

# ICONIQ

ANALYTICS & INSIGHTS

## **THE PATH TO IPO**

*Going Public in 2022 - An Analysis of Enterprise SaaS IPO Performance*

# ICONIQ Capital, LLC

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# An analysis of recent software IPOs

01

**The following report aims to answer key questions across several major topics related to successfully planning for and executing an IPO**

02

## **2021 Trends**

- How do 2021 SaaS IPOs compare to those of previous years?
- What are the major take-aways for companies looking to go public in today's market?

03

## **Driving Ongoing Performance**

- What do scale, growth, efficiency and profitability typically look like leading up to IPO?
- How do these metrics evolve in post IPO years?
- How do top performers effectively manage the street through forecasting post IPO?

04

## **Valuation & Trading Multiples**

- How have these public software companies historically been valued - both at IPO and since?
- How do these compare to overall market valuation?

05

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## **IPO Structure & Banker Selection**

- What have the most common economic structures been over the past few years?
- How do these vary based on which banks are involved?

*Additional information on disclosures, both at time of IPO (S-1s and 424B4s) and on an on-going quarterly and annual basis can be found in the Appendix*

# INTRODUCTION

## Methodology

 Certain graphs on the following pages will only show IPOs from the last 5 years (indicated by this icon). For all IPOs since 2013, check out the [interactive Tableau companion tool](#)

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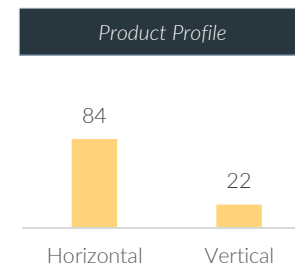
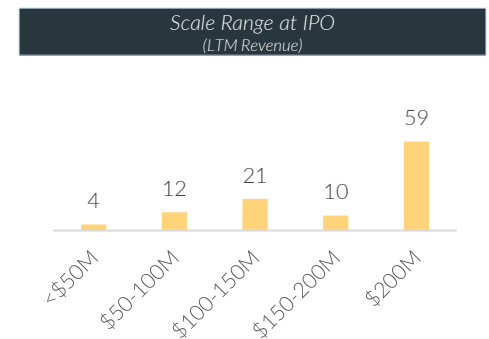
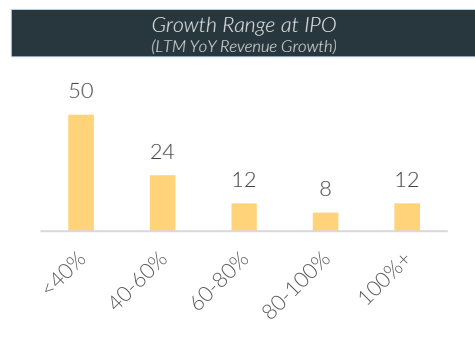
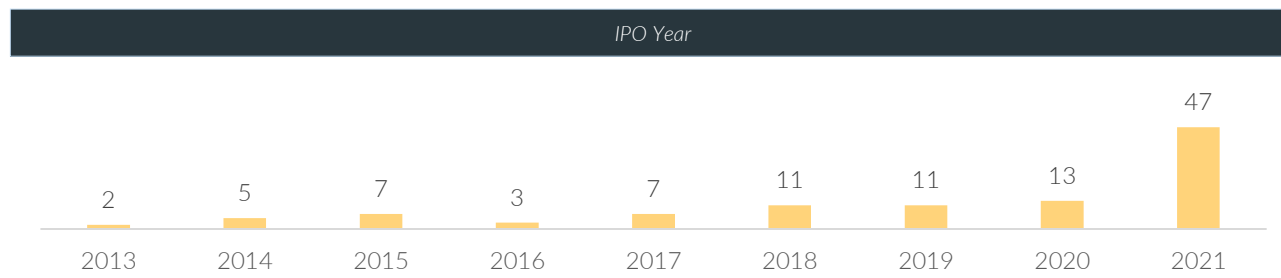
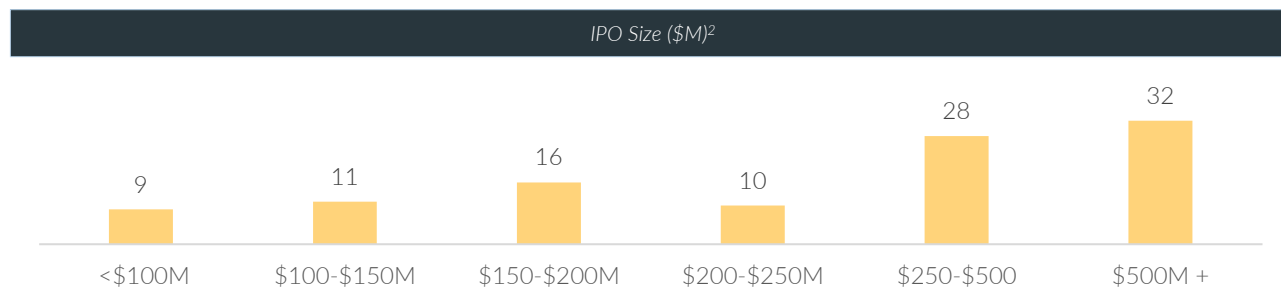
### Enterprise SaaS IPOs Included<sup>1</sup> Major Software IPOs ~2H2013 – 2021

ICONIQ investment

\* All IPOs that have since been acquired are excluded from this report, but the data is available in our accompanying Tableau dashboard



### Make-Up of Enterprise SaaS Companies Included in Analysis Across Various Dimensions



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Notes: (1) Includes all software IPOs across all ICONIQ Growth portfolio including co-investments as of the time period indicated above. IPOs that have since been acquired are excluded from this report (2) IPO Size reflective of 42B4 filing and does not include greenshoe. (3) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ.  
Source: Public Filings for Software IPO June 2013 to December 2021

# INTRODUCTION

## Executive Summary

01

### 2021 Trends

- An **unprecedented number of SaaS companies went public in 2021**, largely driven by pent-up demand from strong private markets and a frothy public market
- New innovations in IPO processes such as blind bidding and employee participation allowed for **more transparent pricing and day one liquidity for employees**
- There has been a slight degradation in the average quality of business profiles of companies going public, with **median revenue growth and Rule of 40 down compared to pre-2020 IPOs**
- 2021 saw a significant market contraction for tech stocks, with **70% of SaaS companies that went public breaking issue** as of Jan 2022
- While direct listings and SPACs have become a viable route to the public market, both the **sample size of enterprise SaaS companies pursuing these routes** and **average returns are still notably lower** than those of traditional IPOs



02

### Driving Ongoing Performance

- Initial IPO performance is **most correlated with Rule of 40, revenue growth, and net retention**; in recent years, **profitability has become more important** in a market that has historically valued growth over profitability
- Based on data from the past 5 years of IPOs, becoming a public SaaS company requires a **median revenue of \$180M with 42% YoY growth, net dollar retention of 119%, gross margin of 70%, and 12 years from founding to IPO**
- Historically, vertical SaaS companies have IPO-ed at a smaller scale than horizontal SaaS companies; however, **2021 saw a cohort of strong vertical SaaS companies with significant scale** leading up to IPO
- **The majority of SaaS companies are not profitable leading up to IPO**; however, around half of these companies are **FCF positive within two fiscal years of IPO**
- IPO sizing relative to market cap has varied across enterprise SaaS IPOs, but **most have remained in the 10-20% range**



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### Valuation & Trading Multiples

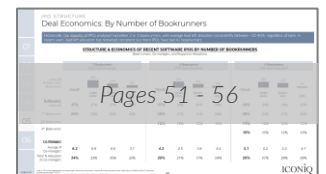
- Multiples have been steadily rising over the past few years, with **average forward multiples for the 2021 SaaS cohort exceeding all historical software companies analyzed since 2013**
- However, while multiples at IPO are at an all-time high for SaaS companies, most companies have seen a **decline in valuation post IPO**
- Vertical SaaS companies tended to see a **higher average forward multiple at IPO and a tighter range** across IPOs in 2021 compared to horizontal SaaS peers
- Across horizontal SaaS IPOs, **companies in the infrastructure & security sector have seen the highest average forward multiples** both at IPO and currently, in addition to the highest price % change from offering



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### IPO Structure & Banker Selection

- Historically, most IPOs analyzed had either 2 or 3 bookrunners; in recent years, **more IPOs have had 4+ bookrunners** with average **lead left allocation between ~32-40%** regardless of bank
- The most common deal structures have historically had either **3 or 4 co-managers, with 3-6% being allocated** to each
- **Goldman Sachs and Morgan Stanley** continue to be the most common lead left bookrunners, whereas **KeyBanc/Pacific Crest and JMP** continue to be the most common co-managers across IPOs in the past 8 years



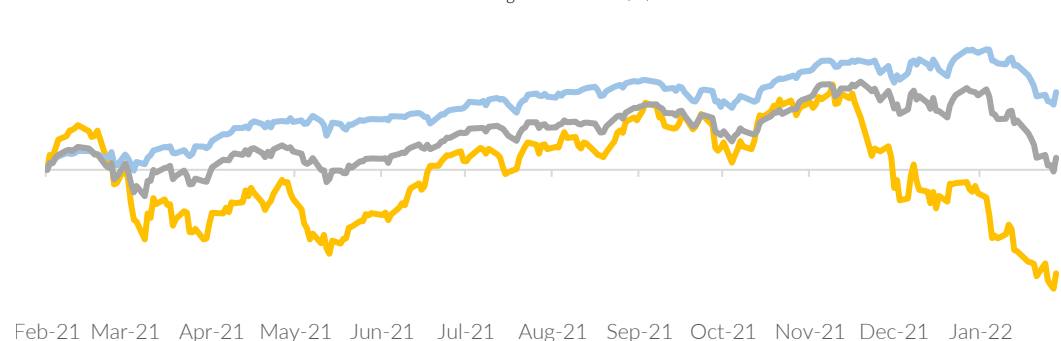
# A Note on the Current Environment

Over the recent months, the public tech equity markets are going through a dramatic contraction, driven in part by faster than expected quantitative tightening by the Federal Reserve to respond to heightened inflation risks. For example, the BVP Cloud Index of cloud software companies is down 18% YoY, with some high growth software stocks trading ~40-50% off 52-week highs.

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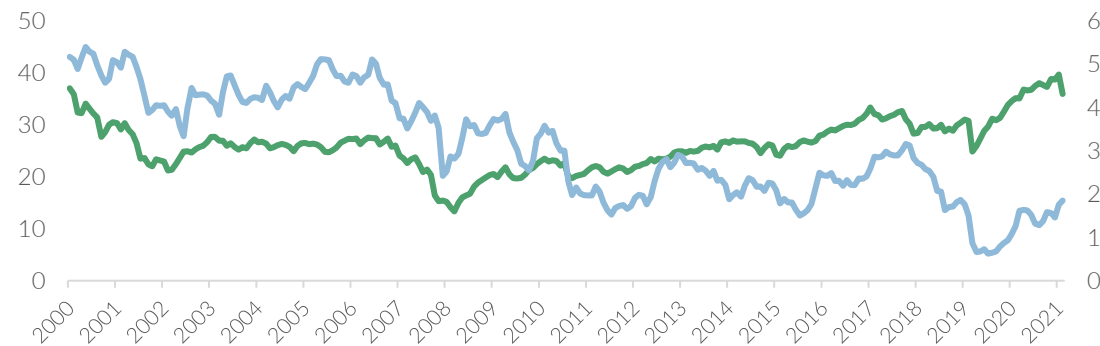
— BVP Emerging Cloud Index  
 — NASDAQ  
 — S&P 500

**BVP EMERGING CLOUD INDEX PERFORMANCE**  
 Net Change Indexed To 2/1/21



— Schiller P/E Ratio for S&P 500 (left axis)  
 — Treasury 10-Year Rate (right axis)

**S&P 500 VS. TREASURY 10-YEAR**



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Looking forward, we can reasonably expect higher interest rates (noting that 10 yr Treasury is still currently near historical lows) and continued market volatility as investors grapple with various economic indicators, inflationary concerns, a tight labor market and shifting geopolitical dynamics.

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However, as growth partners we strongly believe in the fundamental value creation opportunity for ‘best-in-class’ software companies to grow and generate exceptional returns over time, even through shifting market environments. As evidenced by some of the highest multiple software companies, despite the recent pullback they have continued to trade well above historical averages (*more info in Section 4 of this deck*).

06

It may already be a different world by the time you read this, but in the interim, we hope that these updates are still helpful for companies thinking about IPO and please don’t hesitate to reach out with any thoughts or questions.

Note: Information provided is accurate as of 1/31/22  
 Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# INTRODUCTION

## Our IPO Performance Framework

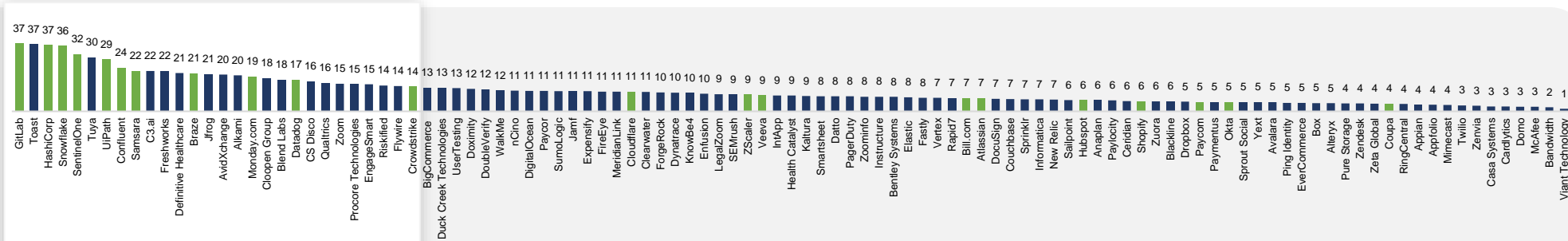
■ Top quartile across at least 2 dimensions  
 ■ All other companies

Success of an IPO is, by nature, a subjective measure and the decision to go public is motivated by a wide range of objectives - however, one holistic and objective way to identify top performing companies is to compare multiples as well as value creation

### ASSESSING IPO SUCCESS: FORWARD REVENUE MULTIPLES AT IPO VS. TODAY AND INDEXED CHANGE IN STOCK PRICE

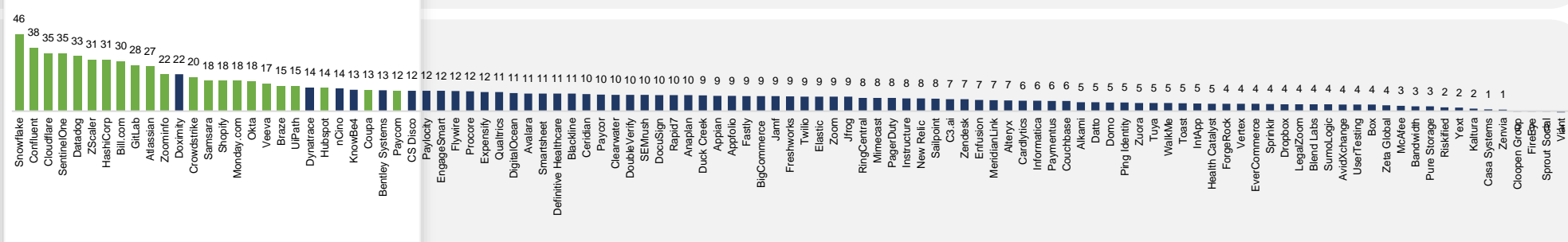
1 **Indication of Success of IPO:**  
 Forward<sup>2</sup> Revenue Multiple at IPO

Correlated with stage and health of business leading up to IPO: scale, growth, profitability, efficiency (More details on slide 10)



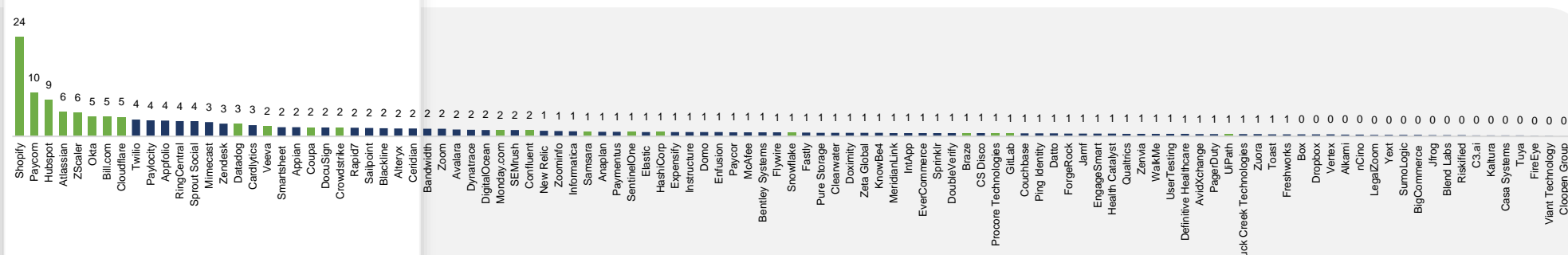
2 **Indication of Success Post-IPO:**  
 Current<sup>1</sup> Forward<sup>2</sup> Revenue Multiple

Most correlated with business performance since IPO and whether company has been able to maintain, or increase value of their company



3 **Indication of Value Creation:**  
 Ratio of Change in Stock Price Since Day 1 Close vs. Market (S&P)<sup>4</sup>

Includes various factors beyond pure business operations, e.g., initial pricing, ability to forecast and manage the street, market demand, etc.



Top Quartile

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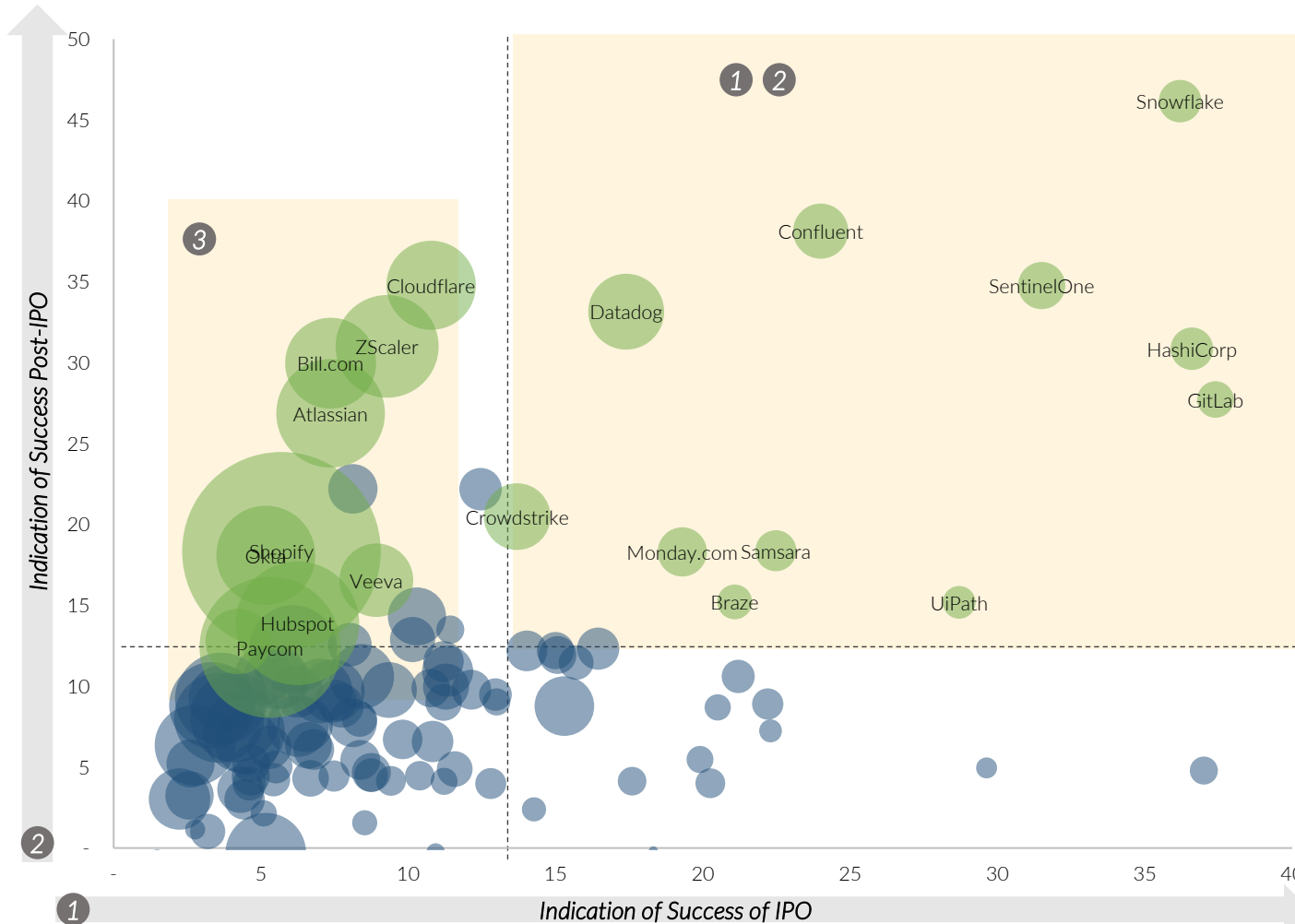
Notes: (1) "Current" represents data as of 1/31/2022; (2) Forward multiples based on NTM Revenue from Wall Street Research and Investment Banking materials from Morgan Stanley and Goldman Sachs (3) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials (4) % Change in stock price from IPO date to 1/31/2022 divided by the % change in S&P over same time period  
 Source: Factset, Public Filings for Software IPO June 2013 to December 2021



# Our IPO Performance Framework

Across these three dimensions, a group of 21 'top performers' emerges that – while not a perfect representation of IPO 'success' - allows us to better distill findings and trends across a narrower set of strong companies

## ASSESSING IPO SUCCESS: FORWARD REVENUE MULTIPLES AT IPO VS. TODAY AND INDEXED CHANGE IN STOCK PRICE



### 'Top Performers'

This Group of 21 companies have top quartile results across at least 2 of these 3 key dimensions:

- 1 Forward Multiple at IPO<sup>1</sup>
- 2 Forward Multiple Today<sup>2</sup>
- 3 Value Creation for Shareholders<sup>4</sup>

3 ●●● Indication of Increase in Value Creation

Notes: (1) "Current" represents data as of 1/31/2022; (2) Forward multiples based on NTM Revenue from Wall Street Research and Investment Banking materials from Morgan Stanley and Goldman Sachs (3) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials (4) % Change in stock price from IPO date to 1/31/2022 divided by the % change in S&P over same time period  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

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# Our IPO Performance Framework

Within the broad buckets of strong operational profiles and the ability to effectively manage expectations, below are a few explicit examples of how these elements have contributed to performance over various time horizons (*detailed case studies in Appendix*)

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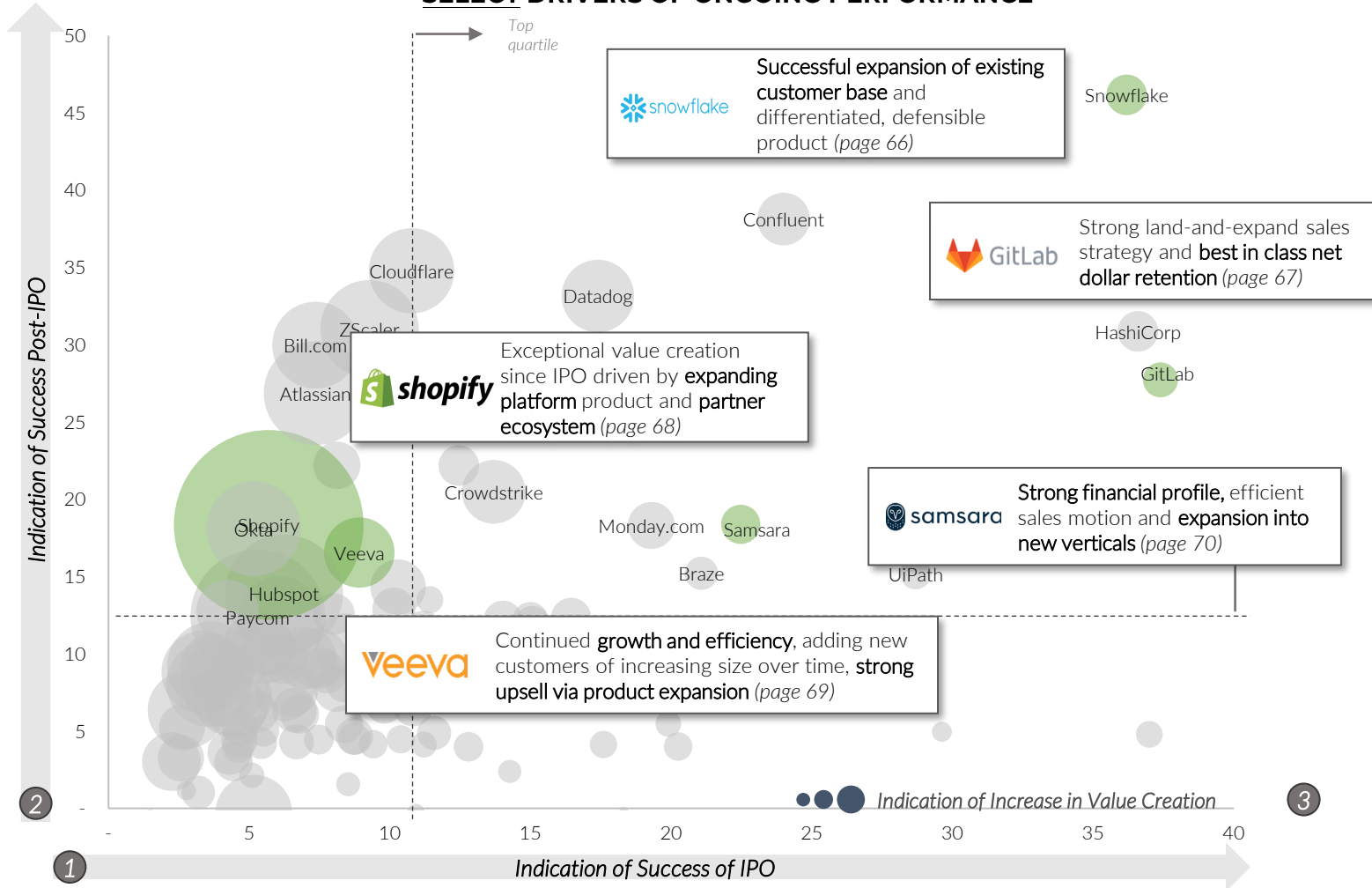
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## SELECT DRIVERS OF ONGOING PERFORMANCE



## Drivers of Ongoing Performance

Top performers post IPO are able to demonstrate many of the below strengths:

- **Strong top-line growth** by successfully capturing new customers or retaining and growing the existing customer base
- Stable cash flow and at least **clear path to profitability within 1-2 years post IPO**
- **Product driven innovation** that enables the company to provide **differentiated solutions** to meet customer needs
- Ability to consistently **beat quarterly estimates** and **raise expectations** for future growth

Additional detail on top 3 horizontal and top 2 vertical SaaS IPOs provided as case studies in the [Appendix](#)

Notes: (1) "Current" represents data as of 1/31/2022; (2) Forward multiples based on NTM Revenue from Wall Street Research and Investment Banking materials from Morgan Stanley and Goldman Sachs (3) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials (4) % Change in stock price from IPO date to 1/31/2022 divided by the % change in S&P over same time period  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Beat and Raise: Key Considerations

One way for companies to perform well in the public market and raise multiples is by managing their “beat and raise” each quarter

01

## What is “beat and raise”?

- Analysts' consensus forecasts and a company's own guidance estimates are used to establish a **benchmark with which to evaluate actual earnings results**
- A “beat” refers to **quarterly actuals exceeding original estimates** while a “raise” refers to an **increase in management’s guidance for future quarters**

02

## Why is it important?

- A company’s ability to meet and beat quarterly guidance estimates signals **visibility into future performance, strong growth prospects** as well as an **internal financial and operational rigor** to accurately forecast and meet market demand
- Thus, a company’s ability to “beat and raise” is strongly **correlated to public market performance**

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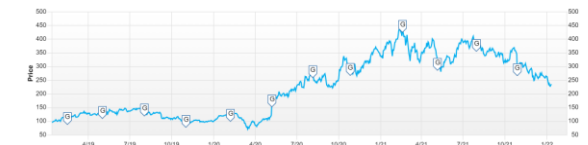
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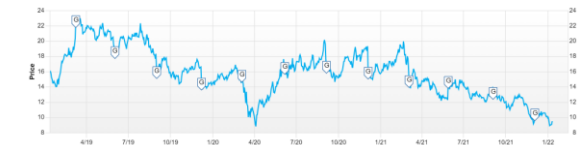
## Key Considerations

- **Private companies nearing IPO** should be able to exceed short term targets (monthly or quarterly top-line plans) while also **increasing mid-term targets** (annual top-line plan)
- While beating expectations is important, **excessive sandbagging can also be detrimental to performance**
- We usually recommend companies start thinking about this **~2 years before IPO** and build in the **forecasting rigor and appropriate financial models to start thinking like a public company**

## CASE STUDIES



Since IPO, Twilio has consistently had beat and raise quarters with average quarter actuals **beating management guidance by 9.8%**. This has contributed to **significant price gains of 713%** since IPO.



