may agree to a negative covenant, whereby it promises not to incur additional debt. The penalties for violation of a covenant may vary from repairing the mistake to losing control of the company.

Coverage ratio – describes a company's ability to pay debt from cash flow or profits. Typical measures are EBITDA/Interest, (EBITDA minus Capital Expenditures)/ Interest, and EBIT/Interest.

Cram down round – a financing event upon which new investors with substantial capital are able to demand and receive contractual terms that effectively cause the issuance of sufficient new shares by the startup company to significantly reduce ("dilute") the ownership percentage of previous investors.

Cumulative dividends – the owner of preferred stock with cumulative dividends has the right to receive accrued (previously unpaid) dividends in full before dividends are paid to any other classes of stock.

**Current ratio** – the ratio of current assets to current liabilities.

**Data room** – a specific location where potential buyers / investors can review confidential information about a target

company. This information may include detailed financial statements, client contracts, intellectual property, property leases, and compensation agreements.

**Deal flow** – a measure of the number of potential investments that a fund reviews in any given period.

Defined benefit plan – a company retirement plan in which the benefits are typically based on an employee's salary and number of years worked. Fixed benefits are paid after the employee retires. The employer bears the investment risk and is committed to providing the benefits to the employee. Defined benefit plan managers can invest in private equity funds.

Defined contribution plan – a company retirement plan in which the employee elects to contribute some portion of his or her salary into a retirement plan, such as a 401(k) or 403(b). The employer may also contribute to the employee's plan. With this type of plan, the employee bears the investment risk. The benefits depend solely on the amount of money made from investing the employee's contributions.

**Demand rights** – a type of registration right. Demand rights give an investor the right to force a startup to register its shares with the SEC and prepare for a public sale of stock (IPO).

**Dilution** – the reduction in the ownership percentage of current investors, founders and employees caused by the issuance of new shares (for example to investors in follow on rounds, , employees by increasing the stock option pool, debt providers in the form or warrants, etc.).

**Dilution protection** – see Anti-dilution and Full ratchet.

#### Direct secondary transaction - A

transaction in which the buyer purchases shares of an operating company from an existing seller. While the transaction is a secondary sale of shares, the transacted interest is a primary issue purchase directly into an operating company. Sellers are often venture capitalists selling their ownership stake in a portfolio company. Buyers





are often funds that specialize in such investments.

**Discount rate** – the interest rate used to determine the present value of a series of future cash flows.

**Discounted cash flow (DCF)** – a valuation methodology whereby the present value of all future cash flows expected from a company or investment is calculated.

Distressed debt – the bonds of a company that is either in or approaching bankruptcy. Some private equity funds specialize in purchasing such debt at deep discounts with the expectation of exerting influence in the restructuring of the company and then selling the debt once the company has meaningfully recovered.

**Distribution** – the transfer of cash or securities to a limited partner resulting from the sale, liquidation or IPO of one or more portfolio companies in which a general partner chose to invest.

**Dividends** – payments made by a company to the owners of certain securities.

**Down round** – a round of financing whereby the valuation of the company is lower than the value determined by investors in an earlier round.

**Drag-along rights** – the contractual right of an investor in a company to force all other investors to agree to a specific action, such as the sale of the company.

**Drawdown schedule** – an estimate of the gradual transfer of committed investment funds from the limited partners of a private equity fund to the general partners.

**Due diligence** – the investigatory process performed by investors to assess the viability of a potential investment and the accuracy of the information provided by the target company.

**Dutch auction** – a method of conducting an IPO whereby newly issued shares of stock are committed to the highest bidder, then, if any shares remain, to the next highest bidder, and so on until all the shares are committed. Note that the price per share

paid by all buyers is the price commitment of the buyer of the last share.

Early stage – the state of a company after the seed (formation) stage but before middle stage (generating revenues). Typically, a company in early stage will have a core management team and a proven concept or product, but no positive cash flow.

#### Earnings before interest and taxes (EBIT)

- a measurement of the operating profit of a company. One possible valuation methodology is based on a comparison of private and public companies' value as a multiple of EBIT.

Earnings before interest, taxes, depreciation and amortization (EBITDA) – a measurement of the cash flow of a company. One possible valuation methodology is based on a comparison of private and public companies' value as a multiple of EBITDA.

**Earn out** – an arrangement in which sellers of a business receive additional future payments, usually based on financial performance metrics such as revenue or net income.

**Elevator pitch** – a concise presentation, lasting only a few minutes (an elevator ride), by an entrepreneur to a potential investor about an investment opportunity.

Employee Stock Ownership Program (ESOP) – a plan established by a company to reserve shares for employees.

**Entrepreneur** – an individual who starts his or her own business.

**Entrepreneurship** – the application of innovative leadership to limited resources in order to create exceptional value.

Enterprise Value (EV) – the sum of the market values of the common stock and long term debt of a company, minus excess cash.

**Equity** – the ownership structure of a company represented by common shares, preferred shares or unit interests. Equity = Assets – Liabilities.

**ESOP** – see Employee Stock Ownership Program.

**Evergreen fund** – a fund that reinvests its profits in order to ensure the availability of capital for future investments.

Exit strategy – the plan for generating profits for owners and investors of a company. Typically, the options are to merge, be acquired or make an initial public offering (IPO). An alternative is to recapitalize (releverage the company and then pay dividends to shareholders).

**Expansion stage** – the stage of a company characterized by a complete management team and a substantial increase in revenues.

**Fair value** – a financial reporting principle for valuing assets and liabilities, for example, portfolio companies in venture capital fund portfolios. In 2007, more defined rules took effect. See ASC Topic 820.

**Fairness opinion** – a letter issued by an investment bank that charges a fee to assess the fairness of a negotiated price for a merger or acquisition.

FAS 157 - See ASC Topic 820 entry.

First refusal – the right of a privately owned company to purchase any shares that employees would like to sell before they are offered to outside buyers

**Founders stock** – nominally priced common stock issued to founders, officers, employees, directors, and consultants.

Free cash flow to equity (FCFE) – the cash flow available after operating expenses, interest payments on debt, taxes, net principal repayments, preferred stock dividends, reinvestment needs and changes in working capital. In a discounted cash flow model to determine the value of the equity of a firm using FCFE, the discount rate used is the cost of equity.

Free cash flow to the firm (FCFF) – the operating cash flow available after operating expenses, taxes, reinvestment needs and changes in working capital, but before any interest payments on debt are made. In a discounted cash flow model to determine the enterprise value of a firm using FCFF, the discount rate used is the weighted average cost of capital (WACC).





Friends and family financing – capital provided by the friends and family of founders of an early stage company.

Founders should be careful not to create an ownership structure that may hinder the participation of professional investors once the company begins to achieve success.

Full ratchet - an anti-dilution protection mechanism to protect earlier investors from dilution when a new round is raised at a lower price. In the case of a full ratchet for a Series A followed by a Series B at a lower price per share, additional shares would be issued to the Series A preferred investors so that their resulting cost per share is equal to the price per share paid by the Series B preferred investors. Often as a result of the implementation of a ratchet, company management and employees who own a fixed amount of common shares suffer significant dilution. See Narrow-based weighted average anti-dilution and Broadbased weighted average anti-dilution.

Fully diluted basis – a methodology for calculating any per share ratios whereby the denominator is the total number of shares, both preferred and common, issued by the company on the assumption that all warrants and options are exercised.

**Fund-of-funds** – a fund created to invest in other funds (e.g. VC Funds, PE funds, etc.). Typically, individual investors and relatively small institutional investors participate in a fund-of-funds to minimize their portfolio management efforts and leverage the size and scale of the fund-of-funds.

**Gatekeepers** – intermediaries which endowments, pension funds and other institutional investors use as advisors regarding private equity investments.

General partner (GP) – a class of partner in a partnership. The general partner retains liability for the actions of the partnership. Historically, venture capital and buyout funds have been structured as limited partnerships, with the venture firm as the GP and limited partners (LPs) being the institutional and high net worth investors that provide most of the capital in the partnership. The GP earns a management

fee and a percentage of gains (see Carried interest).

**GP** - see General partner.

**GP for hire** – In a spin-out or a synthetic secondary, a GP for hire refers to the professional investor who may be hired by a purchasing firm to manage the new fund created from the orphaned assets purchased. In past cases, the GP has often expanded its role to fundraise for and run new funds alongside the initial fund.

Going-private transaction – when a public company chooses to pay off all public investors, delist from all stock exchanges, and become owned by management, employees, and select private investors.

Golden handcuffs – financial incentives that discourage founders and / or important employees from leaving a company before a predetermined date or important milestone.

**Growth stage** – the stage of a company when it has received one or more rounds of financing and is generating revenue from its product or service. Also known as "middle stage."

Hart-Scott-Rodino (HSR) Act – a law requiring entities that acquire certain amounts of stock or assets of a company to inform the Federal Trade Commission and the Department of Justice and to observe a waiting period before completing the transaction to allow the agencies to assess whether there will be any anti-competitive implications as a result of the transaction.

Hedge fund – an investment fund that has the ability to use leverage, take short positions in securities, or use a variety of derivative instruments in order to achieve a return that is relatively less correlated to the performance of typical indices (such as the S&P 500) than traditional long-only funds. Hedge fund managers are typically compensated based on assets under management as well as fund performance.

High yield debt – debt issued via public offering or public placement (Rule 144A) that is rated below investment grade by S&P or Moody's. This means that the debt is rated

below the top four rating categories (i.e. S&P BB+, Moody's Ba2 or below). The lower rating is indicative of higher risk of default, and therefore the debt carries a higher coupon or yield than investment grade debt. Also referred to as Junk bonds or Subinvestment grade debt.

Hockey stick – the general shape and form of a chart showing revenue, customers, cash or some other financial or operational measure that increases dramatically at some point in the future. Entrepreneurs often develop business plans with hockey stick charts to impress potential investors.

