ARR Growth Metric: Its use in Venture Capital and the Circular Startup Ecosystem

Janek Ratnatunga

Abstract

The rapid growth metrics reported by VC-backed AI startups, particularly in Silicon Valley, have raised questions about the reliability of their *Annual Recurring Revenue (ARR)* figures. Exemplified by startups like *Midjourney* and *ElevenLabs,* which reported significant ARR growth within short periods, these figures prompt scrutiny regarding their accuracy and impact on investor interest and company valuations.

ARR, a crucial metric for subscription-based businesses, is calculated by annualizing monthly recurring revenue. It reflects a company's revenue predictability and has traditionally been a key indicator for valuing SaaS companies. However, in the context of AI startups, the suitability of ARR as a metric is questioned due to the unpredictable nature of AI-driven business models, which often rely on token usage and speculative revenue claims.

The article explores how creative accounting practices have emerged in the reporting of ARR, driven by the intense pressure on AI startups to demonstrate rapid revenue growth. This has led to the inclusion of non-recurring revenue sources and speculative contracts in ARR calculations, raising concerns about the integrity of these figures and their influence on valuations.

The ARR growth metric is heavily used in the Circular Startup Ecosystem, characterised by the fluid exchange of talent, technology, and capital. This ecosystem fosters innovation, risk mitigation, and market expansion but also contributes to the insular nature of startup valuations and metric manipulation.

The article highlights a broader industry shift, with venture capitalists re-evaluating the emphasis on ARR and exploring new metrics to assess AI businesses. As geopolitical tensions and macroeconomic uncertainties shape venture capital priorities, the focus is shifting towards profitability, retention, and daily active usage. This evolution underscores the need for smarter investment strategies and the potential risks for those who continue to rely on inflated ARR figures in an equity-driven boom.

Introduction

Beginning in 2024, a stream of “incredible” growth metrics from VC-backed startups in Silicon Valley began to show up, especially in *Artificial Intelligence (AI)* startups. Their reported **Annual Recurring Revenues (ARRs)** showed almost unbelievable growth.

But how reliable is this most amazing of growth metrics?

Take, for example, the case of **Midjourney,** an AI service that creates images from text descriptions, or “prompts”. It is a generative AI tool that operates on the chat platform *Discord* and allows users to type a command and receive AI-generated art in return. In less than three years, its *Annual Recurring Revenue (ARR)* grew from zero to $200 million.

Another example is **ElevenLabs**, a voice AI startup that develops AI software that generates realistic and expressive speech from text, with tools for voice cloning, a voice library, and creating custom voices from text descriptions. In 20 months, it saw its ARR soar from zero to near $100 million.

There are so many other examples. **Lovable**, an AI-powered platform that allows users to create websites and full-stack web applications by describing their ideas in natural language prompts, went from zero to $17 million in ARR in just three months. **Decagon**, an enterprise AI platform that helps support teams automate customer service using large language models (LLMs), achieved "seven figures" in ARR within its first six months. It claims that its AI agents can autonomously handle tasks like answering product questions, processing refunds, and cancelling subscriptions — helping businesses reduce support costs and scale faster. **Cursor AI**, is an AI-powered code editor that assists developers by using large language models to help write, debug, and refactor code using natural language prompts. The company's ARR went from zero to $100 million in a year.

These numbers are eye-popping. But are they reliable? And how does the ARR impact investor interest and company valuations?

This article explores what appears to be the new frontier of creative accounting.

What is Annual Recurring Revenue (ARR)?

ARR is a key financial metric used primarily by *subscription-based businesses* to measure the total value of recurring revenue components in a business's revenue stream, normalised on an annual basis. It is a crucial indicator for ***Software as a Service (SaaS)*** companies and other subscription-based businesses, as it provides insight into the company's revenue health and growth potential (Nansubuga and Kowalkowski, 2024).

How is the ARR calculated?

The key variable in the calculation is ***Recurring Revenue*****.** This could be *via (1)* monthly or yearly *subscriptions* that customers pay for continued access to a service and via (2) *contracts***,** i.e., long-term agreements that ensure a steady revenue stream over a specified period.