Since IPO, Yext has not been able to consistently beat plan and further raise expectations, with average quarter **actuals barely beating management guidance by 2.2%**, which is reflected in its **price decline of -30%** since IPO.

Coming soon: Leadership Analytics study on CFOs – Reach out to an ICONIQ Growth team member for access

# Beat and Raise: Performance by Quarter

Software companies consistently beat consensus estimates and management guidance each quarter after IPO; over time, the beat against consensus and guidance start to plateau and converge as forecasting improves

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## % BEAT EACH QUARTER AFTER IPO

% increase above revenue guidance, Factset

Software companies *consistently* beat consensus estimates each quarter after IPO by a **median of 4.9%** and management guidance by a **median of 3.7%**.

Over time, and as forecasting abilities are further honed, beat against consensus and guidance start to converge to around **3-5%** for average companies and **5-8%** for top performers.

Beat against Management Guidance

Top Performers

Median: 5.1%

All Companies

Median: 3.7%

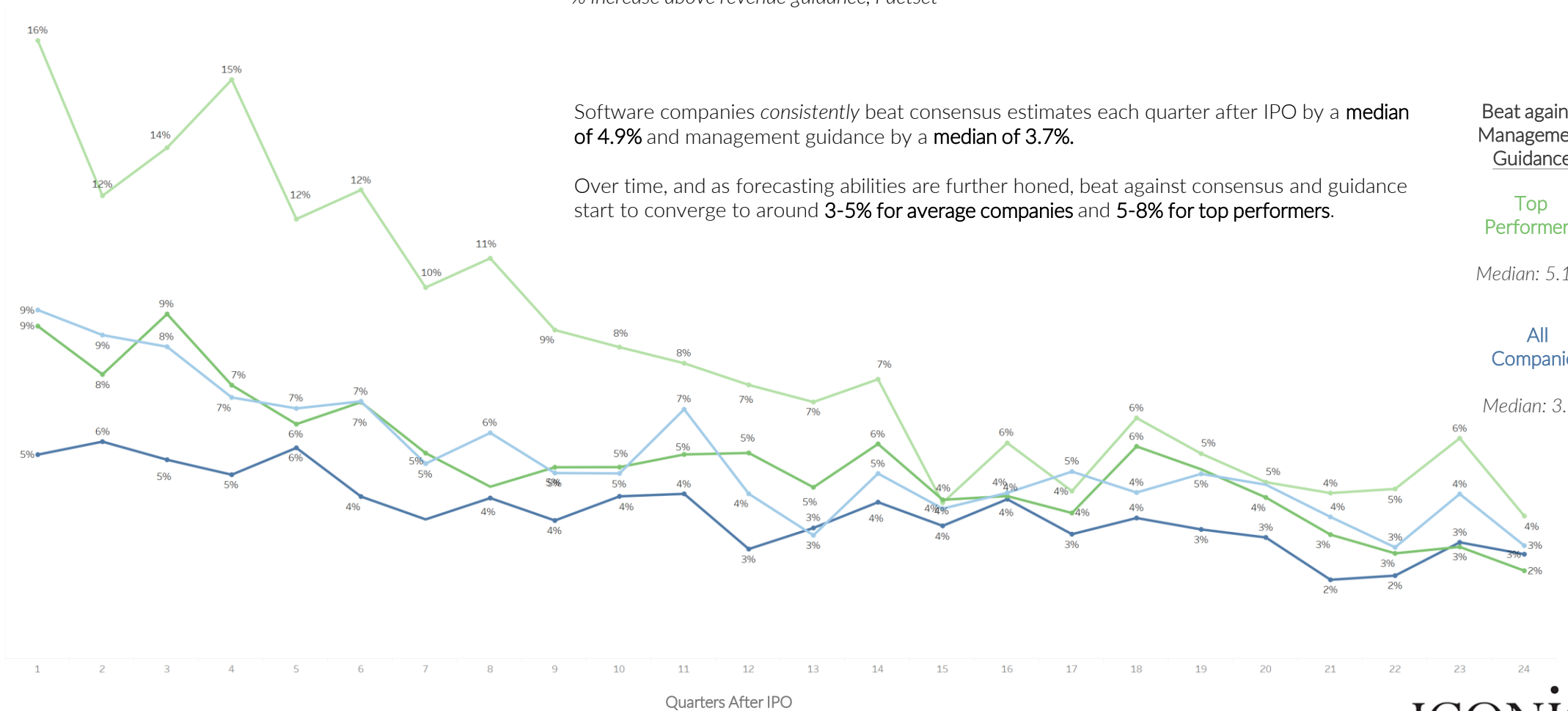
Beat against Consensus

Top Performers

Median: 7.3%

All Companies

Median: 4.9%





02

# 2021 TRENDS

# Key 2021 Trends

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## UNPRECEDENTED DEAL VELOCITY

Pent-up demand from robust private markets and a frothy public market led to a **historic number of SaaS companies going public in 2021**. This deal velocity was also driven by several IPOs that got pushed from 2020 due to the pandemic and companies trying to take advantage of a frothy market and high valuations.

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## INNOVATIONS IN IPO PROCESS

Companies are starting to explore adjustments to the **IPO pricing process and day one liquidity**. Unity used the “Transparent IPO” system from Goldman Sachs which facilitated **blind bidding to determine IPO price** and also allowed for a **small percentage of employee stock to be available on Day 1** to minimize the traditional lock-up period back in 2020.



## IMPORTANCE OF STRATEGIC INVESTORS

We are starting to see the rise of strategic investors who invest in SaaS IPOs via concurrent private placements and offer both **brand name recognition and partnerships** – a continued trend from 2020. Notably in 2021 these included **Zoom’s investment in Monday.com** and **Shopify’s investment and exclusive partnership agreement with Global-E**.



## RISE OF VERTICAL SAAS

**50% of top quartile Rule of 40 companies were vertically focused** – a notable increase that started back in 2020. Vertical SaaS companies also **saw a higher median 1<sup>st</sup> day pop in 2021 than horizontal SaaS peers**, with category leaders like Toast and Doximity going public this past year.

# Software IPOs over Time

While a variety of factors dictate IPO performance, the market has historically rewarded companies with strong, predictable growth and healthy margins. In 2021 however, the market did not respond as strongly to SaaS companies going public with the same business profiles as prior years

## BUSINESS PERFORMANCE VS. IPO AND 30-DAY PRICE PERFORMANCE

Median by IPO Year

IPO Year	Market Cap at IPO (\$Ms)	LTM Revenue YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	Day 1 Pop (%)	30 Day Price Change from Offering (%)
2021	\$3,997	37%	33%	117%	71%	12.5x	24%	26%
2020	\$3,972	35%	33%	114%	70%	10.4x	51%	66%
2019	\$1,799	44%	30%	130%	74%	8.7x	50%	44%
2018	\$1,906	45%	41%	113%	71%	5.6x	42%	50%
2017	\$958	45%	44%	119%	70%	4.2x	11%	25%
2016	\$885	78%	62%	145%	62%	5.2x	85%	58%
2015	\$1,285	81%	65%	108%	70%	5.4x	32%	29%
Pre-2015	\$821	49%	52%	96%	66%	5.5x	41%	47%
Median	\$2503	42%	38%	117%	71%	5.7x	34%	36%

1 While a variety of factors, including industry sentiment and overall equity market performance dictate IPO performance, the market has historically rewarded companies with **strong growth and health margins**. In prior years, top quartile Rule of 40 companies saw a greater offer to 30-day price increase of ~80%, compared to ~40% for all companies. Over the past few years however, there has been a slight degradation in the business profile of companies, with **median revenue YoY growth and Rule of 40 down** compared to pre-2019 IPOs.

2 In 2021, software valuations continued to increase and while the growth and profitability of companies going public remained consistent with 2020, the average stock gains were notably lower. Top quartile Rule of 40 companies saw a **median offer to 30-day price increase of only 25%**, likely due to the frothy markets and elongated pandemic but also arguably an indication of better pricing. The first day pop was also notably lower for SaaS IPOs across the board in 2021, with companies seeing 1<sup>st</sup> day pops as low as -22% and a **median 1<sup>st</sup> day pop of 24%**. Top quartile Rule of 40 companies also saw a lower median 1<sup>st</sup> day pop of 29%.

Additional detail on business performance metrics by company can be found in the [Appendix](#).

# IPO Value Creation by Year

SaaS companies have continued to create meaningful value between the last fundraising round and IPO; however, the IPO on average turned into a down round for the 2021 cohort of companies, with a -12% decline in valuation since IPO as of January 2022

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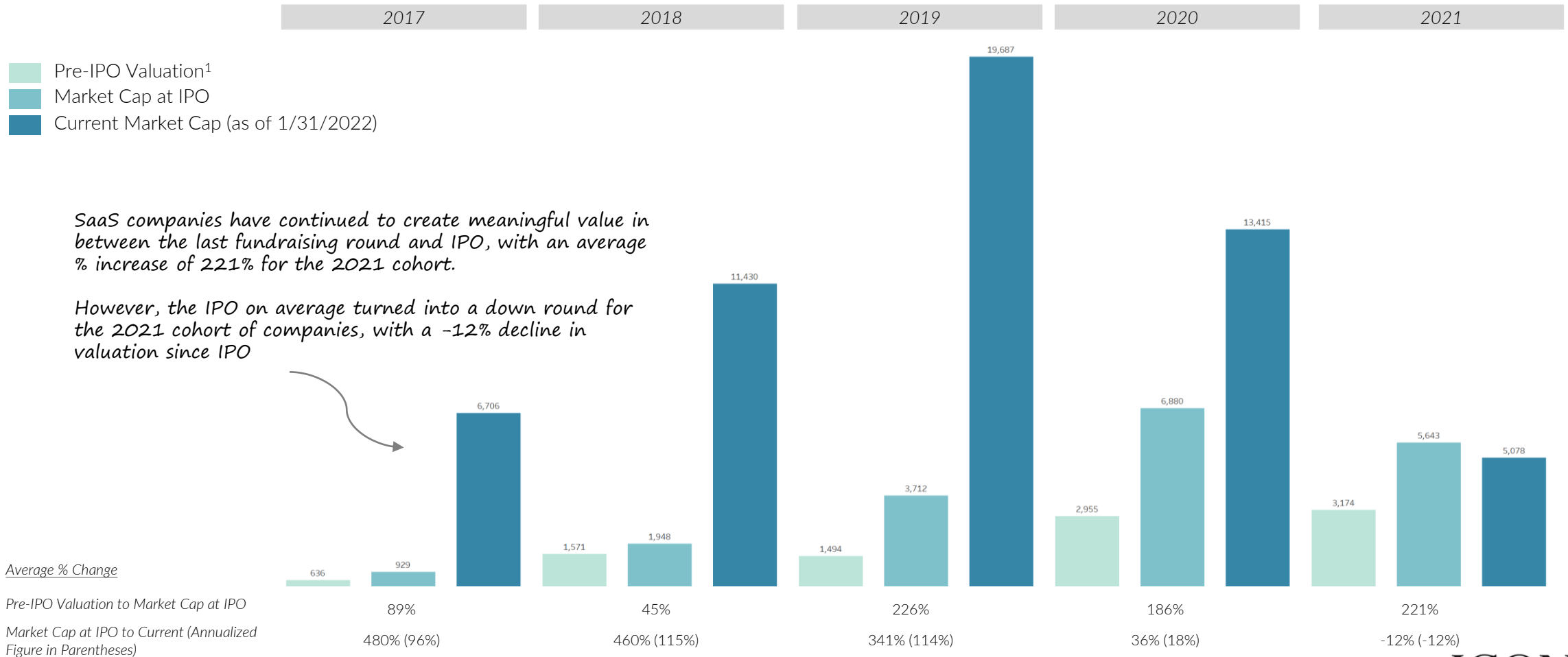
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## IPO Value Creation by Year of IPO (\$M)

Last Private Market Valuation vs. Market Cap at IPO and Present (1/31/2022)



SaaS companies have continued to create meaningful value in between the last fundraising round and IPO, with an average % increase of 221% for the 2021 cohort.

However, the IPO on average turned into a down round for the 2021 cohort of companies, with a -12% decline in valuation since IPO

### Average % Change

Pre-IPO Valuation to Market Cap at IPO

Market Cap at IPO to Current (Annualized Figure in Parentheses)

Notes: (1) Based on Pitchbook deal data which does not include any non-publicly disclosed secondary transactions (2) Information provided as of 1/31/22 Source: Factset, Pitchbook, Public Filings for Software IPO June 2013 to December 2021

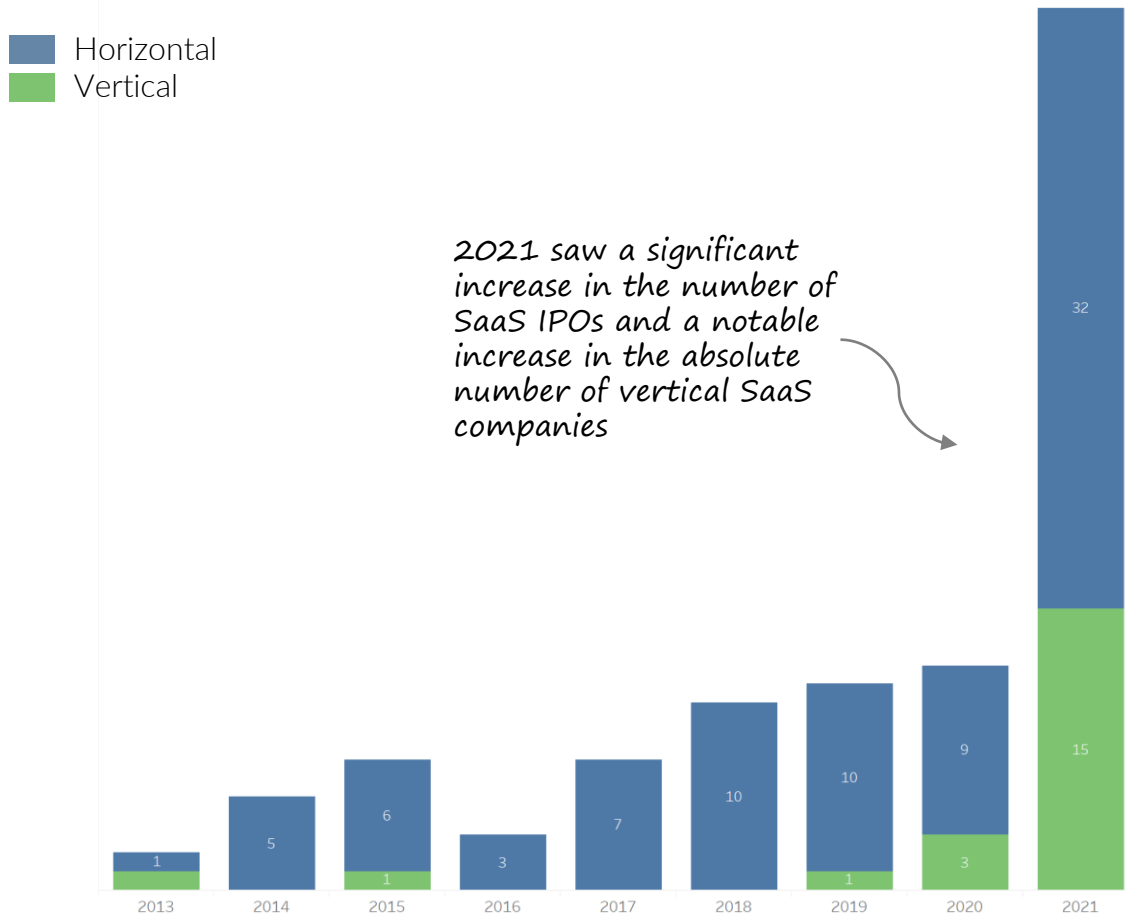


# Software IPO Activity Over Time

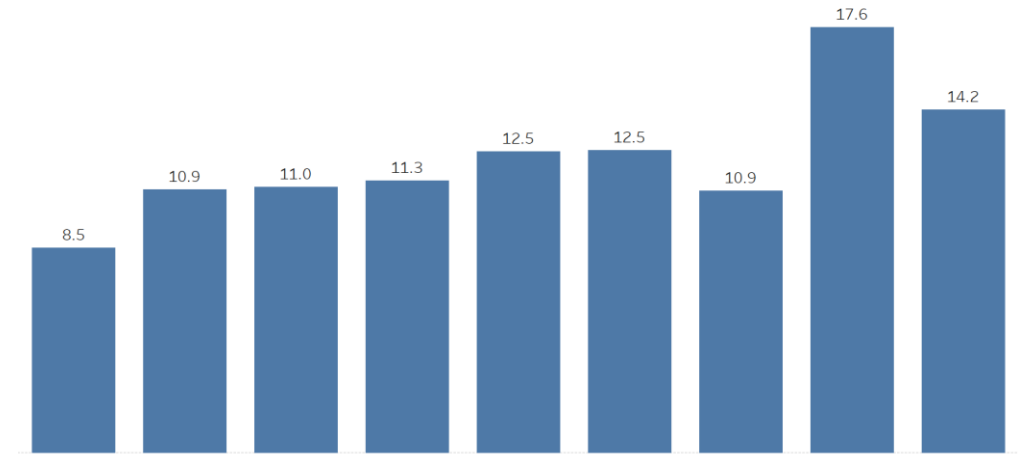
2021 saw a dramatic increase in the number of software IPOs compared to prior years. To IPO in 2021, the average company took ~14 years since founding and raised ~\$400M in funding prior to IPO, an indication of the robust private markets.

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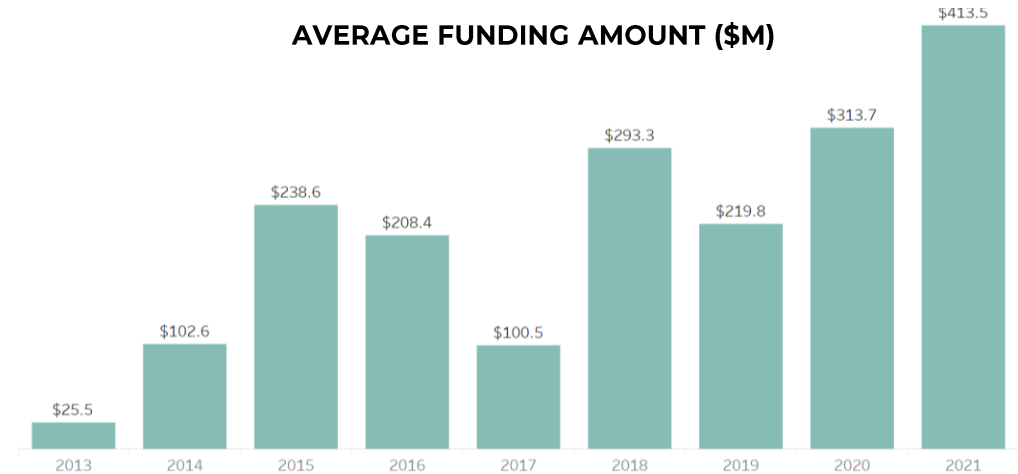
**NUMBER OF SOFTWARE IPOs BY YEAR**



**AVERAGE YEARS FROM FOUNDING TO IPO**



**AVERAGE FUNDING AMOUNT (\$M)**



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Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

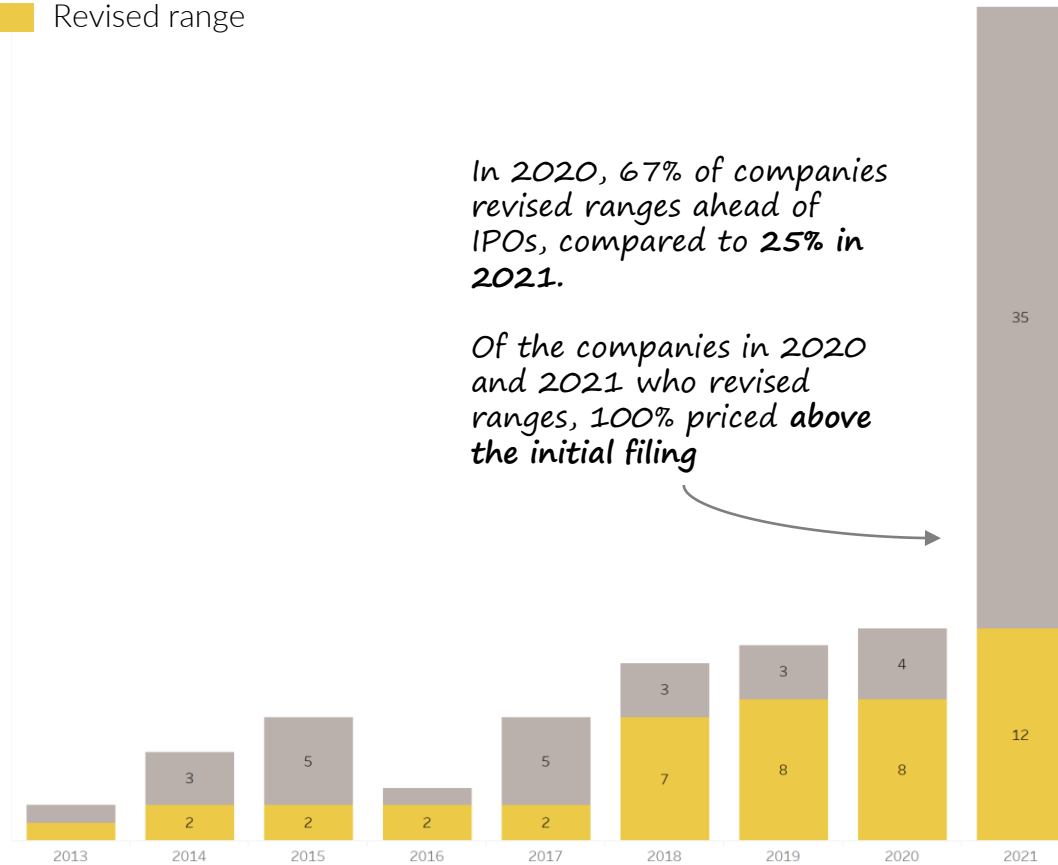
# 2021 TRENDS

## Pricing in 2021

IPOs in 2021 saw a significant reduction in both the percentage of companies who submitted revised ranges ahead of their IPOs as well as the difference between the 1<sup>st</sup> day close from the original filing and offer prices, signaling perhaps better pricing and/or weaker public fervor towards SaaS IPOs

### NUMBER OF SOFTWARE COMPANIES WITH REVISED RANGES

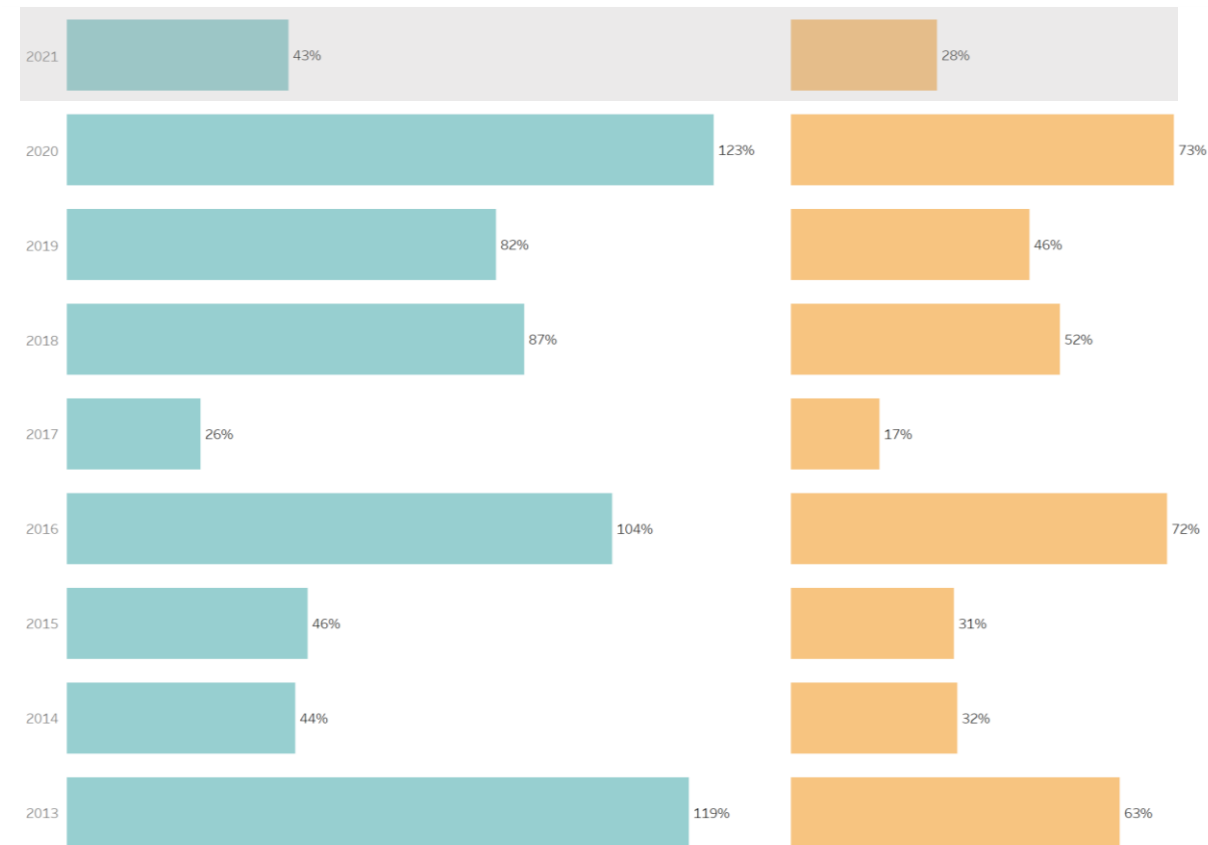
■ Did not revise range  
■ Revised range



### AVERAGE CHANGE IN PRICE % FROM IPO CLOSE TO FILING / OFFER

*% Change from IPO Close to Filing*

*% Change from IPO Close to Offer*



# 2021 TRENDS

## Change from Issue Price



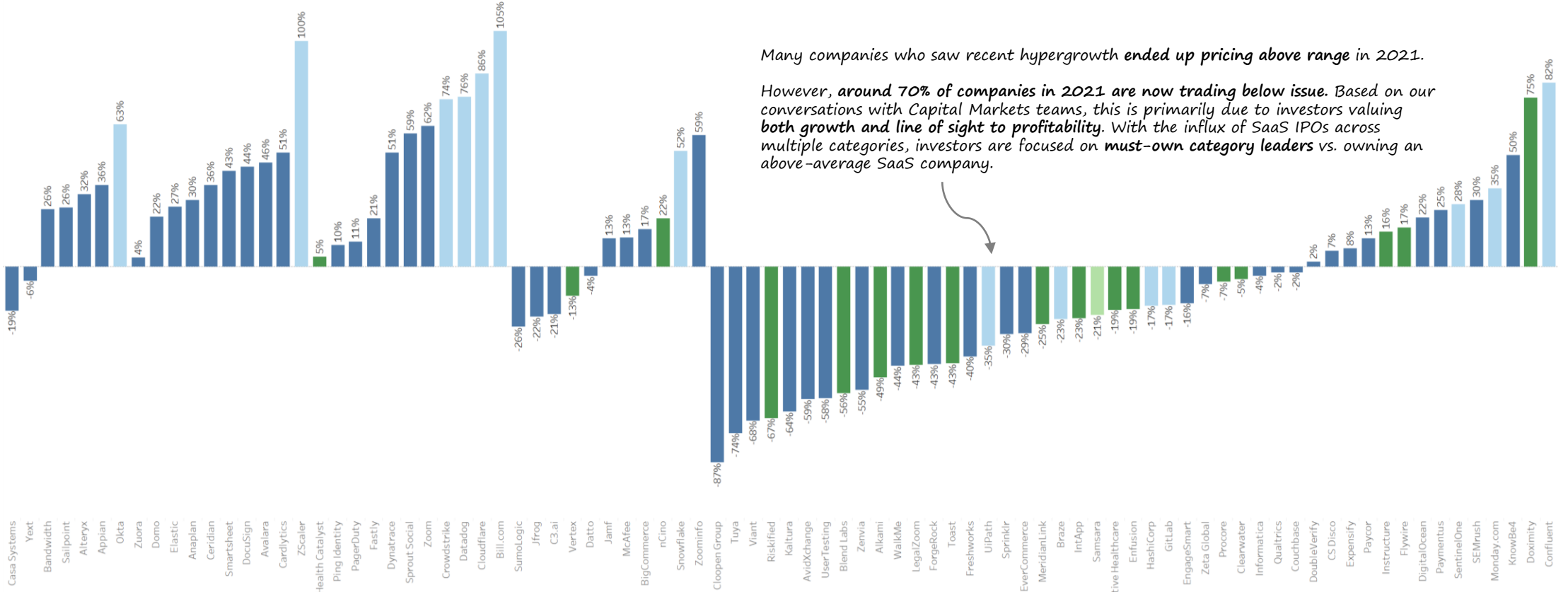
For all IPOs since 2013, check out the interactive Tableau companion tool

