

SaaS Capital Insights

WHAT'S YOUR SAAS COMPANY WORTH?

PRIVATE SaaS COMPANY VALUATIONS, REVISION Q2 2022

Private B2B SaaS companies are typically valued using a multiple of annualized recurring revenue (ARR) but determining the correct multiple to apply is difficult. We provide a data-driven, statistically backed methodology for determining a baseline valuation multiple from a company's ARR growth rate and net revenue retention, and the current level of the SaaS Capital Index™, which is published as a free service by SaaS Capital®. A full formula, as well as an Excel spreadsheet and summary table, are provided for your convenience.

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INTRODUCTION

SaaS Capital is a provider of debt financing for private B2B SaaS companies. Since 2007, we have lent to nearly 100 such firms and observed over 50 of those companies undergo arm's length, private-market, cash valuation events (about half M&As, half equity raises). We also conduct a well-regarded industry survey with over 1,500 anonymized SaaS companies responding annually.

We are also often approached by SaaS founders, executives, and service providers as they seek to understand industry trends to inform their own companies' valuations. To this end, we have published several revisions over the years of this popular white paper, "What's Your SaaS Company Worth," as well as monthly updates to the SaaS Capital Index (SCI), a barometer of the price-to-annualized recurring revenue (ARR) multiples of publicly-traded SaaS Companies.

This revision (Q2 2022) is a major one, with important updates to our methodology and the underlying data. We always recommend the use of the latest version of this valuation methodology, which will be periodically updated and available for free [here](https://www.saas-capital.com).

SaaS VALUATIONS USE ARR MULTIPLES

Any business has an intrinsic value equal to the net present value of its future profits. However, SaaS businesses tend to have:

1. High, consistent growth prospects (it is possible to grow to many multiples of the current revenue run-rate).
2. Low-risk unit economics (it is possible to become profitable after reaching modest scale).

Therefore, for a SaaS company, the value of far-future profits following a long period of compound growth dwarfs the value of trying to turn a profit early (at the cost of continued growth).

This means that SaaS companies by and large choose to stay unprofitable and continue growing, which in turn makes using current profits (earnings) impractical.

As a result, the market has adopted a shorthand method for valuing growing SaaS companies relatively simply, using a multiple of annualized recurring revenue (ARR).

Company Valuation = ARR * Valuation Multiple

Determining the suitable valuation multiple, therefore, is the crucial exercise. The right multiple depends not only on the company's characteristics, but on broader market conditions at a point in time. There is no one-size-fits-all multiple – but it is possible to make an informed, data-driven estimate, which is what we lay out below.

KEY VALUATION MULTIPLE DRIVERS

Three primary factors drive SaaS valuation multiples:

1. Capital market appetites for owning SaaS businesses (external).
2. Revenue growth rate (company-specific).
3. Recurring revenue quality (company-specific).

There are many other factors that may come into play during a negotiation, but *assuming a SaaS company falls within a generally acceptable range* (see “Important Assumptions,” below) for most of its metrics, the three factors above will be decisive.

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Our methodology uses the following inputs to account for these three factors:

1. The current level of the SaaS Capital Index (TM) (SCI).
2. The company's current ARR Growth Rate.
3. The company's Net Revenue Retention (NRR).

We briefly discuss each of these, and how to calculate them, in the sections that follow, before turning to how to derive the baseline multiple and apply it in practice.

(If you are already familiar with the SCI, ARR growth, and NRR metrics, you may turn forward to the section “Applying the Methodology.” *Don’t forget to review the “Important Assumptions” section which follows, however.*)

SaaS CAPITAL INDEX

The SaaS Capital Index Median ARR Multiple is published monthly for free as a public service by SaaS Capital [here](#).

The index follows 91 public companies, carefully curated by SaaS Capital. We include only B2B software with recurring revenue models. We exclude companies where a major portion of revenue is due to services, consulting, payment processing, etc.

In short, the index components should “look like” the private companies in our valuation dataset, only more mature.

