

The Golden Mean of Corporate Venture Capital

Balancing strategic and financial goals can produce golden exit and loss ratios for CVC investors

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Note: This note looks at CVC arms based in the US investing in deals globally. In previous reports, PitchBook has defined CVC to include direct corporate investments, not only CVC arms.

Key takeaways

- In 2018, US CVC investors more than doubled the value of deals in which they participated and set new highs in deal count (1,065), deal value (\$60.8 billion) and number of unique CVC investors (212).
- The most active CVC arms—Intel Capital, GV and Salesforce Ventures—have demonstrated strong financial performance historically even as they select investments in part based on their strategic merits.
- CVC portfolio companies first funded between 2008-2012 have completed profitable exits at higher rates and gone bankrupt at much lower rates than companies without CVC investment, suggesting CVCs are a net positive for the VC ecosystem despite pushing valuations upward.

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CVC activity overview

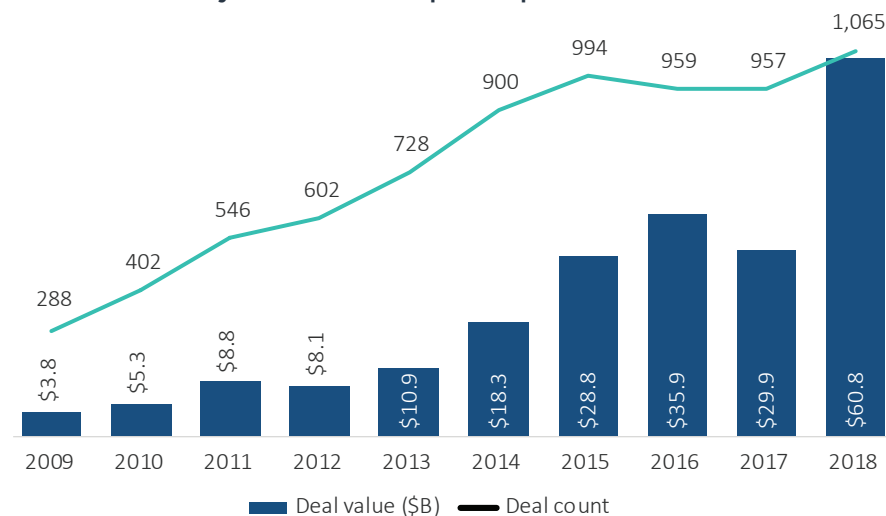
CVC activity exploded in 2018. US CVC arms operating independently from their parent companies increased their number of deals by 11.3% to 1,065 and capital invested by 103.4% to \$60.8 billion YoY. Per the [4Q 2018 PitchBook-NVCA Venture Monitor](#), in 2018, corporate investors participated in rounds contributing over 50% of total deal value for US-based companies, a trend that [continued in 1Q 2019](#). This figure includes global CVC investment in US VC deals and thus includes the expansive role of SoftBank. The expanding role of SoftBank's Vision Fund is a primary explanation for this

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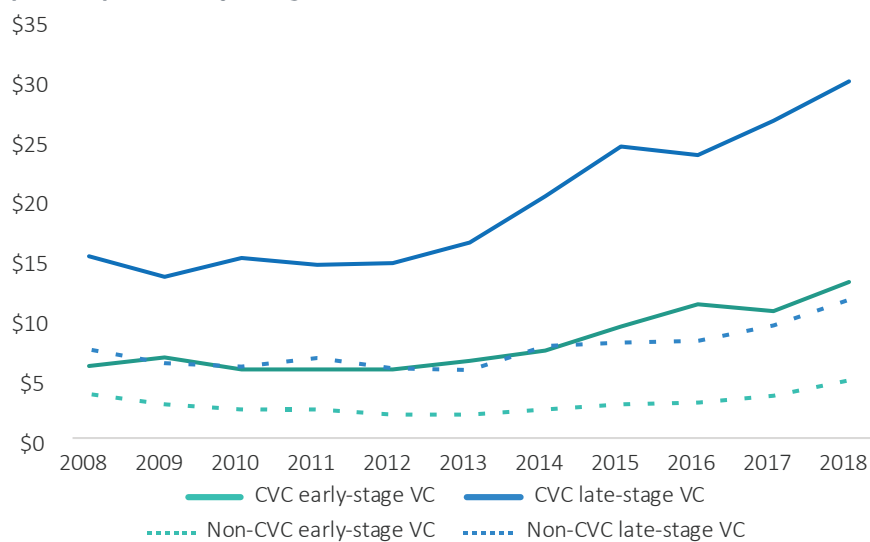
explosion, and its role in the VC market has been well covered. Less explored but similarly impactful is the explosion in US-based CVC activity more broadly over that same period.¹

VC deal activity with US CVC participation



Source: PitchBook | Geography: Global

Median sizes of VC deals (\$M) with and without US CVC participation by stage



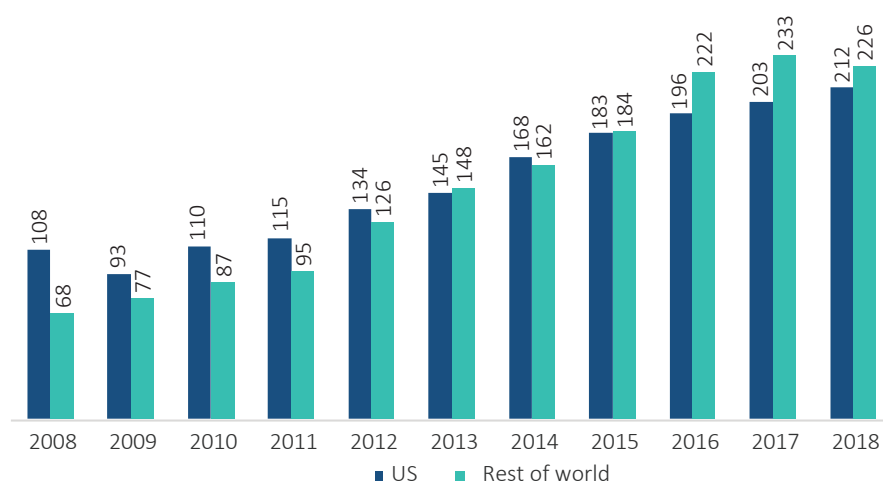
Source: PitchBook | Geography: Global

Deals with CVC investors have consistently been larger than those without at both early and late stages. Since 2009, the median deal size for early-stage deals with CVC participation has been nearly equal to that of late-stage deals with no CVC participation. Furthermore, the sizes of late-stage deals with

¹: The dollar figure is driven higher by Access Technology Ventures' participation in a \$14.0 billion deal for Ant Financial and a \$3.0 billion deal for Pinduoduo.

CVC participation tend to be 2-3x larger than late-stage deals with no CVC participation. While CVC participation is not the only explanation for these phenomena given the leadership of independent VCs and bias of late-stage rounds to include multiple investor types, this does show that CVC investors are comfortable with and commonly participate in deal sizes above the market norm.

Unique CVCs (#) by region



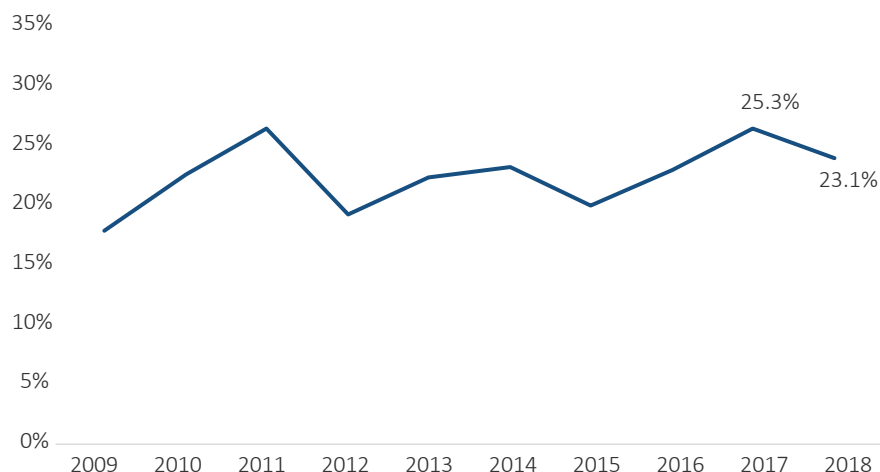
Source: PitchBook | Geography: Global

CVC arms were originally developed to invest in startups related to the company's core mission, but they have formalized and expanded their scope over time to resemble professional VC firms, producing a greater impact on the market. In recent years, S&P 500 companies such as Microsoft and Amazon have created independent CVC arms to pursue opportunities within their parent companies' technology ecosystems but also adjacent to them in emerging verticals. As more companies adopt this model, the number of CVC funds has steadily increased, especially those headquartered in the US. 212 US-based CVC investors made an investment in 2018, a number that has consecutively increased every year since 2009. New corporate investors included global corporations with new US-based CVC arms—including LG, Experian and HP—and revived activity from dormant CVC arms—including Abbott, Cigna, Cargill, Hitachi and 3M. We expect this number will continue increasing as more corporations identify corporate venturing as a complement to R&D and find the VC market more receptive to corporate funds.