**Holding period** – amount of time an investment remains in a portfolio.

**Hot issue** – stock in an initial public offering that is in high demand.

**Hot money** – capital from investors that have no tolerance for lack of results by the investment manager and move quickly to withdraw at the first sign of trouble.

**Hurdle rate** – a minimum rate of return required before an investor will make an investment.

Incorporation – the process by which a business receives a state charter, allowing it to become a corporation. Many corporations choose Delaware because its laws are business-friendly and up to date.

**Incubator** – a company or facility designed to host startup companies. Incubators help startups grow while controlling costs by offering networks of contacts and shared back office resources.

**Indenture** – the terms and conditions between a bond issuer and bond buyers.

Initial public offering (IPO) – the first offering of stock by a company to the public. New public offerings must be registered with the Securities and Exchange Commission. An IPO is one of the methods that a startup that has achieved significant success can use to raise additional capital for further growth. See Qualified IPO.

**In-kind distribution** – a distribution to limited partners of a private equity fund that





is in the form of publicly traded shares rather than cash.

Inside round – a round of financing in which the investors are the same investors as the previous round. An inside round raises liability issues since the valuation of the company has no third party verification in the form of an outside investor. In addition, the terms of the inside round may be considered self-dealing if they are onerous to any set of shareholders or if the investors give themselves additional preferential rights.

**Institutional investor** – professional entities that invest capital on behalf of companies or individuals. Examples are: pension plans, insurance companies and university endowments.

Intellectual property (IP) – knowledge, techniques, writings and images that are intangible but often protected by law via patents, copyrights, and trademarks.

Interest coverage ratio – earnings before interest and taxes (EBIT) divided by interest expense. This is a key ratio used by lenders to assess the ability of a company to produce sufficient cash to service its debt obligation.

Internal rate of return (IRR) – the interest rate at which a certain amount of capital today would have to be invested in order to grow to a specific value at a specific time in the future.

#### Investment thesis / Investment philosophy

- the fundamental ideas which determine the types of investments that an investment fund will choose in order to achieve its financial goals.

IPEV – Stands for International Private
Equity Valuation guidelines group. This
group is made up of representatives of the
international and US venture capital industry
and has published guidelines for applying
US GAAP and international IFRS valuation
rules. See www.privateequityvaluation.
com. Widely regarded in the US as the global
successor to the US-focused PEIGG group.

**IPO** – see Initial public offering.

IRR - see Internal rate of return.

J curve – a concept that during the first few years of a private equity fund, cash flow or returns are negative due to investments, losses, and expenses, but as investments produce results the cash flow or returns trend upward. A graph of cash flow or returns versus time would then resemble the letter "J".

Later stage – the state of a company that has proven its concept, achieved significant revenues compared to its competition, and is approaching cash flow break even or positive net income. Typically, a later stage company is about 6 to 12 months away from a liquidity event such as an IPO or buyout. The rate of return for venture capitalists that invest in later stage, less risky ventures is lower than in earlier stage ventures.

LBO - see Leveraged buyout.

Lead investor – the outside investor that makes the largest investment in a financing round and manages the documentation and closing of that round. The lead investor sets the price per share of the financing round, thereby determining the valuation of the company.

Letter of intent – a document confirming the intent of an investor to participate in a round of financing for a company. By signing this document, the subject company agrees to begin the legal and due diligence process prior to the closing of the transaction. Also known as a "Term Sheet".

Leverage – the use of debt to acquire assets, build operations and increase revenues. By using debt, a company is attempting to achieve results faster than if it only used its cash available from pre-leverage operations. The risk is that the increase in assets and revenues does not generate sufficient net income and cash flow to pay the interest costs of the debt.

**Leveraged buyout (LBO)** – the purchase of a company or a business unit of a company by an outside investor using mostly borrowed capital.

Leveraged recapitalization - the

reorganization of a company's capital structure resulting in more debt added to the balance sheet. Private equity funds can recapitalize a portfolio company and then direct the company to issue a one-time dividend to equity investors. This is often done when the company is performing well financially and the debt markets are expanding.

Leverage ratios – measurements of a company's debt as a multiple of cash flow.

Typical leverage ratios include Total Debt / EBITDA, Total Debt / (EBITDA minus Capital Expenditures), and Senior Debt / EBITDA.

**L.I.B.O.R.** – see The London Interbank Offered Rate.

**License** – a contract in which a patent owner grants to a company the right to make, use or sell an invention under certain circumstances and for compensation.

Limited liability company (LLC) – an ownership structure designed to limit the founders' losses to the amount of their investment. An LLC itself does not pay taxes, rather its owners pay taxes on their proportion of the LLC profits at their individual tax rates.

Limited partnership – a legal entity composed of a general partner and various limited partners. The general partner manages the investments and is liable for the actions of the partnership while the limited partners are generally protected from legal actions and any losses beyond their original investment. The general partner collects a management fee and earns a percentage of capital gains (see Carried interest), while the limited partners receive income, capital gains and tax benefits.

Limited partner (LP) – an investor in a limited partnership. The general partner is liable for the actions of the partnership while the limited partners are generally protected from legal actions and any losses beyond their original investment. The limited partner receives income, capital gains and tax benefits.

**Liquidation** – the sale of a company. This may occur in the context of an acquisition by a





larger company or in the context of selling off all assets prior to cessation of operations (Chapter 7 bankruptcy). In a liquidation, the claims of secured and unsecured creditors, bondholders and preferred stockholders take precedence over common stockholders.

Liquidation preference – the contractual right of an investor to priority in receiving the proceeds from the liquidation of a company. For example, a venture capital investor with a "2x liquidation preference" has the right to receive two times its original investment upon liquidation before other more junior forms of equity share in the liquidation proceeds.

Liquidity discount – a decrease in the value of a private company compared to the value of a similar but publicly traded company. Since an investor in a private company cannot readily sell his or her investment, the shares in the private company must be valued less than a comparable public company.

**Liquidity event** – a transaction whereby owners of a significant portion of the shares of a private company sell their shares in exchange for cash, in the case of an IPO or cash based M&A transaction, or shares of an acquiring company.

Lock-up agreement – investors, management and employees often agree not to sell their shares for a specific time period after an IPO, usually 6 to 12 months. By avoiding large sales of its stock, the company has time to build interest among potential buyers of its shares.

#### London Interbank Offered Rate (L.I.B.O.R.)

- the average rate charged by large banks in London for loans to each other. LIBOR is a relatively volatile rate and is typically quoted in maturities of one month, three months, six months and one year.

Management buyout (MBO) – a leveraged buyout controlled by the members of the management team of a company or a division. Often an MBO is conducted in partnership with a buyout fund.

Management fee – a fee charged to the limited partners in a fund by the general

partner. Management fees in a private equity fund usually range from 0.75% to 3% of capital under management, depending on the type and size of fund. For venture capital funds, 2% is typical.

Management rights – the rights often required by a venture capitalist as part of the agreement to invest in a company. The venture capitalist has the right to consult with management on key operational issues, attend board meetings and review information about the company's financial situation.

Market capitalization – the value of a publicly traded company as determined by multiplying the number of shares outstanding by the current price per share.

MBO - see Management buyout.

Mezzanine – a layer of financing that has intermediate priority (seniority) in the capital structure of a company. For example, mezzanine debt has lower priority than senior debt but usually has a higher interest rate and often includes warrants. In venture capital, a mezzanine round is generally the round of financing that is designed to help a company have enough resources to reach an IPO. See Bridge financing.

Multiples – a valuation methodology that compares public and private companies in terms of a ratio of value to an operations figure such as revenue or net income.

For example, if several publicly traded computer hardware companies are valued at approximately 2 times revenues, then it is reasonable to assume that a startup computer hardware company that is growing fast has the potential to achieve a valuation of 2 times its revenues. Before the startup company issues its IPO, it will likely be valued at less than 2 times revenue because of the lack of liquidity of its shares. See Liquidity discount.

Narrow-based weighted average antidilution – a type of anti-dilution mechanism. A weighted average anti-dilution method adjusts downward the price per share of the preferred stock of investor A (by issuing new additional shares) due to the issuance of new preferred shares to new investor B at a price lower than the price investor A originally received. Investor A is issued enough preferred stock to replicate a weighed average of investor A's price and investor B's price. A narrow-based anti-dilution uses only common stock outstanding in the denominator of the formula for determining the new weighted average price.

National Venture Capital Association (NVCA) – the trade organization that tracks venture capital activity in the United States.

NDA - see Non-disclosure agreement.

Non-cumulative dividends – dividends that are payable to owners of preferred stock at a specific point in time only if there is sufficient cash flow available after all company expenses have been paid. If cash flow is insufficient, the owners of the preferred stock will not receive the dividends owed for that time period and will have to wait until the board of directors declares another set of dividends.

Non-disclosure agreement (NDA) – an agreement issued by entrepreneurs to protect the privacy of their ideas when disclosing those ideas to third parties.

Non-interference – an agreement often signed by employees and management whereby they agree not to interfere with the company's relationships with employees, clients, suppliers and sub-contractors within a certain time period after termination of employment.

No-shop clause – a section of an agreement to purchase or invest in a company whereby the seller agrees not to market the company to other potential buyers or investors for a specific time period.

Non-solicitation – an agreement often signed by employees and management whereby they agree not to solicit other employees of the company regarding job opportunities.

**NVCA** – see National Venture Capital Association.

**Offering memorandum** – a legal document that provides details of an investment to





potential investors. See Private placement memorandum.

Operating cash flow – the cash flow produced from the operation of a business, not from investing activities (such as selling assets) or financing activities (such as issuing debt). Calculated as net operating income (NOI) plus depreciation.

**Option pool** – a group of options set aside for long term, phased compensation to management and employees.

Outstanding shares – the total amount of common shares of a company, not including treasury stock, convertible preferred stock, warrants and options.