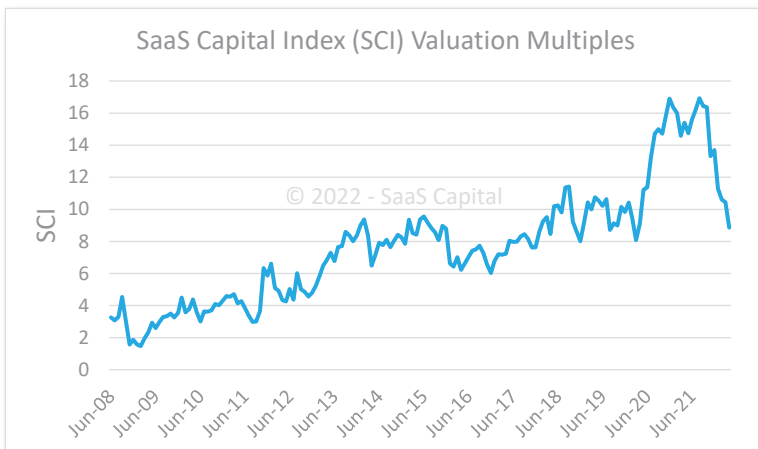
On a monthly basis, we pull company financials and produce a representation of “run-rate” ARR for each index member. (We use annualized current “run-rate” ARR, instead of the forecast next-twelve-months that Wall Street analysts commonly cite, because private SaaS acquirers use run-rate ARR.)

We then use the public market capitalization for each company to determine its valuation multiple. The median value of these multiples is the SaaS Capital Index Median ARR Multiple (SCI) at a point in time.

Historically, the SCI (*Figure 1*) has usually been observed between 5x-10x, and private companies generally trade at a discount to this public multiple.

However, the remarkable run-up to nearly 17x during 2020-2021 (at a time when private valuations did not follow in lockstep) shows that it's not accurate to simply use a fixed percentage (e.g. 28%) or “number of turns” (e.g. 2x) adjustment to the SCI. The SCI is an important factor, but can't be used in isolation.

Figure 1

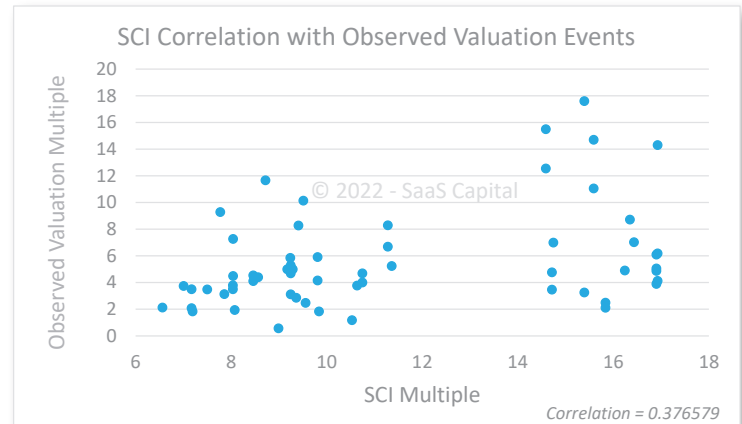


It's also important to use a “fresh” value of the SCI, which changes month to month. We encourage those anticipating a process, or valuation professionals, to sign up for our SCI mailing list [here](#). We've also observed that it's best to use the

value of the SCI *when deal pricing becomes definitive* : a deal that is priced in all cash and signed in April, but which doesn't close until June, should use April's SCI, while an all-stock deal from a public acquirer would use June's SCI.

The SCI level is well-correlated with the observed valuation events (*Figure 2*), Still, outcomes are varied enough that the SCI is not sufficient to use on its own.

Figure 2



ARR GROWTH RATE

ARR Growth Rate is a crucial company-specific metric, and it's important to calculate it correctly, not merely to use a generalized estimate of “revenue.” ARR Growth Rate should be annualized, actual, and trailing (not “forecast” or “projected”).

For annualizing ARR growth, our preference is to use the most recent quarter over the year-ago quarter, to help reduce noise from month-to-month variation. However, there may be a need for subjective evaluation.

