

Understanding the Venture Capital Method for Calculating Required Returns

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This paper outlines the systematic approach to calculating the required returns for venture capital investments. Based on the principles of the VC Method, it provides a clear framework for determining target returns on investment (ROI) that account for the inherent risks, success rates, dilution effects, and time horizons characteristic of early-stage investments. The methodology explained here helps founders, investors, and financial analysts understand how venture capitalists determine appropriate required returns across different investment stages.

Introduction

Venture capital investments are characterized by high risk, long holding periods, and varied outcomes across a portfolio. The VC Method provides a rational framework for calculating required returns that compensate for these risks while accounting for practical market realities. This document explains the methodology for calculating target ROIs based on survival rates (success probabilities), dilution impacts, and time to exit.

The Equidam ROIs by Stage

Equidam has developed a systematic approach to calculating required returns that vary by the development stage of the company. Below are the calculated annual ROIs for each stage in Equidam's development framework:

Development Stage	Annual ROI
Idea Stage	94.08%
Development Stage	76.32%
Startup Stage	58.72%
Expansion Stage	48.93%
Growth Stage	34.89%

Understanding Equidam's Development Stages

Equidam classifies companies into five distinct development stages, each with its own risk profile and success probabilities:

- **Idea Stage:** Companies at the conceptual phase with a business plan but limited operational history. These are pre-revenue ventures with the highest level of uncertainty and correspondingly highest ROI requirements.
- **Development Stage:** Companies that have progressed beyond the idea phase, perhaps with a prototype or minimum viable product, but are still pre-revenue or have minimal revenue. Risk remains high but slightly reduced from the idea stage.
- **Startup Stage:** Companies with a product in the market generating initial revenue, with early customer validation but not yet at scale. This represents a significant risk reduction as market viability begins to be proven.

- **Expansion Stage:** Companies with established products, growing revenue, and beginning to scale operations. These companies have demonstrated product-market fit and are focused on growth.
- **Growth Stage:** More mature companies with established business models, substantial revenue, and potentially approaching profitability. At this stage, companies are preparing for larger funding rounds or potential exits.

This pattern clearly demonstrates how required returns decrease as companies mature through development stages, reflecting the corresponding reduction in risk. Early-stage investments demand significantly higher ROIs to compensate for their extreme uncertainty, while later-stage investments can command lower (but still substantial) ROIs as many risks have been mitigated.

Benchmarking Against Industry Standards

Equidam's calculated ROIs can be compared with industry benchmarks from four different renowned sources, as identified in the KPMG research paper. These benchmarks provide a comprehensive view of expected returns across different investment stages:

Stage of Development	Plummer / QED median	Scherlis and Sahlman	Sahlman, Stevenson and Bhidé	Damodaran	Comparable Equidam Stage
Seed Stage	50% - 70%	50% - 70%	50% - 100%	50% - 70%	Idea/Development Stage
First Stage	40% - 60%	40% - 60%	40% - 60%	40% - 60%	Startup Stage
Second Stage	35% - 50%	30% - 50%	30% - 40%	35% - 50%	Expansion Stage
Bridge/IPO	25% - 35%	20% - 35%	20% - 30%	25% - 35%	Growth Stage

The remarkably consistent patterns across different research sources underscore the reliability of these benchmarks. While there are slight variations in the ranges, the general trend shows decreasing required returns as companies mature and de-risk their operations.

Equidam's calculated ROIs for each stage align neatly with these industry benchmarks. The main source of deviation is in Equidam's *Idea Stage*, representing the earliest point at which a startup may seek institutional investment and the commensurately high discount rate, and not directly matched in these alternatives. However, the ROI of 94.08% remains within the upper bound suggested by Sahlman, Stevenson and Bhidé.

The First-Principles Logic Behind Equidam's ROIs

Equidam's ROI calculations are based on first principles of venture capital economics. The approach considers three fundamental factors:

1. **Risk-Adjusted Fund Returns:** Start with aggregate fund return targets (5x for early-stage funds, 3x for later-stage funds) and adjust for the probability of success at each development stage. Since most investments in a venture portfolio will fail or underperform, successful investments must deliver outsized returns to achieve the overall fund targets.
2. **Dilution Impact:** Account for ownership dilution that occurs through subsequent funding rounds. As companies raise additional capital, existing investors experience dilution that must be factored into return expectations.
3. **Time Value Consideration:** Convert target returns into annualized rates based on expected holding periods (time to exit), recognizing that earlier-stage investments typically have longer time horizons to exit than later-stage investments.