The greater number of funds contributes to higher capital allocated. Global Corporate Venturing's 2019 survey of 95 CVC arms from 10 sectors found that 44% of CVC funds are over \$100 million. Of the 80 CVC arms with AUM recorded on the PitchBook platform, the median AUM of US-based CVCs is \$175 million. In 2008, Cigna and LG debuted with \$250 million and \$400 million funds respectively, which aligns with the sizes we've come to expect of VC funds raised by all but the largest independent VC investors. While it is not possible to determine CVC investors' check sizes because of disclosure limitations, corporations are clearly allocating enough capital to their CVC arms to make them competitive with traditional VCs and capable of leading late-stage rounds.

CVC investors are typically co-investors, meaning they usually do not determine deal prices or sizes. However, the proportion of deals led or solely invested in by CVCs has been ticking up over time, growing steadily from 2015 to 2017 to a peak of 25.3% before tapering off at 23.1% in 2018. We expect this figure to continue trending upward as CVC programs become more sophisticated. In 2018, CVC investors led six investments in prominent unicorns: Lyft, Grab, Opendoor, UiPath, Lime and Convoy. VC market participants should pay close attention to the processes of CVC investors and their role in the market as they continue to lead a high volume of sizable deals.

Deals led or solely backed by US CVCs as proportion of early- and late-stage VC deals (#)



Source: PitchBook | Geography: Global

Though CVC check sizes and the proportion of deals they lead have increased, CVC investment processes remain focused on and primarily connected to their parent company's objectives. Unlike independent VCs, whose key objective is the successful financial performance of their portfolio companies, CVCs focus instead on the long-term strategy of their parent companies.² The emphasis on strategic performance at CVC arms is evident given numerous factors, including:

- Former parent company employees tend to comprise a substantial percentage of the investment staff of CVC arms.
- Salary can form a higher proportion of compensation for investment staff compared to leading VCs, whose pay tends to be highly dependent on investment performance and carried interest.
- CVCs are frequently required to achieve strategic alignment between CVC portfolio companies and the parent company.

These differentiated incentives can produce fundamentally different investment processes and outcomes, which has consequences for all VC market participants given CVC arms' heightened level of activity.

Drivers of CVC activity

CVC activity has historically been cyclical and therefore may not continue increasing at the rate seen in 2018. The median age of CVC units is four years, and many of these nascent CVC units may not sustain their current levels of activity.³ Companies can phase out their programs when R&D budgets are cut or internal innovation strengthens to the point where external investments are not needed.⁴ We think underlying financial factors demonstrably drive CVC investments, including R&D expenses and cash balances. Additionally, corporations with CVC arms tend to have higher share price growth than the benchmark, which may encourage increased CVC activity as part of a broader innovation strategy.

Strategic drivers

Companies are increasingly seeking access to technological innovation from external startups. Early-stage companies have proven capable of disrupting legacy companies through

2: "How Transparent Are Firms About Their Corporate Venture Capital Investments?" S. J. W. Hamm, M. J. Jung & M. Park, December 7, 2018

3: The mean is six years. "The Life Cycle of Corporate Venture Capital," Review of Financial Studies, S. Ma, forthcoming

4: Ibid. According to Ma, companies that experience rapid increases in patenting activity are more likely to terminate their CVC arms.

software development, requiring incumbents to partner with disruptive startups without undermining their operating business units. In addition to CVC units, corporations are also forming startup incubators and accelerators to benefit from startup innovation. Because of this trend, we believe CVC has become a core part of corporate innovation as a means of giving companies access to emerging technologies including artificial intelligence (AI), financial technology and biotechnology.⁵ This trend shows no sign of slowing as the impact of emerging technologies on the economy increases.

We expect AI in particular to continue driving CVC activity even if there is a recession. Nearly all large companies are investing in the vertical; 9 out of 10 companies reported AI investments in a recent BCG survey.⁶ Because of AI's novelty, this development necessarily involves some investment in disruptive startups. Alphabet, Salesforce, Microsoft and Intel are all deploying substantial capital in this field through their CVC arms, and we expect other corporations including Amazon to increase their competition in this arena.

Financial drivers

Recent accounting research has identified relationships between financial statement line items and CVC activity. Using a sample of 115 companies that traded publicly from 1996 to 2017, researchers investigated the relationship between the presence of a CVC program and variables including R&D spending, capital expenditures (capex), changes in external financing, tax incentives and cash and short-term investment positions. They found that the strongest correlations are a positive relationship between CVC activity and R&D and an inverse relationship between CVC activity and capex.⁷ Surprisingly, they also found no relationship between cash balances and CVC activity. We assessed if these findings held for the increase in 2018 using PitchBook public markets data and found evidence to both confirm and deny certain claims.

R&D and capital expenditure spending

In contrast to this study, our data indicates that both R&D and capex spending had a positive relationship with CVC activity in 2018. According to the financial statements for a

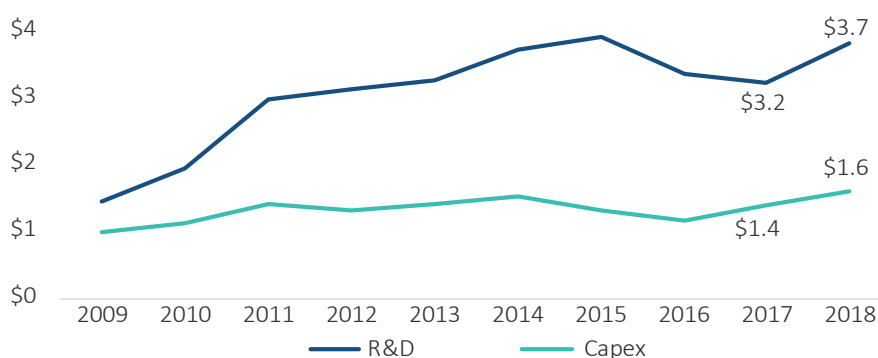
5: For more detail on investment trends in specific emerging technologies, see PitchBook's Emerging Tech Research available on the PitchBook Platform.

6: "Innovation in 2019: The Most Innovative Companies 2019," BCG, M. Ringel, F. Grassl, R. Baeza, D. Kennedy & J. Manly, March 21, 2019

7: "How Transparent Are Firms About Their Corporate Venture Capital Investments?" S. J. W. Hamm, M. J. Jung & M. Park, December 7, 2018

group of 27 publicly traded CVC parent companies—including Salesforce, Intel, and Alphabet—average R&D budgets have been increasing, with 2018 marking the highest percentage increase since 2010.⁸ This spike in R&D spending, highlighted by increases of over 30% YoY for Amazon, Alphabet, Abbvie and Salesforce, may have trickled down to increased CVC activity. Average capex spending among this group also increased, suggesting that it is not inversely related with CVC activity despite what some studies have shown.

Average R&D and capex spending (\$B) for publicly traded US CVC parent companies (2009-2018, n=27)



Source: PitchBook | Geography: US

R&D accounting policy may be a headwind for CVC investment. Corporations may be racing to fund R&D before tax changes required by the Tax Cuts & Jobs Act (TCJA) are enacted in 2022. Companies can currently deduct R&D expenses from taxes, but in 2022, they will be required to capitalize and amortize those expenses over five years.⁹ Thus, companies may decide to get ahead of the tax penalty in 2022 by heavily investing in R&D in the interim. At that time, R&D budgets will likely grow less quickly or potentially be cut. With less funds to go around for R&D, CVC programs may face reductions that could have a cooling effect on the broader VC market. Alternatively, R&D funds could be funneled into CVC programs as they lie off the balance sheet. Given the historical positive correlation between the two, though, we think this is unlikely. In the interim, we see no reason for R&D spending to decline, seeing as not even the global financial crisis was a deterrent to average R&D budgets among technology-adjacent S&P 500 companies.

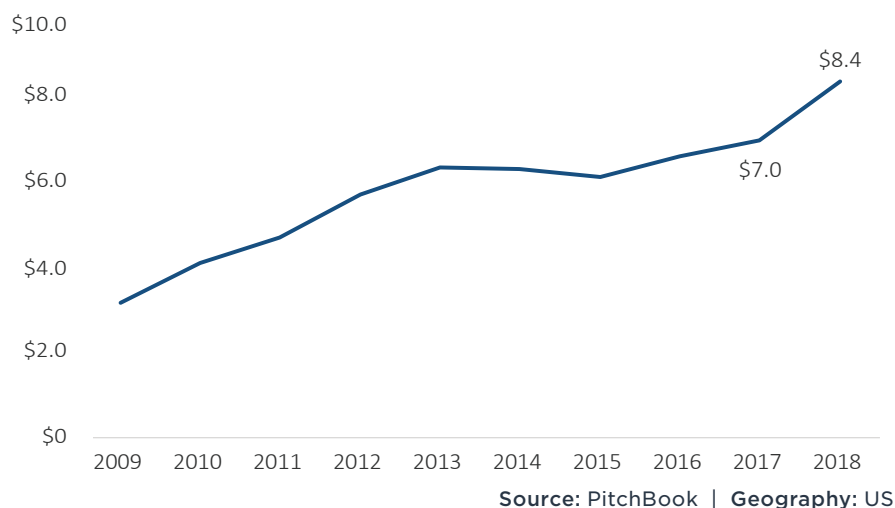
8: More than 27 publicly traded companies have CVC arms, but disclosure consistency limited the sample.