If the choice of periods for the comparison would create a misleading growth rate (such as due to a large one-time gain or loss to ARR, or because of growth rate either speeding or slowing), it is important to use a fairly reflective ARR Growth Rate for this paper's methodology to work well.

“It's best to use the value of the SCI when deal pricing becomes definitive: a deal that is priced in all cash and signed in April, but which doesn't close until June, should use April's SCI, while an all-stock deal from a public acquirer would use June's SCI.”

(Note: because SaaS valuations typically give little or no “credit” for non-ARR revenue lines like services, implementation, or ancillary hardware revenue, be sure not to count these toward ARR. Such other revenue lines – if significant, growing, and margin-producing – can add to the valuation, but usually at a lower multiple. We recommend separately valuing those other revenue lines using traditional measures (e.g., discounted cash flows/DCF) and adding to the multiple-derived SaaS valuation; see “Additive Adjustments,” below.)

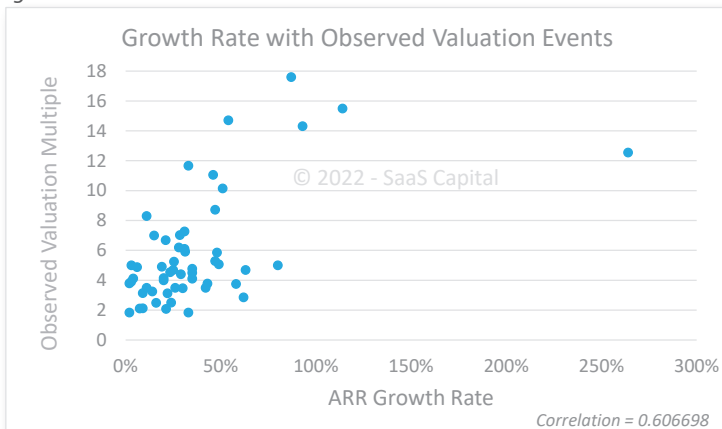
Finally, an open question is how to treat “re-occurring” (not “recurring”) revenue. Because capital markets favor recurring revenue SaaS businesses, many companies understandably try to position non-recurring revenue lines as “SaaS-like,” even if they are not contractually recurring (such as consumption fees, a per-transaction or per-gigabyte fee).

A rough rule of thumb here might be that you can put such re-occurring revenues in ARR if:

1. They have made up, and will continue to be, half or less of that ARR, with true committed subscription recurring revenue making up the remainder.
2. You can show at least a solid year’s worth of cohort data on the revenue volatility.

ARR Growth Rate is highly correlated with valuation multiples, although we can still make a better estimate by using it in combination with other factors. See *Figure 3*.

Figure 3

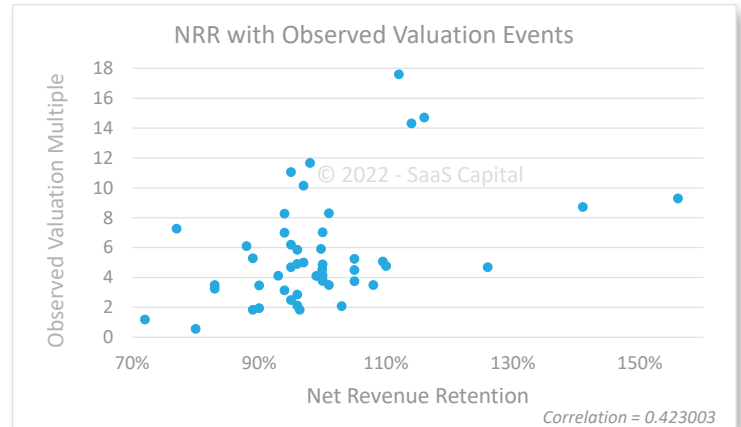


NET REVENUE RETENTION RATE

Retention is considered an important quality-of-revenue metric, and Net Revenue Retention (NRR, or less commonly Net Dollar Retention or NDR) is a fairly universally measured

quantity that also has been shown statistically to have a correlation with valuation; see *Figure 4*, below.

Figure 4



While it is related to growth, NRR contains more information about revenue quality, customer satisfaction, and pricing power than does growth rate alone.