This methodology ensures that required returns are calibrated to both the fund's overall performance targets and the specific risk profile of the company at its current development stage. As companies progress through stages, their success probabilities increase, leading to lower required returns that reflect the reduced risk profile.

Implications for Stakeholders

For Venture Capitalists

Understanding the mechanics of required return calculations allows VCs to:

- Calibrate investment criteria according to fund strategy
- Evaluate potential investments against appropriate hurdle rates
- Create balanced portfolios that can achieve overall fund targets
- Communicate expectations clearly to limited partners

For Founders

Understanding how VCs calculate required returns helps founders to:

- Set realistic expectations for investor demands at different stages
- Structure fundraising strategies that account for dilution effects
- Develop business models capable of delivering the required returns
- Negotiate more effectively during funding rounds

For Limited Partners

For those investing in venture funds, this methodology helps:

- Evaluate fund manager performance expectations
- Understand the risk-return profile of venture investments
- Compare venture returns with other asset classes
- Set appropriate allocation targets for the venture asset class

Conclusion

The VC Method for calculating required returns provides a systematic framework for evaluating venture investments. By accounting for success rates, dilution effects, and time horizons, it offers a realistic view of the returns necessary to compensate for the high-risk nature of startup investments.

This approach enables more transparent communication between founders and investors, more rational investment decisions, and better alignment of incentives among all stakeholders in the venture ecosystem.

About Equidam

Equidam is the online platform for startup valuation. Our technology enables entrepreneurs to truly learn what drives their valuation, transparently discuss it, thanks to clear and detailed valuation reports, and close fair deals with investors and buyers. We selected the 5 leading methods used to value startups and combined them with the most reliable data for the valuation parameters, tailored to 90 countries and 136 industries.

Appendix: Sources and References

Methodology

1. Fund Target Return

The aggregate fund return target represents the overall return multiple that a venture fund aims to achieve across its entire portfolio:

- **Early-stage funds:** Typically target a 5x multiple on invested capital
- **Later-stage funds:** Typically target a 3x multiple on invested capital

These targets reflect the entire fund performance, not individual investments. Since many investments will fail or underperform, individual successful investments must significantly outperform these targets.

2. Success Rates (Survival Rates)

Success rates represent the probability that a startup will advance to subsequent funding rounds and eventually reach a successful exit. Based on empirical data from PitchBook and Dealroom, we observe the following survival rates:

PitchBook data (success rates by round):

- 4.87%
- 8.46%
- 13.52%
- 21.54%
- 36.24%
- 65.48%

Dealroom data (success rates by round):

- 7%
- 12%
- 18%
- 22%
- 29%
- 35%

Average of both data sets:

- 5.94%
- 10.23%
- 15.76%
- 21.77%
- 32.62%
- 50.24%

3. Dilution Effects

As startups raise additional capital through subsequent funding rounds, existing investors experience ownership dilution. Based on CARTA data, typical dilution rates by round are:

- Seed: 20%
- Series A: 17%
- Series B: 17%
- Series C: 9.5%
- Series D: 8.4%
- Maturity: 8.4%

4. Time to Exit

Research from Stanford indicates that the average time from conception to exit for successful startups is approximately 8 years. This timeframe is used to calculate annualized returns from the target multiple.

Sources:

1. [PitchBook Data on startup success rates across funding rounds](#)
2. [Dealroom Data on European startup survival probabilities](#)
3. [CARTA Data on typical dilution percentages by funding round](#)
4. [Stanford research on average time from conception to exit for startups](#)
5. [KPMG venture capital ROI benchmarks by investment stage](#)
 - Plummer/QED research on expected rates of return by venture capitalists
 - Scherlis and Sahlman venture capital return expectations
 - Sahlman, Stevenson and Bhide venture capital return expectations
 - Damodaran research on startup valuation methodologies