Venture Debt Overview

Venture debt usage is growing across industry

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Contents

Methodology

Definitions of venture debt vary widely. Some include convertible notes and others use methodology that may simply look at term loans or lease financing provided to VC-backed companies.

PitchBook defines venture debt as all non-dilutive or low-dilution debt products structured and provided for VC-backed companies at the time of the loan. This includes convertible notes, term loans, lease financings and revenue-based investments. Debt financings made to unbacked companies will not be included in our dataset, though we acknowledge that forms such as revenue-based financings may target unbacked companies in some situations. Our methodology encompasses many different credit offerings and will be flexible regarding new debt products that focus on startups and companies under the VC umbrella.

Key takeaways

- This note sets a precedent and definition for how PitchBook will track and analyze venture debt.
- The avenues for startups to borrow capital are growing, not only through traditional forms such as banks or private debt funds, but through new structures such as revenue-based financings and startup business models targeting early-stage lending.

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Introduction

Founders with ambitious aspirations need capital to scale, and the basis of VC investing has traditionally been equity financings. These investments offer startups relatively patient capital that is untied to immediate repayments, often with access to investor networks, operations support and advice. In return, VC investors enjoy limitless upside potential from their equity stake, actively seeking out high-growth companies that can eventually become dominant in an industry or create a completely new vertical. The trade-off for startups receiving VC financing is that an investor syndicate can take 20% or more of the total equity in the company each round, which dilutes equity for founders, employees and existing investors. That implicit cost can be expensive. High discount rates are needed to incentivize investors to take on uncertainty, but those discounted stakes could end up being worth hundreds of millions in the end.

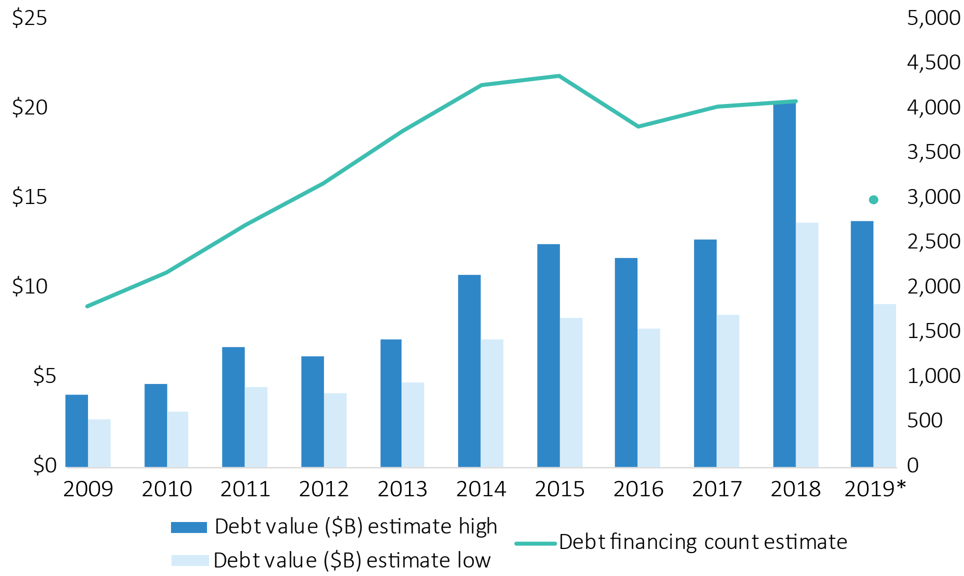
Debt usage is not new to VC-backed companies. Equipment leasing and working capital financing have always favored debt usage over raising more equity. Today's venture debt goes beyond traditional use cases. Rising valuations are attached to loftier benchmarks that companies need to reach before the next round and competition for growth has moved the need for huge amounts of cash up the venture timeline. The evolution of the VC industry has enabled alternative forms of funding with space for growth. As a result, venture debt has seen increased adoption from startups at all stages of development in recent years.