2021 saw a significant market contraction, with two-thirds of the companies that went public breaking issue and now trading below original issue price

■ Horizontal SaaS  
■ Horizontal SaaS Top Performers  
■ Vertical SaaS  
■ Vertical SaaS Top Performers

**Issue Price to Current Price CAGR % (as of 1/31/22)**  
By Year of IPO

	2017	2018	2019	2020	2021
Avg CAGR:	23%	40%	51%	1%	-16%
% Trading Below Issue:	29%	0%	0%	45%	70%



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# Paths to the Public Market

Direct listings and SPACs have become a viable route to the public markets for software companies in recent years; however, the number of enterprise software companies choosing these options remains limited

## ALTERNATIVE AVENUES TO THE PUBLIC MARKET

- As a continued trend from 2020, a handful of software companies chose to go public via **direct listing** to avoid some of the common **dilution and lock-up issues associated with traditional IPOs**
- **The number of completed enterprise SaaS SPACs continues to remain low** and acquisition targets are commonly those with weaker growth and margin profiles
- As the percentage of software companies choosing to go public via traditional IPOs continues to make up the **notable majority of public exits**, we will **continue to focus this study on traditional IPOs until we have a meaningful sample size of SaaS direct listings or SPACs**

## SELECT CASE STUDIES



- Reasons cited for choosing a direct listing included making sure they did not underprice and giving existing shareholders liquidity without a lock-up period
- Amplitude also raised a private financing round a few months before their direct listing at \$32 / share
- Amplitude closed at \$54.8 on its first day of trading, which means the company still underpriced its last round and suffered from the same dilution problem as traditional IPOs



- ServiceMax merged with Pathfinder Acquisition Corp, a blank-check company sponsored by HGGC and Industry Ventures
- Reasons cited by the CEO included the speed of IPO facilitated by a SPAC and additional capital, which enabled ServiceMax to acquire LiquidFrameworks

# SPAC and Direct Listing Performance

SaaS Direct Listings and completed SPAC returns after going public in 2021 have been lower compared to traditional IPOs

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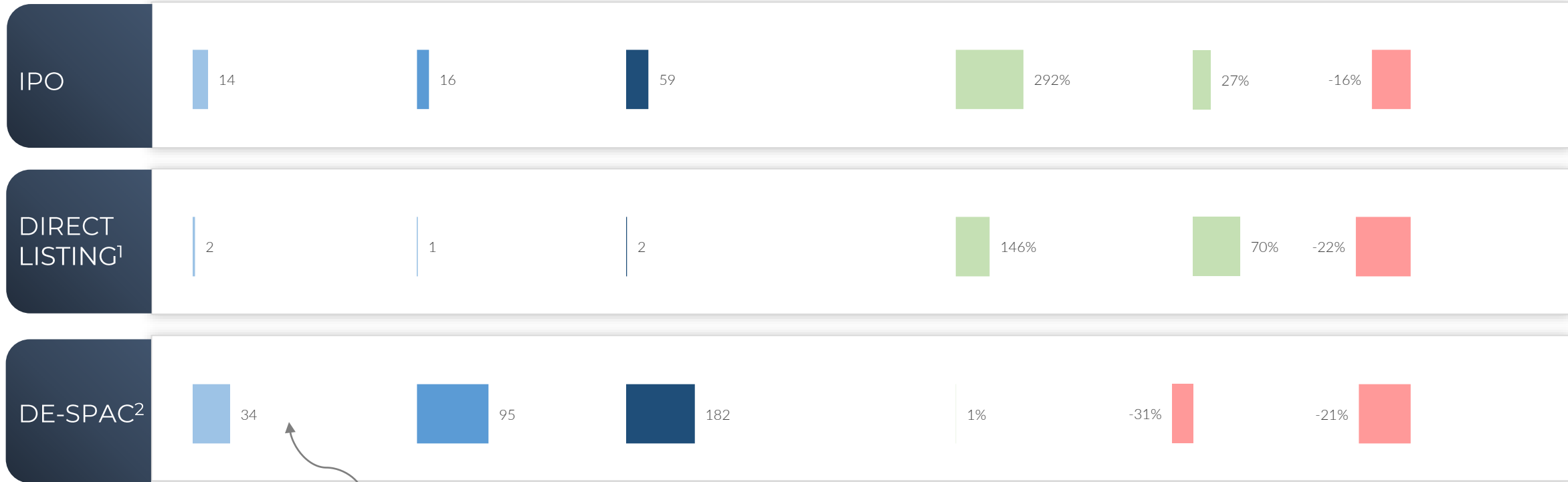
## SOFTWARE IPOs VS DIRECT LISTINGS VS "DE-SPACS"

Count by Year

## AVERAGE RETURNS OVER TIME

% Change in Price from Offer to Current (1/31/21)

2019      2020      2021      2019      2020      2021



De-SPAC number shown is total across all industries given difficulty identifying true completed software SPACs

# 2021 TRENDS

## Hybrid Auctions

In addition to direct listings and SPACs, hybrid auction IPOs have also become a more popular way to navigate some of the challenges associated with traditional IPOs

- In recent years, technology companies have started to explore **innovations to the IPO process** to address some of the challenges associated with traditional IPOs
- A **hybrid IPO**, which uses an **auction process to gauge demand for the offering**, has slowly started to become a more common option for companies to **avoid “leaving money on the table”**
- However, it seems the hybrid auction process can continue to be improved as **Unity, DoorDash, and Airbnb** still saw **notable jumps on the first day of trading**
- It is also worth noting that we haven’t seen **any enterprise SaaS companies** pursuing the hybrid IPO process yet

### HYBRID AUCTIONS

Count by Year



### SELECT CASE STUDY



Hybrid Auction

- In Sept 2020, Unity Software went public using a **hybrid IPO-auction offering**
- Reasons cited by the CEO included wanting the offering to be **data-driven and transparent, especially around pricing allocations**
- Using Goldman Sachs’ Transparent Order Platform, **prospective investors were able to submit blind indications** (both price and quantity)
- Unity also allowed for a **small percentage of employee stock to be made available on the first day**, enabling early employee liquidity (vs. the traditional 180-day lockup)
- Unity still saw a **31% day-one “pop”**, which the CEO suspects was due to a significant number of shares being **allocated to long-term investors** which may have driven up demand

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# DRIVING ONGOING PERFORMANCE

1. Scorecard
2. Revenue and YoY Growth
3. Rule of 40
4. Profitability
5. Equity Raised vs Burn
6. Net Dollar Retention
7. Operating Expenses
8. Headcount
9. Years to IPO
10. Market Cap
11. IPO Sizing
12. Liquidity

# Business Performance vs. IPO Multiples

Across all companies, initial IPO performance (forward multiple at time of IPO) is correlated with factors spanning scale, growth, retention, and profitability. With the latest cohort of IPOs, IPO performance has become most closely linked to net retention – a shift from previous years where Rule of 40 was the most highly correlated

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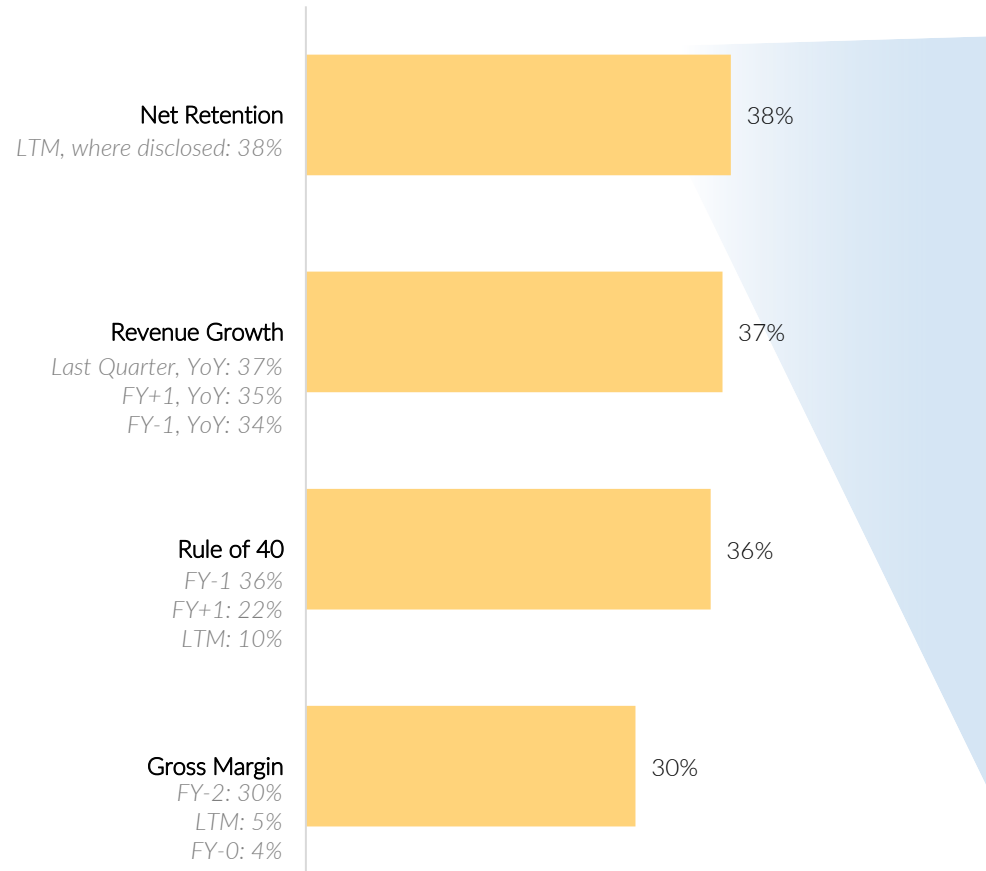
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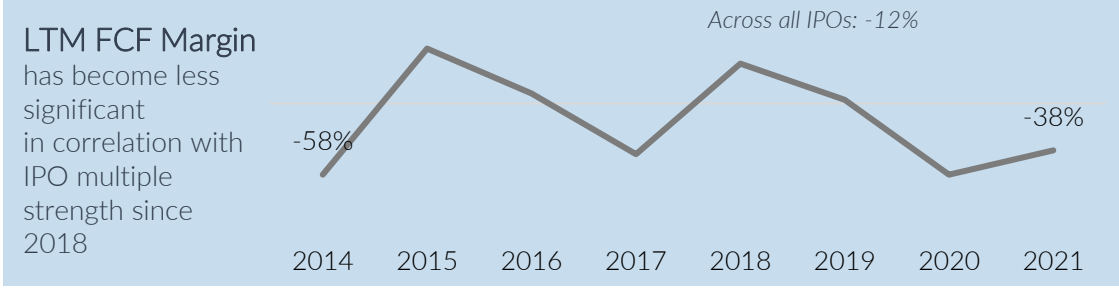
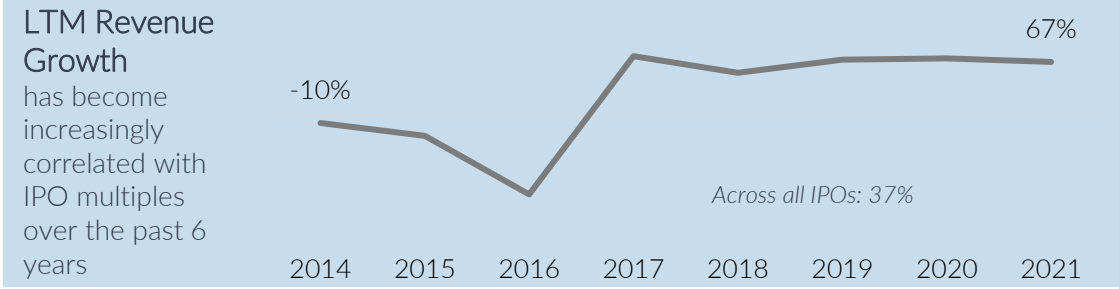
## FACTORS MOST POSITIVELY CORRELATED WITH FORWARD MULTIPLE AT TIME OF IPO

Correlation Coefficient (R) with Company IPO Multiple



### Rule of 40: Growth vs. Profitability and directional change in relevance over time

Correlation by each variable by year of IPO



From a multiple standpoint, public markets continue to value growth over profitability but there has been a slight shift in the past year where profitability has become increasingly correlated to IPO performance, perhaps driven by volatile markets and the rising importance of business predictability to investors



# Becoming a Public SaaS Company

We can examine business performance leading up to IPO across five key metrics: scale, growth, FCF margin, Rule of 40, and net dollar retention – some of which have tighter ranges as it relates to successful IPOs than others

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## RECENT SOFTWARE IPOs: COMPANY PERFORMANCE ACROSS FIVE KEY METRICS

	Revenue (\$M, LTM)		Revenue Growth (% YoY, LTM)		FCF Margin (% Revenue, LTM)		Rule of 40 (LTM Revenue YoY Growth + LTM FCF Margin, %)		Net Dollar Retention (% , LTM)	
	Median	Range	Median	Range	Median	Range	Median	Range	Median	Range
Top Performer	~\$188	\$94 - \$608	~73%	40% - 138%	~(19%)	(82%) - 21%	~51%	7% - 121%	~124%	90% - 187%
Horizontal SaaS	~\$177	\$74 - \$2,745	~42%	3% - 239%	~(8%)	(133%) - 35%	~38%	(88%) - 184%	~117%	89% - 181%
Vertical SaaS	~\$201	\$54 - \$1,183	~41%	11% - 98%	~8%	(45%) - 58%	~39%	7% - 119%	~115%	100% - 187%

Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Scale and Growth: LTM Revenue & YoY Growth

Historically, vertical SaaS companies have IPO-ed at a smaller scale threshold than horizontal SaaS companies. However, 2021 saw a cohort of strong vertical SaaS companies with significant scale leading up to IPO such as Toast and Procore

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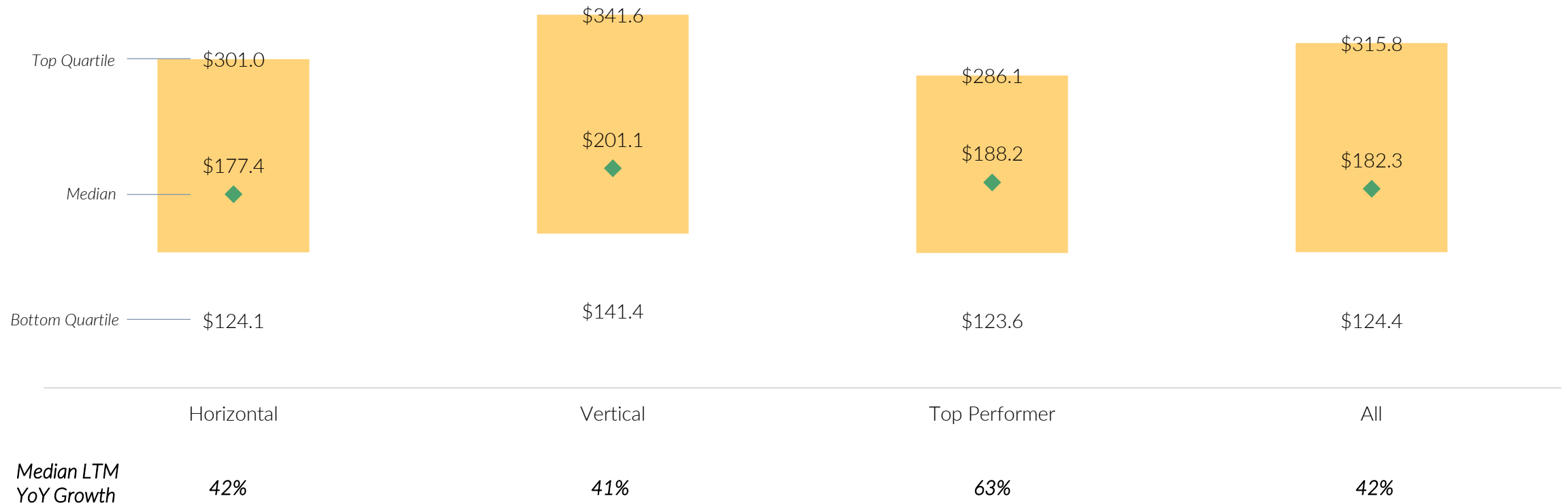
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## SCALE AND GROWTH: REVENUE AND YOY GROWTH AT TIME OF IPO

LTM Revenue (\$M) and YoY Growth (%), Enterprise SaaS IPOs Since 2013



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Scale and Growth: LTM Revenue



For all IPOs since 2013, check out the interactive Tableau companion tool

On average, vertical SaaS companies and horizontal SaaS companies in the infrastructure & security sector had the highest scale leading up to IPO

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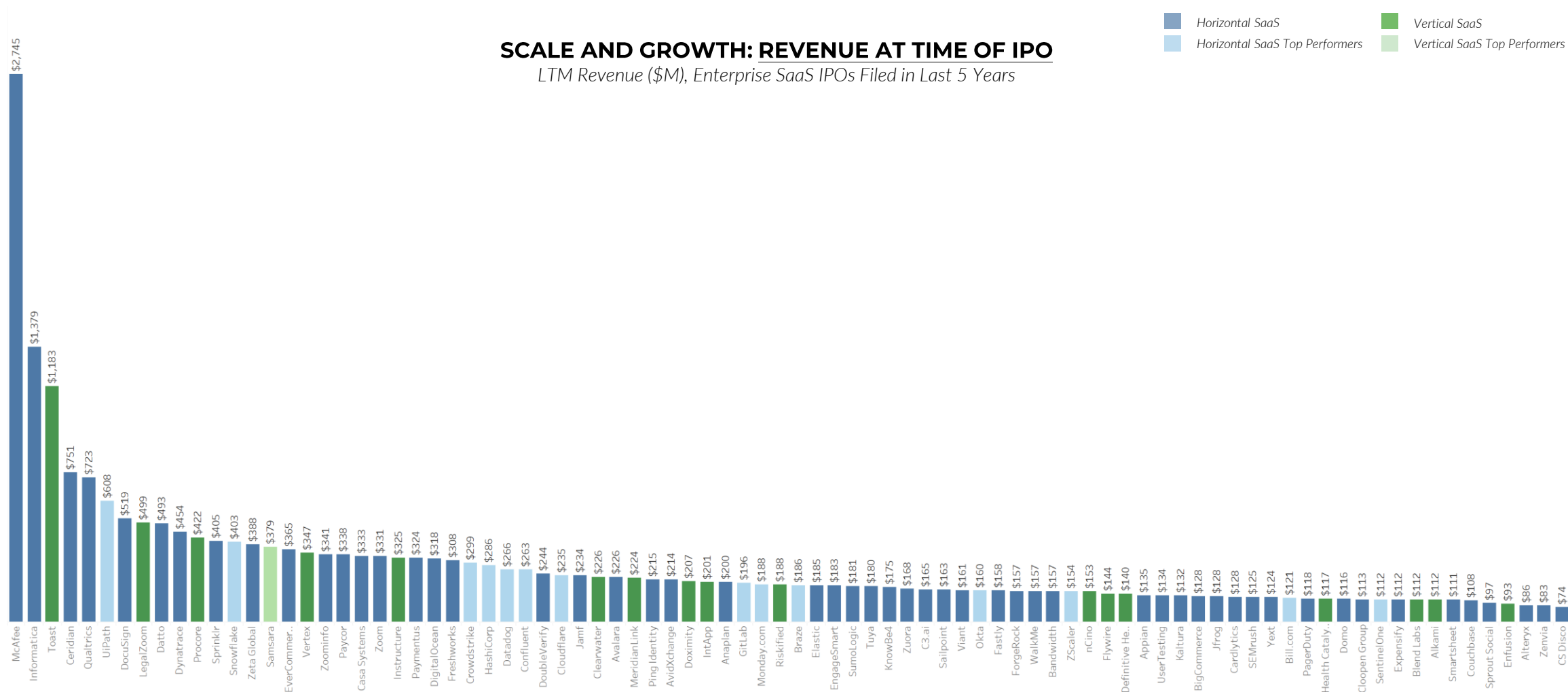
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### SCALE AND GROWTH: REVENUE AT TIME OF IPO

LTM Revenue (\$M), Enterprise SaaS IPOs Filed in Last 5 Years

- Horizontal SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS
- Vertical SaaS Top Performers



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Scale and Growth: YoY Growth



For all IPOs since 2013, check out the interactive Tableau companion tool

Software companies see a median growth rate of 40% YoY prior to IPO, with top performers seeing growth rates as high as 138%

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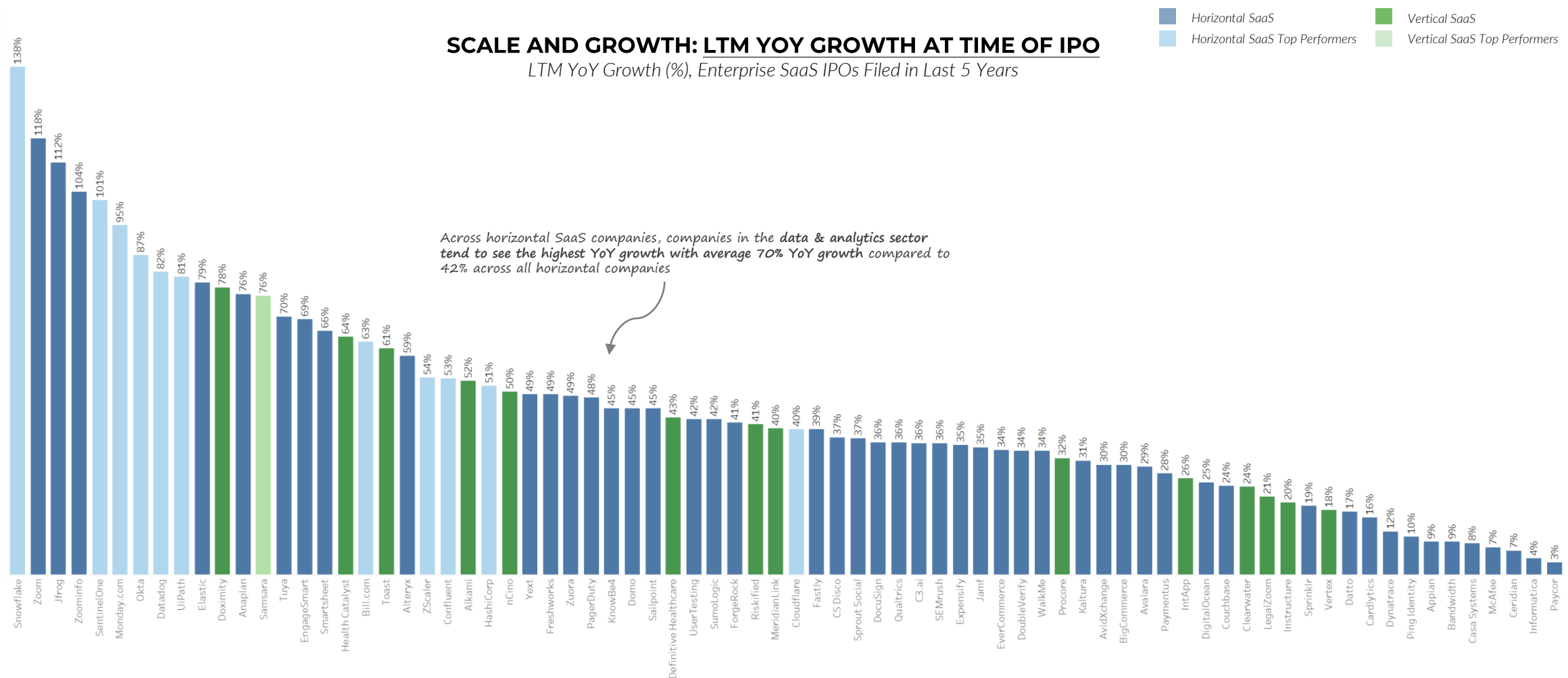
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### SCALE AND GROWTH: LTM YOY GROWTH AT TIME OF IPO

LTM YoY Growth (%), Enterprise SaaS IPOs Filed in Last 5 Years

- Horizontal SaaS
- Vertical SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS Top Performers



Across horizontal SaaS companies, companies in the data & analytics sector tend to see the highest YoY growth with average 70% YoY growth compared to 42% across all horizontal companies

Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

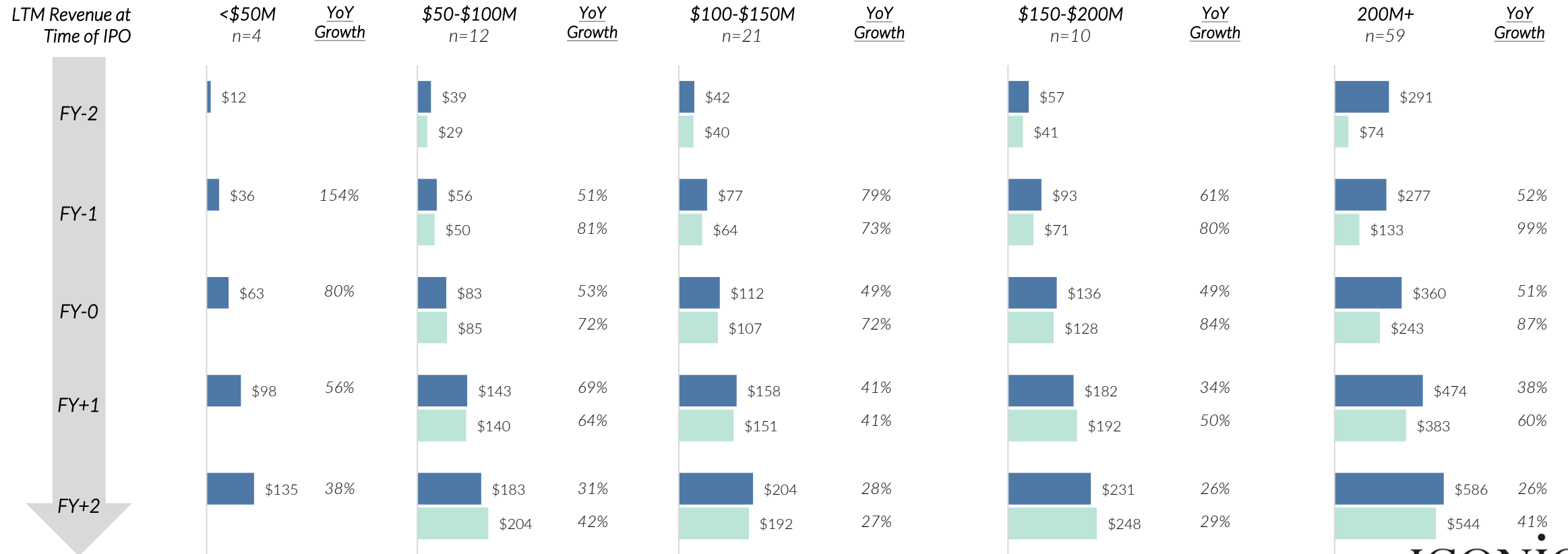
# Scale and Growth: Surrounding IPO

While top performing companies are not always larger than their peers at time of IPO, they typically have stronger growth in the years leading up to IPO and are able to maintain healthy growth trajectories post IPO as well

## SCALE AND GROWTH: AVERAGE LTM REVENUE AND YOY GROWTH BY SCALE AT IPO

Revenue (\$M) and YoY Growth (%) By Scale and Time

■ All Companies  
■ Top Performers



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021



For all IPOs since 2013, check out the interactive Tableau companion tool

# DRIVING ONGOING PERFORMANCE

## Rule of 40: At Time of IPO

While a variety of factors dictate IPO performance, the market has historically rewarded companies with strong growth and healthy margins with an average offer to 30-day performance of ~60% for top quartile Rule of 40 companies

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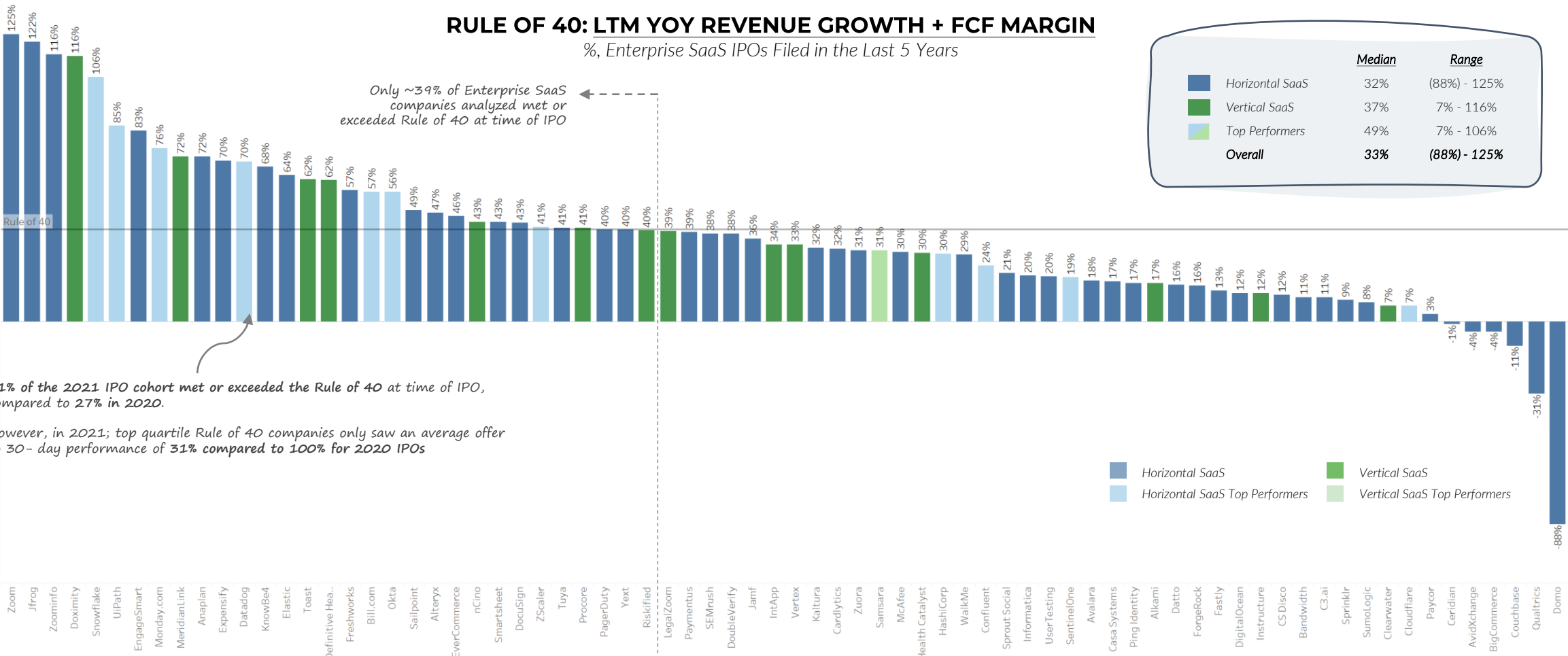
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### RULE OF 40: LTM YOY REVENUE GROWTH + FCF MARGIN

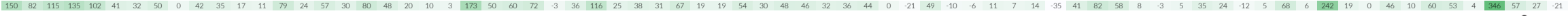
%, Enterprise SaaS IPOs Filed in the Last 5 Years



41% of the 2021 IPO cohort met or exceeded the Rule of 40 at time of IPO, compared to 27% in 2020.