To calculate NRR, it is necessary to break out revenue by period (columns) and individual customers (rows). Sum the revenue in both of the year-over-year periods only for those customers who were paying in the prior year, and count the increase or decrease (including total cancellations) toward the later period sum.

Comparing later period sum to prior period sum produces a ratio, NRR, that falls with cancellations or downgrades, but rises with upgrades and expansions.

Particularly if a single period has large one-time changes, and depending on billing frequency, etc. it may be wise to use an average of several recent periods’ NRR in order to gain a representative figure. For more on calculating NRR, see [Essential SaaS Metrics: Revenue Retention Fundamentals](#).

If gross retention is known, but NRR is not, most typical healthy SaaS companies can use a rule-of-thumb we derived from our dataset and add 11% to gross revenue retention to estimate NRR.

Finally, if applying this model to a company where ARR Growth Rate is known, but retention is not known, we recommend you use 1.0 (100%) as the NRR Rate. Because NRR is a small (< 10%) contributor to the overall valuation multiple result, using a mostly-correct estimate will be sufficient.

WHY MULTIPLE FACTORS ARE NECESSARY

An example from real estate may be helpful here. House prices in the broad market are often spoken of in terms of price per square foot. However, two houses of identical size might be situated in different neighborhoods with different fixtures, like the furnace or roof.

The house with the more desirable neighborhood, or with the better fixtures, will likely sell for a higher price than an identically-sized house with less desirable neighborhood, or fixtures needing maintenance. A price estimate that considers those factors will be substantially more accurate than one that does not.

Similarly, the SCI is a general market indicator akin to the price per square foot, and ARR Growth Rate and NRR Rate are deal-specific factors, like neighborhood and fixtures, which considerably improve the accuracy of a valuation estimate. Our methodology, summarized below, uses statistical methods to apply the right weights to the different factors so as to match our dataset.

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APPLYING THE METHODOLOGY

We include several ways to make practical use of the results of this methodology, starting with the formula itself. Whether you use the formula itself, a lookup table, or the example Excel worksheet, it's important always to use the *most recently* published versions of this white paper and of the SaaS Capital Index, which can be found [here](#) and [here](#) respectively.

BASLINE VALUATION MULTIPLE FORMULA

The baseline Valuation Multiple can be calculated directly using the formula below:

$$\text{Valuation Multiple} = -3.2 + (0.32 * \text{SCI}) + (8.26 * \text{ARR Growth Rate}) + (2.62 * \text{NRR Rate})$$

Note that the first term is a *negative* term (-3.2), so take care to watch the sign when using it! (The specific numbers in this formula, like -3.2 or 2.62, are empirically derived using statistical methods. They don't have obvious meanings outside of the overall formula, so we caution against attaching meaning to those terms.)

The resulting valuation multiple will usually be a number somewhat below the current SCI, though for exceptional private SaaS companies the resulting multiple may even exceed the public SCI multiple.

“It's important always to use the most recently published versions of this white paper and of the SaaS Capital Index.”

EXAMPLE 1

Consider a private SaaS company with:

- ARR of \$5.0 million
- ARR growth rate of 40%
- Net revenue retention of 105%.
- We wish to estimate the valuation that would apply to a transaction priced in May, 2022, when the SCI is at 9.1x. We would apply the formula as such:

$$-3.2 + (0.32 * 9.1) + (8.26 * 0.40) + (2.62 * 1.05) =$$

$$-3.2 + 2.912 + 3.304 + 2.751 = 5.77$$

Therefore, the applicable baseline Valuation Multiple would be 5.77x, implying a company valuation of approximately \$28.8 million.

EXAMPLE 2

Consider a similar company, **but with a much higher ARR growth rate of 80%**. We would then apply the formula as below:

$$-3.2 + (0.32 * 9.1) + (8.26 * 0.80) + (2.62 * 1.05) =$$

$$-3.2 + 2.912 + 6.608 + 2.751 = 9.07$$

The similar company, with a faster ARR growth rate, would tend to be valued substantially higher at 9.07x, implying a valuation of \$45.4 million.