Venture debt market

Some estimates of the total size of the venture debt market run around 10% to 15% of the total VC capital invested during a given year. That would put US venture lending at around $8 billion to $12 billion per year since 2014. That value jumps even higher when we include last year, which saw VC deal value explode to an astronomical $138.0 billion, though that is something of an outlier when compared with even the heightened totals of VC from the past decade. Other estimates have noted that debt components may be present in up to 40% of all VC deals—an average of more than 4,000 deals per year over the past six years.[1]

1: "The Leveraging of Silicon Valley," Jesse Davis, Adair Morse and Xinxin Wang, University of California, Berkeley, November 2018

Estimated VC debt activity



Source: PitchBook | **Geography**: US
*As of September 30, 2019
Note: Debt estimates low (10% of VC deal value) and high (15% of VC deal value) derive from a combination of PitchBook data and non-PitchBook market estimates.[2]

Loans targeted at VC-backed companies take on different terms than traditional Small Business Administration (SBA) loans due in part to how these debt products work in tandem with equity financing rounds to achieve growth. Lenders view venture lending differently not only because of the type of company receiving the loan, but also because of how risk is mitigated through methods unique to venture, such as using future equity rounds and a company's current VC investors as a backstop for losses. For the seemingly exceptional risk taken by lenders, it is estimated that the venture lending industry realizes just a 2.0% loss of capital.[3] As a comparison, roughly 17.4% of SBA loans awarded from 2006 to 2015 went into default, according to a study of SBA loan data.[4]

Debt can be used by startups to mitigate dilution, extend runway and balance working capital, but it is often an afterthought for much of the VC industry. Debt is overlooked because it is frequently used in conjunction with an equity financing. The headlines simply tout "a VC round of $XXX million" no matter the balance of debt and equity used in the deal. Debt also includes an element of signaling risk and could make future investors reluctant to participate, as they may wonder why the company needed extra cash to hit their benchmark. This most likely accounts for the lower occurrence of debt financing announcements. However, negative stigmas toward debt may be shifting as debt becomes a more common method of financing with products developed specifically to supplement growth for VC-backed companies.

2: "New Evidence on Venture Loans," Juanita Gonzalez-Uribe and William Mann, November 21, 2017
3: Ibid.
4: "1 in 6 Small Business Administration Loans Fail, Study Finds," Kevin Voigt and Caren Weiner Campbell, NewWallet, October 3, 2017

For most lenders, startups constitute too risky of an investment. Most startups operate with high cash burn rates, mounting losses and uneven revenues that are difficult to forecast—if there are any at all. Many young companies don't possess much collateral to secure the loans, either, outside of their intellectual property. Similarly, and for many of the same reasons, debt is a risky form of capital for startups. Missing payments can snowball and create financial burden that could spell the end of the road for less robust businesses. Adding a monthly payment can put further strain on companies acquiring the cash needed to attain the high growth required to succeed, stunting a company's trajectory and causing the same problems that a loan sought to alleviate.

A handful of VC firms have been actively lending to startups for decades, but their growth has accelerated in recent years. Silicon Valley Bank, one of the major lenders to startups, currently has around $10 billion in commercial loans outstanding to software, hardware and life sciences companies,[5] compared to less than $4 billion in total commercial loans outstanding in 2009.[6] Hercules Capital, one of the largest business development companies focused on venture lending, holds a total of $2.1 billion in debt investments,[7] when approximately 10 years ago the firm's debt investments totaled just around $540 million.[8]

New forms of debt capital are coming to market as VC-backed startups look to squeeze more growth out of current equity funding reserves. While billion-dollar debt facilities for companies like The We Company (the parent company of WeWork) and debt tranches of mega-rounds drive recent loan value growth, this is not unlike how outsized equity deals have propelled VC financing figures to recent extremes. Stripe Capital is offering fixed fees, revenue-based payments and eligibility based solely on a company's history with Stripe, and BREX provides corporate credit cards to startups with fluctuating limits based on cash raised and spending patterns. Both lenders offer startups a financing avenue for growth at a cheaper cost than raising equity.

Venture debt types

Venture debt providers have become increasingly flexible in the structure and terms of loans, with diverse constructions used for different industries and investment stages, and warrants helping mitigate the risk involved while allowing lenders to participate in the upside of a borrower's growth. This includes but is not limited to: convertible debt notes, term loans, monthly recurring revenue (MRR) lines of credit and/or revenue-based investment products

5: Silicon Valley Bank 10-Q Filing, August 9, 2019
6: Silicon Valley Bank 10-K Filing, December 2009
7: Hercules Capital 10-Q Filing, August 1, 2019
8: Hercules Capital 10-K Filing, December 2008

acting unlike equity-based financings due to repayment terms or claims on future equity. These financings can be issued by angel investors, banks, tech banks or closed-end fund type lenders and, because the VC industry is continually evolving, we believe that debt structures will continue to develop accordingly. The following debt structures are commonly used. Some, such as revenue-based investing, have grown to develop novel niches within the overall ecosystem.