However, in 2021; top quartile Rule of 40 companies only saw an average offer to 30-day performance of 31% compared to 100% for 2020 IPOs

#### Offer + 30 Day Performance (% Change in Price)



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021



# Rule of 40: Growth vs Profitability



For all IPOs since 2013, check out the interactive Tableau companion tool

While the majority of these top performers experienced growth greater than 70% YoY in the year leading up to IPO, only 4 of them were profitable at time of IPO

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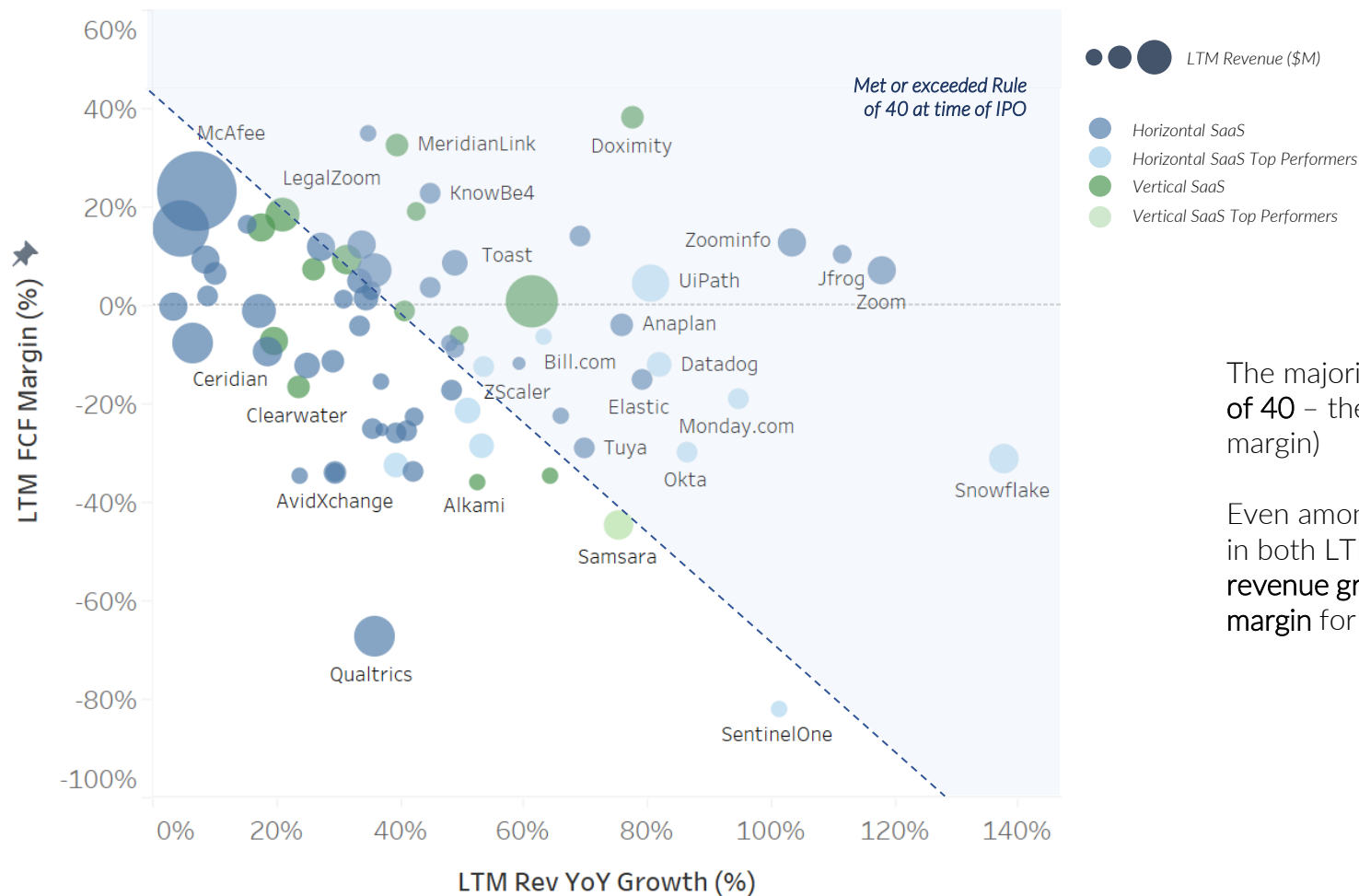
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## RULE OF 40: LTM YOY REVENUE GROWTH + FCF MARGIN

%, Enterprise SaaS IPOs Filed in the Last 5 Years



The majority of top performers **meet or exceed the Rule of 40** – the majority which are driven by growth (vs. FCF margin)

Even amongst top performers, however, there is a range in both LTM growth and FCF margin metrics. **Median revenue growth hovers around ~70% and ~(20%) for FCF margin** for this subset in the year leading up to IPO.

# DRIVING ONGOING PERFORMANCE

## Profitability: Surrounding IPO

Most public software companies are not profitable prior to IPO, with 70% of top performers cash flow negative in the twelve months leading up to IPO

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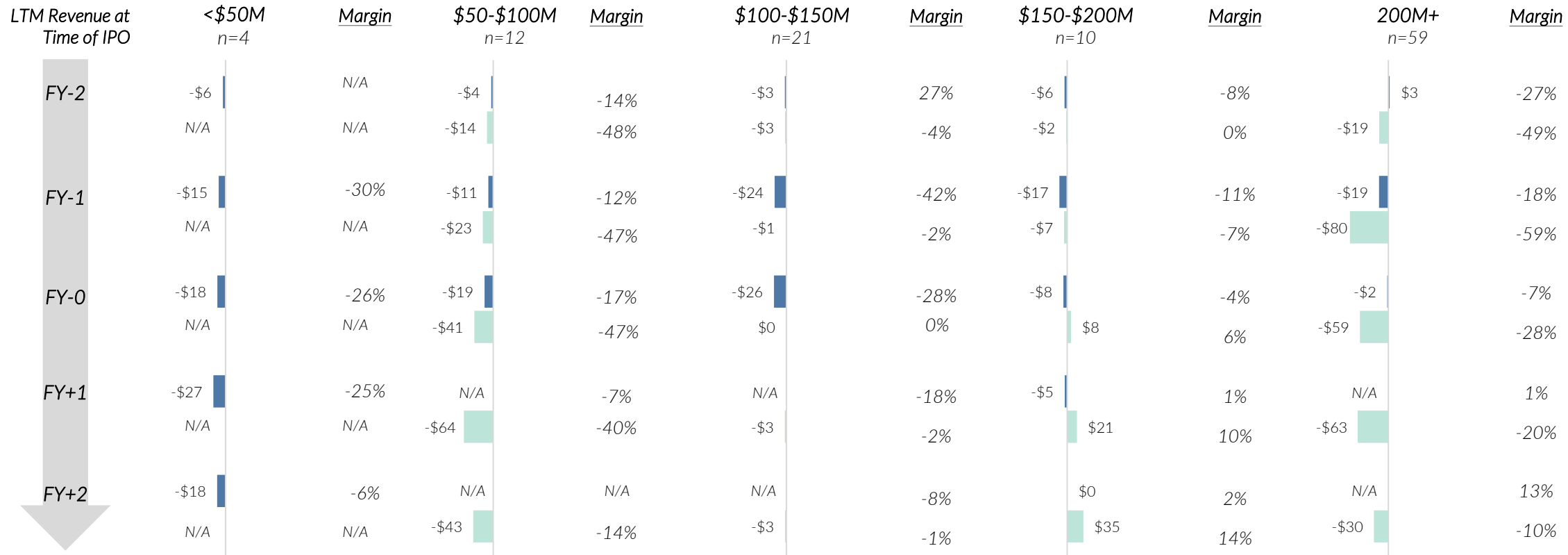
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### PROFITABILITY: AVERAGE FCF BY SCALE AT IPO

FCF (\$M) and Implied Margin (%) By Year and Revenue Range

All Companies  
Top Performers



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021



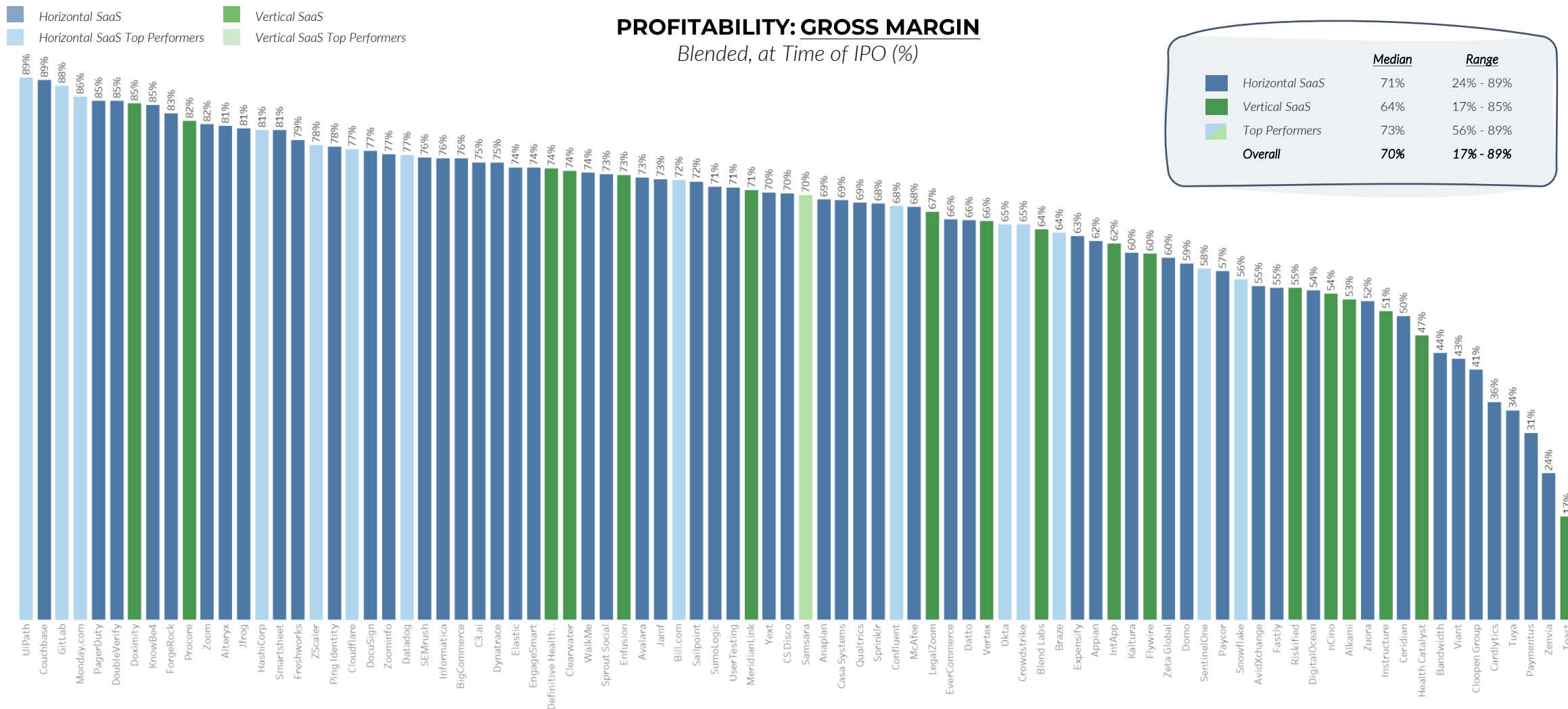
# DRIVING ONGOING PERFORMANCE

## Gross Margin



For all IPOs since 2013, check out the interactive Tableau companion tool

Gross Margin at time of IPO ranges widely with a median of ~70% and vertical SaaS companies typically seeing a lower gross margin than horizontal SaaS peers



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Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021



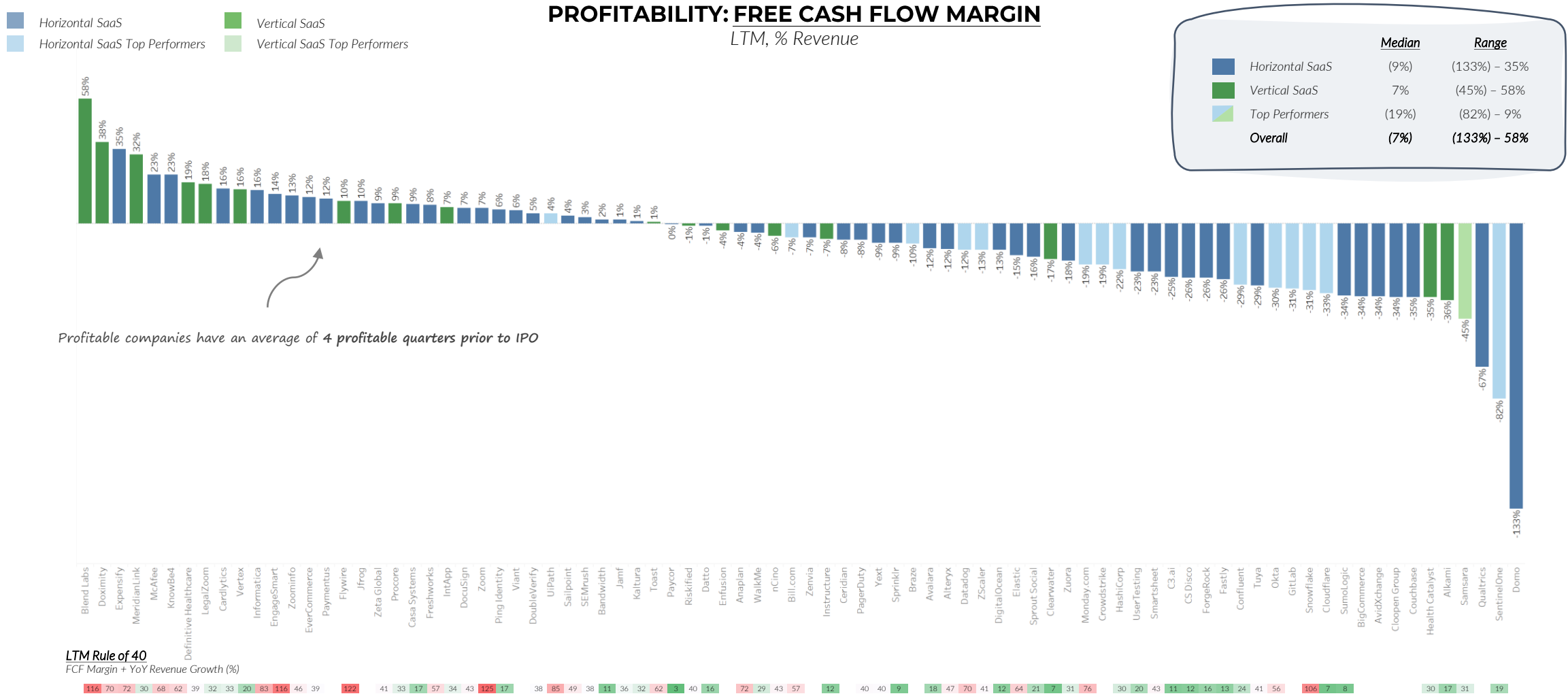
# DRIVING ONGOING PERFORMANCE

## Profitability: LTM FCF at Time of IPO



For all IPOs since 2013, check out the interactive Tableau companion tool

At time of IPO, the majority of software companies are free-cash-flow negative, with only ~43% profitable



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# Profitability: FCF at IPO

However, within two fiscal years of IPO, ~half of public software companies analyzed are FCF positive

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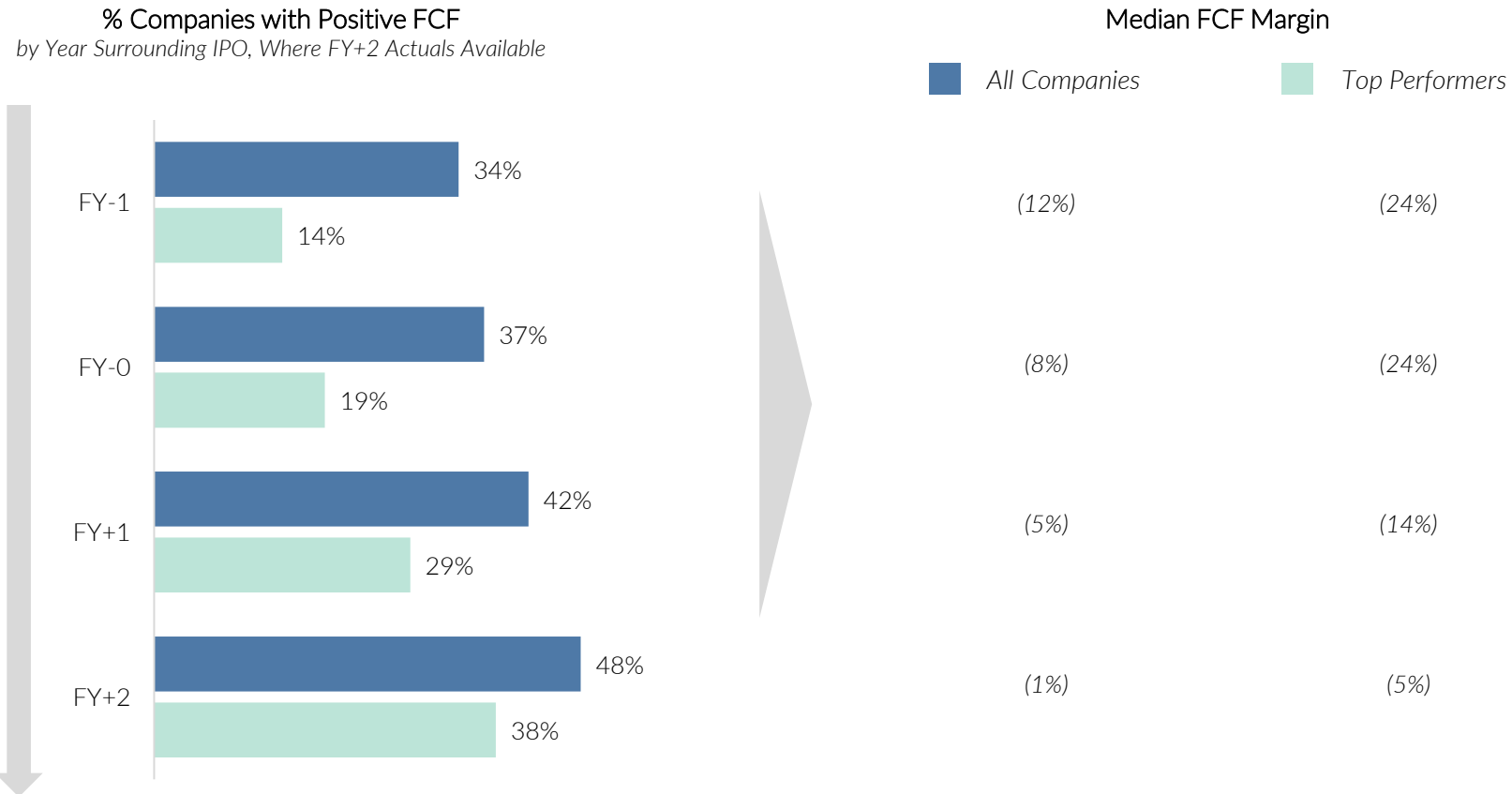
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## PROFITABILITY: FCF BY YEAR SURROUNDING IPO

By Year Surrounding IPO, Where FY+2 Actuals Available



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Equity Raised vs. Burn

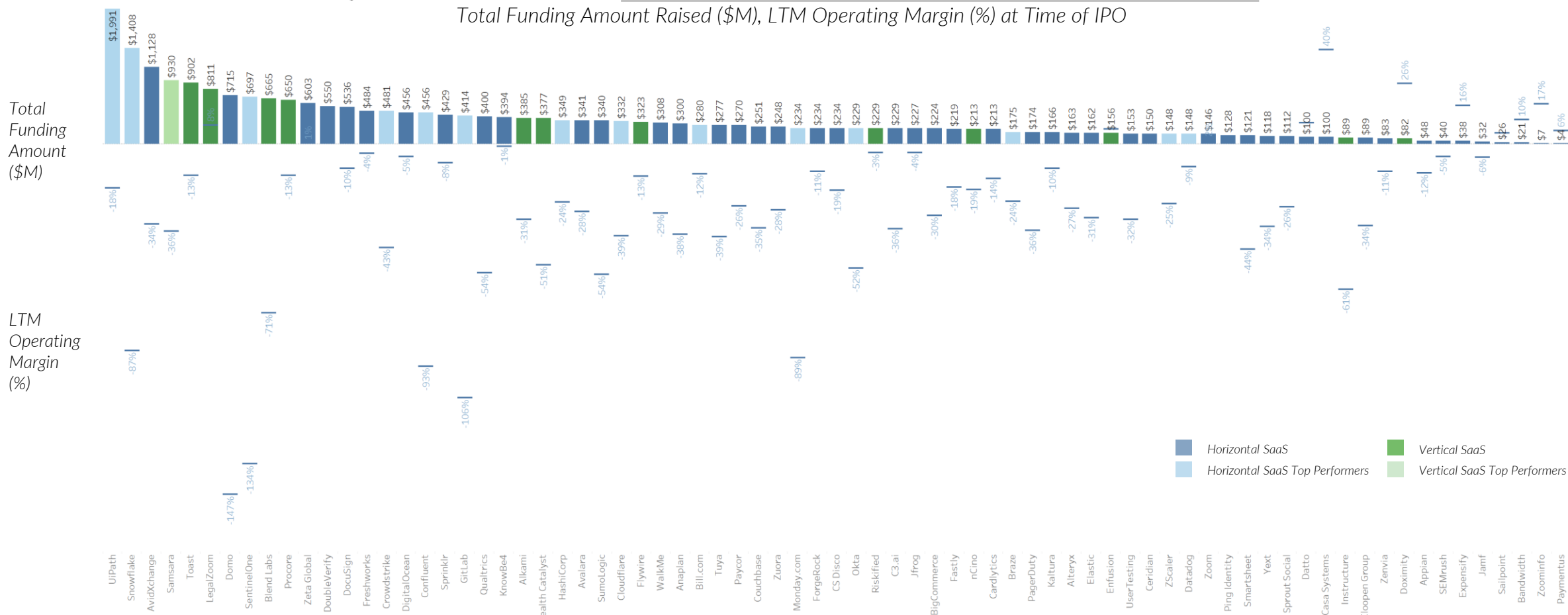


For all IPOs since 2013, check out the interactive Tableau companion tool

SaaS companies raised a median of \$234M prior to IPO with a median LTM operating margin of -19%; not surprisingly, companies who raised more capital prior to IPO were less cash conscious with lower operating margins leading up to IPO

### EQUITY RAISED VS. BURN: TOTAL FUNDING AMOUNT AND LTM OPERATING MARGIN

Total Funding Amount Raised (\$M), LTM Operating Margin (%) at Time of IPO



■ Horizontal SaaS  
■ Vertical SaaS  
■ Horizontal SaaS Top Performers  
■ Vertical SaaS Top Performers

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Total Funding Amount (\$M)

LTM Operating Margin (%)



For all IPOs since 2013, check out the interactive Tableau companion tool

# DRIVING ONGOING PERFORMANCE

## Retention: LTM Net \$ Retention

While average reported net retention likely skews high given the self-selective nature of disclosing this metric, median performance hovers around ~117%, with companies reporting retention as high as ~180% prior to IPO