The main difference is that ***ARR (Annual Recurring Revenue)*** is a forward-looking metric that represents the current, predictable revenue from active subscriptions, while ***CARR (Contracted Annual Recurring Revenue)*** is an even more forward-looking metric that includes committed, but not yet billed, future revenue from signed contracts, including anticipated expansions. In essence, ARR shows the present revenue snapshot, while CARR forecasts future potential and growth based on existing contracts.

There are some ***Exclusions*** in both calculations. *Both ARR and CARR* do not include one-time fees like *setup fees, consulting fees, or any other non-recurring charges.* Also excluded are *variable charges,* such as *usage-based charges,* which fluctuate and are not predictable.

For AI-powered, *usage-based models,* ***Token usage*** is the key component used for calculating the ARR, because it directly translates to the revenue generated by usage-based pricing models.

The ARR is calculated by taking the Monthly Recurring Revenue (MRR) and multiplying it by 12. This provides a straightforward view of the expected revenue over a year.

ARR = MRR x 12

Alternatively, if the business bills annually, ARR can be calculated by summing up all the annual subscription fees.

It is as simple as that, as shown in the following example:

Example: *A SaaS company has a mixed billing system. It has 1000 customers, each paying $50 in subscriptions on a monthly plan, and 2000 customers on an annual plan, paying $400 per year.*

MRR from monthly subscriptions = 1000 customers x $50 = $50,000
Therefore, ARR from monthly subscriptions = $50,000 x 12 = $600,000
ARR from annual subscriptions = 2000 customers x $400 = $800,000
Therefore, Total ARR = $600,000 + $800,000 = $1,400,000

Many companies offer *multiple subscription tiers*, such as Basic, Pro, and Enterprise, and the ARR from each tier must be summed to calculate the total company ARR.

Token Usage

To incorporate token usage into ARR, companies must determine the revenue from token usage by first determining the cost per token. Then it must *estimate customer usage* by analysing user behaviour to predict how many tokens a customer will use over a given period, e.g., monthly. Then it can calculate *monthly usage revenue* by multiplying the number of tokens by the cost per token to calculate the revenue for that month. Finally, to obtain the *annualised usage revenue,* multiply the monthly usage revenue by 12 to obtain the annual usage revenue.

How Does the ARR impact Company Valuation?

Annual Recurring Revenue (ARR) significantly impacts company valuation by indicating a company's revenue predictability, scalability, and customer retention, which are all key factors for investors. Higher ARR suggests a more stable and predictable revenue stream, leading to a higher valuation, especially for SaaS and subscription-based businesses, which are often valued based on a multiple of their ARR. A strong ARR multiple reflects a healthy business with sustainable competitive advantages (SaaS Capital, 2025).

Investors, especially VC investors, often use the ARR multiple to determine how much they are willing to pay for each dollar of a company's recurring revenue.

Strong ARR companies often command significantly higher valuations, sometimes surpassing those relying on perpetual licences by six times. For example, ***Adobe's*** stock price nearly tripled after it shifted to a subscription model, demonstrating the market's preference for this stability (Nurkka, et. al., 2017).

In its purest form, the ARR should provide a clear, predictable revenue stream, reducing uncertainty compared to one-time sales. This financial stability is highly attractive to investors and allows for more accurate forecasting of future earnings. Consistent ARR growth indicates that a company can scale its operations efficiently and grow its customer base. High ARR, particularly when looking at metrics like *retention* and *churn*, is considered a strong indicator of customer satisfaction and loyalty, which is crucial for long-term success.

Numbers vs Narratives in Company Valuations

It must be remembered that in company valuations, a number has almost never been "*just a number".* This is more so in Tech companies.

Behind every revenue figure provided, especially when talking about privately held tech startups, there is a little bit of science—and a lot of art. This is the typical *'numbers' vs. 'narratives'* conflict

one finds in company valuations. A classic example of a *public company* that gives conflicting valuations is ***Tesla***.

The market value of ***Tesla*** in January 2020 (pre-COVID-19) was US$ 80 Billion. Twelve-months later, the market value in December 2020 was US$ 554 Billion—a six-fold surge in shares. Tesla was then worth more than the combined value of *VW, Hyundai, GM and Ford*.