Convertible notes

Convertible notes act as a loan with little to no periodic interest payments, but with the principal amount (and often the interest accrued) converting to equity at the time of a future equity financing. The conversion is generally made at a discount between 10% and 25% to the price of the following equity round, the size of which may hinge on the length of time between the note issuance and the conversion event. These notes generally contain a maturity period, which can trigger a loan repayment (including interest) if no equity financing has been raised by the maturity date. Valuation caps can be put in place for the conversion so that holders of these notes can be sure they receive a large enough stake to make their high-risk investment worth it.[9] In a democratization move for the industry, several convertible note types have been developed and made useful for all investors.

- **Simple Agreement for Future Equity (SAFE):** SAFE is a type of convertible security developed by Y Combinator in 2013, and is now used industry wide. This agreement was designed to introduce a less complicated version of investment documents into the earliest stages of VC, allowing parties to subvert complex terms negotiations. There are several different SAFEs to use, including those that involve valuation caps, discounts and pro rata terms for the investor and the conversion of the note at a later date.

- **Keep it Simple Security (KISS):** Introduced by 500 Startups, KISS agreements are designed to save time. There is a debt type and an equity type of KISS agreement. The debt version includes an interest rate and a maturity date, while the equity type contains neither. Both types convert to equity under certain terms.

9: A conversion cap may work as to convert the note into whichever leads to a higher stake for the lender: the amount of the loan at a discount of 15% of the share price of the round or a specified valuation cap.

In recent news, Toptal, which raised a convertible note from Andreessen Horowitz and other investors, hasn't raised equity since receiving the note, creating a situation where no equity conversion can take place despite the company making around $200 million in revenue.

The main advantage of convertible notes is that they allow for quick and easy fundraising for the earliest-stage startups. Many VC-backed companies likely wouldn't be able to raise traditional debt instruments because of lack of revenue and/or a complete business model. Convertible notes are also designed to give investors protection for making a risky investment by providing a discounted stake on the next round and an option to recover the investment through a debt structure should the company not raise a further equity round. These notes may not carry voting or control rights that may be associated with the next equity rounds or liquidation preferences for shares after the note has converted.

Convertible debt with associated debt terms

Size	Maturity period	Interest rate	Collateralization	Fees	Covenants	Lender equity coverage	Typical VC stage	Typical lender types
Flexible depending on company stage	18-24 months Convertible securities without a debt piece may not have defined maturity period, simply conversion event triggers	Low, can be around 1%-2%	None	None	None	Conversion discount on next round picture	Angel & seed stage	Angels and VC funds

Source: PitchBook | **Geography**: US

Venture term loans

Venture term loans are used by VC-backed companies for several reasons, including runway extension, acquisition financing, project financing, growth capital or equipment financing. They are often raised alongside an equity round or used as a bridge to reaching the next milestone and raising further equity. While terms of venture debt contracts are fluid depending on the agreement, typical construction includes a maturity period of three to five years. The shorter maturity period of venture loans is due to both the common growth trajectories of VC-backed companies (a company with exponentially growing revenues doesn't need a 10-year paydown term), as well as the standard equity raise path in which most companies are raising new equity financings every 18 months or so. These factors lessen the amount of necessary debt for a company's operations.

Lenders also require a premium when issuing venture debt due to the inherent riskiness of lending to such young companies. Venture debt typically carries an interest rate based on the prime rate plus a percentage between 0.5% and 9.0% depending on the lender type, as well as possible fees for origination and contract completion. Total warrant coverage typically constitutes less than 20% of the overall loan amount.

Term loans encompass a wide range of use cases, but non-dilution is featured in all of them. New equity is generally the most expensive form of raising capital for most startups and may take 20% or more of the company. If the company completes a successful exit down the line, that 20% stake will be worth many multiples more than what the company received in return. Dilution for founders and early investors can severely hurt returns in the long run, which has become especially true in today's market where companies tend to stay private longer and raise frequent larger rounds. A severe down round due to missed growth targets set out at the previous round may end up wiping out much of a founder's equity altogether. Taking on term loan debt may dilute the company equity less than 1% in total, making debt financing attractive to founders that want to keep control of their company.