BASLINE VALUATION MULTIPLE TABLE (CURRENT)

For readers near the time of this paper's publication who want a quick reference guide to baseline valuation multiples *at the current SCI level of 9.1*, the following table may be consulted.

First, find the row nearest to your ARR Growth Rate in the left-hand side (from 10% to 150%). Second, find the column nearest to your NRR Rate along the top (from 85% to 115%). The cell where the row and column meet contains the applicable baseline Valuation Multiple as of the date of publication (Q2 2022).

Table 1: Current Baseline Valuation Multiples (2Q 2022)

	NRR Rate						
	85%	90%	95%	100%	105%	110%	115%
10%	2.8	2.9	3.0	3.2	3.3	3.4	3.6
20%	3.6	3.7	3.9	4.0	4.1	4.2	4.4
30%	4.4	4.5	4.7	4.8	4.9	5.1	5.2
40%	5.2	5.4	5.5	5.6	5.8	5.9	6.0
50%	6.1	6.2	6.3	6.5	6.6	6.7	6.9
60%	6.9	7.0	7.2	7.3	7.4	7.6	7.7
70%	7.7	7.9	8.0	8.1	8.2	8.4	8.5
80%	8.5	8.7	8.8	8.9	9.1	9.2	9.3
90%	9.4	9.5	9.6	9.8	9.9	10.0	10.2
100%	10.2	10.3	10.5	10.6	10.7	10.9	11.0
110%	11.0	11.2	11.3	11.4	11.5	11.7	11.8
120%	11.9	12.0	12.1	12.2	12.4	12.5	12.6
130%	12.7	12.8	12.9	13.1	13.2	13.3	13.5
140%	13.5	13.6	13.8	13.9	14.0	14.2	14.3
150%	14.3	14.5	14.6	14.7	14.9	15.0	15.1

EXAMPLE 3

Consider the company from *Example 1* with:

- ARR growth rate of 40%
- net revenue retention of 105%.

We find 40% in the fourth row down, 105% in the fifth column over, and the corresponding cell gives us our approximate baseline Valuation Multiple of 5.8x. (Using the formula gave us the functionally same answer, 5.77x.)

EXCEL SPREADSHEET FOR CALCULATING BASELINE MULTIPLE

If you prefer to use a spreadsheet, we provide a starter template [here](#).

The various cautions in this paper, in particular the section on “Important Assumptions” and the necessity of using the latest published version, still apply when using the spreadsheet!

USING THE BASELINE VALUATION MULTIPLE IN PRACTICE

The resulting Valuation Multiple is the center point of a range, which is why we refer to it as a “baseline,” not as a conclusion. A majority of the actual valuation observations in our historical dataset fell between -30% and +30% of the baseline multiple. So, while most multiples end up being close to the baseline, it is still very much possible for companies to transact at valuations far from the predicted multiple.

The best practice is to:

1. Start by calculating the applicable baseline Valuation Multiple using one of the methods above.
2. Verify that the company meets all the “Important Assumptions” below. If the inputs do not fall in the Input Domains, or, if the baseline Valuation Multiple is outside the Output Range, or, if the company does not meet the assumptions of Threshold B2B SaaS Metrics, *proceed with caution* and consider using a different methodology.
3. Strongly consider using a sensitivity analysis, with a suggested range of +/- 30%. Additional adjustments or a wider sensitivity range may be called for if the company has exceptional characteristics.
4. Make any necessary Additive Adjustments (see below).

IMPORTANT ASSUMPTIONS

INPUT DOMAINS

The model was developed on a dataset of observations that fell within these limits. Because the model is linear, a small deviation from the input domain will probably be OK. However, if your inputs fall far outside these domains, the reliability of the model will be degraded:

- SCI: 3.5x to 16.9x
- ARR Growth Rate: (negative 16%) to 264%
- NRR Rate: 72% to 156%

OUTPUT RANGE

A baseline Valuation Multiple output below 0.5x or above 27.0x likely indicates conditions against which the statistical model was not validated. We caution against relying upon outputs outside that range.