9: "2018 Manufacturing Industry Outlook Report," KLR, July 2, 2018

Cash balances

The study found no correlation between cash balances and the presence of a CVC program, but our data shows that average cash balances for 27 CVC parents increased by a record amount in 2018, suggesting that cash balances can fuel CVC activity.¹⁰ The TCJA's corporate tax cuts have contributed to cash increases as have record profits and strong economic growth. Because of the R&D capitalization requirement, the TCJA may also create a chilling effect on CVC investment when the change is enacted in 2022.

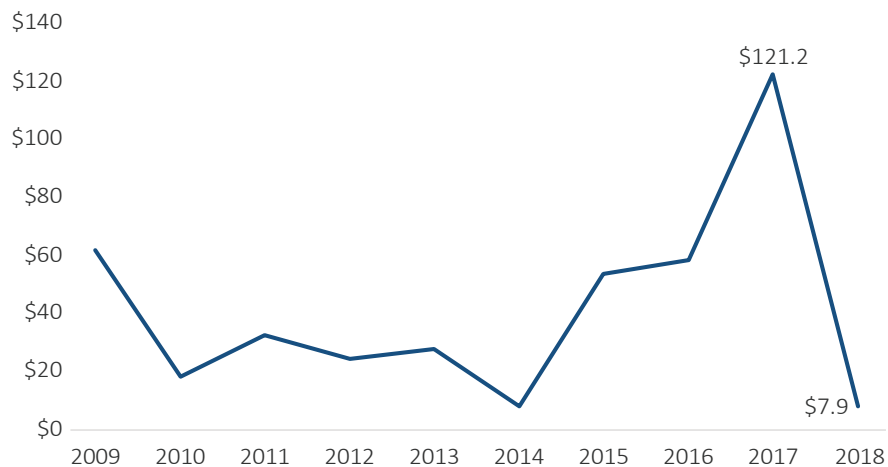
Average 1Q cash balance (\$B) for publicly traded US CVC parent companies (2009-2018, n=27)



M&A spending

Corporations may be looking to alternatives to acquisitions for innovation. Among CVC parents, M&A outflows sharply decreased in 2018. Large deals including Google's acquisition of Nest and Microsoft's acquisitions of Nokia mobile hardware and Skype have not been accretive to the parent company. CVC parents may be allocating a growing proportion of capital to startup investments relative to acquisitions of mature companies, although this trend is likely to have a cyclical component.

10: "How Transparent Are Firms About Their Corporate Venture Capital Investments?" S. J. W. Hamm, M. J. Jung & M. Park, December 7, 2018

Sum of net business purchases or sales (\$B) for publicly traded US CVC parent companies (2009-2018, n=27)

Source: PitchBook | Geography: US

Market value

Studies show the presence of a CVC program can be associated with higher share prices.¹¹ One study finds that this effect is amplified by the strategic focus of the CVC program.¹² From 2Q 2016 through 4Q 2018, the aforementioned cohort of 27 CVC parents achieved an equal-weighted cumulative return of 52.4%, 84.5% above the S&P 500.¹³ Companies that are perceived as more innovative as measured by R&D spending can outperform their less innovative peers, meaning that forming a CVC unit can be a part of a broader strategy to recategorize a company as an innovator and boost market valuations.¹⁴ We do not expect that the primary motivation for CVC unit formation will be share price improvement, however, for reasons listed previously. Companies with superior share price performance may still be able to invest more heavily in CVC and develop competitive advantages in emerging technologies.

Measuring performance of most active CVC investors***Balancing strategic and financial returns in CVC***

Given the role of CVC in the R&D function, CVC investors tend to have both strategic and financial motivations for making VC investments. One study found that 64% of firms cited strategic motives for starting their CVC programs while 36%

11: "When Does Corporate Venture Capital Investment Create Firm Value?," *Journal of Business Venturing*, Vol. 21, Issue 6, G. Dushnitsky & M. J. Lenox, November 2006. See also "The Corporate Capital Correlation—One Year Later," *Touchdown Ventures*, S. Troesch, July 30, 2018

12: Strategic focus is measured by the stated intention of the CVC program as coded by the authors.

13: Morningstar Direct Model Portfolio

14: "How the Most Innovative Industries Outperform," *FactSet*, V. Jha, April 1, 2019

cited financial motives.¹⁵ Taking a more nuanced view, GVC's aforementioned survey indicates that 66% of CVC investors have a mix of both strategic and financial orientations, with 26% being strategic only and 8% being financial only.¹⁶ These findings corroborate our view that CVC arms are primarily strategic but measure themselves financially, with some outliers that focus only on financial returns. Despite this inclination toward strategic motives, there may not be a trade-off between strategic investment and financial returns. In the same survey, 77% of respondents claim that less than 30% of their investments lose value, and 65% claim to earn 1.0x to 2.0x cash-on-cash returns, in line with most venture firms.

CVC arms have received criticism for their immature investment processes, which raises concerns over their increased participation in the VC ecosystem. Former Intel Capital manager director Igor Taber claims that fellow VCs commonly refer to CVCs as “dumb money” or “lenders of last resort.”¹⁷ Fred Wilson, co-founder of Union Square Ventures, has suggested that CVCs' incentives do not align with founders, likening receiving investment from a CVC to doing a deal with “the devil.”¹⁸ Internally, CVC arms' stated goals are often in conflict with their actual structure and performance measures.¹⁹ For example, a CVC arm may claim to pursue financial returns but not compensate its investment staff based on financial performance. If true, this suggests that CVC arms have different incentives than other VCs, which may encourage mission drift in their portfolio companies and inefficient valuations.

CVC investors can pursue a range of strategic goals that may affect their investment decisions, but survey data indicates no singular goal, such as an eventual merger or acquisition by the parent company. Instead, strategic motivations fall into a handful of categories that are often informed by the parent company's sector and strategic priorities. The accompanying table lists the highest-ranking results from those surveys, as well as KPIs on which CVC investors might be judged. Some goals, such as identifying new technologies for which customer segments do not currently exist, may be directly associated with financial returns. In general, though, these goals are balanced against financial returns and the best CVCs can achieve benefits in a range of categories.

15: “When Does Corporate Venture Capital Investment Create Firm Value?,” *Journal of Business Venturing*, Vol. 21, Issue 6, G. Dushnitsky & M. J. Lenox, November 2006

16: “The World of Corporate Venturing 2019,” *Global Corporate Venturing*, January 2019

17: “‘Dumb Money’ and Other Myths About Corporate Venture Capital,” *Venture Beat*, I. Taber, February 11, 2017

18: “The Devil We Know,” *Medium*, S. Lenet, November 3, 2016

19: “‘Alexa, I Need Some Venture Capital,’” *London Business School Review*, G. Dushnitsky, September 2017

CVC strategic goals and corresponding KPIs

CVC strategic goal	KPI
Access to new technology	Number of new products introduced to market New revenue generated
Trend spotting and market intelligence	Number of deals sources and evaluated Number of sector sectors prepared
New commercial relationships	Number of pilots implemented
M&A pipeline	Number of completed acquisitions of portfolio companies by the parent company
Business model innovation	New customer segments reached New geographic markets reached

Source: Touchdown Ventures, Global Corporate Venturing & PitchBook

The degree to which CVC investors achieve financial performance has not been studied in depth. CVC investors do not typically report to external LPs and do not disclose their performance in their parent companies' regulatory filings. In an attempt to benchmark CVC financial performance, GCV surveyed 95 CVC investors in 10 sectors, grouping them into IRR buckets; 61% of respondents reported IRRs over 11% and only 5% reported negative IRRs.²⁰ These results suggest average CVC returns are similar to independent VCs, which have a 5-year equal-weighted IRR of 12.6% as of 2Q 2018, according to [PitchBook Benchmarks](#). Because these CVCs' return data is self-reported, it cannot be verified, but it does indicate that CVC investors are return-oriented, and many likely do achieve competitive returns.

Assessing the leadership of Intel Capital, GV and Salesforce Ventures can demonstrate the extent to which CVC arm decision making is strategic, financial or both. In 2018, GV, Salesforce Ventures and Intel Capital led CVC activity as they comprised 1.3% of US-based CVC investors but 19.7% of CVC deals and 13.1% of deal value. They have consistently led CVC arms in deal count over the past eight years, creating a "Big 3" of US-based CVC investment. These CVC arms do not disclose their financial performance, but through our private market data, we can estimate how their portfolios might have performed and how their portfolio companies align with their parent companies' strategies. In each case, we view these Big 3 CVC arms as competitive with independent VCs on an exit- and loss-ratio basis yet highly varied in strategic priorities.

20: "The World of Corporate Venturing 2019," Global Corporate Venturing, January 2019

Intel Capital
Santa Clara | CA
Founded in 1991



1,766 investment rounds
441 active portfolio
companies
806 exits

Intel Capital

Founded in 1991, Intel Capital is one of the original CVC units and was regularly the leader in CVC deal count until GV overtook it in 2013. In 2018, according to our data, it invested in 60 deals that totaled \$1.3 billion in value.²¹ It was originally set up to drive demand for the parent company's semiconductor products by investing in startups that used semiconductors but has since broadened its scope to create new areas of innovation and achieve financial returns. Intel Capital has not increased its R&D budget as much as many software companies in recent years have, but its CVC arm still annually invests between \$300 million and \$500 million across all stages including 30 to 40 new companies annually, a similar investment range to independent late-stage VCs. It appears to have shifted to a greater financial focus than it was originally founded to have.