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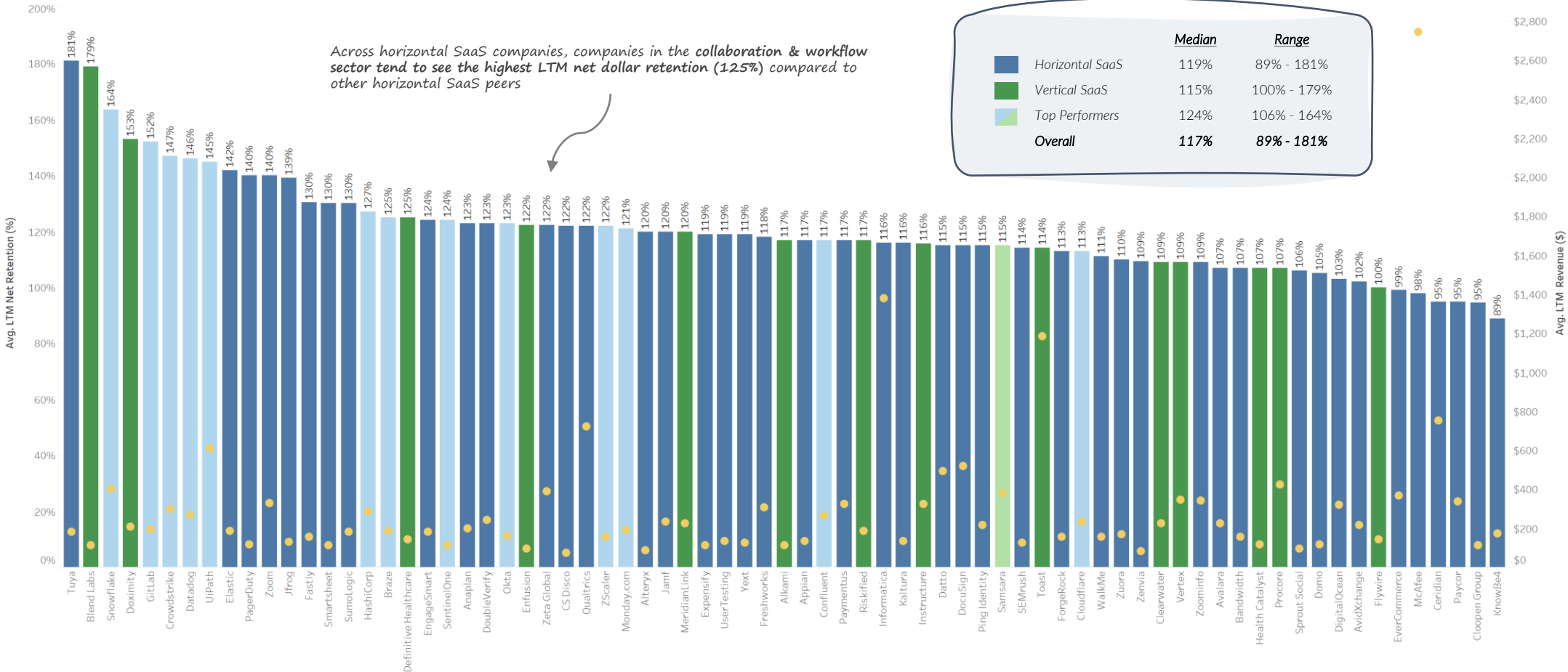
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- Horizontal SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS
- Vertical SaaS Top Performers

### RETENTION: LTM NET \$ RETENTION

LTM \$ Retention (%) and Revenue (\$M), Where Reported



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

LTM Revenue (\$M)



For all IPOs since 2013, check out the interactive Tableau companion tool

# Operating Expenses: LTM OpEx at Time of IPO

Operational efficiency has ranged widely across recent IPOs, but top performers typically have a higher OpEx spend than peers, with total OpEx as a percentage of revenue as low as 53% and as high as 194%

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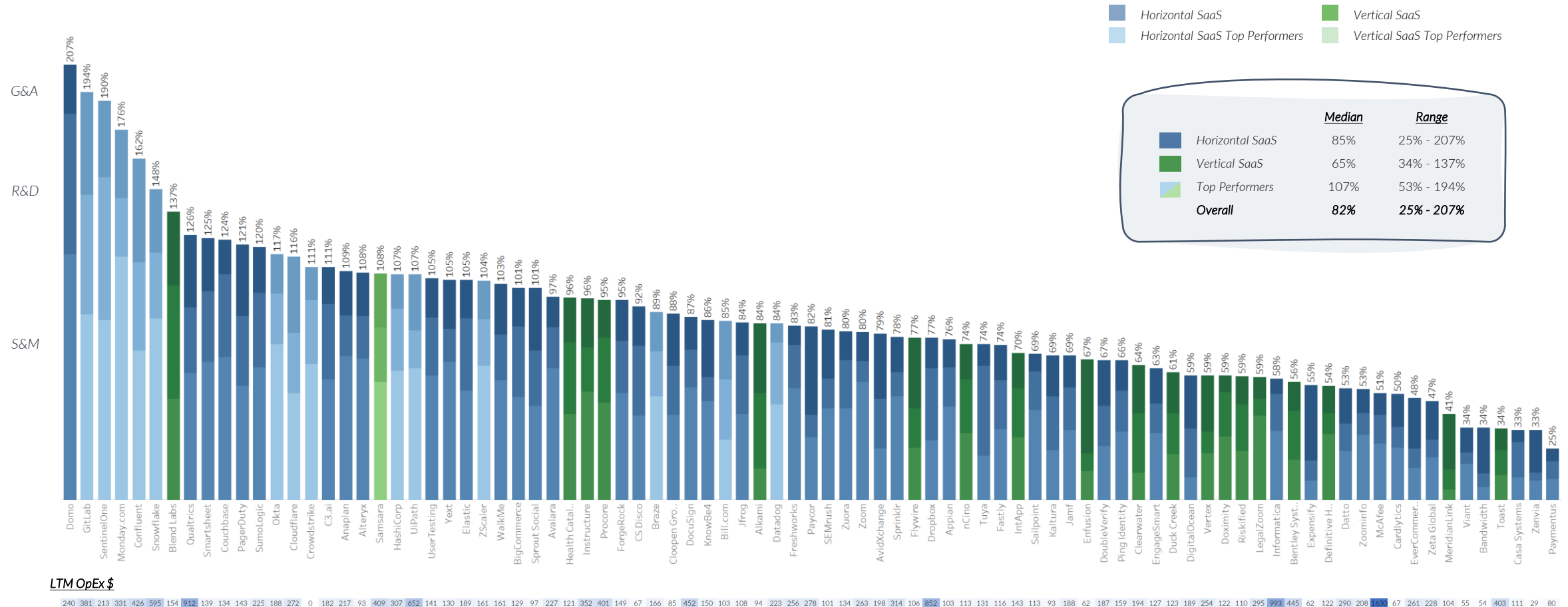
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## OPERATING EXPENSES: TOTAL OPEX AS A % OF REVENUE LEADING UP TO IPO

LTM OpEx Split by Type over LTM Revenue at Time of IPO (%)



# DRIVING ONGOING PERFORMANCE

## Operating Expenses: S&M Detail



For all IPOs since 2013, check out the interactive Tableau companion tool

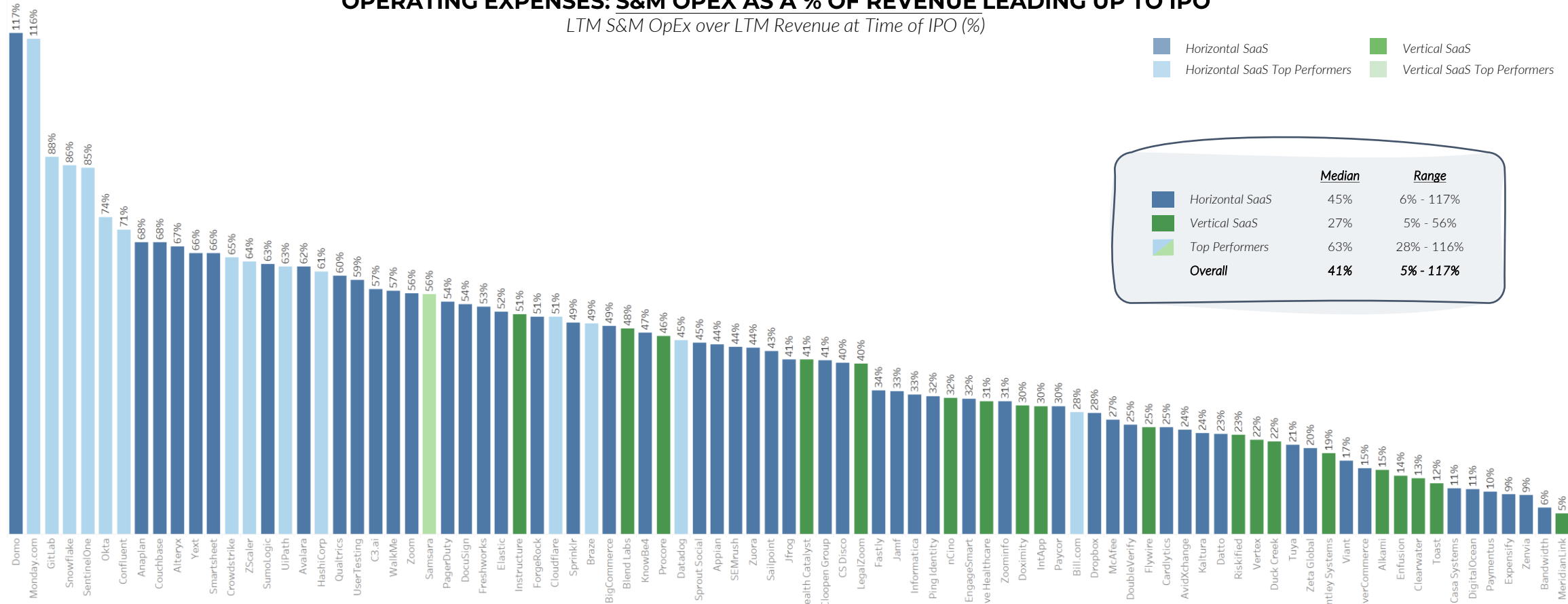
S&M generally makes up the largest portion of total OpEx at time of IPO, at which point businesses have achieved significant leverage in R&D and G&A and are focused on sustaining customer base growth

### OPERATING EXPENSES: S&M OPEX AS A % OF REVENUE LEADING UP TO IPO

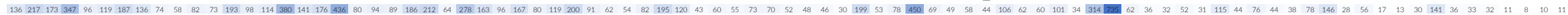
LTM S&M OpEx over LTM Revenue at Time of IPO (%)

- Horizontal SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS
- Vertical SaaS Top Performers

	Median	Range
Horizontal SaaS	45%	6% - 117%
Vertical SaaS	27%	5% - 56%
Top Performers	63%	28% - 116%
<b>Overall</b>	<b>41%</b>	<b>5% - 117%</b>



LTM S&M OpEx \$



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

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For all IPOs since 2013, check out the interactive Tableau companion tool

# DRIVING ONGOING PERFORMANCE

## Operating Expenses: R&D Detail

R&D spend will vary based on product and development cycle, but has historically stayed below ~45% revenue across public software companies analyzed with the exception of a few outliers

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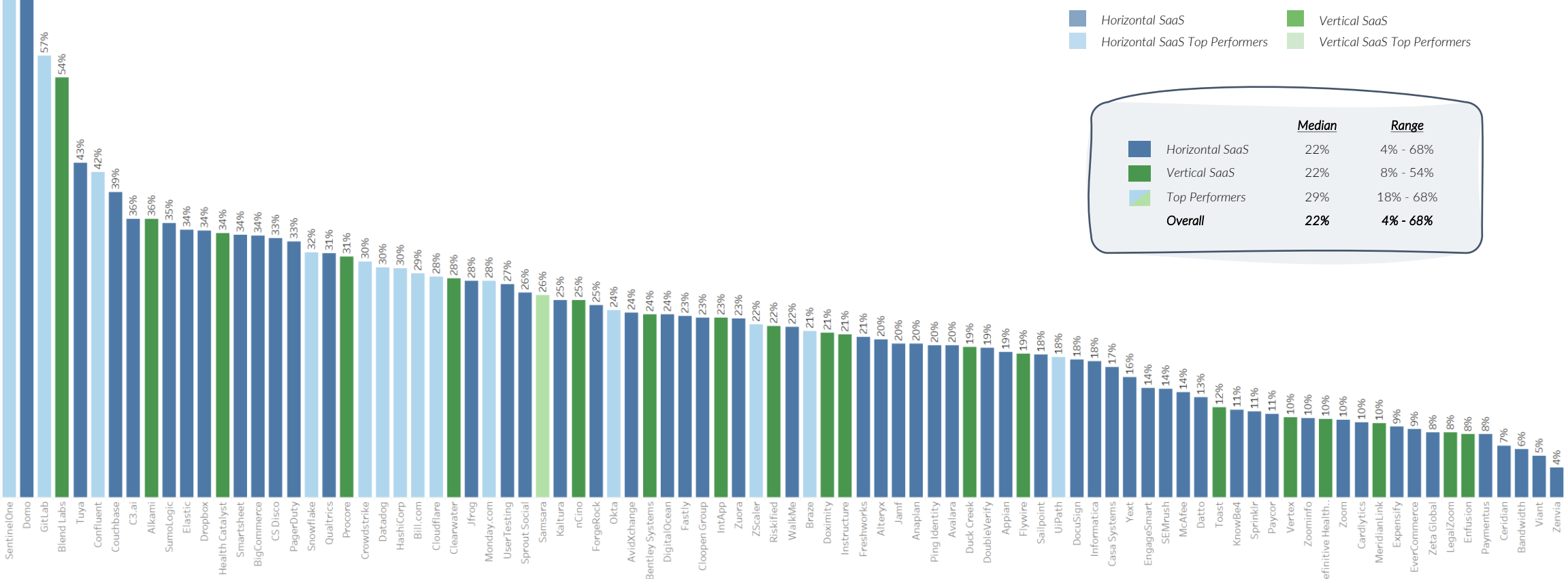
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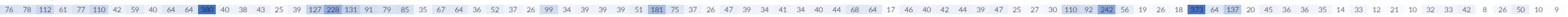
### OPERATING EXPENSES: R&D OPEX AS A % OF REVENUE LEADING UP TO IPO

LTM R&D OpEx over LTM Revenue at Time of IPO (%)



	Median	Range
Horizontal SaaS	22%	4% - 68%
Vertical SaaS	22%	8% - 54%
Top Performers	29%	18% - 68%
<b>Overall</b>	<b>22%</b>	<b>4% - 68%</b>

LTM R&D OpEx \$



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021





# DRIVING ONGOING PERFORMANCE

## Operating Expenses: G&A Detail

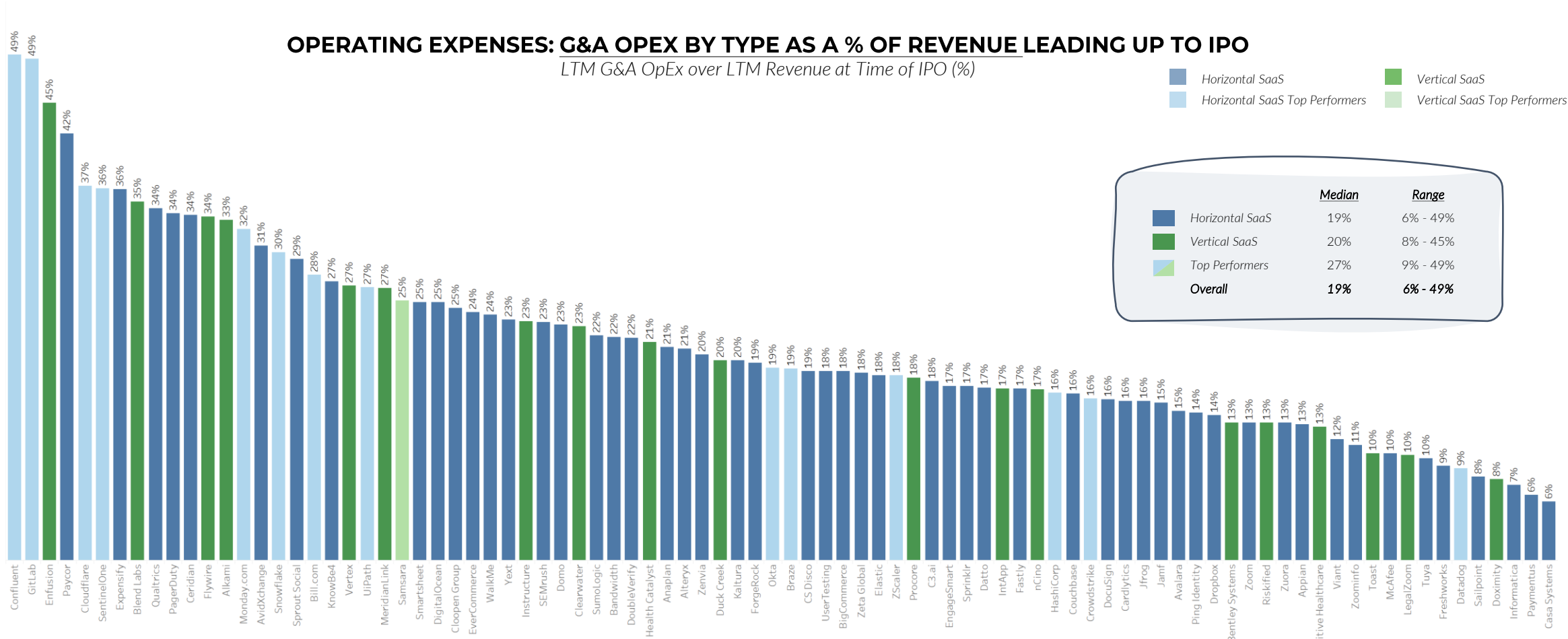


For all IPOs since 2013, check out the interactive Tableau companion tool

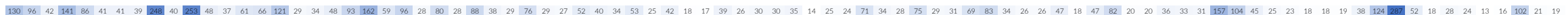
G&A spend is almost always the smallest component of overall OpEx, but also varies quite widely across recent IPOs

### OPERATING EXPENSES: G&A OPEX BY TYPE AS A % OF REVENUE LEADING UP TO IPO

LTM G&A OpEx over LTM Revenue at Time of IPO (%)



#### LTM G&A OpEx \$



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Total Employees



For all IPOs since 2013, check out the interactive Tableau companion tool

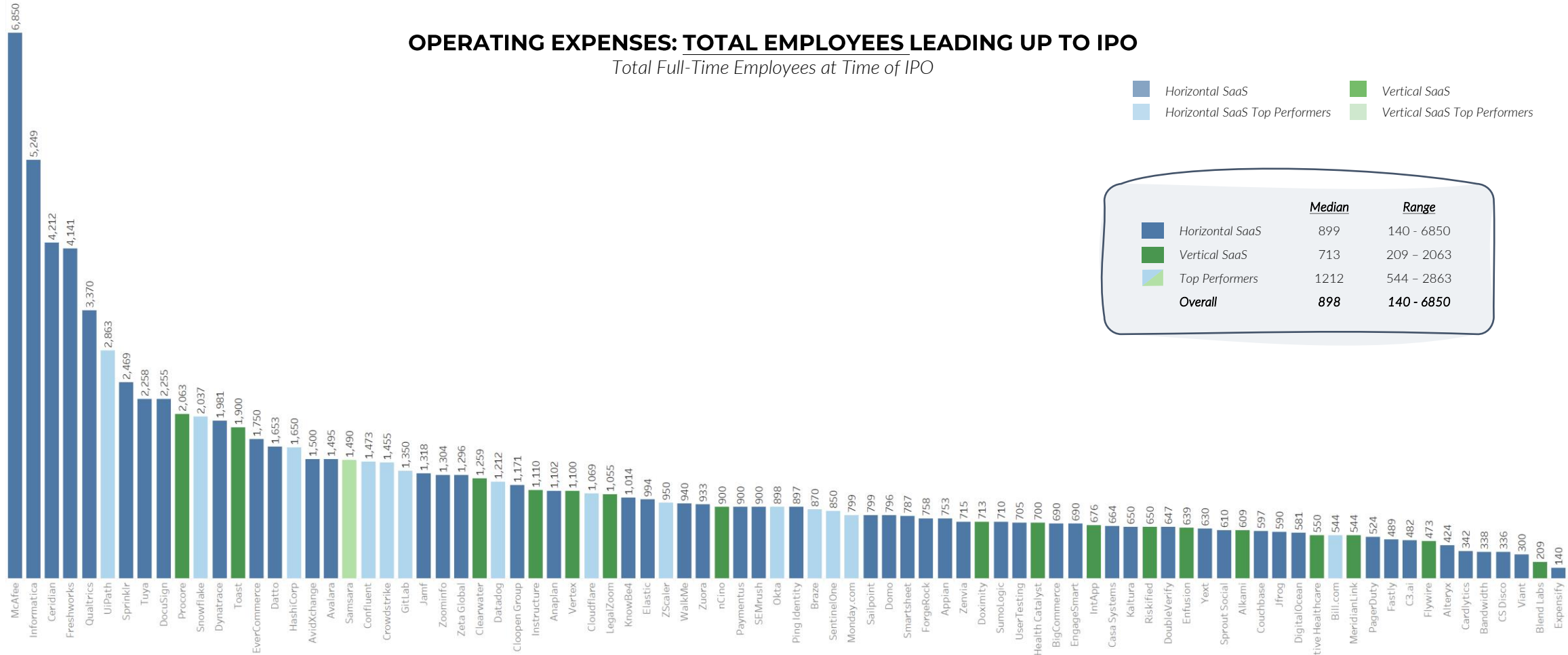
Company size ranges widely leading up to IPO, with companies having anywhere from a few hundred employees to thousands

### OPERATING EXPENSES: TOTAL EMPLOYEES LEADING UP TO IPO

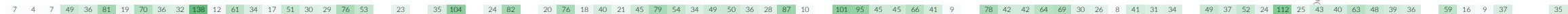
Total Full-Time Employees at Time of IPO

- Horizontal SaaS
- Vertical SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS Top Performers

	Median	Range
<span style="color: #0056b3;">■</span> Horizontal SaaS	899	140 - 6850
<span style="color: #008000;">■</span> Vertical SaaS	713	209 - 2063
<span style="color: #add8e6;">■</span> Top Performers	1212	544 - 2863
<b>Overall</b>	<b>898</b>	<b>140 - 6850</b>



### LTM Revenue YoY Growth (%)



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Revenue per Employee



For all IPOs since 2013, check out the interactive Tableau companion tool

Vertical SaaS companies seem to run a lot more efficiently than horizontal peers, with the majority generating more than 200K revenue per employee

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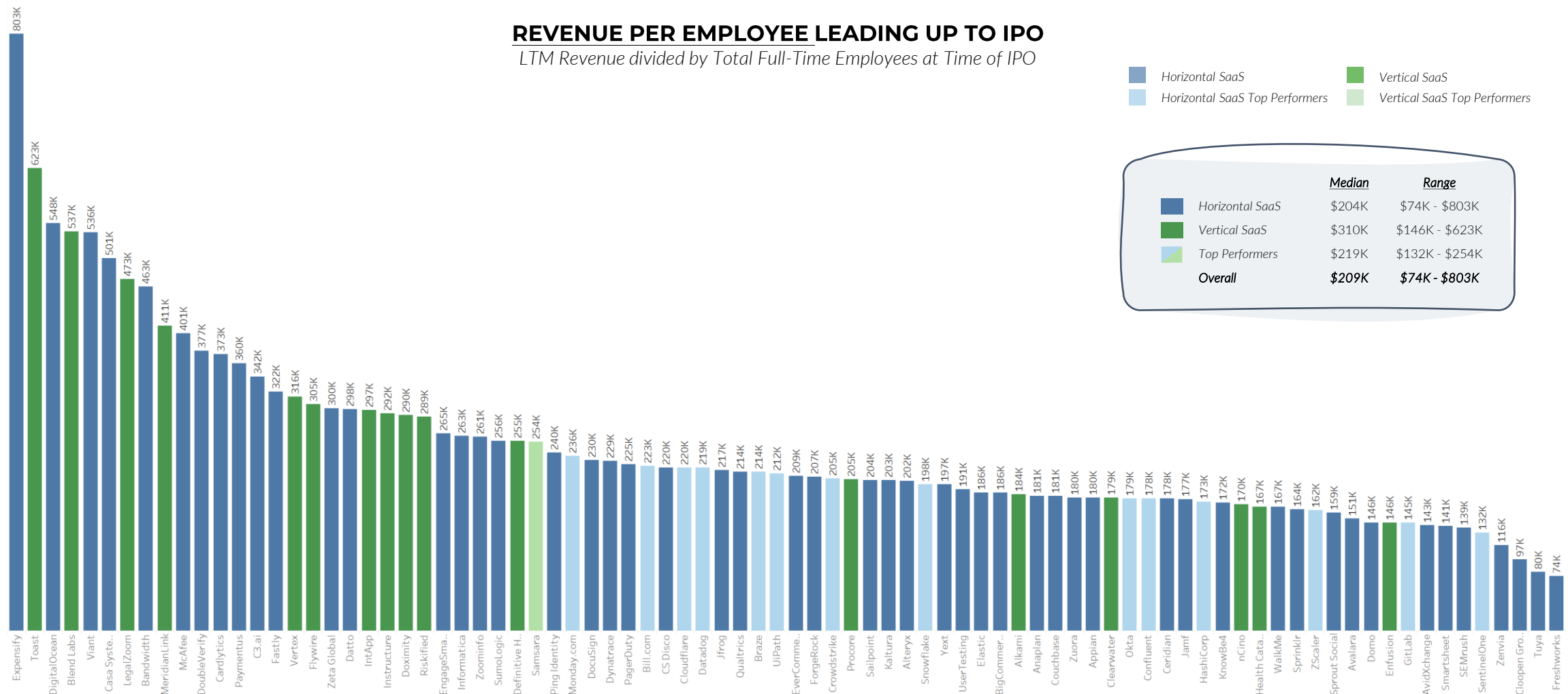
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### REVENUE PER EMPLOYEE LEADING UP TO IPO

LTM Revenue divided by Total Full-Time Employees at Time of IPO



Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Years to IPO



For all IPOs since 2013, check out the interactive Tableau companion tool

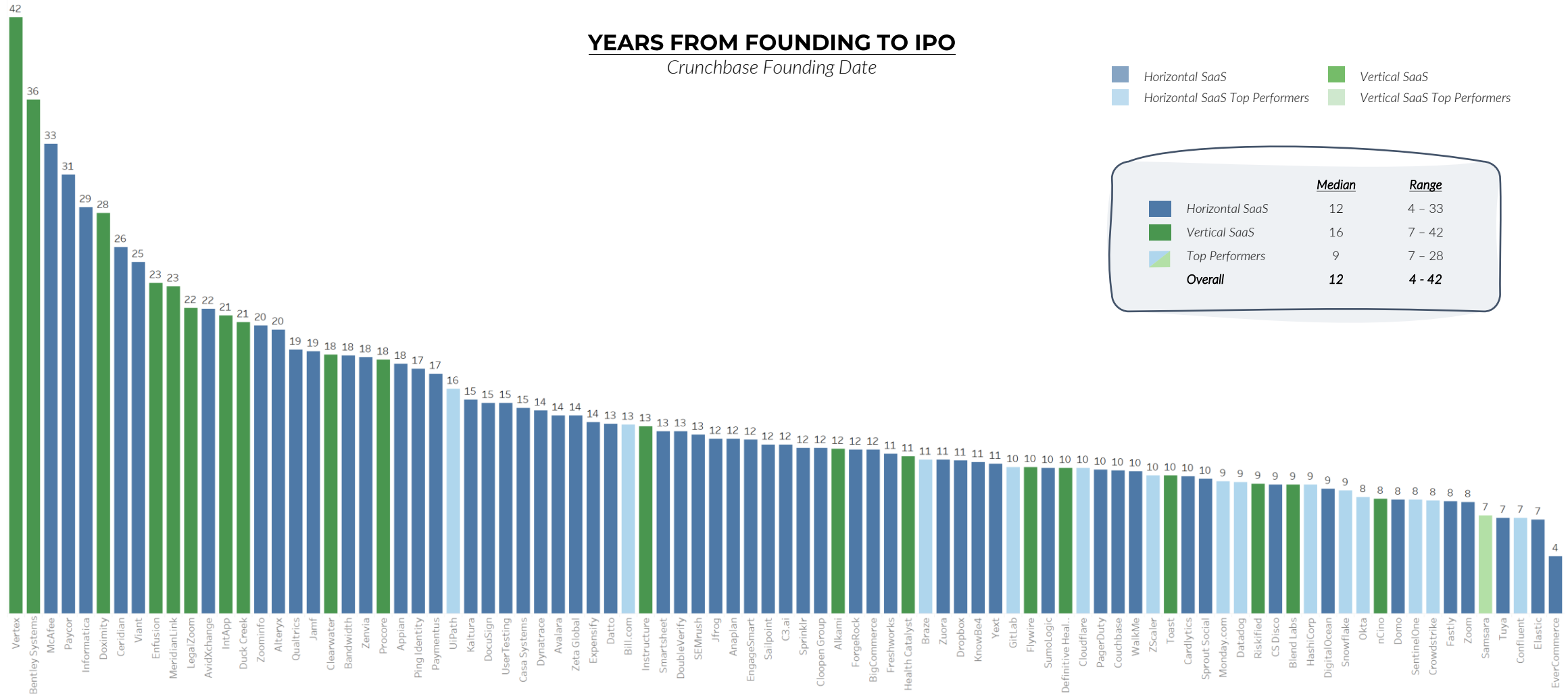
Vertical SaaS companies take a median of 4 more years to IPO than horizontal SaaS peers

### YEARS FROM FOUNDING TO IPO

Crunchbase Founding Date

■ Horizontal SaaS  
■ Vertical SaaS  
■ Horizontal SaaS Top Performers  
■ Vertical SaaS Top Performers