Pay to play – a clause in a financing agreement whereby any investor that does not participate in a future round agrees to suffer significant dilution compared to other investors. The most onerous version of "pay to play" is automatic conversion to common shares, which in essence ends any preferential rights of an investor.

Pari passu – a legal term referring to the equal treatment of two or more parties in an agreement. For example, a venture capitalist may agree to have registration rights that are pari passu with the other investors in a financing round.

Participating dividends – the right of holders of certain preferred stock to receive dividends and participate in additional distributions of cash, stock or other assets.

Participating preferred stock – a unit of ownership composed of preferred stock and common stock. The preferred stock entitles the owner to receive a predetermined sum of cash (usually the original investment plus accrued dividends) if the company is sold or has an IPO. The common stock represents additional continued ownership in the company.

**PEIGG** – acronym for Private Equity Industry Guidelines Group, an ad hoc group of individuals and firms involved in the private equity industry for the purpose of establishing valuation and reporting guidelines. With the implementation of FAS 157 in 2007, the group's mission was essentially complete. Several of its members then joined IPEV, which is viewed by US VCs as the international successor to PEIGG.

**Piggyback rights** – rights of an investor to have his or her shares included in a registration of a startup's shares in preparation for an IPO.

PIK dividend – a dividend paid to the holder of a stock, usually preferred stock, in the form of additional stock rather than cash. PIK refers to payment in kind.

**PIPEs** – see Private investment in public equity.

Placement agent – a company that specializes in finding institutional investors that are willing and able to invest in a private equity fund. Sometimes a private equity fund will hire a placement agent so the fund partners can focus on making and managing investments in companies rather than on raising capital.

**Portfolio company** – a company that has received an investment from a private equity fund.

Post-money valuation – the valuation of a company including the capital provided by the current round of financing. For example, a venture capitalist may invest \$5 million in a company valued at \$2 million "pre-money" (before the investment was made). As a result, the startup will have a post-money valuation of \$7 million.

**PPM** - see Private placement memorandum.

**Preemptive rights** – the rights of shareholders to maintain their percentage ownership of a company by buying shares sold by the company in future financing rounds.

**Preference** – seniority, usually with respect to dividends and proceeds from a sale or dissolution of a company.

**Preferred return** – a minimum return per annum that must be generated for limited partners of a private equity fund before the general partner can begin receiving a percentage of profits from investments.

Preferred stock – a type of stock that has certain rights that common stock does not have. These special rights may include dividends, participation, liquidity preference, anti-dilution protection and veto provisions, among others. Private equity investors usually purchase preferred stock when they make investments in companies.

Pre-money valuation – the valuation of a company prior to the current round of financing. For example, a venture capitalist may invest \$5 million in a company valued at \$2 million pre-money. As a result, the startup will have a "pre-money" valuation of \$2 million.

**Primary shares** – shares sold by a corporation (not by individual shareholders).

American Investment Council (AIC) – an advocacy, communications and research organization for the private equity industry in the United States. Previously known as Private Equity Growth Capital Council (PEGCC).

Private equity – equity investments in nonpublic companies, usually defined as being made up of venture capital, growth equity and buyout funds. Real estate, oil and gas, and other such partnerships are sometimes included in the definition.

#### Private investment in public equity (PIPEs)

- investments by a private equity fund in a publicly traded company, usually at a discount and in the form of preferred stock.

**Private placement** – the sale of a security directly to a limited number of institutional and qualified individual investors. If structured correctly, a private placement avoids registration with the Securities and Exchange Commission.

#### Private placement memorandum (PPM)

- a document explaining the details of an investment to potential investors. For example, a private equity fund will issue a PPM when it is raising capital from institutional investors. Also, a startup may issue a PPM when it needs growth capital. Also known as "Offering Memorandum".





**Private securities** – securities that are not registered with the Securities and Exchange Commission and do not trade on any exchanges. The price per share is negotiated between the buyer and the seller (the "issuer").

Qualified IPO – a public offering of securities valued at or above a total amount specified in a financing agreement. This amount is usually specified to be sufficiently large to guarantee that the IPO shares will trade in a major exchange (NASDAQ or New York Stock Exchange). Usually upon a qualified IPO preferred stock is forced to convert to common stock.

Quartile – one fourth of the data points in a data set. Often, private equity investors are measured by the results of their investments during a particular period of time. Institutional investors often prefer to invest in private equity funds that demonstrate consistent results over time, placing in the upper quartile of the investment results for all funds.

**Realization ratio** – the ratio of cumulative distributions to paid-in capital. The realization ratio is used as a measure of the distributions from investment results of a private equity partnership compared to the capital under management.

**Recapitalization** – the reorganization of a company's capital structure.

Red herring – a preliminary prospectus filed with the Securities and Exchange Commission and containing the details of an IPO offering. The name refers to the disclosure warning printed in red letters on the cover of each preliminary prospectus advising potential investors of the risks involved.

Redemption rights – the right of an investor to force the startup company to buy back the shares issued as a result of the investment. In effect, the investor has the right to take back his/her investment and may even negotiate a right to receive an additional sum in excess of the original investment.

**Registration** – the process whereby shares of a company are registered with the

Securities and Exchange Commission under the Securities Act of 1933 in preparation for a sale of the shares to the public.

Regulation D – Often referred to as simply "Reg D," an SEC regulation that governs private placements. Private placements are investment offerings for institutional and accredited individual investors, but not the general public.

**Restricted shares** – shares that cannot be traded in the public markets.

Return on investment (ROI) – the proceeds from an investment, during a specific time period, calculated as a percentage of the original investment. Also, net profit after taxes divided by average total assets.

**Rights offering** – an offering of stock to current shareholders that entitles them to purchase the new issue.

Rights of co-sale with founders – a clause in venture capital investment agreements that allows the VC fund to sell shares at the same time that the founders of a startup choose to sell.

Risk-free rate – a term used in finance theory to describe the return from investing in a riskless security. In practice, this is often taken to be the return on US Treasury Bills.

Road show – presentations made in several cities to potential investors and other interested parties. For example, a company will often make a road show to generate interest among institutional investors prior to its IPO.

ROI - see Return on investment.

Rollup – the purchase of relatively smaller companies in a sector by a rapidly growing company in the same sector. The strategy is to create economies of scale. For example, the movie theater industry underwent significant consolidation via rollups in the 1960's and 1970's.

**Round** – a financing event usually involving several private equity investors.

**Royalties** – payments made to patent or copyright owners in exchange for the use of

their intellectual property.

Rule 144 – a rule of the Securities and Exchange Commission that specifies the conditions under which the holder of shares acquired in a private transaction may sell those shares in the public markets.

**S corporation** – an ownership structure that limits its number of owners to 100. An S corporation does not pay taxes, rather its owners pay taxes on their proportion of the corporation's profits at their individual tax rates.

**SBIC** – see Small Business Investment Company.

Scalability – a characteristic of a new business concept that entails the growth of sales and revenues with a much slower growth of organizational complexity and expenses. Venture capitalists look for scalability in the startups they select to finance.

**Scale-down** – a schedule for phased decreases in management fees for general partners in a limited partnership as the fund reduces its investment activities toward the end of its term.

**Scale-up** – the process of a company growing quickly while maintaining operational and financial controls in place. Also, a schedule for phased increases in management fees for general partners in a limited partnership as the fund increases its investment activities over time.

Secondary market – a market for the sale of limited partnership interests in private equity funds. Sometimes limited partners chose to sell their interest in a partnership, typically to raise cash or because they cannot meet their obligation to invest more capital according to the takedown schedule. Certain investment companies specialize in buying these partnership interests at a discount.

**Secondary shares** – shares sold by a shareholder (not by the corporation).

Securities and Exchange Commission (SEC)

- the regulatory body that enforces federal





securities laws such as the Securities Act of 1933 and the Securities Exchange Act of 1934.

**Seed capital** – investment provided by angels, friends and family to the founders of a startup in seed stage.

**Seed stage** – the state of a company when it has just been incorporated and its founders are developing their product or service.

**Senior debt** – a loan that has a higher priority in case of a liquidation of the asset or company.

Seniority - higher priority.

**Series A preferred stock** – preferred stock issued by a fast growth company in exchange for capital from investors in the "A" round of financing. This preferred stock is usually convertible to common shares upon an IPO.

Shareholder agreement – a contract that sets out the basis on which the company will be operated and the shareholders' rights and obligations. It provides rights and privileges to preferred and major shareholders and protections to minority shareholders.

Sharpe Ratio – a method of calculating the risk-adjusted return of an investment. The Sharpe Ratio is calculated by subtracting the risk-free rate from the return on a specific investment for a time period (usually one year) and then dividing the resulting figure by the standard deviation of the historical (annual) returns for that investment. The higher the Sharpe Ratio, the better.

Small Business Investment Company (SBIC)
– a company licensed by the Small Business
Administration to receive government
capital in the form of debt or equity for use in
private equity investing.

Stock option – a right to purchase or sell a share of stock at a specific price within a specific period of time. Stock purchase options are commonly used as long term incentive compensation for employees and management of fast growth companies.

**Strategic investor** – a relatively large corporation that agrees to invest in a young or a smaller company in order to have access

to its proprietary technology, product or service.

**Subordinated debt** – a loan that has a lower priority than a senior loan in case of a liquidation of the asset or company. Also known as "junior debt".

**Sweat equity** – ownership of shares in a company resulting primarily from work rather than investment of capital.

Syndicate – a group of investors that agree to participate in a round of funding for a company. Alternatively, a syndicate can refer to a group of investment banks that agree to participate in the sale of stock to the public as part of an IPO.