Historically, the Intel CEO has established R&D investment areas and describes Intel Capital as part of that effort. To that end, Intel Capital structures its goals around the priorities and objectives of the CEO, with former CEO Andy Grove's maxim "only the paranoid survive" serving as its core value.²² At the 2019 Intel Capital Global Summit, current CEO Bob Swan said Intel Capital should identify adjacencies and seeds for new markets as well as bring entrepreneurs into the culture of the company.²³ He also claims they should "thread the needle" between financial and strategic returns and that the current team is doing so. Senior Managing Director and COO Nick Washburn said the firm "won't invest in something unless we can add differentiated value to that company."²⁴ This suggests the strategic goals of the fund are a limiting factor on the investment universe available to the firm.

Most of Intel Capital's investment staff are internal hires that have an acute sense of the parent company's strategic priorities. A review of Intel Capital's team website demonstrates that 61.5% of senior investment staff come from internal hires, including those for whom Intel was their first employer and those who have spent over 10 years at Intel Capital or in other roles within Intel. The remainder is mostly composed of former investment bankers and prior VC investors. These staffing choices suggest that an understanding of Intel's priorities is of paramount importance in investment decision making and ensures that strategic priorities remain core to the investment process.

21: In its backgrounder, Intel Capital self-reports that it invested \$391 million in 89 companies in 2018. Some of these deals are not disclosed publicly and are not included in our dataset.

22: "Intel CEO Bob Swan Interview—Only the Strong Assets Survive," Venture Beat, D. Takahashi, February 27, 2019

23: 2019 Intel Capital Global Summit, B. Swan, April 3, 2019

24: Nick Washburn, personal communication, May 2, 2019

Access to new technology and commercial partnerships

Intel Capital consistently boosts its portfolio companies' sales through networking conferences, but engineering collaboration with the parent company appears to occur only on a case-by-case basis. Intel Capital's marketing materials relate mostly to the business development advantages that portfolio companies gain from working with Intel. Of the eight success stories listed on its website, only one suggests that the parent company directly benefited from commercial relationships with a portfolio company. This was a joint R&D program between Chinese mobile tech company Borqs and Intel that enhanced Intel's integrations with multiple operating systems and its next-generation chip products for mobile. The other success stories relate to the networking benefits of Intel's events including its Global Summit and Technology Days. According to Washburn, Intel Capital frequently forms partnerships with AI companies to "help optimize their algorithms to run on our architecture."²⁵ In one case, Intel gave Virtustream early access to back-end software that improved its products and gave it an advantage over the market. Primarily, though, the parent company does not appear to realize strategic benefits from collaboration with Intel Capital's portfolio companies.

Trend spotting and market intelligence

Intel Capital demonstrates its strategic focus through its sector diversification. Intel Capital has a stated interest in a wide range of sectors including AI, cloud, 5G, IoT & robotics, semiconductors & memory, next-generation compute, software & security and autonomous tech. All of these sectors are strategically related to Intel Capital, but the breadth allows for selection of companies that are likely to succeed financially without necessarily having a clear tie-back to the parent. According to Washburn, Intel Capital does not set sector diversification targets but invests based on investment theses developed in each focus area by a single investment committee.²⁶

While Intel Capital is considered a strategic-focused investor, it conducts deals in a range of sectors outside of its core business that have large market potential over the next 10 years. Our categorization of Intel Capital's portfolio companies based on PitchBook industry tagging and a limited sample of companies suggests that its core business of semiconductors contributed less than 10% of portfolio investments over the past 10 years,

25: Nick Washburn, personal communication, May 2, 2019

26: Ibid.

while AI and SaaS, including cloud, each contributed over 10%. While some companies might overlap several of these sectors, Intel Capital clearly invests in a high number of deals across a wide range of sectors. Beyond its stated sectors, Intel Capital also shows substantial portfolio positions in energy storage, edtech, gaming, ecommerce, healthcare and fintech. Trend spotting and market intelligence appear to be central goals for Intel Capital.

Estimated Intel Capital portfolio sector diversification

Stated target sector	PitchBook platform equivalent vertical/industry	% of investments (2009-2018)
Software	SaaS or software	56.2%
AI	AI & ML	10.8%
IoT	IoT	8.6%
Security	Cybersecurity	7.7%
Semiconductor & memory	Semiconductor & storage (IT)	6.7%
5G	Telecommunication service providers, wireless communication equipment, wireless service providers	2.9%
Robotics	Robotics & drones	2.8%
Next-generation compute	Computers, parts & peripherals	0.8%
Autonomous tech	Autonomous cars	0.8%

Source: Intel Capital & PitchBook

M&A pipeline

Intel Capital has been a core contributor to Intel's M&A pipeline, as 11 of its portfolio companies were acquired by its parent since 2008, contributing 15.5% of Intel's acquisitions over that time period. The most recent was the acquisition of NetSpeed Systems in September 2018. In recent years, these acquisitions have been in several emerging verticals including VR, wearables and athletic performance sensors. Three of those deals were in Europe and one was in South Korea, increasing Intel's foothold in global markets. Aligning CVC activity with the CEO's goals creates a funnel that makes parent company acquisitions a viable exit strategy for Intel Capital's portfolio companies.

Business model innovation

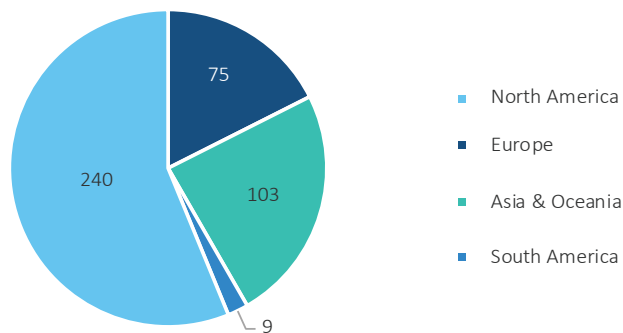
New customer segments

Intel Capital's investments in AI create new customer segments for its processor business. AI applications require specialized hardware such as the graphics processing unit (GPU) chips made by Intel. Intel Capital directly consults with its portfolio companies on how to grow AI and autonomous applications within their business, which can drive traffic for its GPUs.²⁷ Furthermore, as mentioned previously, Virtustream represented the first application for its Trusted Execution Technology, which serves as a competitive advantage for its processors and chipsets. In some cases, Intel Capital portfolio companies can be early adopters of new Intel technologies, though it is unclear how effective this strategy is compared to traditional business development efforts.

New geographies

Intel Capital achieves broad geographic diversification for its parent companies. According to our data, Intel Capital has invested in 41 different countries across all inhabited continents. North America comprises only 56% of its portfolio companies' headquarters, with China, India and Israel receiving over 20 investments each. We believe that Intel Capital will continue to broach new markets, including the dynamic technology market of Southeast Asia.

Intel Capital portfolio company headquarters (#) by region (2009-2019*)



Source: PitchBook
*As of April 15, 2019

27: "Joby Aviation - Inventing the Future of Air Taxis," Intel Capital, February 5, 2019

Financial performance

Intel Capital aims to achieve venture-style returns, and the investment staff is compensated based on cash-on-cash returns, according to Washburn.²⁸ This financial focus represents a change from the past; as former president Arvind Sodhani said in 2015, they did not rely on financial metrics when reporting to the parent company.²⁹ Despite this, Sodhani claims they have historically achieved double-digit returns.³⁰ The increase in financial focus may lead to improved performance going forward.

Intel Capital's portfolio data suggests it achieves similar outcomes to independent VCs. PitchBook data includes 69 Intel Capital deals from 2009-2013 with tracked post-money valuations. Of these, 18 (26.1%) have exited, with 13 (18.8%) exiting above the last post-money valuation at which Intel Capital invested. 41 (59.4%) don't have a recorded exit, 27 of which are still valued at Intel Capital's last post-money valuation. 10 (14.5%) have gone bankrupt or out of business. This data indicates that Intel Capital achieved cash-on-cash returns in line with independent VCs. The firm's financial performance may improve given its increasing financial focus.

Intel Capital can exercise a high degree of control in structuring transactions by leading a majority of its deals. The firm claims to have led 66% of its deals in 2018.³¹ Our data suggests this percentage is closer to 40%, although this proportion has remained consistent over time.³² Intel can thus exert price leadership over a large portion of their deals, incorporate strategic value into the price and outcompete independent VCs. In 2018, its median pre-money valuation of \$34.5 million for early-stage deals and \$125.0 million for late-stage deals were both at least 70% above the non-CVC median. According to Washburn, the firm is "no different" from the rest of the market in valuing companies based on "the stage it is at."³³ The higher valuations may thus be the product of investing in companies with higher traction. The high level of leadership creates superior trend spotting and M&A pipeline benefits for its parent as it has 110 current board positions, including observer roles. Intel Capital may be willing to invest in startups at higher valuations than other VCs, but it has proven the ability to grow its portfolio companies' revenues and achieve a competitive exit ratio, so these higher valuations may be justified.