	Median	Range
Horizontal SaaS	12	4 - 33
Vertical SaaS	16	7 - 42
Top Performers	9	7 - 28
<b>Overall</b>	<b>12</b>	<b>4 - 42</b>



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# DRIVING ONGOING PERFORMANCE

## Market Cap



For all IPOs since 2013, check out the interactive Tableau companion tool

Since IPO, top performing public software companies have all been able to steadily grow market cap, with Snowflake tripling its market cap since IPO

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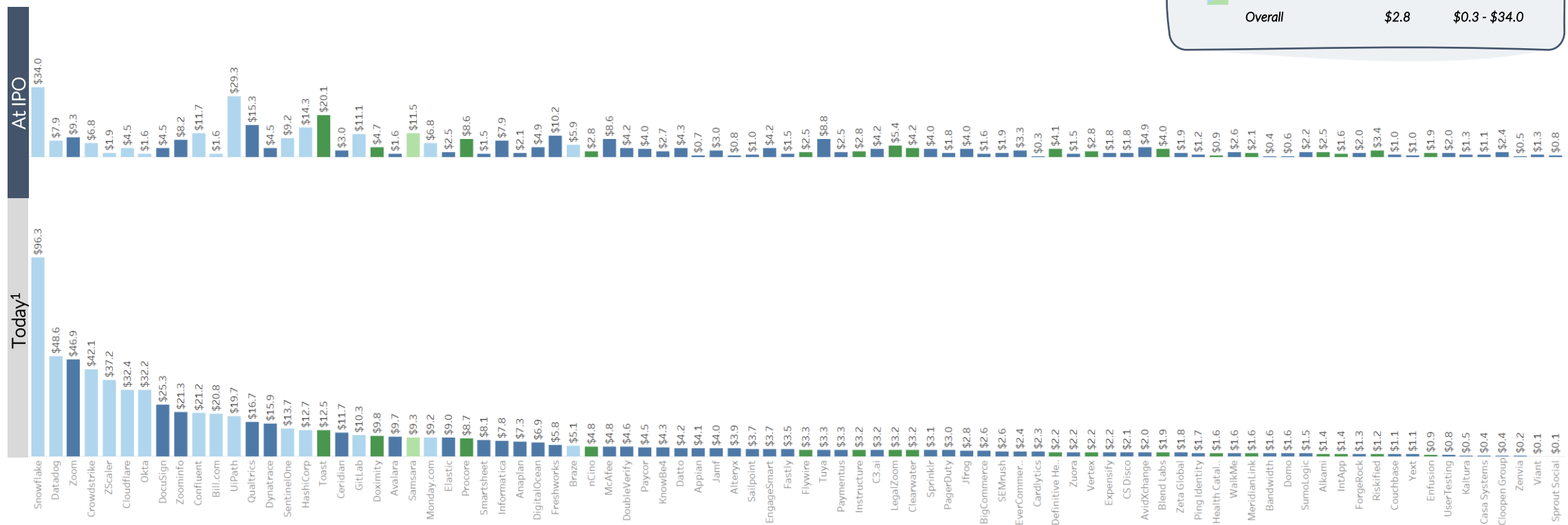
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### MARKET CAP: AT IPO VS. DECEMBER 2021

\$B, Enterprise SaaS IPOs Filed Last 5 Years

- Horizontal SaaS
- Vertical SaaS
- Horizontal SaaS Top Performers
- Vertical SaaS Top Performers



Notes: (1) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials; (2) Market Cap at IPO based on IPO price (3) Information provided as of 1/31/22  
 Source: FactSet, Public Filings for Software IPO June 2013 to December 2021



# DRIVING ONGOING PERFORMANCE

## IPO Sizing

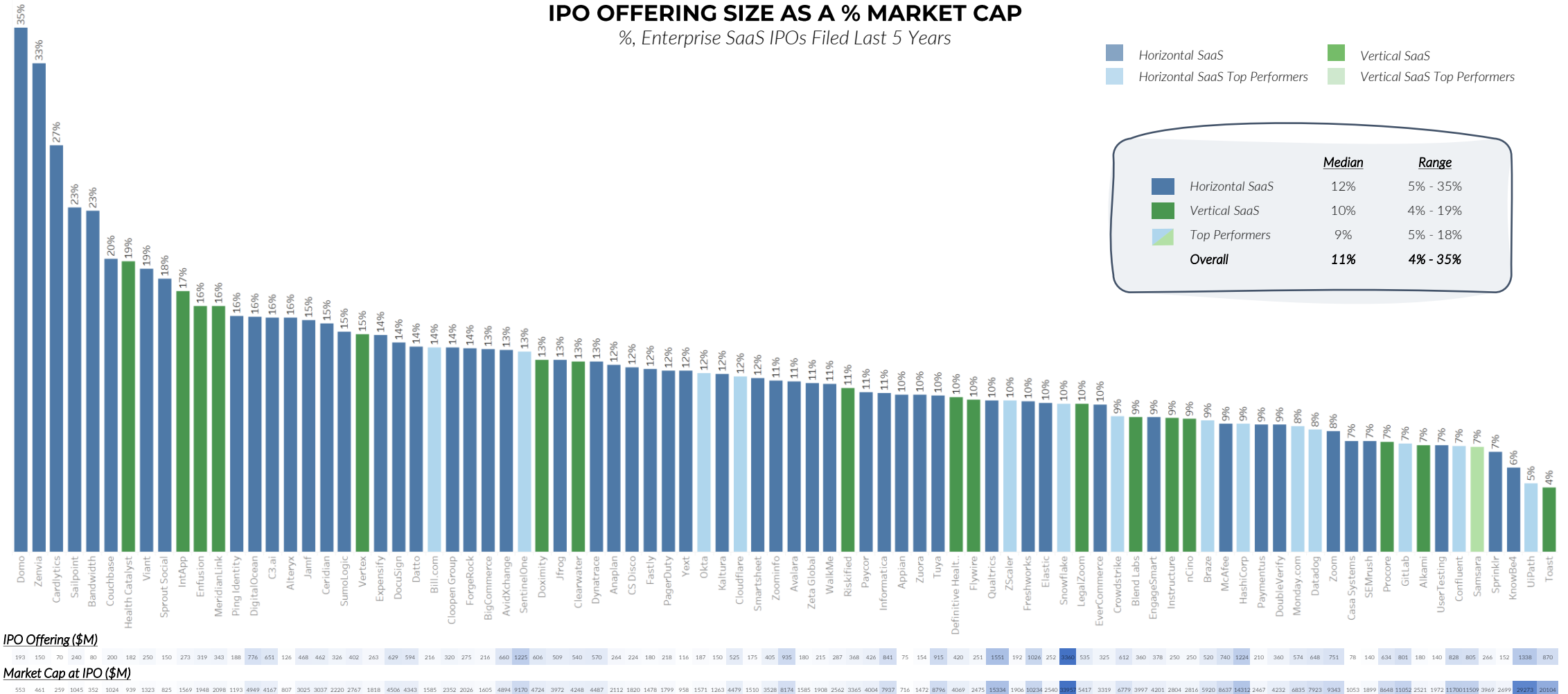


For all IPOs since 2013, check out the interactive Tableau companion tool

IPO offering size relative to market cap has varied from 4 to 35% across enterprise SaaS IPOs in the past ~7 years – however, the majority of companies have remained in the 10-20% range

### IPO OFFERING SIZE AS A % MARKET CAP

%, Enterprise SaaS IPOs Filed Last 5 Years



	Median	Range
Horizontal SaaS	12%	5% - 35%
Vertical SaaS	10%	4% - 19%
Top Performers	9%	5% - 18%
<b>Overall</b>	<b>11%</b>	<b>4% - 35%</b>

IPO Offering (\$M)

Market Cap at IPO (\$M)

Notes: (1) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials; (2) Market Cap at IPO based on IPO price (3) Information provided as of 1/31/22  
Source: FactSet, Public Filings for Software IPO June 2013 to December 2021

# DRIVING ONGOING PERFORMANCE

## Liquidity: Cash at Time of IPO



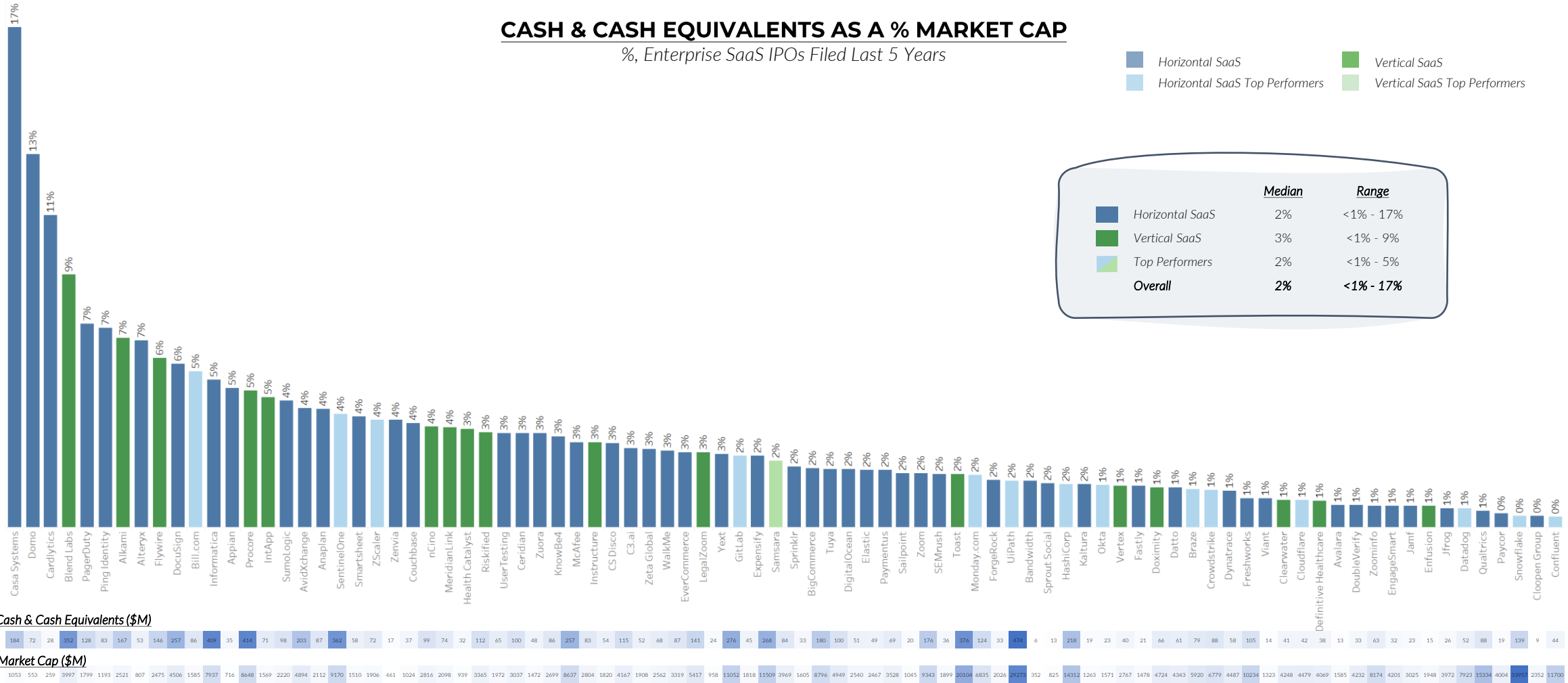
For all IPOs since 2013, check out the interactive Tableau companion tool

Pre-IPO, software companies analyzed typically have cash and cash equivalents of less than ~13% total market cap

### CASH & CASH EQUIVALENTS AS A % MARKET CAP %, Enterprise SaaS IPOs Filed Last 5 Years

Horizontal SaaS  
Horizontal SaaS Top Performers  
Vertical SaaS  
Vertical SaaS Top Performers

	Median	Range
Horizontal SaaS	2%	<1% - 17%
Vertical SaaS	3%	<1% - 9%
Top Performers	2%	<1% - 5%
<b>Overall</b>	<b>2%</b>	<b>&lt;1% - 17%</b>



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Notes: (1) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials; (2) Market Cap at IPO based on IPO price (3) Information provided as of 1/31/22  
Source: FactSet, Public Filings for Software IPO June 2013 to December 2021





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# VALUATION & TRADING MULTIPLES



# Pricing: Trading Multiples at Time of IPO

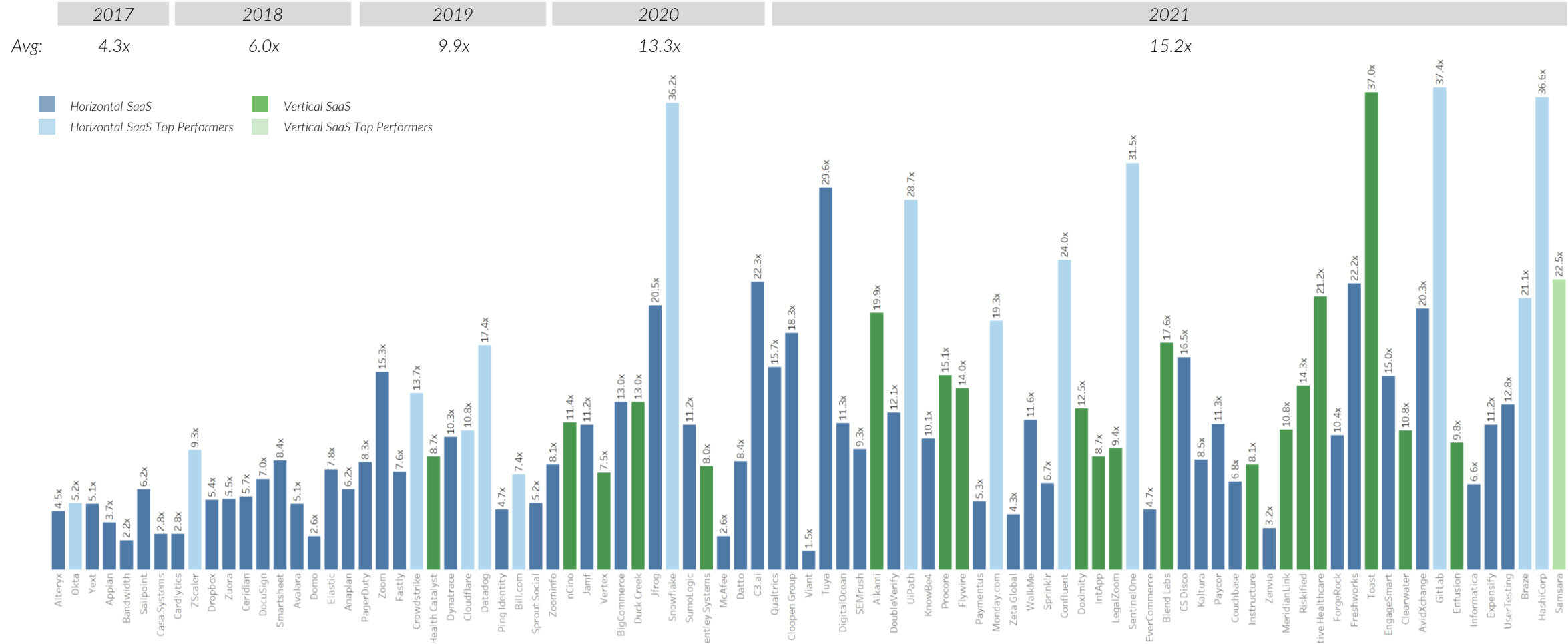


For all IPOs since 2013, check out the interactive Tableau companion tool

Multiples paid have been steadily rising over the past few years, with average forward multiples in 2021 exceeding all years analyzed since 2013; given the current market, it will be interesting to see where 2022 IPOs price

## FORWARD MULTIPLES AT TIME OF IPO

EV / NTM Revenue By Year of IPO (Chronological by IPO Year)



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Notes: (1) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials from Morgan Stanley and Goldman Sachs (2) Information provided as of 1/31/22  
Source: FactSet, Wall Street Research and Investment Banking materials from Morgan Stanley and Goldman Sachs

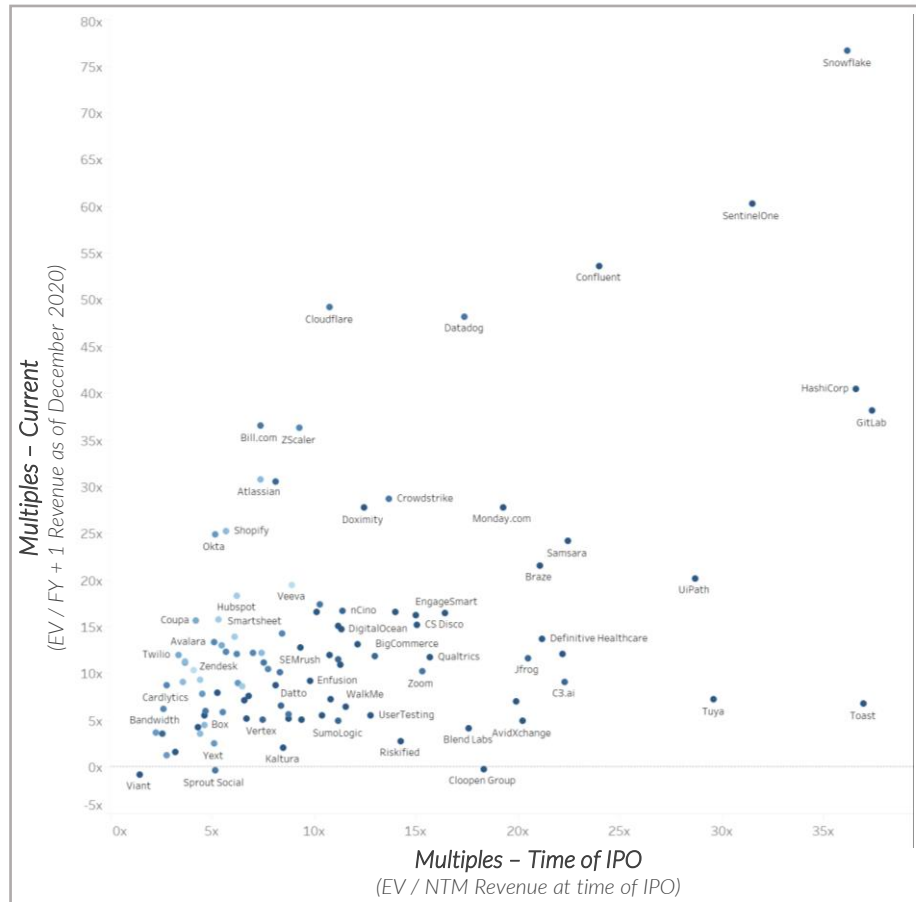
# VALUATION & TRADING MULTIPLES

## Trading Multiples by Year

Multiples for software companies continue to increase, with 2021 average multiples reaching an all-time high; despite having the highest multiples at time of IPO, the 2021 cohort also saw the biggest decrease in valuation post IPO

### MULTIPLES AT TIME OF IPO VS. DECEMBER 2021

Forward Revenue Multiples, By Year of IPO



### Average Multiple at IPO and Change vs. January 2022 by Year

Year of IPO	Avg. Software Multiple at IPO (EV/NTM Rev.)	Avg. Market Multiple (S&P)	Avg. Change in Multiple (Today vs. IPO)	Avg. Change in Multiple (Annualized)
2021	15.2x	3.2x	-32%	-32%
2020	13.3x	2.8x	-3%	-1%
2019	9.9x	2.4x	49%	16%
2018	6.0x	2.4x	69%	17%
2017	4.3x	2.3x	55%	11%
2016	4.4x	2.1x	152%	25%
2015	5.3x	2.1x	107%	15%
2014	5.7x	1.9x	88%	11%
2H2013	6.5x	1.7x	91%	10%

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Notes: (1) IPO multiples reflects basic shares outstanding for market cap as received from Investment Banking pricing materials from Morgan Stanley and Goldman Sachs (2) Information provided as of 1/31/22  
Source: FactSet, Wall Street Research and Investment Banking materials from Morgan Stanley and Goldman Sachs

A background network diagram consisting of a complex web of thin blue lines connecting various nodes. The nodes are represented by small, semi-transparent blue circles of varying sizes. The overall structure is dense and interconnected, with some nodes appearing more central than others. The background is a light, pale blue gradient.

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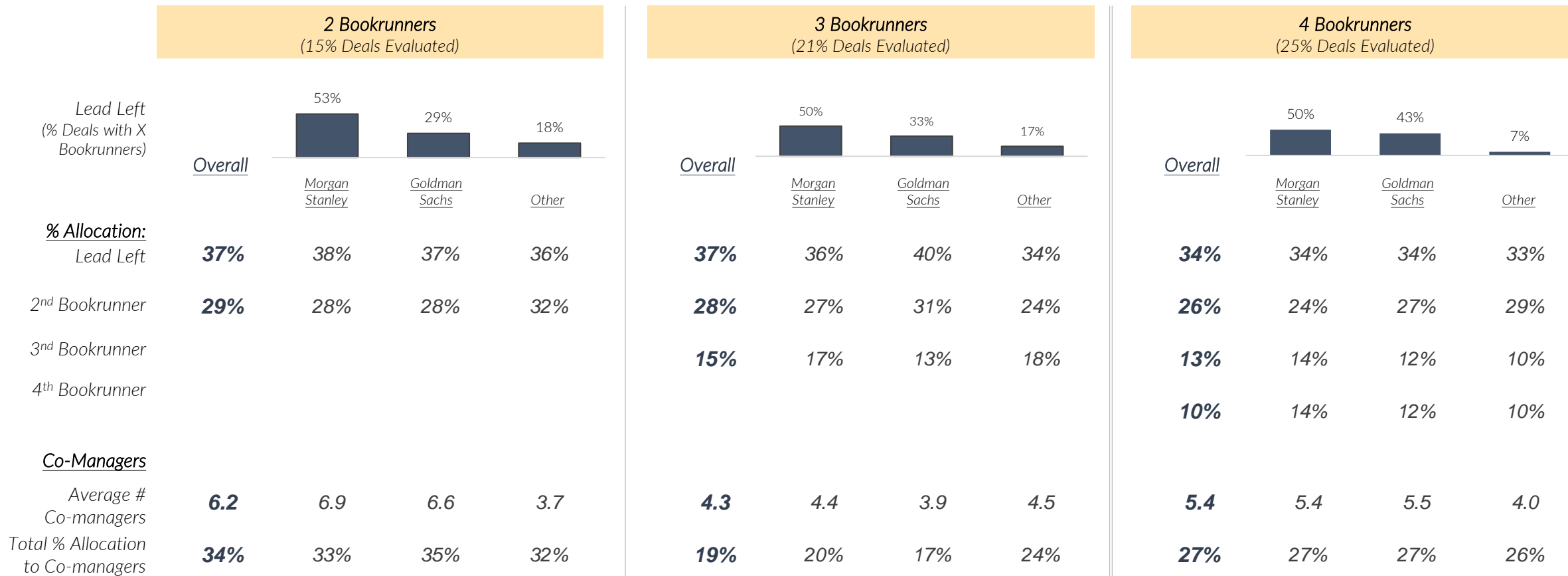
# **IPO STRUCTURE & BANKER SELECTION**

# Deal Economics: By Number of Bookrunners

Historically, the majority of IPOs analyzed had either 2 or 3 bookrunners, with average lead left allocation consistently between ~32-40%, regardless of bank. In recent years, lead left allocation has remained consistent but more IPOs have had 4+ bookrunners.

## STRUCTURE & ECONOMICS OF RECENT SOFTWARE IPOs BY NUMBER OF BOOKRUNNERS

Book-runners, Co-managers, and Respective Allocations



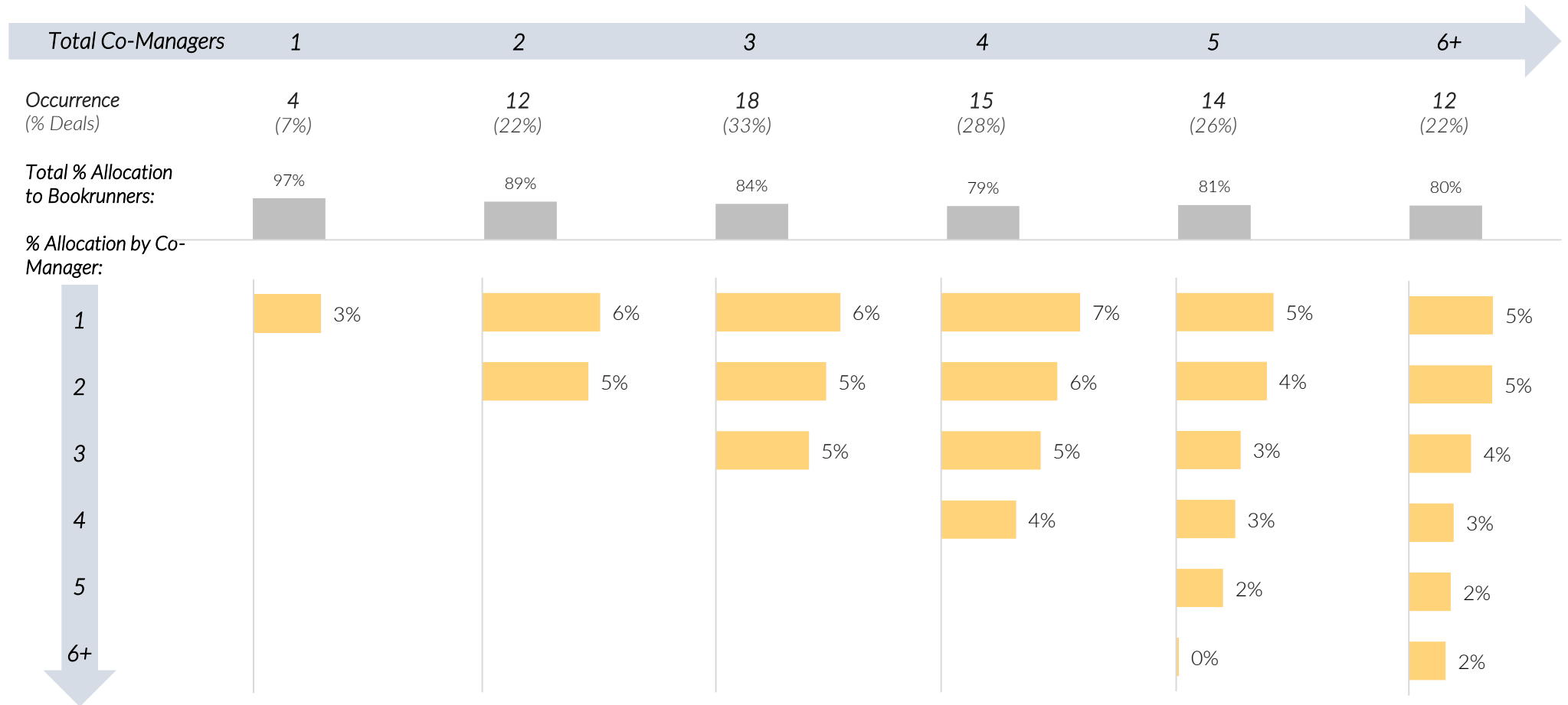
Note: Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Deal Economics: Co-Managers

The most common deal structures have historically had either 3 or 4 co-managers, with anywhere from 3 to 6% being allocated to each

## STRUCTURE & ECONOMICS OF RECENT SOFTWARE IPOs BY NUMBER OF CO-MANAGERS

*Bookrunners, Co-managers, and Respective Allocations*



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# Deal Economics: By Lead Left

Across the 111 IPOs included in this analysis, Morgan Stanley was the most common lead left bookrunner with 33% allocation across all deals (whether or not leading)