The 'numbers' showed that Tesla's production in 2020 was 500,000 cars, which was 1/20 the production of VW. Tesla would need to produce 10 million cars just to catch up with VW that year. Although the giant new giga-factories under construction in Berlin, Shanghai and Austin, Texas in that period could potentially increase production to approx. 2.1 million cars by 2025 (a growth rate of 35% per year), it would not be enough to catch-up with even VW.

However, Tesla could obtain the predicted valuation if its profit margin is at least 20 times higher than VW. The price to cost ratio comparisons between Tesla and VW cars do not indicate that this is possible. Therefore, the numbers alone don't tell the full story.

The 'narratives' explaining the surge was the impending inclusion of the company in the *S&P index of leading US shares* on Dec 31, 2021. This happened, but in May 2022 Tesla was removed as the stock was considered to be too highly speculative. Today (November 2025) Tesla's is valued at US$468 Billion, still more than the combined value of the other four car companies. Today the closest car company to Tesla is new entrant ***BYD's*** which has a market valuation is approximately $137.26 billion. Therefore, the narrative also does not tell the full story.

Valuations of Start-ups.

Unlike public companies like Tesla, *start-up companies* (especially Tech start-ups) are not monitored the way that public companies are Whilst public companies have to report quarterly. to a country's *Securities and Investment Commission*, VC investors do not necessarily look for audit reports of the start-up companies they invest in. Whilst there is a financial due diligence process that may involve an informal audit before a VC invests, it is more likely a game played with trust.

And in the ***SaaS*** era (which technically started in the 1990s and gained steam through the 2000s), trust in ARR came comparatively easily. In the earlier period, there was an agreed-upon set of ***conventions***. For example, *annual per-seat pricing was standard,* where one user pays for one year, and then accounts expanded by adding multiple users. There was a clear separation between ARR and CARR (signed contract value before activation) and recognised revenue (actual revenue booked). Typically, 80% to 90% of CARR would convert to ARR, and you could predictably chart a company's expansion, relying on low churn rates and steady customers.

There were, in short, standardised methods of calculating ARR.

How ARR Creativity Became the Favoured Metric in AI Valuations

As outlined earlier, until about the early 2020s, everyone agreed with these terms in the SaaS world. All this has now changed. *Anna Barber*, a partner at VC firm ***M13*** now says:

"The numbers then were a lot harder to manipulate, because people had a general understanding of what things had to mean. Today, we don't know what things have to mean in the same way. So, there is a lot of confusion and, maybe, obfuscation." (Garfinkle, 2025).

Although absolute revenue clarity was not necessarily always there in the SaaS era, as the cloud computing wave started to take shape, ARR started to get a little erratic. People began to question

the suitability of subscription revenue as a proxy for ARR. However, it was the emergence of AI that created a whole new layer of uncertainty.

Nnamdi Okike, co-founder and managing partner of ***645 Ventures***, says:

"Investors wanted to keep evaluating companies as SaaS-predictable, so they tried to shoehorn those elements into 'recurring' revenue. It doesn't truly work, but it worked well enough for investors to keep doing it. Now AI has shown up with a whole new set of elements, and it would be better for investors to finally create new metrics to represent this new reality." (Garfinkle, 2025).

Creative Revenue Recognition Across Industries

Revenue itself, on a fundamental level, features both *core truths* and *discretionary realities*. As such, whilst there was a significant amount of variation across industries, there were also widely accepted optimal accounting principles pertaining to revenue recognition. Until proven otherwise, adopting an optimistic perspective on revenue is not illegal, and many even consider it a long-standing tradition. But that can still cause problems (or crises) down the line.

Traditionally, companies book revenue when the service is provided and/or when the goods are delivered. Depending on how the contracts are written, depending on how clear those stated objectives or benchmarks are noted, and/or just the industry in general, there is some room for discretion and perhaps misreporting, intentional or not. Also, there are often incentives tied to revenue for management and members of the sales teams.

In general terms, however, there *are* normal red flags around revenue that accounting experts watch for. A primary concern among external auditors is to watch out for revenue that is being creatively inflated. There are always many things auditors are looking for, but a company potentially trying to manipulate the revenue numbers to achieve a goal that really contradicts objective reporting is always a red flag.