28: Nick Washburn, personal communication, May 2, 2019

29: "Interview with Intel Capital's Arvind Sodhani," *Precision Hawk*, D. Denehan, March 19, 2015

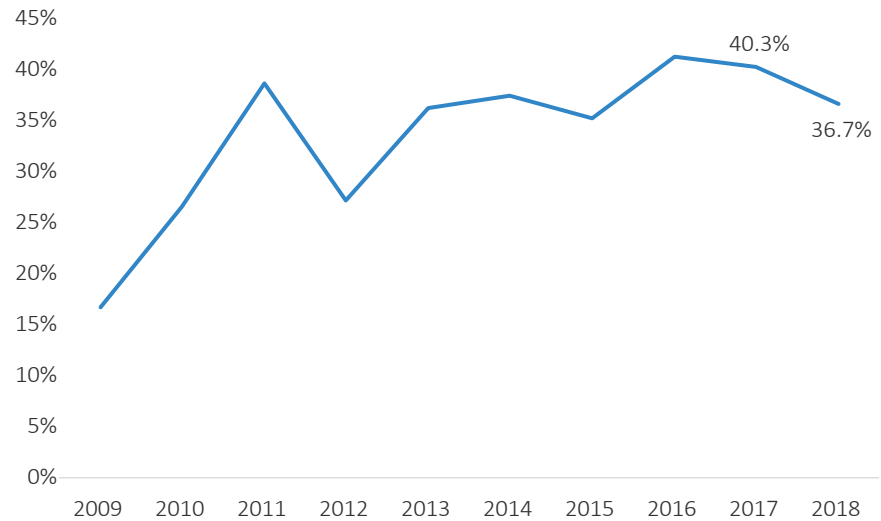
30: "After Almost 35 Years and 1,400 Investments, Intel's Investment Chief Says Farewell," *Venture Beat*, D. Takahashi, November 3, 2015

31: "Backgrounder," Intel Capital

32: PitchBook data does not include all of Intel's VC deals. Our database includes 440 portfolio companies while Intel Capital reports investment in 1,544 companies since 1991 in its backgrounder. Our coverage is likely to have improved in recent years.

33: Nick Washburn, personal communication, May 2, 2019

Deals led or solely invested in by Intel Capital as proportion of total VC deals (#)



Source: PitchBook | Geography: Global

GV

Mountain View | CA
Founded in 2009



743 investment rounds
289 active portfolio
companies
212 exits

GV

GV, the VC arm of Alphabet, has become the most active CVC arm over the past five years. In 2018, it invested in 82 deals that totaled \$5.3 billion of capital invested. It was set up by the firm's founder, Bill Maris, in 2009 as a separate entity not to be influenced by the parent company. Over this timespan, Alphabet has increased its R&D budget by nearly 10x, including a 28.8% YoY increase in 2018 to \$21.4 billion. Likely as a consequence, GV has evolved into a mega-fund with \$4.5 billion in AUM that can lead \$300 million rounds. Despite its size, GV's investment processes are secretive, and its performance is not disclosed in Alphabet filings. It is viewed as a leading Silicon Valley VC firm yet remains unique in its structure and access to its parent's data.

GV does not incorporate Google input into its investment decision-making process, though media reports suggest there are some benefits to the subsidiary relationship. The GV investment process relies on Google data to make decisions, according to Maris.³⁴ The firm reportedly passes that data through a deal flow management tool to decide whether prospective companies are investible or not.³⁵ There is no evidence to suggest this data is biased toward enhancing Google's strategic goals, though it may provide GV with a competitive advantage in the VC market if it is used as media reports suggest.

³⁴: "Google Ventures Stresses Science of Deal, Not Art of the Deal," New York Times, C. C. Miller, June 12, 2013

³⁵: "Scoop: Inside Google's Venture Capital 'Machine,'" Axios, D. Primack, July 19, 2018

Access to new technology and commercial partnerships

GV explicitly does not have any parent-level commercial partnerships goal though it often becomes intertwined with its parent company through portfolio companies. A condition of its founding was that it would ignore its parent company's strategic interests.³⁶ GV claims to make introductions to Google executives when beneficial but does not specify cases in which this occurs nor that it is judged on that basis. GV has a dedicated Partnerships Program that helps make connections between portfolio companies and all Global 2000 corporations, including but not limited to Google.³⁷ GV does hire investment staff from Google, and thus does carry expertise from the parent, but does not seem to have a working relationship with the parent company as Intel Capital does. As a result, there is little direct benefit to Alphabet from interaction with GV.

Trend spotting and market intelligence

GV is an outlier in claiming to be solely financially oriented as only 6% of CVC investors claim to be purely financially oriented.³⁸ Thus, we would expect to see GV's portfolio concentrate in areas distinct from Google's strategic focus. In practice, GV's industry diversification demonstrates close alignment with its parent company's strategic priorities, which belies its stated independence.

Less than half of GV's investments since 2009 have been in its stated targets, with our data suggesting that GV explicitly focuses on life sciences, healthcare and transportation. GV's website indicates that it focuses at a high level on enterprise, life sciences, consumer, and frontier technology, with emphasis on target sectors including healthcare, AI, life sciences, robotics, transportation, cybersecurity and agriculture. This limited list of target sectors does not include SaaS, which composes 29.1% of portfolio companies from 2009-2019, including enterprise software such as Slack and Toast. Fintech is also a vertical of importance contributing to 8.5% of deals. Within the stated preferences, AI and life sciences are the only verticals accounting for more than 10% of deal flow. These goals are entirely consistent with its parent company's strategy. Alphabet has made healthcare and AI priority areas of investment, meaning the sectors form core parts of both Alphabet's growth strategy and GV's portfolio.³⁹ This alignment seems like more than a coincidence given the reliance of GV on Google's data to make investment decisions. Transportation constitutes only three deals but includes Uber

36: "Google's GV on Why Investment Success Isn't All About the Money," Wired, S. Armstrong, May 3, 2018

37: "How GV Handles the Unsexy Part of Growing Startups," Venture Beat, K. Yeung, July 3, 2016

38: "The World of Corporate Venturing 2019," Global Corporate Venturing, January 2019

39: "Google Hires a Health Care CEO to Organize Its Fragmented Health Initiatives," The Verge, D. Lee, November 9, 2018

and Lime, which provide a growth market for the parent company's Google Maps product. Robotics, cybersecurity and agriculture represent non-core sectors, and in practice they constitute a minor portion of deal flow. GV thus appears to identify new trends and markets relative to its parent company and concentrate its investments in those areas.

Estimated GV portfolio sector diversification

Stated target sector	PitchBook platform equivalent vertical/industry	% of investments (2009-2018)
Healthcare	Healthcare devices & supplies, healthcare services, healthcare technology services	14.2%
AI	AI & ML	11.4%
Life Science	Life sciences	10.1%
Cybersecurity	Cybersecurity	6.8%
Agriculture	Agtech	2.7%
Robotics	Robotics & drones	2.2%
Transportation	Transportation	1.6%

Source: GV & PitchBook

M&A pipeline

GV has contributed a minor portion of its parent company's M&A pipeline, and activity has slowed over the past two years. Since 2012, Alphabet has acquired nine GV portfolio companies, or 6.7% of all acquisitions over this time period, highlighted by a \$3.2 billion acquisition of Nest. Since Nest, all five acquisitions have related to mobile technology. Despite GV's insight into Nest, the acquisition has had uneven results, which may have contributed to the two-year gap since Google's last acquisition of a GV portfolio company. Given the alignment of GV's portfolio with Alphabet's strategic imperatives, however, we expect further M&A going forward.

Business model innovation

New customer segments

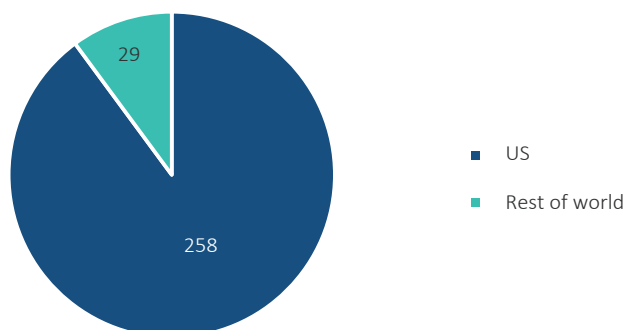
GV is able to develop new users of core Alphabet products such as Google Maps. GV's portfolio company Uber disclosed that it paid Google \$759 million from 2016-2018 for Google Map

Services, Marketing, Advertising, and Public Cloud.⁴⁰ Mobility company Lime also uses Google for similar purposes including an integration with Google Maps in over 80 cities globally.⁴¹ The strategic interest of Google in ridesharing was made clear by its growth equity arm CapitalG's late-stage investment in Lyft. GV's investments in Uber and Lime incubate new customers for its parent company's core products and thus serve a strategic purpose for Alphabet. Similar relationships can be created in AI for Google's TensorFlow and TPU products and in SaaS for Google Cloud.

New geographies

From a geographic perspective, GV is exclusively focused on North America and Europe, with no apparent motivation to open strategic markets abroad. Alphabet's growth equity fund CapitalG has prioritized entering the Indian and Indonesian markets due to the growth of internet users, but GV has made no forays into those markets. The UK has been the second-biggest market globally but has still received less deals than the state of Massachusetts. 64.7% of deals are from California alone, and predominantly from the Bay Area, showing that the fund acknowledges the primacy of the Silicon Valley ecosystem. Based on this level of diversification, GV does not add strategic value to Alphabet's geographic expansion.