Term loan with associated debt terms

Size	Maturity period	Interest rate	Collateralization	Fees	Covenants	Lender equity coverage	Typical VC stage	Typical lender types
30%-50% of previous equity round for early-stage startups	3-5 years	From banks: Prime rate + 0-4% From funds: Prime rate + 5%-9%	Assets and/or intellectual property	1%-2% origination 0-3% exit	Generally none	Warrant coverage, 5%-20% of loan size	Early stage to late stage	Banks and venture debt funds

Source: PitchBook | **Geography**: US

Revenue-based investment products

Revenue-based investment products are a form of debt gaining traction in part due to the proliferation of recurring revenue business models. The model of these loans is just as the name suggests—repayments are tied to monthly revenues of the borrowers, rather than being made on typical amortized payment schedule. The loan terms may also include a cap on the total amount paid by the borrower, generally between 1.3x and 2.5x the principal amount of the loan.[10] This leads to two basic scenarios: the cap is hit before the maturity date, effectively terminating the contract, or the loan matures below the cap and triggers a balloon payment to make up the difference. The revenue-based structure reduces payment risk from a company and the ultimate price cap on the loan allows the lender to model out returns for their fund. Because revenues are the main determinant of creditworthiness, this structure lowers risk for the lender by making financial metrics available to inform a credit decision.

The seed stage has gone through one of the more drastic changes throughout the VC lifecycle and opened a place for revenue-based debt investments to take hold. As stated in a recent note, cloud infrastructure and the commoditization of tech services has decreased the cost to start and scale a business, helping some companies to achieve revenues prior to raising outside funding and creating new opportunities for young companies to raise capital beyond venture. VC comes with the inherent need to grow and reach milestones to raise more capital and fuel more growth. The structure of debt allows young companies that have realized revenues to determine their path to growth, or simply kick off VC fundraising further down the road.

Revenue-based investments made before an initial VC round have grown while angel and seed financings have slowed across the US. The direct correlation of these may be difficult to determine, but it is likely that many companies that receive revenue-based debt financings are also those that would have, until recently, raised seed equity financing.[11] The bifurcation of early-stage VC will continue to open a window for these revenue-based investment products to take hold. Though these loans favor companies with strong and predictable revenue streams, they also allow startups with choppy revenue models to access non-dilutive financing.

10: A $1 million loan with a 2x cap will pay out $2 million to the lender by the end of the contract, no matter if it is repaid at or before the maturity date.
11: Revenue-based investments made to companies that are not yet VC-backed will not show up in PitchBook venture debt datasets.

Revenue-based financing with associated debt terms

Size	Maturity period	Interest rate	Collateralization	Fees	Covenants	Lender equity coverage	Typical VC stage	Typical lender types
Based on monthly revenue requirements or a fixed amount	3-5 years	1.3x-2.5x repayment cap	Assets and/or intellectual property	None	None	None	Pre-VC	Specialized debt funds

Source: PitchBook | **Geography**: US

Venture debt lenders

The unique requirements of venture debt obligate investors to have higher risk tolerance than similar commercial lenders. Banks, traditional VC investors, large business development corporations and angel and seed-stage investors all participate in venture lending, but each serves a different role within the industry.

Banks' ability to lend up and down the lifecycle provides the capacity to reduce risk in their loan portfolio by bringing on the borrowers as banking clients and shifting the growing company's future banking revenues directly into their balance sheets. This not only provides additional revenue streams for the future, it allows the bank to monitor its investment by tracking deposit accounts of the borrowing company and determine if any financial covenants have been breached. It also allows the banks to lend at a lower interest rate than venture debt funds, a benefit passed on to borrowers. Specialty banks such as Silicon Valley Bank and Bridge Bank work with borrowers throughout the VC lifecycle, while large banks such as Wells Fargo and Bank of America typically enter the venture lending scene later in a company's maturity.

Private debt funds have found their own ways to succeed in venture debt. According to a recent note, 10-year horizon IRRs for venture debt funds was 8.2% as of 2018, and over $1 billion was raised by venture debt-focused vehicles globally YTD, already the second highest total in the past decade. That sum may seem paltry compared to overall VC fundraising, but venture debt funds are just a fraction of the total lending market. Banking regulations have helped open a window for these types of lenders, as increased requirements for company liquidity and limits on equity exposure for banks has allowed private funds to access opportunities that banks monopolized in the past. Western Technology Investment (WTI), which has closed over $1 billion for venture debt funds since 2010, has become one of the most active venture debt investors with a portfolio that includes Jet, Allbirds and Stitch Fix. As a business development company, WTI can also invest in equity securities, though certain funds only allow up to 10% of the total capital in the vehicles investments to be used in equity financings.[12] These equity deals, along with warrants acquired in loan deals, serve to bolster the fund's risk-return profile, as well as participate in the upside potential for their investment past any warrant coverage they receive.