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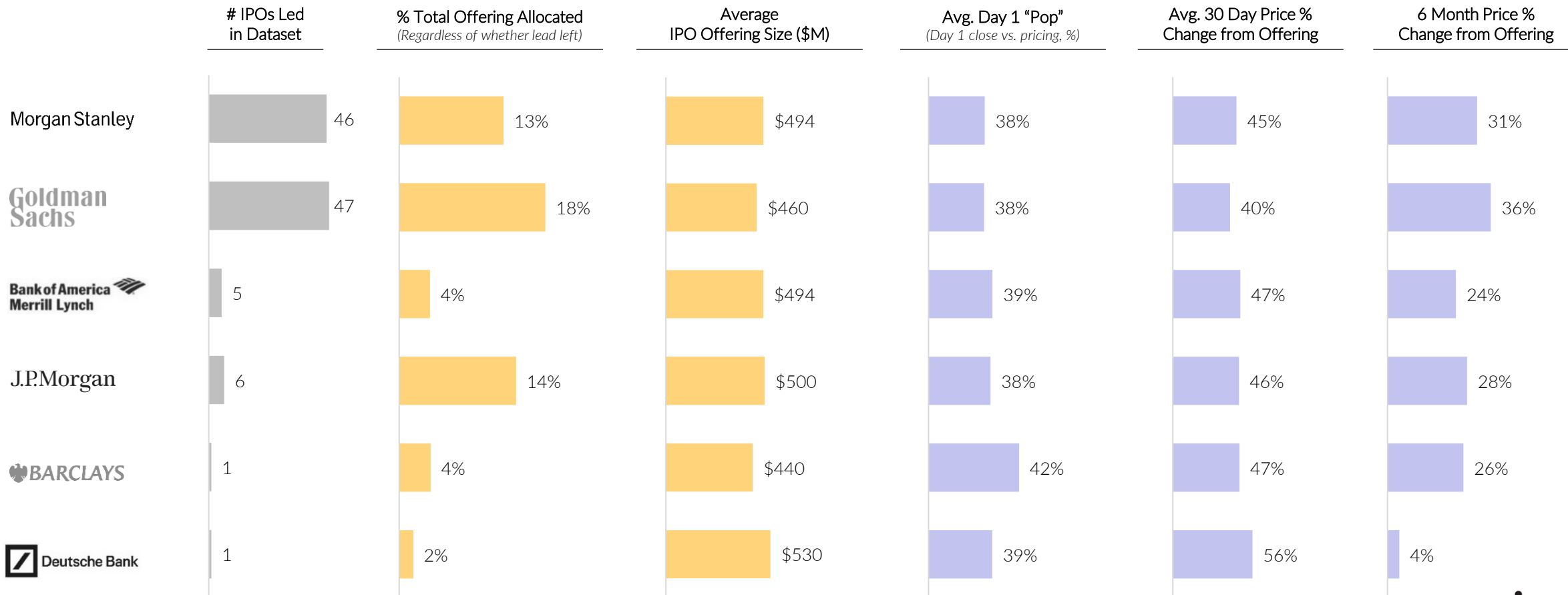
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## SOFTWARE IPO ECONOMICS, STRUCTURE, PERFORMANCE: BY MOST COMMON BOOKRUNNERS

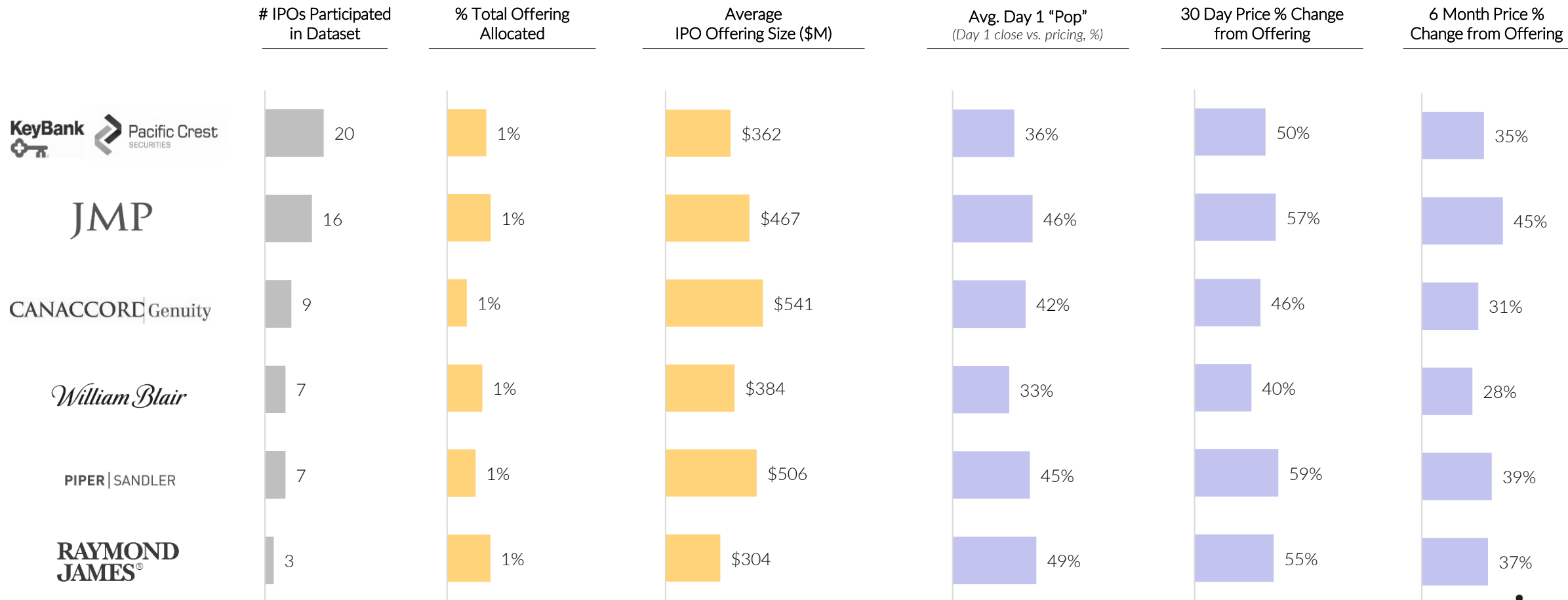


Notes: (1) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ. (2) Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Deal Economics: By Co-Manager

Average co-manager allocation typically remains in the 4-5% range; KeyBank/Pacific Crest has been the most common co-manager in the past ~7 years, typically with the largest allocation amongst co-managers

## SOFTWARE IPO ECONOMICS, STRUCTURE, PERFORMANCE: BY MOST COMMON CO-MANAGERS



Notes: (1) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ. (2) Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Which stock exchange should you choose?

In 2021, an equal number of tech companies chose the NASDAQ and NYSE – a shift from the prior year where NASDAQ was the more popular option

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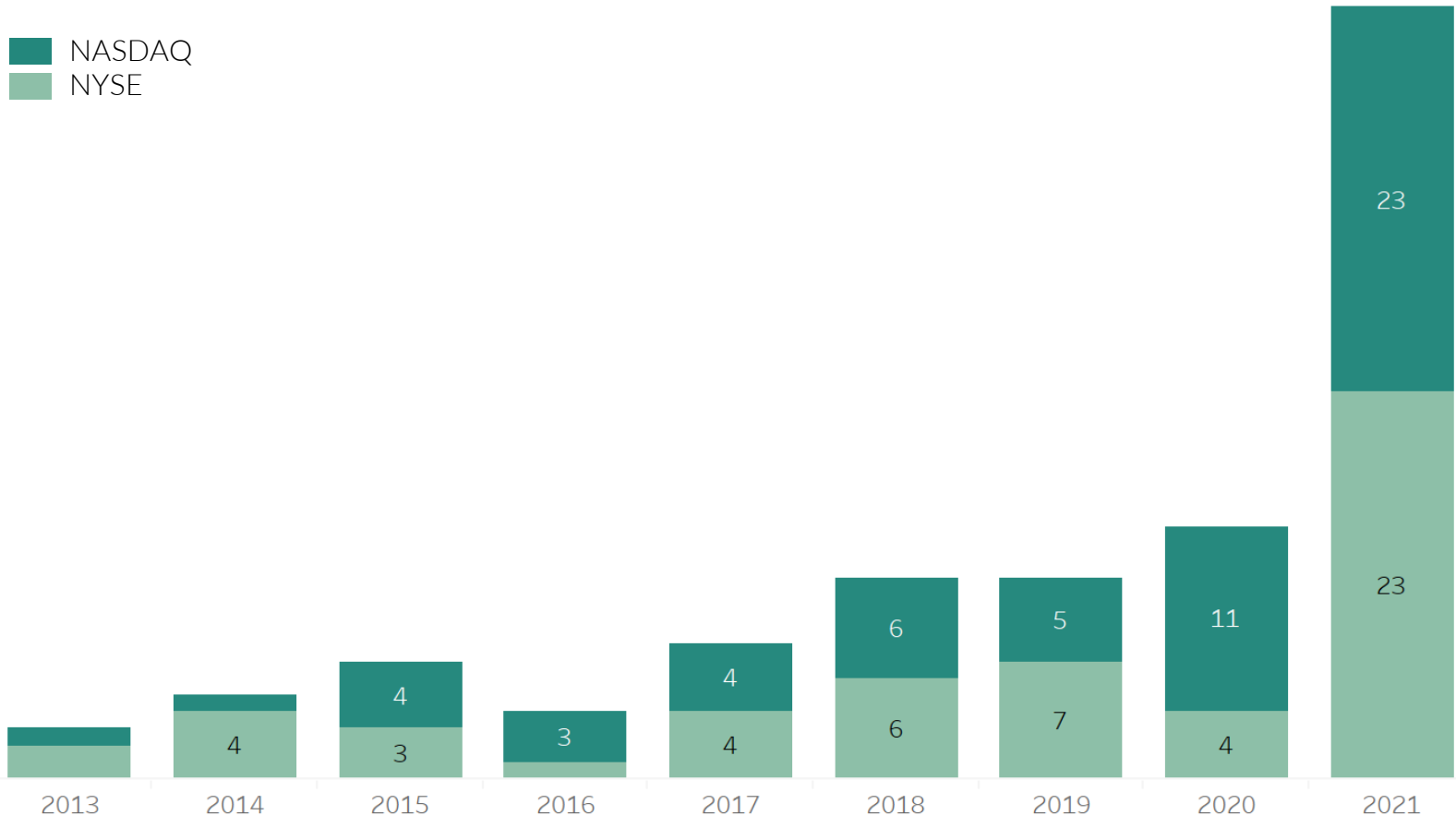
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STOCK EXCHANGE CHOSEN BY YEAR



In 2021, an **equal number** of SaaS companies chose **either the NASDAQ or New York Stock Exchange (NYSE)** for their public listing.

This is an interesting shift from the prior year where **the majority of companies chose to list on NASDAQ**, likely due to the effects of the pandemic making an in-person IPO in New York less feasible.

While the exchange chosen certainly does not have an effect on IPO performance; each exchange does bring **different considerations related to marketing, reputation, and in-person celebrations**

For those looking for more info on tradeoffs between the two exchanges, check out **our Medium post and webinar with CMOs** [here](#)



# MEET THE TEAM

PROFESSIONALS WITH EXPERIENCE ACROSS OPERATING, CONSULTING, & INVESTING



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**Vivian Guo**

*Portfolio Analytics*

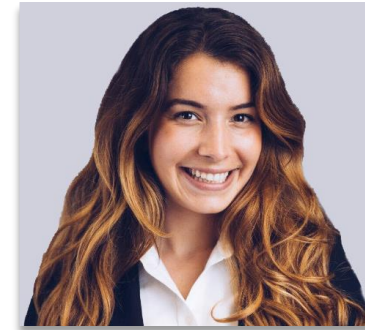
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**Leland Speth**

*Data Analytics*

*lspeth@iconiqcapital.com*



*Insights*



*Contact Us*

The background features a complex network of thin, light blue lines connecting various nodes. Most nodes are small, semi-transparent blue circles, but there are several larger, semi-transparent red circles scattered throughout, primarily in the lower-left and central areas. The overall aesthetic is clean and modern, with a light blue and white color palette.

# APPENDIX

## Public Disclosure of Key Metrics: IPO vs Ongoing

Based on benchmarking of 133 software companies, 95% of companies have disclosed number of customers and 87% a dollar-based net retention figure at the time of IPO; the majority continue ongoing disclosure in 10-Ks and 10-Qs

Metric	Software IPO Disclosure		Ongoing Disclosure			
	S-1 / 424B4s		10-Ks		10-Qs	
	# of Companies	% Total	# of Companies	% Total	# of Companies	% Total
Number of Customers	127	95%	74	89%	84	65%
Net Retention / Expansion Analysis	116	87%	64	77%	74	57%
Cohort Analysis	72	54%	36	43%	45	35%
# of Large Customers	65	49%	5	6%	0	0%
Non-GAAP FCF	58	44%	38	46%	54	42%
Backlog	56	42%	23	28%	50	39%
Contribution Margin	46	35%	23	28%	35	27%
Bookings / Billings	44	33%	22	27%	23	18%
Active Users	39	29%	15	18%	15	12%
Non-GAAP EBITDA	38	29%	31	37%	31	24%
ARR	38	29%	20	24%	32	25%
Number of Enterprise Accounts	25	19%	17	20%	17	13%
ACV	12	9%	7	8%	4	3%
CAC	3	2%	1	1%	1	1%

Notes: (1) Net retention / expansion includes company specific retention rates (e.g., subscription revenue retention); (2) Contribution margin reflects a non-GAAP margin adjusted or net contribution margin (3) Information provided as of 1/31/22  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Public Disclosure of Key Metrics: Company Detail at IPO

At IPO  
Quarterly  
Annually

During the time of IPO, most software companies disclose key metrics on customer performance beyond retention / expansion rates, in particular number of customers and performances of cohorts

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Company Name	Number of Customers	Net Retention Analysis / Expansion	Cohort Analysis	# of Large Customers	Non-GAAP FCF	Contribution Margin	Bookings / Billings	Backlog	ACV	Active Users	Number of Enterprise Accounts	Non-GAAP EBITDA	CAC	ARR
Alkami														
Alteryx														
Anaplan														
Appfolio														
Appian														
Atlassian														
Avalara														
AvidXchange														
Bandwidth														
Bentley Systems														
BigCommerce														
Bill.com														
Blackline														
Blend Labs														
Box														
Braze														
C3.ai														
Cardlytics														
Casa Systems														
Ceridian														
Cleanwater														
Cloopen Group														
Cloudflare														
Confluent														
Couchbase														
Coupa														
CrowdStrike														
CS Disco														
Datadog														
Datto														
Definitive Healthcare														
DigitalOcean														
DocuSign														
Domo														
DoubleVerify														
Doximity														
Dropbox														
Duck Creek Technologies														
Dynatrace														
Elastic														
Enfusion														
EngageSmart														
EverCommerce														
Expensify														
Fastly														
Flywire														
ForgeRock														
Freshworks														
GitLab														
HashiCorp														
Health Catalyst														
Hubspot														
Informatica														
Instructure														
IntApp														
Jamf														
Jfrog														

Notes: (1) Net retention / expansion includes company specific retention rates (e.g., subscription revenue retention); (2) Contribution margin reflects a non-GAAP margin adjusted or net contribution margin (3) Information provided as of 1/31/22  
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Kaltura														
KnowBe4														
LegalZoom														
McAfee														
MeridianLink														
Mimecast														
Monday.com														
nCino														
New Relic														
Okta														
PagerDuty														
Paycom														
Paycor														
Paylocity														
Paymentus														
Ping Identity														
Procore Technologies														
Pure Storage														
Qualtrics														
Rapid7														
Riskified														
Sailpoint														
Samsara														
SEMrush														
SentinelOne														
Shopify														
Smartsheet														
Snowflake														
Sprinklr														
Sprout Social														
SumoLogic														
Toast														
Tuya														
Twilio														
UiPath														
UserTesting														
Veeva														
Vertex														
Viant Technology														
WalkMe														
Yext														
Zendesk														
Zenvia														
Zeta Global														
Zoom														
Zoominfo														
ZScaler														
Zuora														

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# Public Disclosure of Key Metrics: Company Detail Annually

At IPO  
Annually  
Quarterly

On an annual basis, software companies have seen significant disclosure reduction for customer performance, while most best of breed companies still disclose number of customers and net retention / expansion rates

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Company Name	Number of Customers	Net Retention / Expansion Analysis <sup>1</sup>	Cohort Analysis	# of Large Customers	Non-GAAP FCF	Contribution Margin <sup>2</sup>	Bookings / Billings	Backlog	ACV	Active Users	Number of Enterprise Accounts	Non-GAAP EBITDA	CAC	ARR
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Coupa														
CrowdStrike														
CS Disco														
Datadog														
Datto														
Definitive Healthcare														
DigitalOcean														
DocuSign														
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DoubleVerify														
Doximity														
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SEMrush														
SentinelOne														
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# Public Disclosure of Key Metrics: Company Detail Quarterly

On a quarterly basis, software companies have maintained consistent disclosure practices to the annual filings

Company Name	Number of Customers	Net Retention / Expansion Analysis <sup>1</sup>	Cohort Analysis	# of Large Customers	Non-GAAP FCF	Contribution Margin <sup>2</sup>	Bookings / Billings	Backlog	ACV	Active Users	Number of Enterprise Accounts	Non-GAAP EBITDA	CAC	ARR
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Blackline														
Blend Labs														
Box														
Braze														
C3.ai														
Cardlytics														
Casa Systems														
Ceridian														
Clearwater														
Cloopen Group														
Cloudflare														
Confluent														
Couchbase														
Coupa														
Crowdstrike														
CS Disco														
Datadog														
Datto														
Definitive Healthcare														
DigitalOcean														
DocuSign														
Domo														
DoubleVerify														
Doximity														
Dropbox														
Duck Creek Technologies														
Dynatrace														
Elastic														
Enfusion														
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Mimecast														
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nCino														
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Okta														
PagerDuty														
Paycom														
Paycor														
Paylocity														
Paymentus														
Ping Identity														
Procore Technologies														
Pure Storage														
Qualtrics														
Rapid7														
Riskified														
Sailpoint														
Samsara														
SEMrush														
SentinelOne														
Shopify														
Smartsheet														
Snowflake														
Sprinklr														
Sprout Social														
SumoLogic														
Toast														
Tuya														
Twilio														
UiPath														
UserTesting														
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WalkMe														
Yext														
Zendesk														
Zenvia														
Zeta Global														
Zoom														
Zoominfo														
ZScaler														
Zuora														

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 Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Case Study: Horizontal SaaS

“Top Performer” Profile Leading Up to and Post-IPO



Snowflake provides a data warehouse built for the cloud

NYSE: SNOW  
IPO Date: 9/16/2020

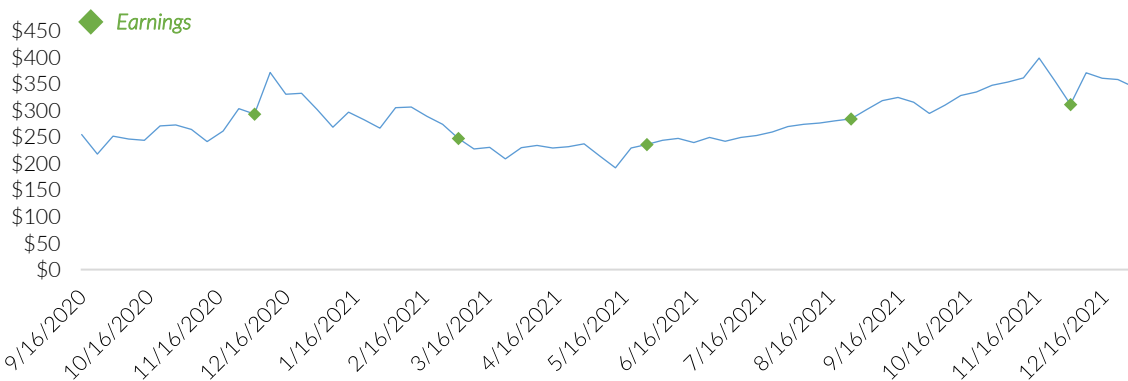
IPO Price: \$120  
Current Stock Price<sup>1</sup>: \$341

## Performance to Date

Strong performance driven by:

- Successful expansion of product and customer base
  - Continued addition and improvement of features, leveraging the elasticity and performance of the public cloud
  - Used globally by organizations of all sizes across a broad range of industries
- Differentiated product
  - Decoupled architecture that allows for compute and storage to scale separately
  - Cloud agnostic, with seamless scalability across AWS, Azure, and Google Cloud

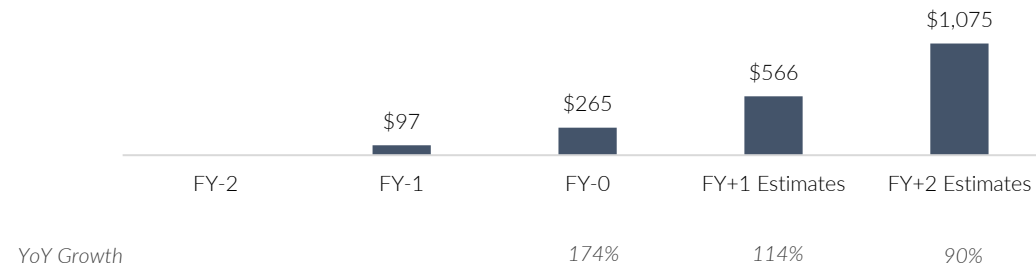
### STOCK PRICE PERFORMANCE TO DATE



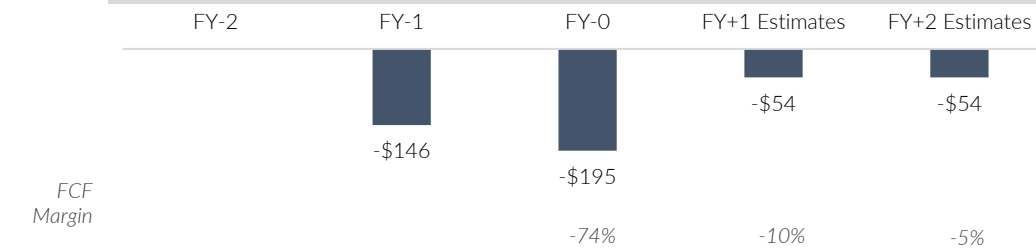
## Key Metrics at IPO (LTM or Time of IPO)

	snowflake	Median – Horizontal SaaS
Revenue:	\$403M	\$177M
YoY Growth:	138%	42%
Gross Margin:	61%	71%
FCF:	-\$126M	-\$11M
Rule of 40:	106%	38%
Total Operating Expenses:	\$595M	\$154M
Market Cap:	\$33,957M	\$2,070M
Cash & Cash Equivalents:	\$139M	\$60M

## Scale & Growth – Revenue (\$M, YoY Growth)



## Profitability – Free Cash Flow (\$M, % Revenue)



Notes: (1) “Current” represents data as of 1/31/22; (2) Market Cap based on IPO price; (3) Cash & Cash Equivalents not inclusive of IPO proceeds (4) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ (5) The case studies presented herein are for illustrative purposes only. No assumption should be made that the investments described herein were or will be profitable, or that investments made in the future will be comparable to those described herein. References to investments included herein should not be construed as a recommendation of any particular investment  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Case Study: Horizontal SaaS

“Top Performer” Profile Leading Up to and Post-IPO



GitLab is an open-source DevOps software platform

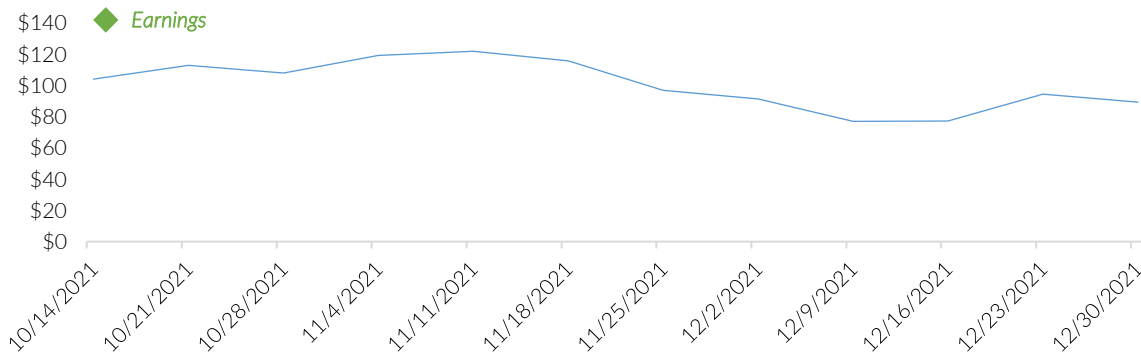
NYSE: GTLB      IPO Price: \$77  
 IPO Date: 10/13/2021      Current Stock Price<sup>1</sup>: \$89

### Performance to Date

Strong performance driven by:

- Strong net retention and viral adoption
  - Land-and-expand sales strategy that begins with developers and expands to teams and senior buyers
  - “Best in class” dollar based net retention (~152%) and strong viral adoption driven by open-source community
- Product-driven strategy
  - Product-driven organization with rapid iterative feature releases every month
  - Consistently high gross margins driven by GitLab’s on-prem product

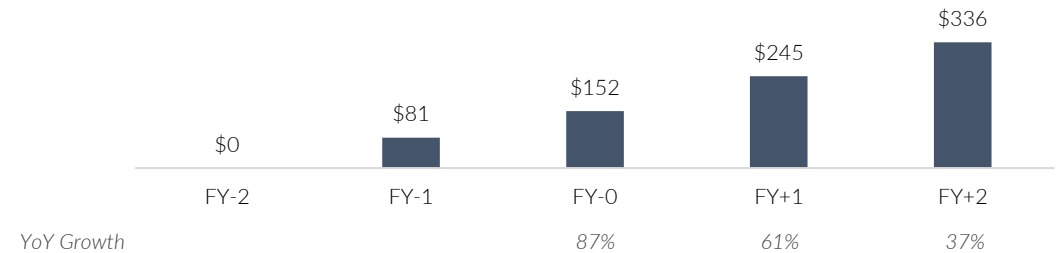
### STOCK PRICE PERFORMANCE TO DATE



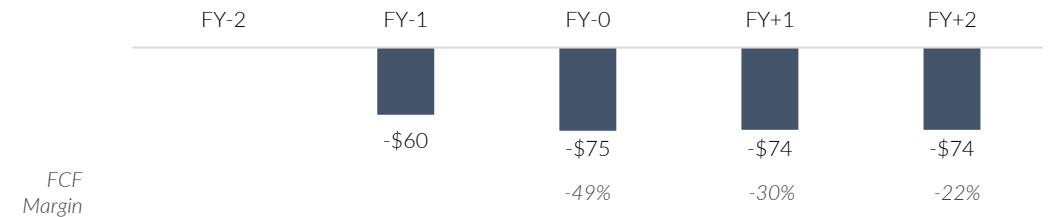
### Key Metrics at IPO (LTM or Time of IPO)

	GitLab	Median – Horizontal SaaS
Revenue:	\$196M	\$177M
YoY Growth:	87%	42%
Gross Margin:	88%	71%
FCF:	-\$60M	-\$11M
Rule of 40:	38%	38%
Total Operating Expenses:	\$381M	\$154M
Market Cap:	\$11,052M	\$2,070M
Cash & Cash Equivalents:	\$276M	\$60M

### Scale & Growth – Revenue (\$M, YoY Growth)



### Profitability – Free Cash Flow (\$M, % Revenue)



Notes: (1) “Current” represents data as of 1/31/22; (2) Market Cap based on IPO price; (3) Cash & Cash Equivalents not inclusive of IPO proceeds (4) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ (5) The case studies presented herein are for illustrative purposes only. No assumption should be made that the investments described herein were or will be profitable, or that investments made in the future will be comparable to those described herein. References to investments included herein should not be construed as a recommendation of any particular investment  
 Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Case Study: Horizontal SaaS

“Top Performer” Profile Leading Up to and Post-IPO



Shopify is an e-commerce platform that allows merchants to sell online, ship and process payments

NYSE: SHOP

IPO Date: 5/21/2015

IPO Price: \$17

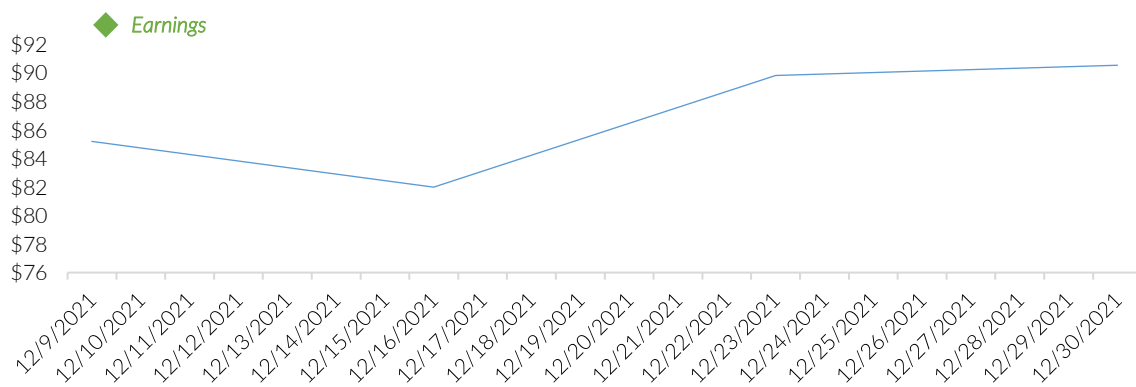
Current Stock Price<sup>1</sup>: \$1,398

## Performance to Date

Strong performance driven by:

- Partnerships and extensive app store
  - 5K+ apps on its app store and extensive partner network with 37K+ agencies and web designers
  - Partnership with Facebook and Affirm to expand payment solutions
- Transition from single product to all-in one e-commerce platform
  - Set up initially as a tool for merchants to build their own sites, Shopify has become a platform with both merchant (payments, shipping, etc.) and subscription solutions (apps, domain sales, etc.)