“The resulting Valuation Multiple is the center point of a range, which is why we refer to it as a ‘baseline,’ not as a conclusion. A majority of the actual valuation observations in our historical dataset fell between -30% and +30% of the baseline multiple. So, while most multiples end up being close to the baseline, it is still very much possible for companies to transact at valuations far from the predicted multiple.”

THRESHOLD B2B SaaS METRICS

The model was developed by observing a group of B2B SaaS companies that tended to exhibit similar characteristics. If your company does not meet the following assumptions about those characteristics, this methodology may not be suitable:

- Subscription, recurring business model with B2B customers.
- Minimum \$2 M ARR.
- Non-Distress Sale Condition (no short-term financing risk).
- Gross Margin: Minimum 65%.
- Customer Concentration: Maximum 20%.
- Cash Burn as % of Revenue: Maximum 200%.
- Market Penetration: Maximum 10%.

ADDITIVE ADJUSTMENTS

After the appropriate Valuation Multiple (or sensitivity range) has been determined and applied to the ARR, there may still be adjustments to the final valuation. These are added (subtracted) to the “pure SaaS” valuation to arrive at a business valuation.

Such adjustments may not be needed for all purposes, but in an actual M&A transaction there are almost always some such adjustments necessary, so we mention them here for completeness.

NON-SaaS REVENUE LINES

Above, we cautioned to use only true recurring SaaS revenue as the ARR figure, and to exclude other types of revenue. Generally speaking, companies with 85% or greater revenue from ARR (the remainder coming from implementation fees, consulting, and the like) can disregard those ancillary revenues as being a normal adjunct to an ARR-based SaaS business, and no adjustment is warranted.

However, if there are truly independent and separable lines of business which are *not* SaaS-like enough to be included as part of ARR, they must be independently valued and their value added to the ARR-based valuation.

Finally, it’s important to note that in some cases, particularly when separate revenue lines are low-margin, or when a company is compelled to provide some other non-SaaS service or product as a condition of continuing its recurring

SaaS revenue, it is possible for the additive valuation of a separate revenue line to be *negative*.

BALANCE SHEET ITEMS

The methodology we have proposed assumes cash-free, debt-free valuations available to all equity owners. Companies with significant cash balances (or liabilities) outside of reasonable working capital requirements should adjust the final valuation by addition (or subtraction) of amounts that would go to, or be taken from, proceeds to equity owners.

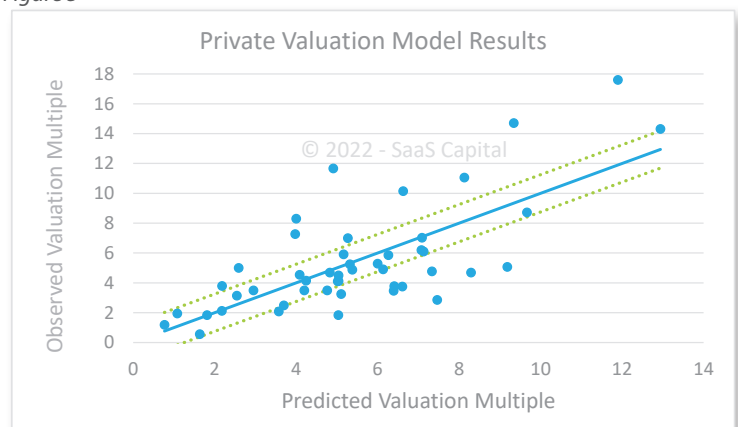
CONCLUSION

We hope this white paper has been instructive and practical for your SaaS company valuation needs. Valuation of a business is always an art, not a science – even if SaaS businesses are dramatically more predictable and amenable to quantitative analysis than others.

As a result, we caution that even the best mathematical model will only provide a starting place, and can never account for things like negotiation styles, moods, and perceived urgency that strongly influence how real deals get priced.

That said, our methodology is a pretty good starting place, and has held up over many years and changing market conditions. A majority of actual Valuation Multiples were within +/- 30% of the predicted multiple, and likewise a majority were within +/- 1.25x of the predicted multiple. See *Figure 5* below for an illustration of multiples that fell within +/- 1.25x.