GV portfolio company headquarters (#) by region (2009-2019*)



Source: PitchBook | Geography: Global
*As of April 9, 2019

40: "Form S-1 Registration Statement," SEC, Uber Technologies, Inc., April 11, 2019

41: "Now in More Cities: Lime Bikes and Scooters on Google Maps," The Keyword, V. Dutta, March 3, 2019

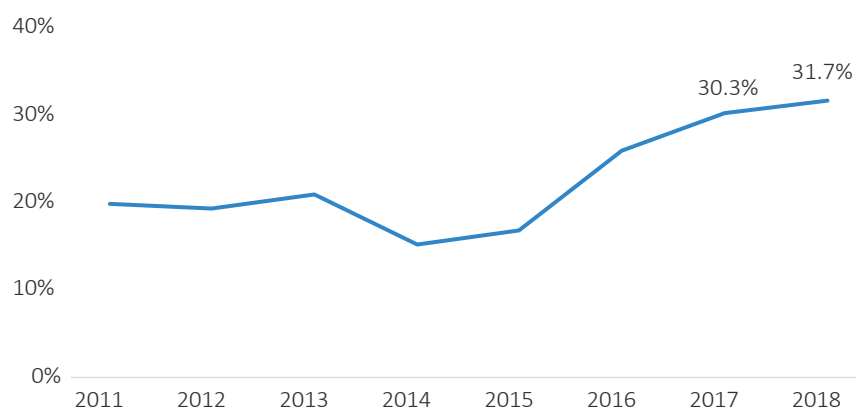
Financial performance

GV does not disclose its measurement of financial performance but has claimed that few of its portfolio companies have failed.⁴² It also claims that its parent company judges its success based on historical returns. Thus, its increased activity should logically be the result of strong performance and increased commitments from its single LP, Alphabet.

GV's portfolio data suggests that it achieves similar outcomes to independent VCs. PitchBook data includes 101 GV deals from 2009-2013 with tracked post-money valuations. Of these, 26 (25.7%) have exited, with 22 (21.8%) exiting above the last post-money valuation at which GV invested. 62 (61.4%) do not have a recorded exit, of which 32 (31.7%) have increased from GV's last post-money valuation. 13 (12.9%) have gone bankrupt or out of business. This data indicates that GV has achieved portfolio company outcomes in line with independent VCs.

GV is gaining more control over its financial performance by leading more deals. In 2018, it more than doubled the number of deals it led in 2011. This includes a \$335.1 million round for Lime in December 2018 followed by a \$309.7 million deal in February 2019. Both set records for deal sizes led by GV and set a new bar for its ability to provide private IPOs to its portfolio companies. This level of leadership may accompany a willingness to accept higher valuations than the rest of the market with early- and late-stage median pre-money valuations more than doubling the non-CVC median at \$70 million and \$200 million, respectively.

Deals led or solely invested in by GV as proportion of total VC deals (#)



Source: PitchBook | Geography: Global

42: "Google Ventures Stresses Science of Deal, Not Art of the Deal," New York Times, C. C. Miller, June 12, 2013

Salesforce Ventures

San Francisco | CA
Founded in 2008

412 investment rounds
214 active portfolio companies
90 exits

Salesforce Ventures

Salesforce Ventures has become one of the most active VC investors on an annual basis. It was founded in 2008 and became one of the 10 most active CVC investors by 2011, when it backed 21 deals. Its parent company, Salesforce, nearly doubled its R&D budget from 2015 to 2018, with some of these funds likely earmarked for VC investments. In 2018, Salesforce Ventures did 71 deals totaling \$1.3 billion in capital invested. With an AUM of only \$600 million, it does not have the scale of Intel Capital or GV but is purpose-built to carry out a strategic mission for its parent company. Salesforce Ventures provides its parent and Salesforce customers access to innovative technology and measures itself against strategic goals set by Salesforce GMs as well as customer engagement on new product lines, according to managing partner Matt Garratt.⁴³ We find that Salesforce Ventures delivers strong strategic benefits to its parent company including commercial partnerships, an M&A pipeline, business model innovation, as well as financial performance, although its trendspotting and market intelligence lag its peers due to a low diversification in emerging technologies before 2018.

Access to new technology and commercial partnerships

Salesforce Ventures has an explicit strategic mandate and collaborates with its parent company on access to new technology, commercial relationships, its M&A pipeline, and new markets. Salesforce Ventures invests only in companies that work with the Salesforce platform, building direct mutual benefits for the parent and portfolio companies. Portfolio companies should either, according to Garratt, “integrate with Salesforce,” “build on the Salesforce platform,” or “implement Salesforce solutions.”⁴⁴ Salesforce Ventures measures its success rate in adding portfolio companies to its App Exchange and their performance once they are listed, according to Garratt.⁴⁵ By our count at time of writing, 35.1% of Salesforce Ventures investments since the start of 2018 have apps or consulting services listed on the App Exchange. Salesforce has also integrated technology from a Salesforce Ventures portfolio company. Ecommerce company Narvar integrated its track and return products with Salesforce B2C ecommerce and service cloud products, according to Garratt.⁴⁶

43: Matt Garratt, personal communication, May 3, 2019

44: Ibid.

45: Ibid.

46: Ibid.

Because of these limiting criteria in deal sourcing, Salesforce Ventures does not explicitly pursue financial returns. According to executive vice president of corporate development John Somorjai, “financial returns are not the priority for the fund.”⁴⁷ Investment decisions are made collaboratively with parent company executives as well as CVC investment staff based on what products will most benefit Salesforce’s customers. Each portfolio company is assigned an executive sponsor from the business unit. This process maintains alignment with Salesforce goals. Given Salesforce’s broad customer base and high revenue growth rate, this preference selects for companies that are likely to succeed commercially. It does create an artificial constraint on the VC opportunity set available to Salesforce Ventures and potentially increases the price the fund is willing to pay for deals that could assist its parent company.

Trend spotting and market intelligence

Salesforce Ventures closely follows its stated target sectors, suggesting that it strictly abides by its strategic mandate. 63.7% of its investments have been in SaaS companies, including Big Data, with AI being a secondary investment area. It also makes comparatively fewer but still significant investments in impact, AR & VR, and open source & developer tools. A majority of SaaS investments have been in business and productivity software, including marketing tech and other enterprise software. Salesforce Ventures succeeds in identifying startups that can expand Salesforce’s ecosystem and spot trends in enterprise software though it has comparatively less success in identifying new technologies and creating business model innovation. 2018 saw a shift in focus from marketing tech to AI & ML investments, suggesting that the share of emerging technologies in the portfolio may increase going forward.

Estimated Salesforce Ventures portfolio sector diversification

Stated target sector	PitchBook platform equivalent vertical/ industry	% of investments (2009-2018)
Industry SaaS	SaaS	63.7%
AI & ML	AI	12.6%
Open source & developer tools	Software development applications	3.3%
AR & VR	AR	1.4%

Source: Salesforce Ventures & PitchBook

47: “How Salesforce Ventures Helped Fortify Salesforce Empire,” Business Insider, B. Peterson, August 26, 2018

M&A pipeline

Salesforce Ventures is relatively successful in creating an M&A pipeline for its parent company, even though M&A pipeline development is not an explicit goal of the firm, according to Garratt.⁴⁸ Salesforce has acquired seven of its CVC arm's portfolio companies since 2011, including its recent acquisition of MapAnything. Even though Salesforce is highly acquisitive, this constitutes 15.6% of acquisitions made since 2011. This suggests that Salesforce Ventures is successful in identifying synergies between its portfolio companies and its parent company.

*Business model innovation*New customer segments

Salesforce Ventures portfolio companies can expand the market for Salesforce's products. Recent investee Vlocity creates industry-specific applications of Salesforce products for communications and media, insurance and financial services, health, energy and utilities, and government and nonprofits. Those are growth segments for Salesforce, which have not historically developed vertical-specific applications of its Salesforce Cloud.⁴⁹ These complementary products can be integrated with the App Exchange, allowing Salesforce to capture value from the expansion of its ecosystem.

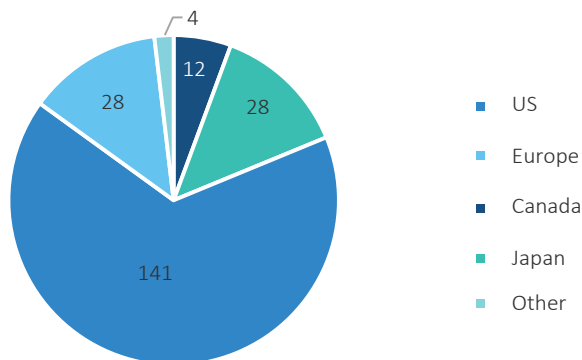
New geographies

Salesforce Ventures' matches its parent company's geographic diversification. Only two-thirds of its portfolio companies are based in the US, with 13% based in Europe and 13% in Japan. In the fiscal year ended January 31, 2019, Salesforce achieved 71% of its revenue from the Americas, 19% from Europe and 10% from Asia. The consolidated focus on Japan and Europe in Salesforce Ventures' portfolio companies shows that it is not breaking new ground. Recently, it announced a \$50 million fund focused on Australian startups which should serve to further diversify Salesforce's growth. Salesforce Ventures may focus on more emerging geographic regions going forward.