Pressure in the Tech Industry for High ARRs

Today, there is significant pressure to be the company that went from zero to $100 million in ARR in the shortest number of days.

As discussed earlier, the ARR metric came to be a favourite of VCs and startups through the software-as-a-service (SaaS) wave starting in the 2000s, when it was widely accepted as a trusted proxy for a stable startup with a reliable source of revenue and a reasonably shored-up future.

However, as billions flowed across the venture capital ecosystem into AI startups, some mere months old, the vaunted, trusted ARR metric has morphed into something much harder to recognise. There is now a massive amount of pressure on AI-focused founders to report significant ARR growth at earlier stages than ever before: If they are not generating revenue immediately, it raises the question of what their current focus is. Founders—to keep up with the Joneses—are counting all sorts of things as "long-term revenue" that are, to be blunt, nothing your regular accounting professor would recognise as legitimate.

Exacerbating the pressure is the fact that more VCs than ever are trying to funnel capital into possible winners at a time when there is no certainty about what evaluating success or traction even looks like. Throughout the '90s, VC as an industry grew to more than 700 firms managing about $143 billion. Today, there are more than 3,000 VC firms, according to the *National Venture Capital Association*, managing more than $360 billion, with some projections suggesting venture will be a more than $700 billion industry by 2029 (Ceppos, 2025).

Creative accounting has a long history of emerging during economic booms, a practice that dates back to the Gilded Age when inflating assets, understating liabilities, and bribery were common. More recently, the dotcom boom and the lead-up to the Great Recession revealed practices such as 'channel stuffing', 'roundtripping revenue', and the infamous 'special purpose entities' in creatively reporting revenue. Now, industry watchers are beginning to raise concerns about ARR.

The problem is that so much of this is essentially 'speculative' revenue. This situation is different from **Google** signing a data centre contract with a provider. That is *real future revenue*. In most cases, a startup temporarily uses another company's name, product, or service while claiming to have a contractual relationship. This certainly is not *recurring* revenue.

Creative Accounting in ARR Calculations

Today, ARR is in what could be described as an awkward phase, where there are some AI startups that are trying to use the metric with sincerity, but their business dynamics are just too different from traditional SaaS businesses. Many are still in an experimentation phase, trying all sorts of products on *short-term pilots*, creating high *churn risk*.

Furthermore, AI services often have unpredictable *token usage*, which refers to the amount of text that AI processes to understand language. (More tokens equal more usage, and more complicated queries require more token usage, by extension.) So, a few "inference whales" like *OpenAI* and *Anthropic* have massive pricing power and can skew costs, making AI startups' financial structures fundamentally different from traditional SaaS businesses.

The result? Founders are counting pilots, *one-time deals*, or *inactivated contracts* as recurring revenue. For example, some startups are claiming "booked ARR"—numbers based on what customers *might pay* in the future rather than what they *actually are paying now*—even though contracts frequently have provisions that let customers opt out at any time for any reason.

Companies are entering into contracts that include *kill provisions*, which allow them to claim booked ARR while providing their customers with a way out. Surely it should concern VC investors if a startup company books a million-dollar-a-year contract, includes it in their ARR calculation, only to have it cancelled for no reason within three months?

A case in point is **Cluely**, a startup born of controversy after Founder *Roy Lee* posted in a viral X thread saying he was suspended by *Columbia University* because he and a co-founder developed a tool to cheat on job interviews for software engineers. He claimed that he turned around and created a product and startup out of the tech, originally using the marketing tagline that it helps you *"cheat on everything."* However, the startup's controversial history has not stopped businesses from showing interest in Cluely's product. Now, due to big-league VCs backing it, Cluely has toned down its marketing to *"Everything You Need. Before You Ask."* Cluely now claims to have doubled ARR to $7 million over a *week* by signing a public company that doubled its annual contract with them to $2.5 million. However, Lee declined to name the company (Temkin, 2025).

Strategic Approaches to ARR Growth

Rather than resort to creative ARR manipulation, company management can make strategic decisions to grow ARR exponentially. ARR provides critical data for long-term business planning, budgeting, and investment decisions. ARR is an essential metric for subscription-based businesses, providing insights into financial health, growth potential, and strategic planning. By focusing on ARR, companies can make informed decisions to enhance their revenue streams, attract investment, and ensure long-term success.