Angel and seed investors and traditional VC fund investors use debt services to close deals quickly. Often these investors participate in convertible note offerings, and, especially on late-stage deals, could be current investors in the borrowing company. Rather than raising debt from a lender with interest repayments, a convertible note keeps interest aligned within the company and extends the runway to the next equity round so each party can benefit from a higher valuation. In addition, a convertible note adds extra protections for the investors in the event the company is still not able to reach the required benchmarks for a future equity round.

Conclusion

Debt has grown within VC for several reasons. The overall size of the venture industry has exploded over the past decade. VC fundraising has surpassed $30 billion each of the past five years, with more than $20 billion raised so far in 2019. VCs have completed an average of more than 10,200 deals each year since 2014—more than double the average of deals completed from 2006 to 2010—and venture debt's use cases alongside equity financings has allowed it to rise with the larger VC industry. Cheaper debt becomes an intriguing opportunity as an increase in round sizes puts continued strain on founder and early investors' stakes, which has aided in the growing use of debt within the broader venture ecosystem.

Equity is ensconced as the most common venture financing option, but debt can further disrupt the traditional venture model. Especially at the earliest stages of VC, debt products have become a viable option of financing to further push out the first rounds of VC. We have seen the median age of companies at the time of their first financing grow from a decade-low of 1.3 years in 2012 to a decade high of 2.0 through 3Q 2019. Cloud services and SaaS businesses are largely seen as the major contributors of this trend, but accessibility to debt financing solutions for young companies is a likely contributor.

12: "Form 10. General Form for Registration of Securities," Securities and Exchange Commission, n.d.

The further evolution of VC will continue to allow alternative investment products to play roles in the financing of startups and early-stage companies. We believe that debt provided to VC-backed companies will continue to increase as a mechanism for growth up and down the venture lifecycle. However, comparing future debt growth to a time in which the overall industry is at its largest is difficult. A downshift in activity by VC firms may also cause lenders to lessen their exposure to a slowing venture market. Although the bull market trudges on, a recession of some variety is expectedly around the corner.

The amount of venture loans declined dramatically after the dotcom bust. Only in recent years—after the global financial crisis—has venture lending found more stable footing. Revenue-based investments will likely be pressured by contracting revenues from borrowing companies should a recession materialize, and they will face increased repayment risk. Direct lenders will also likely tighten lending standards and recede from more risky investments. Strong revenues and other key performance metrics will become an even more material piece of determining credit worthiness for startups, but the implied agreement between lenders and VCs will keep losses low relative to traditional commercial loans.

No matter the overall state of the market, the non-dilutive properties of debt will make it a sought-after financing strategy of growth for entrepreneurs despite the risks associated.

Appendix

Select debt types with associated debt terms

	SBA loan	Convertible debt	Term loan	Revenue-based financing
Size	Up to $5M	Flexible depending on company stage	30%-50% of previous equity round for early-stage startups	Based on monthly revenue requirements or a fixed amount
Maturity period	7-10 years	18-24 months Convertible securities without a debt piece may not have defined maturity period, simply conversion event triggers	3-5 years	3-5 years
Interest rate	Prime + 2.25% for loans greater than $50,000 and maturity of less than 7 years Prime + 2.75% for loans greater than $50,000 and maturity of 7 years or more	Low, can be around 1%-2%	From banks: Prime rate + 0-4% From funds: Prime rate + 5%-9%	1.3x-2.5x repayment cap
Collateralization	All company assets + liens on personal assets	None	Assets and/or intellectual property	Assets and/or intellectual property
Fees	3.5% of the guaranteed portion for loans above $700,000	None	1%-2% origination 0-3% exit	None
Covenants	None	None	Generally none	None
Lender equity coverage	None	Conversion discount on next round picture	Warrant coverage, 5%-20% of loan size	None
Typical VC stage	Must fit within “small business” definitions determined by the US Small Business Administration	Angel & seed stage	Early stage to late stage	Pre-VC
Typical lender types	Small business investment companies and local banks	Angels and VC funds	Banks and venture debt funds	Specialized debt funds

Source: PitchBook, The US Small Business Administration | **Geography**: US