Synthetic secondary – A popular method of completing a direct secondary transaction in which the buyer becomes a limited partner (LP) in a special purpose vehicle (SPV) or similar entity which has been set up out of the underlying investments in order to create a limited partnership interest. The term arose because of the synthetic nature of the direct purchase through the LP secondary transaction.

Tag-along right – the right of a minority investor to receive the same benefits as a majority investor. Usually applies to a sale of securities by investors. Also known as Co-sale right.

**Takedown** – a schedule of the transfer of capital in phases in order to complete a commitment of funds. Typically, a takedown is used by a general partner of a private equity fund to plan the transfer of capital from the limited partners.

**Tender offer** – an offer to public shareholders of a company to purchase their shares.

**Term loan** – a bank loan for a specific period of time, usually up to ten years in leveraged buyout structures.

**Term sheet** – a document confirming the intent of an investor to participate in a round of financing for a company. By signing this document, the subject company agrees to begin the legal and due diligence process

prior to the closing of the transaction. Also known as "Letter of Intent".

Tranche – a portion of a set of securities. Each tranche may have different rights or risk characteristics. When venture capital firms finance a company, a round may be disbursed in two or three tranches, each of which is paid when the company attains one or more milestones.

**Turnaround** – a process performed at a struggling company resulting in a substantial increase in a company's revenues, profits and reputation.

**Under water option** – an option is said to be under water if the current fair market value of a stock is less than the option exercise price.

**Underwriter** – an investment bank that chooses to be responsible for the process of selling new securities to the public. An underwriter usually chooses to work with a syndicate of investment banks in order to maximize the distribution of the securities.

**Venture capital** – a segment of the private equity industry which focuses on investing in new companies with high growth potential and accompanying high risk.

Venture capital method – a pricing valuation method whereby an estimate of the future value of a company is discounted by a certain interest rate and adjusted for future anticipated dilution in order to determine the current value. Usually, discount rates for the venture capital method are considerably higher than public stock return rates, representing the fact that venture capitalists must achieve significant returns on investment in order to compensate for the risks they take in funding unproven companies.

Venture Monitor – Officially known as the PitchBook-National Venture Capital Association (NVCA) Venture Monitor. Jointly produced by PitchBook and NVCA, it serves as the authoritative quarterly report on venture capital activity in the entrepreneurial ecosystem. The Venture Monitor provides a complete look at venture capital activity, reporting on fundraising,





investments, exits and other relevant industry analysis in one comprehensive report each quarter.

**Vesting** – a schedule by which employees gain ownership over time of a previously agreed upon amount of retirement funding or stock options.

**Vintage** – the year that a private equity fund begins making investments. Venture funds are generally benchmarked to funds of the same vintage year.

Voting rights – the rights of holders of preferred and common stock in a company to vote on certain acts affecting the company. These matters may include payment of dividends, issuance of a new class of stock, mergers or liquidation.

Warrant – a security which gives the holder the right to purchase shares in a company at a pre-determined price. A warrant is a long term option, usually valid for several years or indefinitely. Typically, warrants are issued concurrently with preferred stocks or bonds in order to increase the appeal of the stocks or bonds to potential investors.

Washout round – a financing round whereby previous investors, the founders and management suffer significant dilution. Usually as a result of a washout round, the new investor gains majority ownership and control of the company.

#### Weighted average cost of capital (WACC)

- the average of the cost of equity and the after-tax cost of debt. This average is determined using weight factors based on the ratio of equity to debt plus equity and the ratio of debt to debt plus equity.

Weighted average anti-dilution – an anti-dilution protection mechanism whereby the conversion rate of preferred stock is adjusted in order to reduce an investor's loss due to an increase in the number of shares in a company. Without anti-dilution protection, an investor would suffer from a reduction of his or her percentage ownership. Usually as a result of the implementation of a weighted average anti-dilution, company management and employees who own a fixed amount of common shares suffer significant dilution,

but not as badly as in the case of a full ratchet.

**Write-down** – a decrease in the reported value of an asset or a company.

**Write-off** – a decrease in the reported value of an asset or a company to zero.

**Write-up** – an increase in the reported value of an asset or a company.

Zombie – a company that has received capital from investors but has only generated sufficient revenues and cash flow to maintain its operations without significant growth. Sometimes referred to as "walking dead." Typically, a venture capitalist has to make a difficult decision as to whether to liquidate a zombie or continue to invest funds in the hopes that the zombie will become a winner.





### Data Methodology

#### **Fundraising**

We define venture capital funds as pools of capital raised for the purpose of investing in the equity of startup companies. In addition to funds raised by traditional venture capital firms, PitchBook also includes funds raised by any institution with the primary intent stated above. Funds identifying as growth-stage vehicles are classified as PE funds and are not included in this report. A fund's location is determined by the country in which the fund is domiciled, if that information is not explicitly known, the HQ country of the fund's general partner is used. Only funds based in the United States that have held their final close are included in the fundraising numbers. The entirety of a fund's committed capital is attributed to the year of the final close of the fund. Interim close amounts are not recorded in the year of the interim close.

#### Deals

We include equity investments into startup companies from an outside source. Investment does not necessarily have to be taken from an institutional investor. This can include investment from individual angel investors, angel groups, seed funds, venture capital firms, corporate venture firms, and corporate investors. Investments received as part of an accelerator program are not included, however, if the accelerator continues to invest in follow-on rounds, those further financings are included. All financings are of companies headquartered in the US.

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firms, and corporate investors. Investments received as part of an accelerator program are not included, however, if the accelerator continues to invest in follow-on rounds, those further financings are included. All financings are of companies headquartered in the US.

#### Stage Definitions

Angel/seed: We define financings as angel rounds if there are no PE or VC firms involved in the company to date and we cannot determine if any PE or VC firms are participating. In addition, if there is a press release that states the round is an angel round, it is classified as such. Finally, if a news story or press release only mentions individuals making investments in a financing, it is also classified as angel. As for seed, when the investors and/or press release state that a round is a seed financing, or it is for less than \$500,000 and is the first round as reported by a government filing, it is classified as such. If angels are the only investors, then a round is only marked as seed if it is explicitly stated.

**Early-stage:** Rounds are generally classified as Series A or B (which we typically aggregate together as early stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors, and more.

Late-stage: Rounds are generally classified as Series C or D or later (which we typically aggregate together as late stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors, and more.

Growth equity: Rounds must include at least one investor tagged as growth/expansion, while deal size must either be \$15 million or more (although rounds of undisclosed size that meet all other criteria are included). In addition, the deal must be classified as growth/expansion or later-stage VC in the PitchBook Platform. If the financing is tagged as late-stage VC it is included regardless of industry. Also, if a company is tagged with any PitchBook vertical, excepting manufacturing and infrastructure, it is kept. Otherwise, the following industries are excluded from growth equity financing calculations: buildings and property, thrifts and mortgage finance, real estate investment trusts, and oil & gas equipment, utilities, exploration, production and refining. Lastly, the company in question must not have had an M&A event, buyout, or IPO completed prior to the round in question.

Corporate venture capital: Financings classified as corporate venture capital include rounds that saw both firms investing via established CVC arms or corporations making equity investments off balance sheets or whatever other non-CVC method actually employed.

#### **Exits**

We include the first majority liquidity event for holders of equity securities of venture-backed companies. This includes events where there is a public market for the shares (IPO) or the acquisition of majority of the equity by another entity (corporate or financial acquisition). This does not include secondary sales, further sales after the initial liquidity event, or bankruptcies. M&A value is based on reported or disclosed figures, with no estimation used to assess the value of transactions for which the actual deal size is unknown.





# Geographic Definitions

#### U.S. regions

West Coast:

Alaska, California, Hawaii, Oregon,

Washington

Mountain:

Arizona, Colorado, Idaho, Montana, Nevada,

New Mexico, Utah, Wyoming

Midwest:

Iowa, Kansas, Missouri, Nebraska, North

Dakota, South Dakota

Great Lakes:

Illinois, Indiana, Michigan, Minnesota, Ohio,

Wisconsin

New England:

Connecticut, Maine, Massachusetts, New

Hampshire, Rhode Island, Vermont

Mid-Atlantic:

Delaware, D.C., Maryland, New Jersey, New

York, Pennsylvania, Virginia, West Virginia

South:

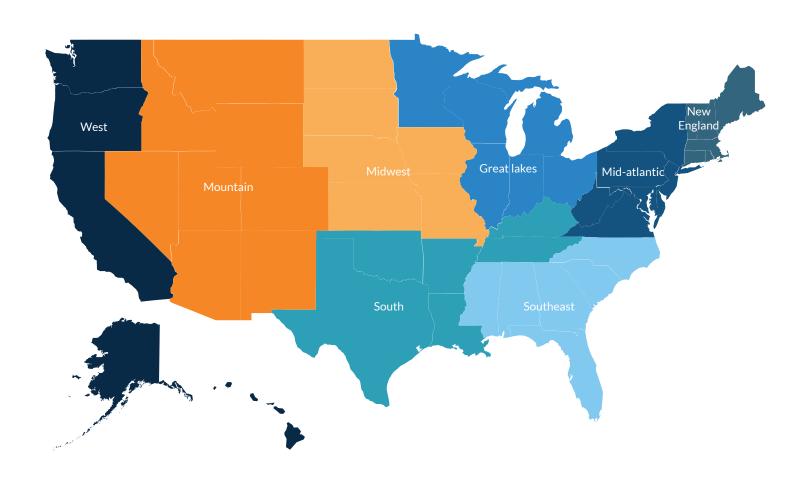
Arkansas, Kentucky, Louisiana, Oklahoma,

Tennessee, Texas

Southeast:

Alabama, Florida, Georgia, Mississippi, North

Carolina, Puerto Rico, South Carolina







# Industry Code Definitions

Example companies in these definitions do not necessarily mean that those companies are included in the venture dataset included in the Yearbook, but are merely provided for context.