Figure 5



APPENDIX

METHODOLOGY

We used 47 valuation events and performed ordinary least-squares multiple regression to derive our model. The model can be said to explain just over half of the variation in multiples (R^2 of 0.525), and is extremely unlikely to be explained by chance ($p < 0.01$).

We used the entire history of the SaaS Capital Index, monthly, up through the end of April, 2022, to match with observed valuation events. Our calculations were performed with open-source statistical software including Python “statsmodels” version 0.13.2 and “pandas” version 1.3.5.

There are additional refinements available, which we did not pursue for this white paper, such as use of additional variables, interpolation of certain missing data, and log-transformation of variables. We chose to keep the model simple and comprehensible at the cost of some accuracy.

EXIT VS. NON-EXIT TRANSACTIONS

Historically, business valuations have treated “exit” transactions (including complete sales and majority or “control” transactions) differently from minority equity sales, and therefore have applied a control premium. We did *not* observe a reliable control premium in our dataset ($T = -0.41$, $p = 0.68$), which was about half “exit” and half non-exit events. This might be due to the generally rising investor interest in B2B SaaS over the past 12 years, during which time particularly high-performing deals were able to raise minority equity capital on entrepreneur-friendly (relatively high-valuation) terms.

PEs PAYING EQUALLY?

A bit of conventional wisdom among software investors historically held that Private Equity (PE) buyers were “bottom feeders” and that they tended to pay lower valuations. However, we did *not* find this to be true. We found PE participants in both minority and majority deals to pay a variety of multiples across the dataset. Importantly, there was no statistically significant difference in average multiples ($T = 1.02$, $p = 0.31$) between PE and non-PE counterparties.

CITATION AND REFERENCE

Please make reference to the publication date of this white paper (Q2 2022), as well as the date of the SCI multiple used as input, when making reference to any results of this model. We anticipate making refinements to this model as we gather data over time, which could result in future versions of the model being published with different specific weights in the formula.

DISCLAIMER

This paper and any accompanying materials are provided AS-IS, with NO WARRANTY of any kind, express or implied. While we are confident that this methodology can be helpful, and is an important improvement over other estimation techniques, we provide it only as an expression of our opinions, and this paper cannot substitute for proper financial advice. Caveat lector.

“A bit of conventional wisdom among software investors historically held that Private Equity (PE) buyers were “bottom feeders” and that they tended to pay lower valuations. However, we did not find this to be true. We found PE participants in both minority and majority deals to pay a variety of multiples across the dataset.”

About SaaS Capital

SaaS Capital is the leading provider of growth debt designed explicitly for B2B SaaS companies. SaaS Capital's growth debt is structured to provide a significant source of committed funding, deployment flexibility, and lower overall cost of capital, all while avoiding the loss of control and dilution associated with selling equity. SaaS Capital was the first to offer lending alternatives to SaaS businesses based on their future recurring revenue. Since 2007, SaaS Capital has deployed \$234 million in growth debt to deliver better outcomes for 70+ clients, resulting in \$983 million in total enterprise value created.

Benefits of SaaS Capital's unique, SaaS-focused approach:

- **Higher advance rates** - Capital availability is based on a multiple of your monthly recurring revenue (MRR) – typically 5x to 7x MRR
- **Capital availability that grows with your business** - The amount of capital that you can draw increases automatically as your revenue grows
- **Long-term source of capital** - The capital is drawn down over 2 years under the committed line of credit, and then either renewed, or repaid over the following 3 to 4 years
- **Efficient use of capital** - Capital is drawn down only as your business needs it, thereby reducing your interest expense
- **Flexibility** - No balance sheet covenants or cash reserve requirements

SaaS Capital is best able to assist companies with the following attributes:

- Sell a SaaS-based solution
- Seeking \$2M to \$20M in growth capital
- \$250,000, or above, in MRR
- Have a minimum of 85% retention
- Registered and principally banked in the U.S., Canada, or UK
- Revenue growth above 15% per year

Your business does **NOT** need to be:

- Venture Backed
- Profitable
- Billing your customers monthly



Visit www.saas-capital.com to learn more.

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