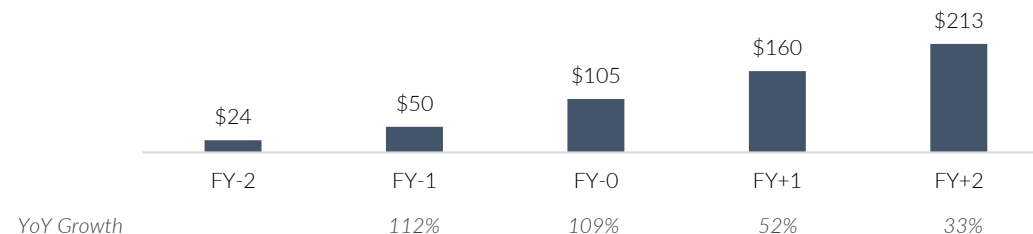
### STOCK PRICE PERFORMANCE TO DATE



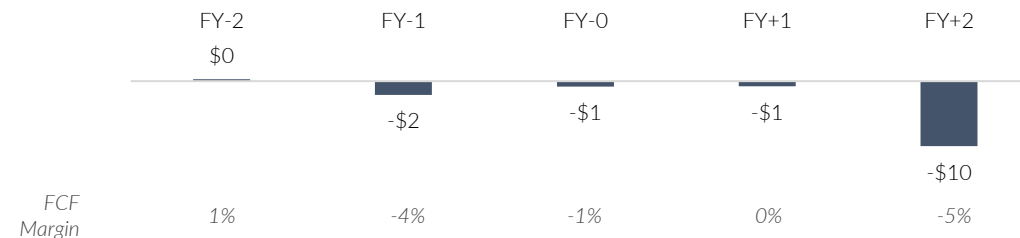
## Key Metrics at IPO (LTM or Time of IPO)

	shopify	Median – Horizontal SaaS
Revenue:	\$124M	\$177M
YoY Growth:	106%	42%
Gross Margin:	58%	71%
FCF:	\$18M	-\$11M
Rule of 40:	121%	38%
Total Operating Expenses:	\$91M	\$154M
Market Cap:	\$1,285M	\$2,070M
Cash & Cash Equivalents:	\$60M	\$60M

## Scale & Growth – Revenue (\$M, YoY Growth)



## Profitability – Free Cash Flow (\$M, % Revenue)



Notes: (1) “Current” represents data as of 1/31/22; (2) Market Cap based on IPO price; (3) Cash & Cash Equivalents not inclusive of IPO proceeds (4) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ (5) The case studies presented herein are for illustrative purposes only. No assumption should be made that the investments described herein were or will be profitable, or that investments made in the future will be comparable to those described herein. References to investments included herein should not be construed as a recommendation of any particular investment  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Case Study: Vertical SaaS

“Top Performer” Profile Leading Up to and Post-IPO



Veeva offers a suite of cloud-based business solutions for the global life sciences industry

NYSE: VEEV

IPO Date: 10/16/2013

IPO Price: \$20

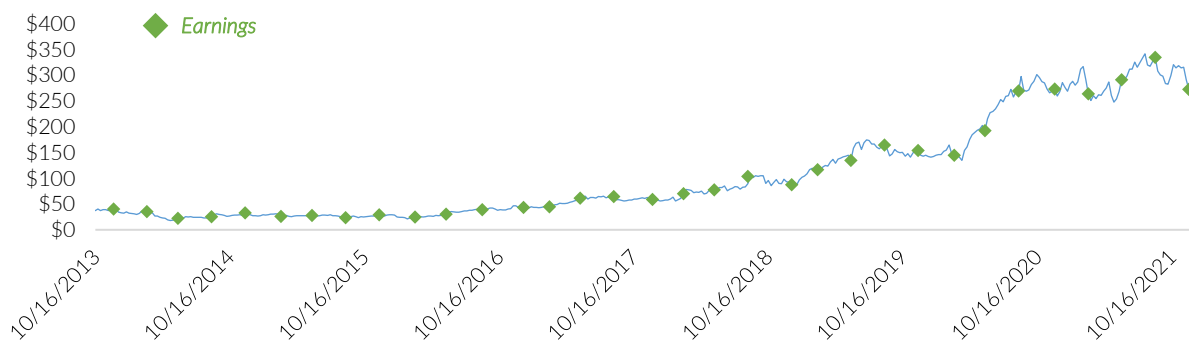
Current Stock Price<sup>1</sup>: \$260

## Performance to Date

Strong performance driven by:

- Continued growth and efficiency
  - Steadily increasing gross margin to >70%
  - Acquisition of increasingly large customers
- Successful product expansion
  - Built suite of modules on top of original product, expanding revenue and upsell capabilities
- Ability to consistently forecast and meet or beat expectations

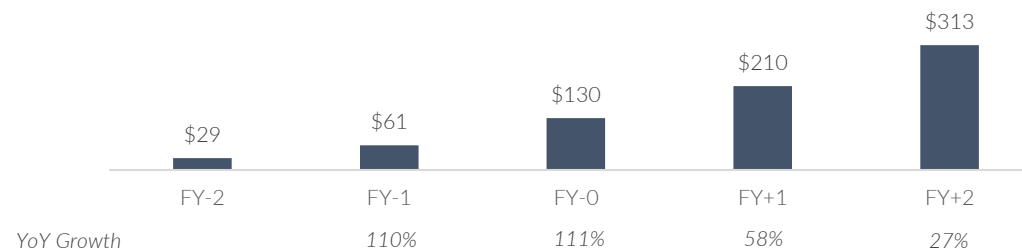
### STOCK PRICE PERFORMANCE TO DATE



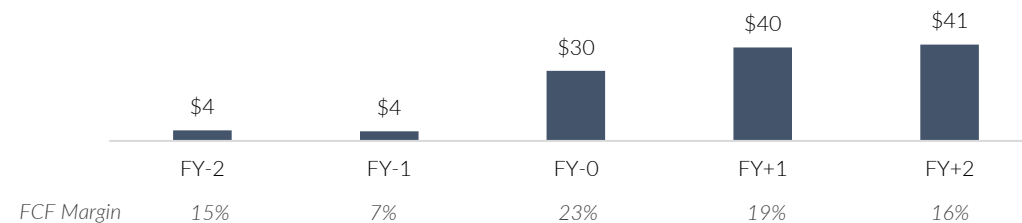
## Key Metrics at IPO (LTM or Time of IPO)

	Veeva	Median – Vertical SaaS
Revenue:	\$168M	\$201M
YoY Growth:	98%	41%
Gross Margin:	59%	63%
FCF:	\$35M	\$15M
Rule of 40:	119%	39%
Total Operating Expenses:	\$62M	\$123M
Market Cap:	\$2,484M	\$3,090M
Cash & Cash Equivalents:	\$39M	\$78M

## Scale & Growth – Revenue (\$M, YoY Growth)



## Profitability – Free Cash Flow (\$M, % Revenue)



Notes: (1) “Current” represents data as of 1/31/22; (2) Market Cap based on IPO price; (3) Cash & Cash Equivalents not inclusive of IPO proceeds (4) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ (5) The case studies presented herein are for illustrative purposes only. No assumption should be made that the investments described herein were or will be profitable, or that investments made in the future will be comparable to those described herein. References to investments included herein should not be construed as a recommendation of any particular investment  
Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Case Study: Vertical SaaS

“Top Performer” Profile Leading Up to and Post-IPO

01



Samsara is a provider of cloud-based Internet of Things data and analytics

NYSE: IOT

IPO Date: 12/14/2021

IPO Price: \$23

Current Stock Price<sup>1</sup>: \$27

02

## Performance to Date

Strong performance driven by:

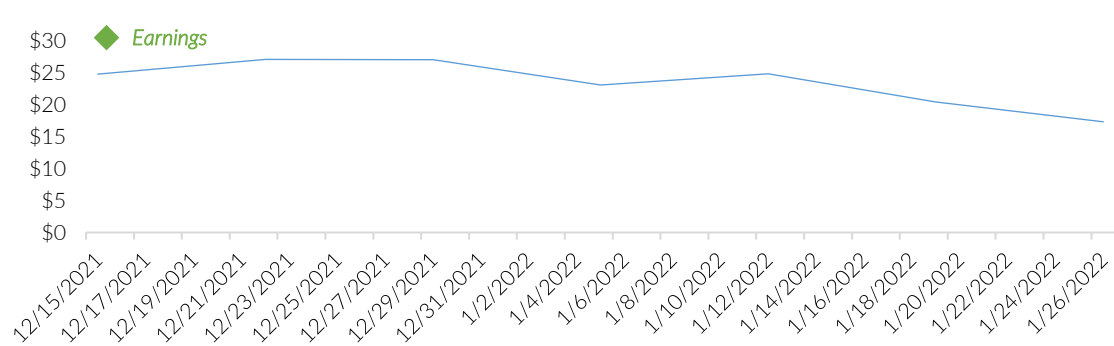
- Robust financial performance driven by high gross margins and sales efficiency
  - Customer contracts of 3-5 years enables Samsara to amortize hardware costs over time
  - Efficiency sales motion focused on upselling existing customers across Samsara product suite and upmarket expansion
- Data integrations and partnerships
  - Data integrations with ~150 third-party apps and partnerships with vehicle makers like Ford and Volvo

03

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STOCK PRICE PERFORMANCE TO DATE

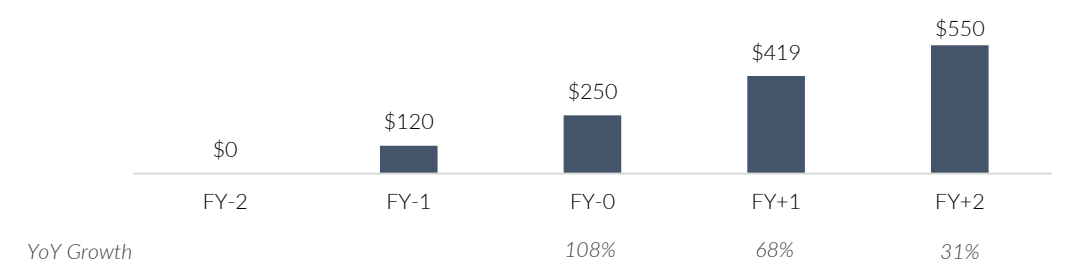


06

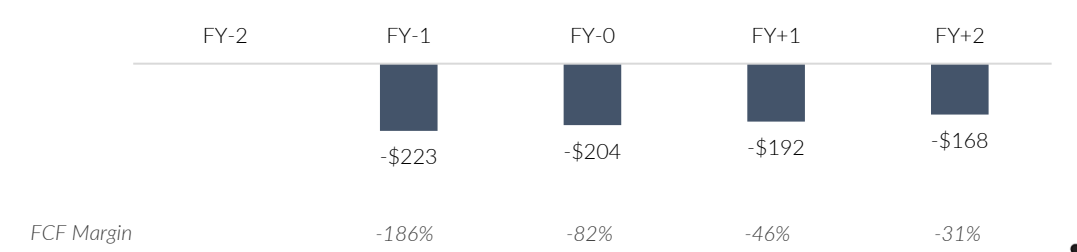
## Key Metrics at IPO (LTM or Time of IPO)

	samsara	Median – Vertical SaaS
Revenue:	\$379M	\$201M
YoY Growth:	76%	41%
Gross Margin:	72%	63%
FCF:	-\$169M	\$15M
Rule of 40:	31%	39%
Total Operating Expenses:	\$409M	\$123M
Market Cap:	\$11,509M	\$3,090M
Cash & Cash Equivalents:	\$268M	\$78M

## Scale & Growth – Revenue (\$M, YoY Growth)



## Profitability – Free Cash Flow (\$M, % Revenue)



Notes: (1) “Current” represents data as of 1/31/22; (2) Market Cap based on IPO price; (3) Cash & Cash Equivalents not inclusive of IPO proceeds (4) Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommend the services of ICONIQ (5) The case studies presented herein are for illustrative purposes only. No assumption should be made that the investments described herein were or will be profitable, or that investments made in the future will be comparable to those described herein. References to investments included herein should not be construed as a recommendation of any particular investment  
 Source: Factset, Public Filings for Software IPO June 2013 to December 2021

# Business Performance vs. 30 Day Performance

## 2021 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
Qualtrics	2021	1/28/2021	\$15,334	36%	-31%	122%	72%	15.7x	27%
Cloopen Group	2021	2/8/2021	\$2,352	N/A	N/A	95%	41%	18.3x	5%
Viant Technology	2021	2/9/2021	\$1,323	N/A	N/A	N/A	43%	1.5x	101%
Tuya	2021	3/17/2021	\$8,796	70%	41%	181%	34%	29.6x	-3%
DigitalOcean	2021	3/23/2021	\$4,949	25%	12%	103%	54%	11.3x	-12%
SEMrush	2021	3/24/2021	\$1,899	36%	38%	114%	76%	9.3x	19%
Alkami	2021	4/13/2021	\$2,521	52%	17%	117%	53%	19.9x	-3%
UiPath	2021	4/20/2021	\$29,273	81%	85%	145%	89%	28.7x	41%
DoubleVerify	2021	4/20/2021	\$4,232	34%	38%	123%	85%	12.1x	19%
KnowBe4	2021	4/21/2021	\$2,699	45%	68%	89%	85%	10.1x	11%
Procore Technologies	2021	5/19/2021	\$8,648	32%	41%	107%	82%	15.1x	36%
Flywire	2021	5/25/2021	\$2,475	N/A	N/A	100%	60%	14.0x	59%
Paymentus	2021	5/25/2021	\$2,467	28%	39%	117%	31%	5.3x	67%
Zeta Global	2021	6/9/2021	\$1,908	N/A	N/A	122%	59%	4.3x	-28%
Monday.com	2021	6/9/2021	\$6,835	95%	76%	121%	86%	19.3x	50%
WalkMe	2021	6/15/2021	\$2,562	34%	29%	111%	74%	11.6x	-6%
Sprinklr	2021	6/22/2021	\$3,969	19%	9%	N/A	70%	6.7x	19%
Doximity	2021	6/23/2021	\$4,724	78%	116%	153%	85%	12.5x	135%
Confluent	2021	6/23/2021	\$11,700	53%	24%	117%	69%	24.0x	11%
LegalZoom	2021	6/29/2021	\$5,417	21%	39%	N/A	67%	9.4x	31%
IntApp	2021	6/29/2021	\$1,569	26%	34%	110%	64%	8.7x	30%
EverCommerce	2021	6/30/2021	\$3,319	34%	46%	99%	66%	4.7x	3%
SentinelOne	2021	6/29/2021	\$9,170	101%	19%	124%	56%	31.5x	41%
Blend Labs	2021	7/15/2021	\$3,997	N/A	N/A	179%	66%	17.6x	0%
Kaltura	2021	7/20/2021	\$1,263	31%	32%	116%	60%	8.5x	32%
Paycor	2021	7/20/2021	\$4,004	3%	3%	95%	57%	11.3x	60%
CS Disco	2021	7/20/2021	\$1,820	37%	12%	122%	71%	16.5x	68%
Zenvia	2021	7/21/2021	\$461	N/A	N/A	109%	24%	3.2x	6%
Couchbase	2021	7/21/2021	\$1,024	24%	-11%	115%	89%	6.8x	57%
Instructure	2021	7/21/2021	\$2,804	20%	116%	116%	48%	8.1x	5%
MeridianLink	2021	7/27/2021	\$2,098	40%	72%	120%	71%	10.8x	0%
Riskified	2021	7/28/2021	\$3,365	41%	40%	117%	55%	14.3x	38%
Definitive Healthcare	2021	9/14/2021	\$4,069	43%	62%	125%	75%	21.2x	57%
ForgeRock	2021	9/15/2021	\$2,026	41%	16%	113%	84%	10.4x	35%
Toast	2021	9/21/2021	\$20,104	61%	62%	114%	21%	37.0x	24%
Freshworks	2021	9/21/2021	\$10,234	49%	57%	118%	79%	22.2x	30%
EngageSmart	2021	9/22/2021	\$4,201	69%	83%	124%	75%	15.0x	32%
Clearwater	2021	9/23/2021	\$4,248	24%	7%	109%	75%	10.8x	46%
AvidXchange	2021	10/12/2021	\$4,894	30%	-4%	102%	59%	20.3x	4%
GitLab	2021	10/13/2021	\$11,052	N/A	N/A	152%	88%	37.4x	62%
Enfusion	2021	10/20/2021	\$1,948	N/A	N/A	122%	73%	9.8x	26%
Informatica	2021	10/26/2021	\$7,937	4%	20%	116%	77%	6.6x	14%
Expensify	2021	11/9/2021	\$1,818	35%	70%	119%	71%	11.2x	35%
Braze	2021	11/26/2021	\$5,920	N/A	N/A	125%	65%	21.1x	-4%
UserTesting	2021	11/16/2021	\$1,972	42%	20%	119%	74%	12.8x	-35%
HashiCorp	2021	12/8/2021	\$14,312	51%	30%	127%	83%	36.6x	-10%
Samsara	2021	12/14/2021	\$11,509	76%	31%	115%	72%	22.5x	0%

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# Business Performance vs. 30 Day Performance

## 2020 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
Zoominfo	2020	6/5/2020	\$8,174	104%	116%	109%	78%	8.1x	115%
nCino	2020	7/14/2020	\$2,816	50%	43%	N/A	55%	11.4x	173%
Jamf	2020	7/23/2020	\$3,025	35%	36%	120%	75%	11.2x	54%
Vertex	2020	7/30/2020	\$2,767	18%	33%	109%	61%	7.5x	48%
BigCommerce	2020	8/5/2020	\$1,605	30%	-4%	N/A	71%	13.0x	346%
Duck Creek Technologies	2020	8/17/2020	\$3,528	23%	33%	113%	56%	13.0x	46%
Snowflake	2020	9/16/2020	\$33,957	138%	106%	164%	61%	36.2x	102%
Jfrog	2020	9/16/2020	\$3,972	112%	122%	139%	81%	20.5x	82%
SumoLogic	2020	9/17/2020	\$2,220	42%	8%	130%	70%	11.2x	0%
Bentley Systems	2020	9/24/2020	\$5,747	11%	37%	110%	81%	8.0x	66%
Datto	2020	10/23/2020	\$4,343	17%	16%	115%	68%	8.4x	5%
McAfee	2020	10/21/2020	\$8,637	7%	30%	98%	70%	2.6x	-21%
C3.ai	2020	12/8/2020	\$4,167	36%	11%	N/A	75%	22.3x	242%

## 2019 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
PagerDuty	2019	4/11/2019	\$1,799	48%	40%	140%	85%	8.3x	116%
Zoom	2019	4/18/2019	\$9,343	118%	125%	140%	82%	15.3x	150%
Fastly	2019	5/17/2019	\$1,478	39%	13%	130%	56%	7.6x	24%
CrowdStrike	2019	6/14/2019	\$6,779	N/A	N/A	147%	N/A	13.7x	116%
Health Catalyst	2019	7/25/2019	\$939	64%	30%	107%	53%	8.7x	49%
Dynatrace	2019	8/1/2019	\$4,487	12%	N/A	N/A	N/A	10.3x	44%
Cloudflare	2019	9/13/2019	\$4,479	40%	7%	113%	77%	10.8x	10%
Datadog	2019	9/19/2019	\$7,923	82%	70%	146%	74%	17.4x	17%
Ping Identity	2019	9/20/2019	\$1,193	10%	17%	115%	77%	4.7x	8%
Bill.com	2019	12/12/2019	\$1,585	63%	57%	N/A	73%	7.4x	80%
Sprout Social	2019	12/13/2019	\$825	37%	21%	106%	74%	5.2x	7%



## Business Performance vs. 30 Day Performance

## 2018 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
Cardlytics	2018	2/9/2018	\$259	16%	32%	N/A	38%	2.8x	36%
ZScaler	2018	3/16/2018	\$1,906	54%	41%	122%	79%	9.3x	72%
Dropbox	2018	3/23/2018	\$8,343	31%	59%	90%	67%	5.4x	38%
Zuora	2018	4/12/2018	\$1,472	49%	31%	110%	52%	5.5x	44%
Ceridian	2018	4/26/2018	\$3,037	7%	-1%	95%	50%	5.7x	53%
DocuSign	2018	4/27/2018	\$4,506	36%	43%	115%	77%	7.0x	60%
Smartsheet	2018	4/27/2018	\$1,510	66%	43%	130%	81%	8.4x	50%
Avalara	2018	6/15/2018	\$1,585	29%	18%	107%	73%	5.1x	82%
Domo	2018	6/29/2018	\$553	45%	-88%	105%	60%	2.6x	-21%
Elastic	2018	10/5/2018	\$2,540	79%	64%	142%	71%	7.8x	79%
Anaplan	2018	10/12/2018	\$2,112	76%	72%	123%	71%	6.2x	42%

## 2017 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
Alteryx	2017	3/24/2017	\$807	59%	47%	120%	81%	4.5x	10%
Okta	2017	4/7/2017	\$1,571	87%	56%	123%	65%	5.2x	48%
Yext	2017	4/13/2017	\$958	49%	40%	119%	70%	5.1x	25%
Appian	2017	5/26/2017	\$716	9%	N/A	117%	64%	3.7x	54%
Bandwidth	2017	11/13/2017	\$352	9%	11%	107%	45%	2.2x	6%
Sailpoint	2017	11/17/2017	\$1,045	45%	49%	N/A	74%	6.2x	20%
Casa Systems	2017	12/15/2017	\$1,053	8%	17%	N/A	73%	2.8x	58%

# Business Performance vs. 30 Day Performance

## 2013 – 2016 SAAS IPOs

Company	IPO Year	IPO Date	Market Cap at IPO (\$Ms)	LTM Rev YoY Growth (%)	LTM Rule of 40 (%)	LTM Net Retention (%)	LTM Gross Margin (%)	Forward Multiple at IPO	30 Day Price % Change from Offering
Twilio	2016	6/23/2016	\$1,256	84%	78%	170%	56%	3.3x	172%
Coupa	2016	10/6/2016	\$886	71%	46%	N/A	62%	4.2x	40%
Blackline	2016	10/28/2016	\$861	N/A	N/A	119%	74%	5.5x	58%
Box	2015	1/23/2015	\$1,656	83%	15%	130%	79%	4.6x	35%
Shopify	2015	5/21/2015	\$1,285	106%	121%	N/A	58%	5.7x	109%
Appfolio	2015	6/26/2015	\$399	81%	65%	N/A	54%	3.7x	23%
Rapid7	2015	7/17/2015	\$620	33%	41%	N/A	75%	7.4x	37%
Pure Storage	2015	10/7/2015	\$3,210	239%	184%	N/A	58%	4.4x	4%
Mimecast	2015	11/19/2015	\$540	24%	38%	108%	70%	3.6x	-1%
Atlassian	2015	12/10/2015	\$4,382	54%	74%	100%	84%	7.4x	29%
Paylocity	2014	3/19/2014	\$838	49%	52%	92%	48%	6.1x	14%
Paycom	2014	4/15/2014	\$762	40%	46%	91%	81%	5.3x	-5%
Zendesk	2014	5/16/2014	\$647	84%	78%	N/A	66%	4.4x	86%
Hubspot	2014	10/10/2014	\$778	46%	21%	90%	66%	6.2x	47%
New Relic	2014	12/12/2014	\$1,076	93%	53%	115%	82%	6.5x	47%
RingCentral	2013	9/27/2013	\$804	49%	28%	99%	62%	4.1x	43%
Veeva	2013	10/16/2013	\$2,484	98%	119%	187%	59%	8.9x	93%

01

02

03

04

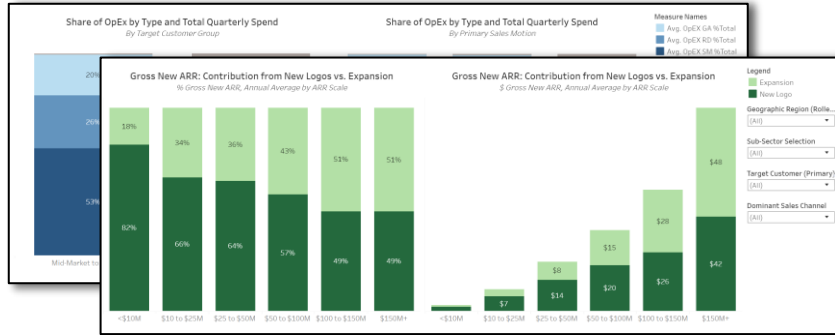
05

06

# ICONIQ GROWTH ANALYTICS: PROPRIETARY TOOLS

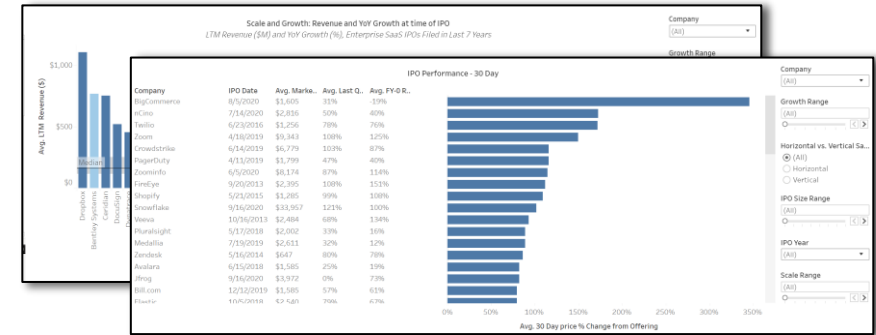
INTERACTIVE COMPANION TABLEAU DASHBOARDS WITH PROPRIETARY BENCHMARKS

Currently only available to portfolio companies – reach out to ICONIQ Analytics for access

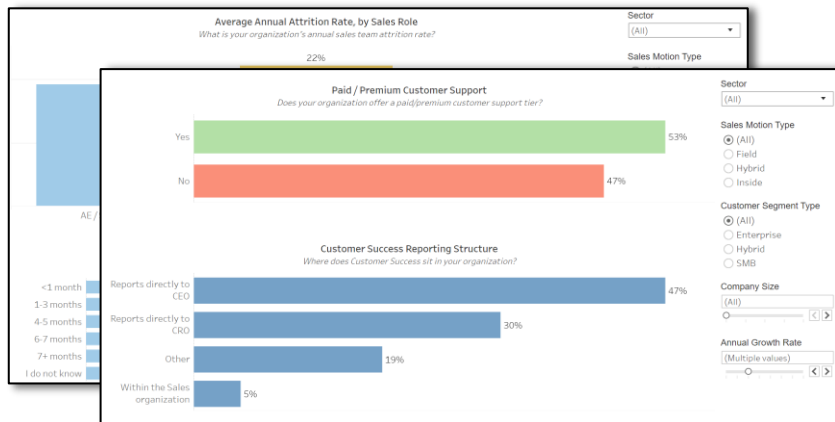


Filter by sector, geography, target customer, or sales motion to find relevant benchmarks for your specific company

Topline Growth & Operational Efficiency

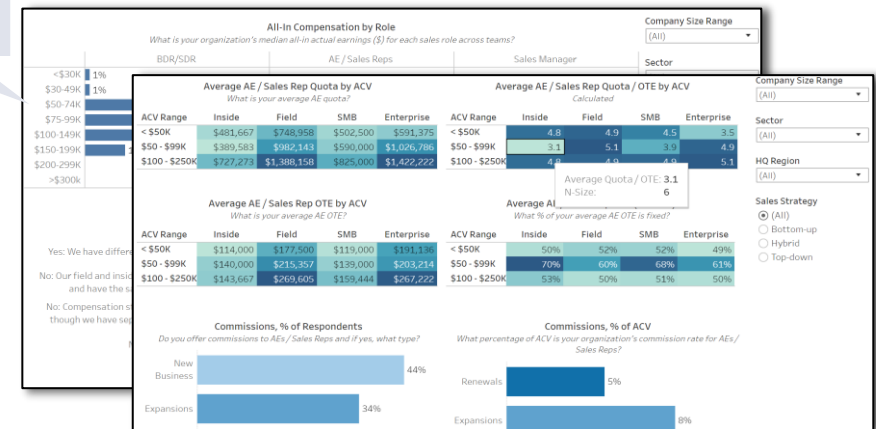


Enterprise Software IPO Database



Hover over specific data points for more details (always anonymized)

Go-to-Market Organization Structure



Go-To-Market Compensation & Incentives