Description	VC Special Industry
Commercial Services	Commercial Services
Apparel and Accessories	Consumer Goods & Recreation
Restaurants, Hotels and Leisure	Consumer Goods & Recreation
Retail	Consumer Goods & Recreation
Energy Equipment	Energy
Exploration, Production and Refining	Energy
Energy Services	Energy
Healthcare Devices and Supplies	HC Devices & Supplies
Healthcare Services	HC Services & Systems
Healthcare Technology Systems	HC Services & Systems
Communications and Networking	IT Hardware
Computer Hardware	IT Hardware
Semiconductors	IT Hardware
Media	Media
Commercial Products	Other
Other Healthcare	Other
IT Services	Other
Other Information Technology	Other
Agriculture	Other
Chemicals and Gases	Other

Description	VC Special Industry
Construction (Non-Wood)	Other
Containers and Packaging	Other
Forestry	Other
Metals, Minerals and Mining	Other
Textiles	Other
Other Materials	Other
Utilities	Other
Other Energy	Other
Capital Markets/Institutions	Other
Commercial Banks	Other
Insurance	Other
Other Financial Services	Other
Services (Non-Financial)	Other
Transportation	Other
Other Consumer Products and Services	Other
Consumer Durables	Other
Consumer Non-Durables	Other
Commercial Transportation	Other
Other Business Products and Services	Other
Pharmaceuticals and Biotechnology	Pharma & Biotech
Software	Software





- 1 Business Products & Services
- 1.1 Commercial Products
- 1.1.1 Aerospace and Defense -Manufacturers of equipment, parts or products related to civil or military aerospace and defense. Includes aircraft parts, firearms, and other munitions.

Ex: Boeing, Lockheed Martin, Northrop Grumman

1.1.2 Building Products - Manufacturers and distributors of home improvement and construction products and equipment. Includes drills, saws, windows, doors, and other prefabricated building materials, among others.

Ex: USG, Elk Corporation, Fastenal Company

1.1.3 Distributors/Wholesale - Companies engaged in the sale of bulk goods for resale by a retailer. The goods are sold to industrial, commercial, institutional, or other entities.

Ex: Ferguson Enterprises, W.W. Grainger, Hughes Supply

1.1.4 Electrical Equipment - Manufacturers of electrical equipment and components. Includes a broad range of electrical devices, electrical components, power-generating equipment, and other large electrical systems, among others.

Ex: AO Smith, Exide Technologies, Zoltek Companies

1.1.5 Industrial Supplies and Parts - Manufacturers of intermediate goods. Includes industrial parts and supplies made through injection molding, extrusion, thermoforming, die casting, and metal stamping, among others.

Ex: Advanced Plastics, Precision Urethane and Machine, Lyons Tool and Die

1.1.6 Machinery - Manufacturers of heavyduty industrial machinery. Includes heavy equipment, hardware, and machine tools, among others.

Ex: Caterpillar, Komatsu, Deere and Company

1.1.7 Other Commercial Products

- 1.2 Commercial Services
- 1.2.1 Accounting, Audit and Tax Services Providers of accounting, audit, and tax services to managers, investors, and tax authorities.

Ex: PricewaterhouseCoopers, Ernst and Young, KPMG, Deloitte

1.2.2 BPO/Outsource Services - Providers of business process outsourcing (BPO) services. BPO is the transmission of processes and operational activities to a third party for the purpose of cost reduction, productivity growth, and innovative capabilities.

Ex: Accenture, Sitel, ARAMARK

1.2.3 Construction and Engineering - Companies engaged in large scale or non-residential construction. Includes building construction, heavy/highway construction, industrial construction, architecture, and civil engineering, among others.

Ex: Turner Construction, Skanska, Tishman Construction

1.2.4 Consulting Services - Providers of specialized consulting services to improve a company's performance. Includes environmental consulting, human resource consulting, management consulting, strategic consulting, and political consulting, among others.

Ex: McKinsey and Company, Boston Consulting Group, Watson Wyatt

1.2.5 Education and Training Services - Providers of specialized education and training services. Includes on-the-job and off-the-job training, among others.

Ex: Apollo Group, Accredited Technical Training, WorldWideLearn

1.2.6 Environmental Services - Providers of environmental services. Includes environmental management, waste management, and pollution control services, among others.

Ex: Environmental Quality Management, Waste Management, Allied Waste Industries 1.2.7 Human Capital Services - Providers of human resource and employment services. Includes recruitment, training, and career development, among others.

Ex: Monster Worldwide, Vault.com, Robert Half Finance and Accounting

1.2.8 Legal Services - Providers of corporate legal services. Includes contract law, tax law, securities law, intellectual property rights, and zoning law, among others.

Ex: DLA Piper, Goodwin Procter, White and Case

1.2.9 Logistics - Providers of supply chain management and logistical support. Includes inventory management, purchasing, organizing transportation, and warehousing, among others.

Ex: Penske Logistics, United Parcel Service, Expeditors International

1.2.10 Media and Information Services - Providers of media and information services to businesses. Includes companies engaged in trade shows, marketing, branding, conducting surveys, market analysis, and audience data interpretations, among others. This includes online marketplaces.

Ex: Arbitron, DST Systems, Interactive Data Corporation

1.2.11 Office Services - Providers of administrative, office management, and personnel services.

Ex: Express Personnel Services, IKON Office Solutions, Snelling Personnel Services

1.2.12 Printing Services - Providers of commercial printing services. Includes printing, copying, binding, and document preparation, among others.

Ex: Kinko's, AlphaGraphics, Sir Speedy

1.2.13 Security Services - Provider of residential and commercial security services. Includes security system installation, monitoring, and staffing services, among others.

Ex: Brinks, AlliedBarton Security Services, Protection One





#### 1.2.14 Other Commercial Services

#### 1.3 Transportation

1.3.1 Air - Providers of products or services related to commercial air transportation. Includes couriers, airfreight, and airplane maintenance, among others.

Ex: Delta Cargo, Pilot Freight Services, Lufthansa Cargo

1.3.2 Marine - Providers of products or services related to commercial water transportation. Includes cargo shipping, manufacturers of ships, and ship components, among others.

Ex: Overseas Shipholding Group, DryShips, Seacor Holdings

1.3.3 Rail - Providers of products or services related to commercial rail transportation. Includes freight trains, manufacturers of trains, and train parts, among others.

Ex: Union Pacific, Canadian National Railway, Norfolk Southern

1.3.4 Road - Providers of products or services related to commercial land transportation. Includes freight trucks, manufacturers of commercial trucks, and truck parts, among others.

Ex: J.B. Hunt Transport Services, Landstar System, Con-way

1.3.5 Infrastructure - Providers of products and services for commercial transportation infrastructure. Includes products and services related to airports, train stations, bus terminals, and highway construction, among others.

Ex: Hubbard Construction, Granite Construction, Mosites Construction

- 1.3.6 Other Transportation
- 1.4 Other Business Products and Services
- 1.4.1 Buildings and Property Owners of buildings and property. Includes office buildings, factories, farmland, and oil fields, among others.

Ex: The Empire State Building, 175 Fifth Avenue

1.4.2 Conglomerates - Companies engaged in multiple and unrelated industrial sectors.

Ex: Berkshire Hathaway, Altria Group, GE

1.4.3 Government - Providers of products and services to government agencies. Includes consulting, information technology services, and military equipment and support, among others.

Ex: Booz Allen Hamilton, Maximus, Skanska

- 1.4.4 Other Business Products and Services
- 2 Consumer Products & Services
- 2.1 Apparel and Accessories

2.1.1 Accessories - Manufacturers or designers of fashion accessories. Includes jewelry, gloves, handbags, hats, belts, scarves, and sunglasses, among others.

Ex: Ray-Ban, Coach, Citizen Watch Company

2.1.2 Clothing - Manufacturers or designers of clothing.

Ex: Ralph Lauren Polo, Hanes, Columbia Sportswear

2.1.3 Footwear - Manufacturers or designers of footwear. Includes athletic shoes, boots, and sandals, among others.

Ex: Crocs, Sketchers, Timberland

2.1.4 Luxury Goods - Manufacturers or designers of luxury goods. Includes high end clothing, accessories, and footwear, among others.

Ex: Gucci Group, Patek Philippe, Tag Heuer International

- 2.1.5 Other Apparel
- 2.2 Consumer Durables
- 2.2.1 Business Equipment and Supplies
   Manufacturers of office supplies and
  equipment. Includes general office supplies,
  filing products, and paper shredders, among
  others.

Ex: Pitney Bowes, Steelcase, 3M

2.2.2 Electronics - Manufacturers of consumer electronics. Includes digital

cameras, televisions, and handheld devices, among others.

Ex: Samsung, Sony, Panasonic

2.2.3 Home Furnishings - Manufacturers of home furniture and other decorative accessories. Includes couches, lamps, and draperies, among others.

Ex: Ethan Allen Interior, Furniture Brands International, La-Z-Boy

2.2.4 Household Appliances - Manufacturers of household appliances. Includes microwaves, vacuum cleaners, washers, and dryers, among others.

Ex: Whirlpool, Kenmore, LG

2.2.5 Recreational Goods - Manufacturers of recreational goods. Includes sporting goods and leisure goods, among others.

Ex: Burton, Titleist, Coleman

- 2.2.6 Other Consumer Durables
- 2.3 Consumer Non-Durables
- 2.3.1 Beverages Producers and distributors of alcoholic and non-alcoholic beverages.

Ex: Coca-Cola, Pepsi, Anheuser-Busch

2.3.2 Food Products - Producers, processors, and distributors of food products. Includes companies engaged in food preparation, and manufacturers of packaged food, among others.

Ex: Kraft Foods, Heinz, Lancaster Colony

2.3.3 Household Products - Manufacturers of household products. Includes cleaning supplies, disposable products, and paper towels, among others.