48: Matt Garratt, personal communication, May 3, 2019

49: "A Rare Interview With Salesforce Cofounder Parker Harris," Business Insider, E. Kim, February 15, 2015

Salesforce Ventures portfolio company headquarters (#) by region (2009-2019*)



Source: PitchBook | Geography: Global
*As of April 9, 2019

Financial performance

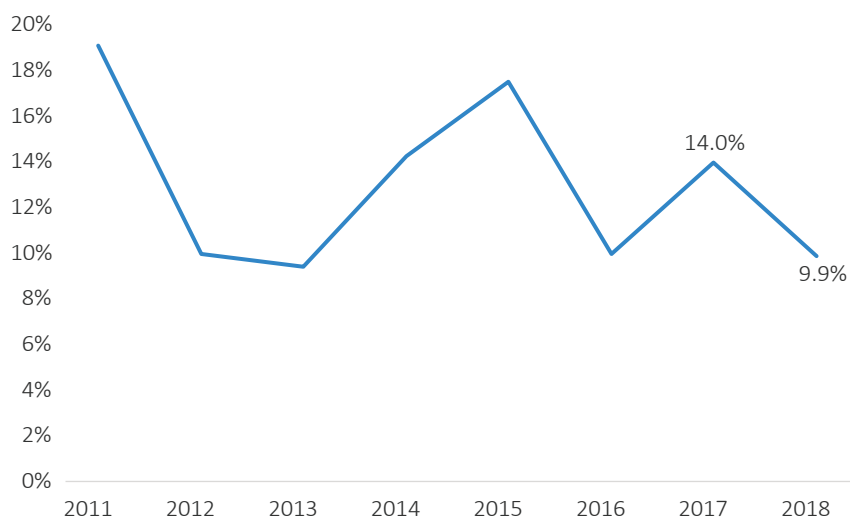
Salesforce Ventures aims not to lead rounds, which makes it unlikely to influence pricing dramatically. Because its percentage of deals that it leads has remained under 20% since its inception, it rarely is responsible for deal pricing and thus must accept what other VCs negotiate. Garratt claims that financial returns have been excellent on a cash-on-cash basis while maintaining a low loss ratio.⁵⁰ While these returns may be competitive, strategic achievements are the goal of the portfolio. Given the strategic focus of the fund, it is unclear what role financial discipline plays in the Salesforce Ventures investment process, but its portfolio data can lend insight into its performance.

Salesforce Ventures' portfolio data suggests it achieves superior outcomes to independent VCs. PitchBook data includes 27 of the arm's deals from 2009-2013 with tracked post-money valuations. Of these, 12 (44.4%) have exited, with 10 (37.0%) exiting above the last post-money valuation at which Salesforce Ventures invested. 13 (48.1%) do not have a recorded exit, of which 8 (29.6%) are still valued at the firm's last post-money valuation. 2 (7.4%) have gone bankrupt or out of business. While this is a small sample of the firm's investments, this data indicates that Salesforce Ventures has achieved portfolio company outcomes that outperform independent VCs. Salesforce Ventures' strong financial performance suggests it is able to add incremental value to its portfolio companies through App Exchange distribution and upselling to Salesforce customers.

50: Matt Garratt, personal communication, May 3, 2019

Salesforce Ventures focuses on Series A and Series B rounds and thus makes relatively smaller investments in each deal. Due to the volume of deals in which it invests, however, it ranks among the leaders in capital committed and can push deal prices higher across the early stages, having knock-on effects in later rounds for VCs looking to invest in Salesforce's enterprise software ecosystem. In 2018, its median early-stage and late-stage pre-money valuations were around 2x those of median non-CVC deals at \$40.0 million and \$142.5 million, respectively, suggesting that it may be willing to pay higher prices for deals that match its criteria. These higher medians may be the result of investing in companies with higher traction on the App Exchange or with Salesforce customers.

Deals led or solely invested in by Salesforce Ventures as proportion of total VC deals (#)



Source: PitchBook | Geography: Global

Summary of strategic and financial performance of Intel Capital, GV and Salesforce Ventures

The leading CVC investors are able to marry strategic and financial benefits. All three have shown ability to invest in emerging technologies, identify acquisition targets for their parent companies and avoid the high loss ratios typical of early-stage investors. Intel Capital is able to extend its parent company's horizons through new technologies and geographies, although the overlap with the core business is not always strong. GV does not have direct relationships with its parent company and therefore does not drive as much M&A activity as its peers yet indirectly lends its parent company insight on emerging business lines in AI, mobility and

healthcare. Salesforce Ventures enhances the utility of its parent company's App Exchange and contributes a high percentage of M&A activity for its parent company. These results appear to make each successful strategically, although financial performance does not lag far behind.

The financial performance of each suggests that CVC investors are not systematically overpaying for startups or hurting their chances of exit through a right of first refusal. Leading VC investors aim to lose 100% of value on only 33% of investments, which our data suggests these CVC investors have achieved.⁵¹ They do in part benefit from the ability to sell portfolio companies to their parent companies and boost their revenues through business unit collaboration, but there is no evidence of this happening frequently enough to artificially boost their returns. We have yet to see how CVC investors will perform given their recent increase in deal activity, but we can expect them to continue what have largely been successful programs. This level of success may put pressure on independent VCs to match their valuations and deal count.

Breakdown of strategic and financial performance for Intel Capital, GV and Salesforce Ventures

Benefit to parent company	Intel Capital	GV	Salesforce Ventures
Noncore technologies receiving investment ⁵²	AI, IoT and cybersecurity	Life sciences, healthcare, AI and cybersecurity	AI
Enables trend spotting and market intelligence in core business	6.7% of investments in core business segment semiconductors	N/A	Focus on companies within Salesforce ecosystem
Creates commercial relationships for parent company	Some evidence of joint R&D and portfolio company utilization of Intel technology	N/A	Grows App Exchange platform of apps and services
% of parent company acquisitions from portfolio companies	15.5% (since 2008)	6.7% (since 2012)	15.6% (since 2011)
Business model innovation	Expands geographies and invests in use cases for Intel products	Gives parent company insight into strategic priorities of healthcare, mobility and AI	New customer segments and product features through App Exchange
Exit ratio for 2009-2013 investments ⁵³	18.8%	21.8%	37.0%
Loss ratio for 2009-2013 investments ⁵⁴	14.5%	12.9%	7.4%

Source: PitchBook

51: "Venture Outcomes Are Even More Skewed Than You Think," Seth Levine, August 12, 2014

52: >5% of portfolio companies

53: % of portfolio companies achieving exits at valuations above the investor's last post-money valuation

54: % of portfolio companies to go bankrupt or out of business

Role of US CVC in the VC market

The varying motivations and high activity levels of CVC investors are likely to contribute idiosyncratic dynamics to the VC marketplace. While most VC investors aim to achieve the lowest deal price and exit at the highest valuation, CVC investors may be willing to invest in deals at higher valuations and keep companies private for longer as they collaborate with their parent companies and develop new technologies. Our data demonstrates a positive relationship between CVC investment, VC valuations and portfolio company performance, suggesting that CVC arms are able to achieve a golden mean between strategic and financial goals.

Performance of companies with CVC backing

To understand the relative performance of CVC-backed companies, we analyzed startups that were seeded in 2008-2012 and found that companies that received CVC backing outperformed those that did not.⁵⁵ 31.9% of companies backed by a CVC investor achieved an acquisition, buyout or IPO within their first eight fundraising rounds. Only 9.4% declared bankruptcy over this time period, and startups raised an average of 2.8 funding rounds from that point forward.

Among companies with no CVC investors, only 21.3% in our sample achieved an exit, 23.0% went out of business and only 1.1 subsequent rounds were raised on average. This may be circular given many companies that receive seed investments are not able to attract further investment, so those that secure additional funding will naturally outperform those that do not. To account for selection bias, we can look at companies that raised a second round, a cohort that has the highest attrition rate from the previous round for non-CVC backed companies before the sixth round. This cohort better controls for CVCs' natural preference for companies likely to persist over time, as 65.9% of non-CVC-backed companies that raise a second round go onto raise a third round or achieve an exit.⁵⁶

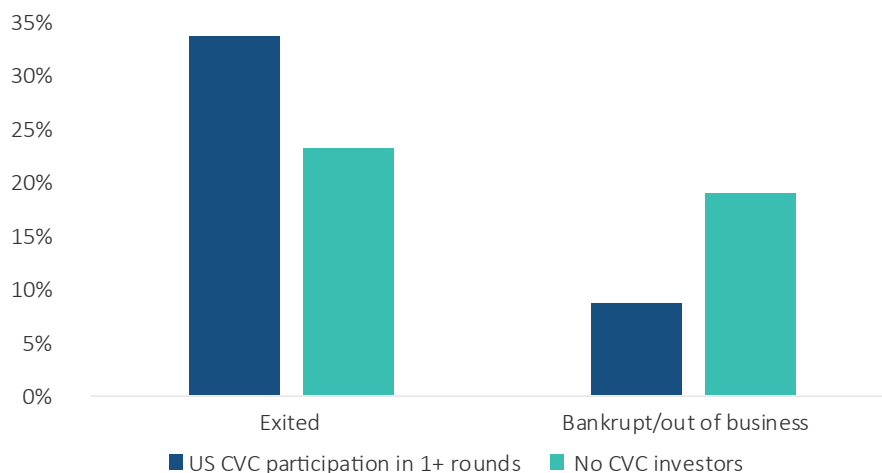
Among companies that were able to raise a second round—typically a Series A—it was still meaningful to receive CVC investment. These companies raised 1.1 more funding rounds

55: This time period includes the global financial crisis from 2008-2009. Our previous analyst note "Venture Capital in the Great Recession" found that bankruptcy rates were slightly higher for companies raising a first round during this time period. While this may increase the bankruptcy rate for our sample, we found that results for both cohorts in individual post-recession years were in line with the sample of 2008-2012.