Marketing Campaigns with targeted promotions can be launched. Companies can give *promotional discounts* for upgrading from Basic to Pro or Enterprise plans to encourage existing customers to move to higher tiers. Companies can also implement a *referral program* where existing customers receive discounts or additional features for referring new customers, which can drive new subscriptions.

Product Enhancements also help in the growth of the ARR. Companies can add *new features* or services to the Pro and Enterprise tiers, making them more attractive and encouraging upgrades. *Customer feedback* can also be used to improve service offerings, increasing customer satisfaction and reducing churn.

Customer Retention Efforts like providing exceptional customer support to increase customer satisfaction and retention also reduce churn. Regular webinars, tutorials, and newsletters can keep customers engaged and informed about new features or updates.

Pricing Strategy Reviews should be undertaken to analyse market trends and competitors' pricing to ensure competitive pricing. To accelerate ARR growth, companies should consider introducing flexible pricing models to attract a broader customer base.

Feedback: companies should conduct regular reviews by continuously monitoring ARR growth and adjust strategies based on performance metrics and market feedback. They need to track key performance indicators (KPIs) such as customer acquisition costs, lifetime value, and churn rate to ensure strategies are effective.

The Circular Startup Ecosystem

The Circular Startup Ecosystem is a concept that describes a dynamic and interconnected network of startups, where businesses often buy, sell, or merge with one another in a way that forms a continuous loop, or circle. This ecosystem is characterized by the fluid movement of technology, talent, and capital among various startup entities, often leading to acquisitions and partnerships that help startups scale or pivot their business models.

There are many well-known examples of Circular Startup Ecosystems:

Google, initially a startup, became a giant by acquiring other startups such as *YouTube, Android,* and *Waze.* These acquisitions allowed Google to expand its ecosystem and maintain its competitive edge.

Facebook acquired Instagram in 2012. Instagram was a startup that had quickly gained popularity, and its acquisition allowed Facebook to integrate new features and tap into a younger user base.

Salesforce, a cloud-based software company, acquired *Slack Technologies*, a startup that developed a leading communication platform. This acquisition enabled Salesforce to enhance its offerings in the collaborative workspace sector.

Shopify has acquired several startups like *Oberlo* and *Tictail* to provide wider E-Commerce Solutions. Acquiring Oberlo, a dropshipping app, enabled Shopify to streamline the process for entrepreneurs to find products and sell them online without having to handle inventory. This acquisition integrated seamlessly with Shopify's platform, enhancing its value proposition for e-commerce businesses. Similarly, Shopify acquired Tictail, a social shopping startup, to enhance its social commerce capabilities, enabling Shopify users to leverage social media channels more effectively to boost their sales.

The key components that drive Circular Startup Ecosystems are:

Talent Mobility: Employees often move between startups, bringing their expertise and fostering a culture of innovation and agility. This talent mobility enhances the ecosystem's adaptability and resourcefulness.

Technology Exchange: Startups frequently exchange technologies through acquisitions or partnerships. This exchange can accelerate product development and market entry.

Investment and Funding: Venture capitalists and angel investors play crucial roles in providing the necessary funding that keeps these startups viable and encourages their participation in the ecosystem.

Acquisitions and Mergers: Startups often acquire other startups to gain new technologies, enter new markets, or eliminate competition. This is a core element of the circular nature, as it allows for continuous evolution and reinvention.

Partnerships and Collaborations: Collaborations between startups can lead to innovative solutions and shared resources, enhancing the ecosystem's overall productivity.

Clearly, a Circular Startup Ecosystem represents a dynamic and symbiotic network where startups continuously interact through talent, technology, and capital flows. This ecosystem not only drives innovation and growth but also provides strategic advantages to startups looking to expand, diversify, and sustain their operations. By understanding and participating in this circular economy, startups can enhance their resilience and adaptability in an ever-evolving market landscape. The broader implications and benefits of the Circular Startup Ecosystem in detail are:

Innovation Acceleration: The ecosystem encourages rapid innovation as startups can quickly adopt and integrate new technologies and ideas. This constant flow of innovation helps businesses stay competitive and responsive to market demands.