Ex: Clorox, Dixie, Kleenex

2.3.4 Personal Products - Manufacturers of personal products. Includes cosmetics, perfumes, and hygiene products, among others.

Ex: Old Spice, Gillette, Dove

2.3.5 Other Consumer Non-Durables





#### 2.4 Media

2.4.1 Broadcasting, Radio and Television - Providers of entertainment through radio, television, or the internet. Includes local, national, and international radio and television channels.

Ex: NBC, Telemundo, YouTube

2.4.2 Information Services - Providers of information and content services. Includes political surveys, financial data, and statistics, among others.

Ex: Bloomberg, Interactive Data Corporation, Gallup

2.4.3 Movies, Music and Entertainment - Companies engaged in the production, distribution, and sale of entertainment products and services. Includes movie theaters, production companies, and music labels, among others.

Ex: Lowes Cineplex, Virgin Records, Paramount Pictures

2.4.4 Publishing - Providers of print and internet publishing services. Includes newspapers, magazines, and books, among others.

Ex: Daily Journal, The New York Times Company, The McGraw-Hill Companies

2.4.5 Social Content - Owners and operators of social content websites. Includes social networks, discussion boards, and dating websites, among others.

Ex: Facebook, LinkedIn, Match.com

2.4.6 Other Media

2.5 Restaurants, Hotels and Leisure

2.5.1 Casinos and Gaming - Owners and operators of casinos and other gaming operations.

Ex: MGM Mirage, Boyd Gaming, Monarch Casino

2.5.2 Cruise Lines - Owners and operators of cruise lines. Includes cruise ships, and ocean liners, among others.

Ex: Carnival Cruise Lines, Royal Caribbean Cruise Lines, Crystal Cruises

2.5.3 Hotels and Resorts - Owners and operators of hotels and resorts. Includes vacationing facilities and commercial establishments, among others.

Ex: Four Seasons, Hyatt, Fairmont

2.5.4 Leisure Facilities - Owners and operators of leisure facilities. Includes fitness centers and day spas, among others.

Ex: LA Fitness, 24 Hour Fitness, Aveda Lifestyle Salon and Spa

2.5.5 Restaurants and Bars - Owners and operators of restaurants and bars.

Ex: Applebee's, Chili's, Ruth's Chris Steak House

2.5.6 Other Restaurants, Hotels and Leisure

2.6 Retail

2.6.1 Catalog Retail - Provider of retail services through mail order and TV home shopping.

Ex: QVC, HSN, Jewelry Television

2.6.2 Department Stores - Owners and operators of large stores with a wide variety of products in distinct departments. Includes apparel, furniture, electronics, hardware, and sporting goods, among others.

Ex: Nordstrom, Macy's, Neiman Marcus

2.6.3 Distributors/Wholesale - Companies engaged in the sale of bulk goods to individual consumers.

Ex: Costco, Sam's Club, BJ's Wholesale Club

2.6.4 General Merchandise Stores - Owners and operators of stores offering a wide variety of general merchandise. General merchandise includes personal products, food, film, and prescriptions, among others.

Ex: CVS, RiteAid, Walgreen's

2.6.5 Internet Retail - Providers of retail services primarily through the internet.

Ex: Amazon.com, Overstock.com, Netflix

2.6.6 Specialty Retail - Owners and operators of retail stores specializing in the sale of goods in a particular industry or sector.

Ex: Barnes and Noble, Petsmart, Office Depot

2.6.7 Other Retail

2.7 Services (Non-Financial)

2.7.1 Accounting, Audit and Tax Services - Providers of accounting, audit, and tax services to individuals.

Ex: HandR Block, Jackson Hewitt, Liberty
Tax Service

2.7.2 Educational and Training Services - Providers of educational and professional training services. Includes vocational education and exam preparation, among others.

Ex: University of Phoenix, ITT Technical Institute, Princeton Review

2.7.3 Legal Services - Providers of legal services to individuals. Includes criminal law, property law, human rights law, and insurance law, among others.

Ex: DLA Piper, Goodwin Procter, White and Case

2.7.4 Real Estate Services - Providers of real estate services to individuals. Includes real estate brokers and property valuation, among others.

Ex: Century 21, RE/MAX, Coldwell Banker

2.7.5 Other Services (Non-Financial)

2.8 Transportation

2.8.1 Air - Providers of air transportation to consumers. Includes major airlines and charter airlines, among others.

Ex: Northwest Airlines, United Airlines, Alaska Airlines





2.8.2 Automotive - Providers of products and services related to automotives. Includes automotive manufacturers and automotive services, among others.

Ex: Ford, GM, Enterprise Rent-a-Car

2.8.3 Marine - Providers of products and services related to water transportation. Includes leisure boat manufacturers and yacht dealers, among others.

Ex: Viking Yacht Company, Marine Products Corporation, Fountain Powerboat Industries

2.8.4 Rail - Providers of products and services related to rail transportation. Includes passenger trains and express trains, among others.

Ex: Amtrak, Grand Luxe Rail Journeys, Union Pacific Railroad

- 2.8.5 Other Transportation
- 2.9 Other Consumer Products and Services
- 2.9.1 Other Consumer Products and Services
- 3 Energy
- 3.1 Equipment

3.1.1 Alternative Energy Equipment - Manufacturers or providers of alternative energy equipment. Includes compressed natural gas, solar, hydroelectric, and wind, among others.

Ex: The Wind Turbine Company, Vestas, Solar Electric Power Company

3.1.2 Coal and Consumable Fuels Equipment - Manufacturers or providers of coal and consumable fuels equipment.

Ex: Joy Mining Machinery, Getman, Peters Equipment Company

3.1.3 Oil and Gas Equipment -Manufacturers or providers of oil and gas equipment. Includes rigs and drilling equipment, among others.

Ex: Weatherford International, Baker Hughes, Cameron International

3.1.4 Other Equipment

3.2 Exploration, Production and Refining

3.2.1 Energy Exploration - Companies engaged in energy exploration. Includes the identification, testing and development of sites for well drilling and wind farms.

Ex: Apache Corporation, Anadarko Petroleum, Hunt Oil

3.2.2 Energy Production - Companies engaged in energy production. Includes wind farming, drilling and removal of crude oil and natural gas.

Ex: Transocean, Diamond Offshore Drilling, Noble Corporation

3.2.3 Energy Refining - Companies engaged in energy refining. Includes the refining of crude oil into gasoline, diesel, kerosene, and fuel oil.

Ex: Sasol, Valero Energy, Imperial Oil

- 3.3 Services
- 3.3.1 Energy Marketing Companies engaged in energy marketing. Includes gas marketing, pipeline analysis, and asset management, among others.

Ex: Marathon Oil, Hess Corporation, Murphy Oil

3.3.2 Energy Storage - Companies engaged in energy storage. Includes commercial and industrial batteries, fuel cells, and capacitors, among others.

Ex: ZBB Energy, Young Gas Storage, Falcon Gas Storage

3.3.3 Energy Traders and Brokers -Companies engaged in energy trading and brokerage services.

Ex: Dynergy, Reliant Energy, El Paso Corporation

3.3.4 Energy Transportation - Companies engaged in energy transportation. Includes tankers, and gathering and transmission pipelines, among others.

Ex: Energy Transfer Equity, Kinder Morgan Energy Partners, Enbridge

3.3.5 Infrastructure - Companies engaged in energy infrastructure. Includes pipelines, transmission lines, generation plants, and refineries, among others.

Ex: Energy Infrastructure Acquisition, Brookfield Infrastructure Partners, Tortoise Energy Infrastructure

3.3.6 Other Energy Services

3.4 Utilities

3.4.1 Electric Utilities - Companies engaged in the generation, transmission, and distribution of energy for sale in the regulated market.

Ex: Southern Company, FPL Group, Dominion Resources

3.4.2 Gas Utilities - Companies engaged in the production, distribution and marketing of natural gas and related services.

Ex: National Grid, Sempra Energy, Equitable Resources

3.4.3 Multi-Utilities - Companies engaged in the generation, transmission, distribution, and sale of water, electricity and natural gas to residential, commercial, industrial, and wholesale customers.

Ex: Exelon Corporation, Public Service Enterprise Group, PGandE

3.4.4 Water Utilities - Companies engaged in providing water or wastewater services.

Ex: Aqua America, California Water Service Group, American States Water Company

- 3.4.5 Other Utilities
- 3.5 Other Energy
- 3.5.1 Other Energy
- 4 Financial Services
- 4.1 Capital Markets/Institutions
- 4.1.1 Asset Management Financial institutions providing management of various securities to meet specified investment goals for the investors. Investors may be institutions or high net worth individuals.





Ex: Smith Barney, Edward Jones, Ameriprise Financial

4.1.2 Brokerage - Financial Institutions acting as an intermediary between a buyer and seller of securities, usually charging a commission. Includes clearing houses and stock brokerage firms, among others.

Ex: Citigroup, Options Clearing Corporation, LCH.Clearnet

4.1.3 Investment Banks - Financial institutions functioning across all areas of capital markets. Includes raising money by issuing and selling securities, and advisory within mergers and acquisitions, among other financial services.

Ex: Citigroup, Goldman Sachs, Lehman Brothers

4.1.4 Private Equity - Financial institutions engaged in long-term loans with multinational corporations and governments. Includes merchant banks, and private equity firms, among others.

Ex: Blackstone Group, Carlyle Group, Kohlberg Kravis Roberts

- 4.1.5 Other Capital Markets/Institutions
- 4.2 Commercial Banks
- 4.2.1 International Banks Non-investment commercial banks located in more than one country.
- Ex: Deutsche Bank, UBS, Bank of America
- 4.2.2 National Banks Non-investment commercial banks located in one country.