56: 89.6% of CVC-backed companies that raised a second round went on to raise a third round, though this can in part be explained by the skill of CVC investors, as all of the Big 3 CVC investors commonly enter at the Series A stage.

on average over their lifetimes, exited at a 38.5% higher rate (31.6%) and went bankrupt or out of business at a 47.5% lower rate (7.1%). The potential for parent companies to acquire their CVC arm's portfolio companies cannot solely explain the difference in exit rate, as only 2.0% of companies in this cohort were acquired by their parents. These effects are maintained for companies that raise a third round, although for companies raising a fourth round, the exit rate is nearly the same.

Outcomes for companies seeded in 2008-2012 that raised two VC rounds



Source: PitchBook | Geography: US
*As of April 15, 2019

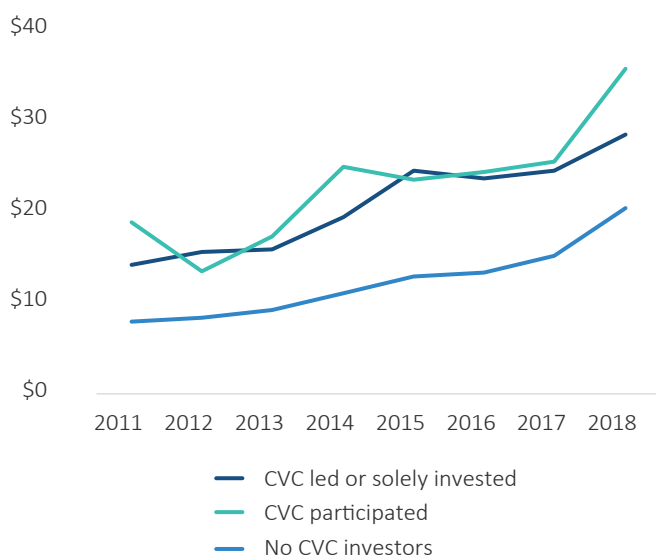
Our data suggests CVC backing can be an important fundraising milestone for VC-backed companies. It may be wise for startups to proactively identify synergies with corporate business models and engage CVCs early in their journeys. VC investors can also look at CVC involvement as a net positive for companies, especially if there is potential for acquisition by the parent company. CVC-backed companies are half as likely to fail with greater potential for exits, suggesting their influence is beneficial for the VC ecosystem.

CVC valuation metrics

CVC investors are consistently investing in startups with higher valuations at all stages, contributing to skyrocketing deal prices. For both early and late stages, deals in which CVCs participate have higher valuations than rounds with only independent VCs. CVC-led deal sizes are larger and consequently tend to be priced at higher valuations than non-CVC investors. The

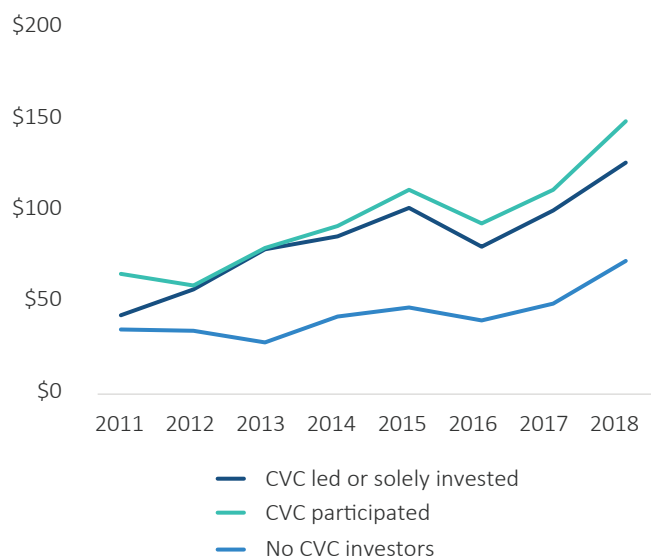
median early VC pre-money valuation in 2018 was \$28.0 million for CVC-led deals compared to \$20.0 million for non-CVC deals. For late-stage deals, the median is \$125.0 million for CVC-led deals and \$72.2 million for non-CVC deals. This data may be skewed by the later-stage focus of CVC investors, but it suggests that CVC participation pushes valuations upward and will continue to do so. CVC investors may have a strategic premium they are willing to pay, much like the premium paid by corporate development teams for acquisitions.

Median early-stage VC pre-money valuation (\$M) by US investor mix



Source: PitchBook | Geography: Global

Median late-stage VC pre-money valuation (\$M) by US investor mix



Source: PitchBook | Geography: Global

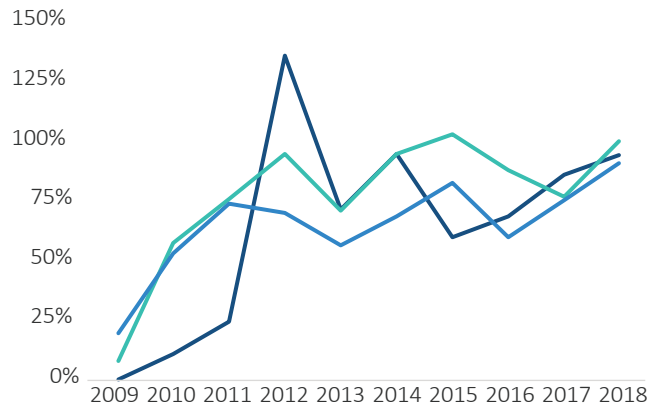
While CVC-backed valuations are higher than non-CVC valuations, CVCs do not pay higher valuations for rounds when they are leading than when they follow. For early-stage investments between 2015 and 2017, CVCs had nearly the same median valuation whether they led or followed the rounds; this was before large syndicate deals led to a spike in valuations in 2018. CVC-led valuations at the late stage have precisely tracked with valuations of deals with CVC participation since 2012. This alignment suggests there is not a leadership premium for CVC deals.

Rounds with CVC participation consistently have higher valuation step-ups than rounds without. Since the ascendance of a new wave of CVC investors including GV and Salesforce Ventures in 2011, CVC-backed rounds have nearly always increased at a higher rate than or equal rate to non-CVC rounds.

Rounds led by CVC investors have had higher step-ups than rounds without for the early stage since 2016 and for the late stage since 2013, but step-ups have converged in recent years as CVC investors have become more sophisticated. We believe CVC investors are becoming more disciplined in the early stages even if the prices they pay trend higher than independent investors.

Syndicates that include CVCs have shown a willingness to pay increasingly high step-ups at the late stage. This effect became particularly stark in 2018 as the median late-stage step-up rose to 71.6% for rounds where CVCs followed compared to 40.4% for non-CVC rounds. This increase may in part be explained by a strategic premium paid by CVC investors to participate in rounds alongside independent investors. CVC investors may be willing to pay closer to a 100% step-up at the late stage than the 40% median for non-CVC investors.

Median early-stage VC valuation step-up (post to pre) by US investor mix



— CVC led or solely invested
— CVC participated
— No CVC investors

Source: PitchBook | Geography: Global

Median late-stage VC valuation step-up (post to pre) by US investor mix



— CVC led or solely invested
— CVC participated
— No CVC investors

Source: PitchBook | Geography: Global

Conclusion

CVC investors are paying higher valuations for startups than independent VCs but are able to materially improve their outcomes. The bold claims made by CVC arms regarding their ability to enhance their portfolio companies' prospects are supported by our data, which indicates that CVC arms can increase exit ratios and decrease loss ratios while increasing

valuations. Firms such as Salesforce Ventures and Intel Capital are able to drive incremental revenue for their portfolio companies through their business development platforms, suggesting their value is not superficial. Thus, CVC portfolio companies may actually grow into the higher valuations they are receiving. The trend of higher CVC valuations necessitates close monitoring to measure the performance of these investments going forward.

CVC investors are likely to meaningfully influence deal activity and pricing across strategic segments, such as transportation technology, AI and life sciences. Emerging market VC activity will be bolstered by US parent companies using their CVC arms for geographic expansion. LPs should realize, however, that the ability of independent VCs to generate outsized returns may be constrained by the higher prices of CVC syndicate deals. A less price-sensitive environment will test the historical performance of CVC arms and may create valuable opportunities in segments where CVC investors are not participating at the same levels.

We think that CVC activity will continue to rapidly increase until macroeconomic factors and regulation present headwinds. A recession could freeze R&D budgets which would likely trickle down to CVC arms. However, our data suggests that this would only slow growth in R&D spending, not reverse it. The TCJA may have more serious consequences if companies are able to establish innovation platforms before 2022 and then reduce their R&D budgets. The interpretation of this tax code change bears watching and may constrain capital for VC investment in the medium-term. In the near term, though, the historical success of CVC programs and their high levels of funding should encourage continued growth in deal value and CVC clout in the VC market.