Risk Mitigation: By acquiring or merging with other startups, businesses can diversify their offerings and reduce reliance on a single product or market, effectively spreading risk.

Resource Optimisation: Startups within this ecosystem optimize resource utilization by sharing talent, technology, and infrastructure, leading to cost efficiencies and better allocation of financial and human capital.

Market Expansion: Acquisitions enable startups to enter new markets or expand their customer base more swiftly than they could organically. This expansion is crucial for startups aiming to scale quickly in a competitive landscape.

Enhanced Collaboration: The circular nature of the ecosystem fosters a culture of collaboration over competition. Startups often collaborate on projects, share insights, and co-develop products that benefit all parties involved.

Increased Valuation: Participation in a thriving ecosystem can increase a startup’s valuation, as investors see potential in companies that are well-integrated into a network of innovative and supportive entities.

The above discussion on the drivers of the Circular Startup Ecosystem illustrates that there are also broader sociological changes making the ARR shenanigans possible. A part of the fault lies in well-established accelerators which have standardised “what to say” to raise money. This approach has encouraged metric manipulation.

As discussed, many of these startups ultimately sell to other startups circuitously, making things even more insular. More than private equity, more than even banking, venture capital has an 'in' crowd, i.e., a certain sort of person gets funded with a certain sort of business model.

Conclusion

The emphasis on ARR is ultimately reflective of a wider reckoning in ventures overall. Not only are there more VCs (and more capital) than ever, but priorities are in flux. *Ilya Strebulaev*, a professor at the S*tanford Graduate School of Business* and coauthor of *The Venture Mindset,* says:

"Generally, historically, there's been an important trade-off in the venture capital industry between profitability and growth. But roiled by geopolitical tensions and macroeconomic uncertainty, that pendulum has been changing over time. I think venture capitalists are now spending more effort on profitability today than in the past and are spending more effort on revenue. But that doesn't mean the trade-off between profitability and growth has evaporated—absolutely not." (Garfinkle, 2025).

The consensus among VCs seems to be that ARR will ultimately not be the way forward at all: *Priya Saiprasad*, general partner at Touring Capital, says:

"The classic SaaS model is dying as we speak. We shouldn't be using classic SaaS terms to measure these companies; we shouldn't be using the language of it. So, we should all, collectively as an industry, evolve to a new set of metrics we feel comfortable measuring these companies by." (Garfinkle, 2025).

Ultimately, smart investors will develop new ways to assess AI businesses, focusing on retention, daily active usage, and unit economics. If a bubble bursts, VCs and founders who inflated ARR may suffer most. This is an equity-driven boom, and the main losers in equity-driven booms like the one right now are the ones who made the bets.

References:

Ceppos, Robin (2025), NVCA Releases 2025 Yearbook Showcasing 2024 VC Trends, *National Venture Capital Association*, March 27. https://nvca.org/press_releases/nvca-releases-2025-yearbook-showcasing-2024-vc-trends/

Garfinkle, Allie (2025), "Founders are using creative accounting to boost lofty 'ARR'—the hottest startup metric in Silicon Valley", *Fortune*, Sept 28. https://fortune.com/2025/09/28/how-is-arr-calculated-startups-venture/

Nansubuga, Brenda and Kowalkowski, Christian (2024), "Moving to subscriptions: service growth through business model innovation in consumer and business markets", *Journal of Service Management*, 35(6):185-215

Nurkka, Jaakko; Waltl, Josef and Alexy, Oliver (2017), "How Investors React When Companies Announce They're Moving to a SaaS Business Model", *Harvard Business Review,* January 13, https://hbr.org/2017/01/how-investors-react-when-companies-announce-theyre-moving-to-a-saas-business-model

SaaS Capital (2025), "SaaS Valuation Multiples: Understanding the New Normal", *SaaS Capital Blog Posts*, August 6, https://www.saas-capital.com/blog-posts/saas-valuation-multiples-understanding-the-new-normal/

Temkin, Marina (2025), “Cluely’s ARR doubled in a week to $7M, founder Roy Lee says. But rivals are coming”, *Techcrunch*, July 3. https://techcrunch.com/2025/07/03/cluelys-arr-doubled-in-a-week-to-7m-founder-roy-lee-says-but-rivals-are-coming/