Ex: Bank of New York, Citizens Bank, Capital One Bank

4.2.3 Regional Banks - Non-investment commercial banks located in a particular region.

Ex: Sterling Savings Bank, Evergreen Bank, HomeStreet Bank

4.2.4 Thrifts and Mortgage FinanceFinancial institutions specializing in originating and/or servicing mortgage loans.

Ex: Accredited Home Lenders, Countrywide, Quicken Loans

- 4.2.5 Other Commercial Banks
- 4.3 Insurance
- 4.3.1 Automotive Insurance Providers of insurance for cars, trucks, and other vehicles.

Ex: State Farm, All-State, GEICO

- 4.3.2 Commercial/Professional Insurance Providers of commercial or professional insurance. Includes medical malpractice and legal malpractice, among others.
- Ex: CNA Insurance, Zurich, FM Global

4.3.3 Insurance Brokers - Companies sourcing contracts of insurance on behalf of their customers.

Ex: Marsh and McLennan, Willis Group, Brown and Brown

4.3.4 Life and Health Insurance - Providers of life and health insurance.

Ex: ING, Prudential, MetLife

4.3.5 Multi-line Insurance - Providers of diversified insurance services with multiple interests in life, health, and property insurance.

Ex: AXA, Prudential, Sun Life

4.3.6 Property and Casualty Insurance - Providers of property and casualty risks insurance.

Ex: Allianz, American International Group, Hartford Financial

4.3.7 Re-Insurance - Providers of insurance to insurance companies.

Ex: Berkshire Hathaway, Munich Reinsurance, Hannover Reinsurance

- 4.3.8 Other insurance
- 4.4 Other Financial Services
- 4.4.1 Consumer Finance Companies engaged in any kind of lending to consumers. Includes sub prime lending, among others.

Ex: HSBC Finance, CIT, CitiFinancial

4.4.2 Holding Companies - Companies that do not produce goods or provide services, but instead own shares of other companies.

Ex: Berkshire Hathaway, UAL Corporation, AMR Corporation

4.4.3 Real Estate Investment Trusts (REITs) - REIT is a tax designation for a corporation investing in real estate. REITs receive special tax reductions and offer high yield investments in real estate.

Ex: AMB Property, Duke Realty, EastGroup Properties

4.4.4 Specialized Finance - Companies engaged in providing specialized finance to both public and private enterprises.

Ex: Latitude Capital Group, Budget Finance Company, Capital Source

- 4.4.5 Other Financial Services
- 5 Healthcare
- 5.1 Devices and Supplies
- 5.1.1 Diagnostic Equipment Manufacturers of imaging and non-imaging devices used to assess and diagnose medical conditions. Includes X-ray and MRI machines, otoscopes and stethoscopes, and ultrasound equipment, among others.

Ex: Welch Allyn, Siemens, AFC Industries, SOMA Technology

5.1.2 Medical Supplies - Manufacturers of medical supplies that would be considered non-durable. Includes syringes, diabetes supplies, bandages, and protective wear, among others.

Ex: Frank Healthcare, Johnson and Johnson, Adenna, Cardinal Health, Covidien

5.1.3 Monitoring Equipment - Manufacturers of devices used to collect and monitor vital signs. Includes heart-rate monitors, oxygen saturation monitors, and fetal monitors, among others.

Ex: Phillips Medical Systems, GE Medical Systems, Welch Allyn, SOMA Technology, Datascope





5.1.4 Surgical Devices - Manufacturers of devices and equipment used in a surgical setting. Includes laparoscopy instruments, retractor systems, and positioning devices, among others.

Ex: Lyons, Mediflex, Boston Scientific

5.1.5 Therapeutic Devices - Manufacturers of devices for rehabilitation or therapy. Includes muscle stimulators, light therapy, and pacemakers, among others.

Ex: Medtronic, Boston Scientific, Empi

5.1.6 Other Devices and Supplies

5.2 Services

5.2.1 Clinics/Outpatient Services - Facilities and services for short-term, outpatient care and procedures. Includes rehabilitation, diagnostic testing, and outpatient surgery and exams.

Ex: AmSurg, Physiotherapy Associates, HealthSouth

5.2.2 Distributors - Distributors of healthcare equipment and supplies. Includes all distributors of healthcare products.

Ex: American Medical Supplies and Equipment, AmerisourceBergen, BMP Sunstone, Owens and Minor

5.2.3 Elder and Disabled Care - Facilities and services for the care of senior citizens. Includes assisted living, long term care, hospice care, nursing homes, and home care, among others.

Ex: RehabCare Group, Sunrise Senior Living, AccentCare

5.2.4 Hospitals/Inpatient Services - Facilities and services for long-term care, and inpatient care and procedures. Includes invasive surgical procedures, and emergency services.

Ex: Tenet Healthcare, HCA, Universal Health Services

5.2.5 Laboratory Services - Providers of medical laboratory services. Includes blood and tissue testing.

Ex: Quest Diagnostics, LabCorp, LabOne

5.2.6 Managed Care - Owners and operators of managed health plans. Includes Preferred Provider Organizations (PPOs) and Health Maintenance Organizations (HMOs).

Ex: Aetna, Kaiser Permanente, UnitedHealth Group

5.2.7 Practice Management - Providers of consulting and management services to medical practices. Excludes practice management software, such as billing or medical records software.

Ex: Advantage Medical Claims, Medical Management Associates, Healthcare Facilitators

5.2.8 Other Healthcare Services

5.3 Healthcare Technology Systems

5.3.1 Decision/Risk Analysis - Developers and producers of software or systems used to expedite the medical decision and risk management process. These programs try to assist doctors and nurses in their decision making process.

Ex: HLTH Corporation, Apache Medical Systems, Wellsource

5.3.2 Enterprise Systems - Developers and producers of software and systems that cover multiple areas of the healthcare organization.

Ex: NextGen, Cerner, McKesson Corporation

5.3.3 Medical Records Systems - Developers and producers of software or systems to organize medical records.

Ex: NextGen, McKesson, MediNotes

5.3.4 Outcome Management - Developers and producers of software or systems used to analyze the effectiveness of treatments prescribed by doctors.

Ex: Tri-Analytics, Outcome Concept Systems, Protocol Driven Healthcare

5.3.5 Other Healthcare Technology Systems

5.4 Pharmaceuticals and Biotechnology

5.4.1 Biotechnology - Companies engaged in research, development, and production of biotechnology. Includes embryology, genetics, cell biology, molecular biology, and biochemistry, among others.

Ex: Elan, Genentech, Amgen

5.4.2 Discovery Tools - Researchers and developers of tools used in drug discovery and drug delivery research. Includes compound libraries, enzymes, kinases, and specialized proteins, among others.

Ex: PerkinElmer, Qiagen, Charles River Laboratories

5.4.3 Drug Delivery - Researchers and developers of medication delivery methods. Includes targeted delivery methods, and timed release formulations, among others.

Ex: Elan, Hospira, Nektar Therapeutics

5.4.4 Drug Discovery - Researchers and developers of new drugs. Includes identification, screening, and efficacy testing of drug candidates, among others.

Ex: Bristol-Meyers Squibb, PerkinElmer, Elan

5.4.5 Pharmaceuticals - Manufacturers and distributors of established drugs/ pharmaceuticals. This category includes any large drug company that primarily manufactures medicines; however they may also be engaged in drug research and development.

Ex: Bristol-Meyers Squibb, GlaxoSmithKline, Novartis, Eli Lilly and Company

5.4.6 Other Pharmaceuticals and Biotechnology

5.5 Other Healthcare

5.5.1 Other Healthcare

6 Information Technology

6.1 Communications and Networking

6.1.1 Cable Service Providers - Developers and marketers of television, internet and voice services for cable networks. Includes broadband internet, VoIP, and cable television, among others.

Ex: Comcast, Cox Communications, Adelphia





6.1.2 Connectivity Products - Manufacturers of electronic components used to create networks or link devices. Includes bulk cable, connectors, and adapters, among others.

Ex: Belkin, AMP Inc., Griffin Technology, Molex

6.1.3 Fiberoptic Equipment - Manufacturers of fiber optic and photonics equipment. Includes bulk cable, connectors, lasers, and light emitting diodes (LEDs), among others.

Ex: Oplink Communications, Optical Communication Products. Belden

6.1.4 Internet Service Providers - Providers of dial-up and DSL access to the internet.

Ex: America Online, NetZero, EarthLink, Juno, PeoplePC

6.1.5 Telecommunications Service Providers - Providers of commercial and residential voice and data services. Includes phone service, paging, and voicemail, among others.

Ex: BellSouth, AT&T, Qwest, Vodafone, Airtel

6.1.6 Wireless Communications Equipment - Manufacturers, designers and marketers of wireless communications equipment. Includes wireless handsets, and wireless modems and routers, among others.

Ex: LG, Motorola, Cisco

6.1.7 Wireless Service Providers - Providers of wireless telephone networks. Includes cellular telephone service, and personal communication service (PCS), among others.

Ex: Verizon Wireless, Qualcomm, Nextel Partners

6.1.8 Other Communications and Networking

6.2 Hardware

6.2.1 Computers, Parts and Peripherals - Manufacturers, designers, and distributors of computers and peripherals. Includes monitors, cases, mice, keyboards, and printers, among others.

Ex: Dell, Apple, Hewlett-Packard, Sony, IBM

6.2.2 Electronic Components Manufacturers, designers, and distributors
of electronic parts and components for

use in more advanced products. Includes processors, video cards, sound cards, fans, and motherboards, among others.

Ex: Intel, Advanced Micro Devices (AMD), Texas Instruments, NVIDIA

6.2.3 Electronic Equipment and Instruments - Manufacturers, designers, and distributors of electronic equipment and instruments. Includes multimeters, and oscilloscopes, among others. This category is for electronic testing and measurement devices.

Ex: Agilent Technologies, National Instruments, Tektronix, Chase Scientific

6.2.4 Office Electronics - Manufacturers, designers, and distributors of office equipment. Includes copiers and faxes, among others.

Ex: Xerox, Ricoh, Lanier

6.2.5 Storage - Manufacturers, designers, and distributors of electronic storage devices. Includes hard drives, optical drives, and flash memory, among others.

Ex: Seagate Technology, EMC, Western Digital

6.2.6 Other Hardware

6.3 Semiconductors

6.3.1 Application Specific - Manufacturers and designers of application specific semiconductors and integrated circuits.

Ex: First Solar, NVIDIA, Linear Technology

6.3.2 General Purpose - Manufacturers and designers of generic or general purpose semiconductors and integrated circuits.

Ex: Intel, Texas Instruments, STMicroelectronics

6.3.3 Production - Owners and operators of semiconductor foundries. "Foundries" are companies that manufacture semiconductors, but are not involved in their design. Ex: Taiwan Semiconductor Manufacturing, United Microelectronics, Chartered Semiconductor Manufacturing, SMIC

6.3.4 Other Semiconductors

6.4 Services

6.4.1 Consulting and Outsourcing - Providers of outside consulting, outsourcing, or offshoring services. Includes subcontractors, and business process outsourcers, among others.

Ex: Gartner, Infosys Technologies, Sapient Corporation

6.4.2 Systems and Information - Management Providers of systems and information management services. Includes companies providing IT hosting and data centers, among others.

Ex: Rackspace, Network World, Mosso

6.4.3 Other IT Services

6.5 Software

6.5.1 Application Software - Developers and producers of software for specific tasks or applications. Includes general application software not classified elsewhere.

Ex: Microsoft, Oracle, Adobe

6.5.2 Automation/Workflow Software - Developers and producers of software for automation and workflow management. Includes automation of IT processes, data transferring, FTPs, and scheduling, among others.

Ex: Tethys Solutions, Parallels, Synopsys

6.5.3 Business/Productivity Software - Developers and producers of software for the enterprise where the focus is on process management and automation.

Ex: Salesforce, IBM, Microsoft

6.5.4 Communication Software Developers and producers of software
for communicating electronically through
voice, video or text. Includes text and video
chat, web conferencing, and web-based
presentations, among others.

Ex: America Online, Microsoft, WebEx





6.5.5 Database Software - Developers and producers of software to manage and utilize information in databases. Includes MySQL, Microsoft SQL Server, and Oracle, among others.

Ex: Microsoft, Oracle, IBM, Sun Microsystems

6.5.6 Educational Software - Developers and producers of educational software.

Ex: Renaissance Learning, Scientific Learning Corporation, The Learning Company

6.5.7 Entertainment Software - Developers of consumer-oriented gaming software and applications.

Ex: Zynga, Rovio

6.5.8 Financial Software - Developers and producers of software for managing accounting and financial processes. Also includes various software developed specifically for the financial industry.

Ex: Intuit, CapControls, Merlin Securities, Tally, Finacle

6.5.9 Internet Software - Developers and producers of software for accessing and manipulating internet content. Includes internet browsers, and file transfer protocol (FTP) programs, among others.

Ex: Apple, Microsoft, Mozilla Foundation, Norwegian Opera Software

6.5.10 Multimedia and Design Software
- Developers and producers of software
for creating and manipulating multimedia
content. Includes Computer Aided Design
(CAD) software, and video and image editing
software, among others.

Ex: Adobe Systems, Quark, Autodesk

6.5.11 Network Management Software
- Developers and providers of software
and systems for managing and organizing
networks and information. Includes network
monitoring software, and network security
software, among others.

Ex: Altiris, Tivoli, NetIQ

6.5.12 Operating Systems Software - Developers and producers of computer operating systems.

Ex: Apple, Microsoft, Red Hat Software, Novell

6.5.13 Social/Platform Software - Developers and producers of software that facilitates the production, distribution or following of social content. The category also includes online markets.

Ex: Facebook, LinkedIn

6.5.14 Software Development Applications - Developers and producers of software for planning, coding, and debugging of new software. Includes compilers, build tools, debuggers, disassemblers, and documentation generators, among others.

Ex: Eiffel Software, Borland Software, BigFix

6.5.15 Vertical Market Software Developers and producers of vertical market software. Includes point of sale software, among others. A vertical market is a group of companies that do business in the same industry.

Ex: SAP, Hypercom, Ingenico

6.5.16 Other Software

6.6 Other Information Technology

6.6.1 Other Information Technology

7 Materials & Resources

7.1 Agriculture

7.1.1 Animal Husbandry - Companies that breed, raise, and market livestock.

Ex: Seaboard Corp., Smithfield Foods, Alico

7.1.2 Aquaculture - Companies that cultivate and market aquatic organisms. Includes fish, shrimp, kelp/seaweed and cultured pearls, among others.

Ex: Stolt Sea Farm, D.B. Kenney Fisheries, America's Catch

7.1.3 Cultivation

7.1.4 Horticulture - Companies that cultivate and market grains, fruits, flowers, and vegetables.

Ex: Cargill, Archer Daniels Midland, The Andersons, Inc.

7.1.5 Other Agriculture

7.2 Chemicals and Gases

7.2.1 Agricultural Chemicals - Producers of chemicals used primarily in an agricultural setting. Includes diammonium phosphate (DAP), anhydrous ammonia (NH3), and potassium chloride (KCI), among others.

Ex: Monsanto, Mosaic, CF Industries Holdings

7.2.2 Commodity Chemicals - Producers of chemicals that are sold in bulk due to their low cost. Includes methane, hydrochloric acid, chlorine, and sodium chloride, among others.

Ex: Mitsubishi Chemical, Terra Nitrogen, ExxonMobil

7.2.3 Industrial Chemicals - Producers of chemicals used primarily in industrial applications. Includes plastics, biocides, coolants, and polyglycols, among others.

Ex: Celanese, FMC Corp., Archer Daniels Midland

7.2.4 Multi-line Chemicals - Producers of diversified chemicals.

Ex: Dow Chemical, Air Products and Chemicals, FMC Corp., DuPont

7.2.5 Specialty Chemicals - Producers of proprietary or advanced chemical compounds. Includes food additives, and polymers, among others.

Ex: Sigma-Aldrich, Lubrizol, Cytec Industries

7.2.6 Other Chemicals and Gases

7.3 Construction (Non-Wood)

7.3.1 Raw Materials (Non-Wood) -Harvesters or producers of non-wood construction materials. Includes stone, gravel, sand, cement, and bricks, among





others. Finished construction products are classified under Building Products.

Ex: Texas Industries, Eagle Materials, Hanson Aggregates North America

7.4 Containers and Packaging

7.4.1 Metal - Producers of metal containers and packaging materials.

Ex: Ball Corporation, Greif Inc., Silgan Holdings

7.4.2 Paper - Producers of paper containers and packaging materials.

Ex: Packaging Corporation of America, International Paper, Georgia-Pacific

7.4.3 Plastic - Producers of plastic containers and packaging materials.

Ex: Ball Corporation, Sonoco, Silgan Holdings

7.4.4 Wood - Producers of wood containers and packaging materials.

Ex: Greif Inc., Berry Industrial Group, Universal Forest Products

7.4.5 Other Containers and Packaging

7.5 Forestry

7.5.1 Forestry Development/Harvesting - Companies engaged in developing and harvesting forested areas.

Ex: Weyerhaeuser, Deltic Timber, MAXXAM

7.5.2 Forestry Processing - Companies engaged in converting raw forest products into marketable materials. Includes lumber, woodchips, engineered wood products, and paper products, among others.

Ex: Weyerhaeuser, Louisiana-Pacific, Stimson Lumber, Pope and Talbot, Georgia-Pacific, Boise Cascade, Temple-Inland Forest Products

7.5.3 Paper/Soft Products

7.5.4 Wood/Hard Products

7.5.5 Other Forestry

7.6 Metals, Minerals and Mining

7.6.1 Aluminum - Miners, producers and marketers of aluminum. Includes aluminum ore, and rolled aluminum, among others.

Ex: Alcoa, Kaiser Aluminum, Alcan

7.6.2 Coal - Miners, producers and marketers of coal. Includes lignite coal, bituminous coal, anthracite coal, and coke, among others.

Ex: Peabody Energy, CONSOL Energy, Drummond Company

7.6.3 Gold - Miners, producers and marketers of gold.

Ex: Newmont Mining, AngloGold Ashanti, Gold Fields Limited

7.6.4 Iron and Steel - Miners, producers and marketers of iron and steel.

Ex: Nucor, Olympic Steel, Arcelor Mittal

7.6.5 Multi-line - Miners, producers and marketers of diversified metals and minerals.

Ex: BHP Billiton, Rio Tinto, Teck Cominco

7.6.6 Precious Metals and Minerals - Miners, producers and marketers of precious metals and minerals. Includes platinum, silver, and palladium, among others.

Ex: Coeur d'Alene Mines, Stillwater Mining, Metalor

7.6.7 Other Metals, Minerals and Mining

7.7 Textiles

7.7.1 Animal - Manufacturers of animalbased textiles. Includes wool, cashmere and silk, among others.

Ex: Buckskin Fur and Leather, J. Hewit and Sons

7.7.2 Plant- Manufacturers of plant-based textiles. Includes hemp and cotton, among others.

Ex: Parkdale Mills, Boston Felt Company, Aetna Felt Corporation

7.7.3 Mineral - Manufacturers of mineralbased textiles. Includes asbestos, glass fiber, and metal fiber, among others.

Ex: Roxul, Potter and Soar, Central Glass

7.7.4 Synthetic - Manufacturers of synthetic textiles. Includes polyester, aramid, nylon and spandex, among others.

Ex: Huitong Chemical, Unifi, DuPont-Akra Polvester

7.7.5 Other Textiles

7.8 Other Materials

7.8.1 Other Materials





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