Pacific Crest
SECURITIES
Technology Specialists of
KeyBanc Capital Markets

2016 Pacific Crest Private SaaS Company Survey Results

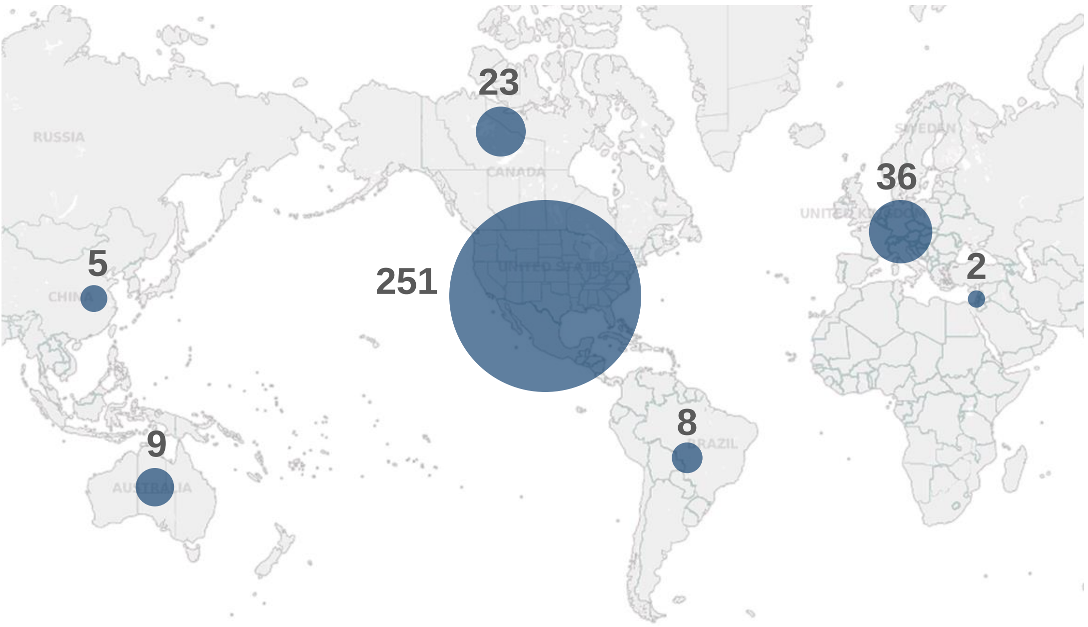
October 17, 2016

Pacific Crest 2016 Private SaaS Company Survey

- **This report provides an analysis of the results of a survey of private SaaS companies which Pacific Crest's software investment banking team conducted in June-July 2016**
  - Represents the seventh such survey Pacific Crest has completed
  - The survey results include responses from senior executives of 336 companies
  - Special thanks to our partners at Matrix Partners and the *forEntrepreneurs* blog for help soliciting participants and republishing our report
- **Representative statistics on the survey participants:**
  - ~$5MM median 2015 revenues, with over 60 companies >$25MM
  - Median employees (FTEs): ~50
  - Median customer count: ~250; 28% with >1,000 customers
  - 75% headquartered in the U.S.
  - ~$25K median annual contract value (ACV)
  - 44% use field sales as predominant mode of distribution; 23% inside sales

Our goal is to provide useful operational and financial benchmarking data to executives and investors in SaaS companies

Survey Participant Geography (HQ)



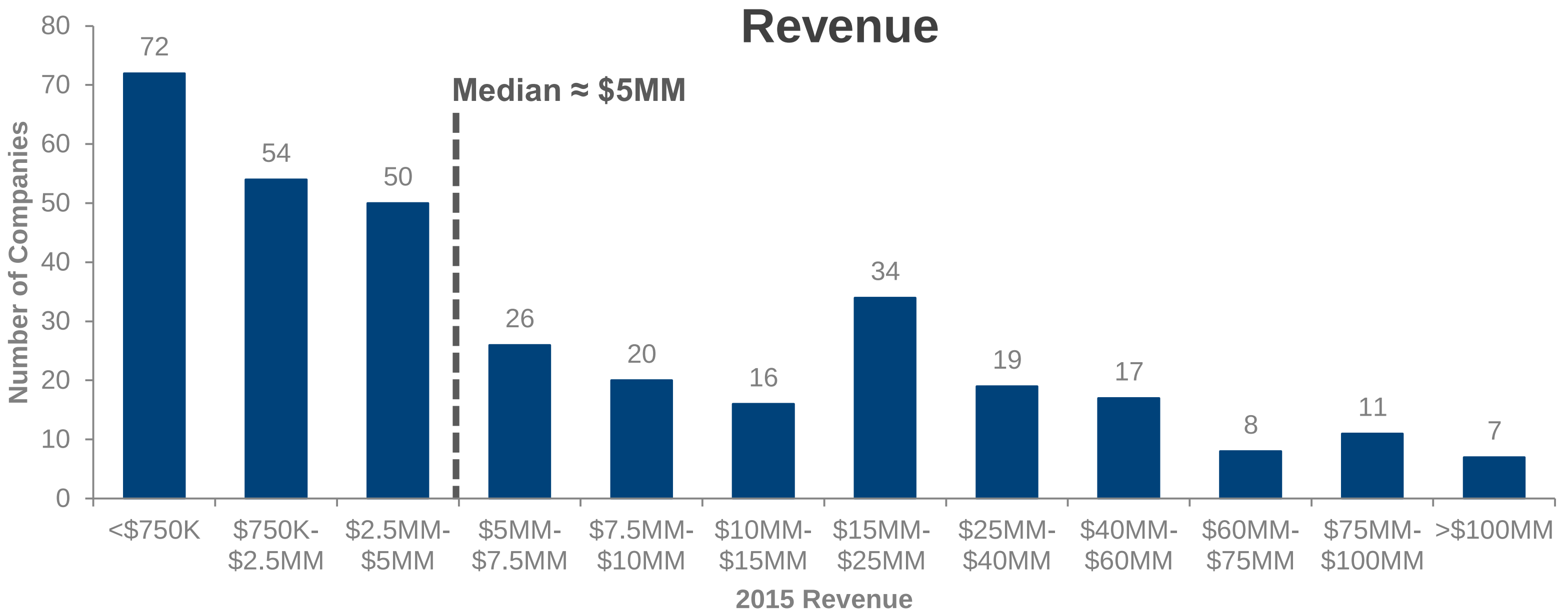
U.S. Regions	
Northern California / Silicon Valley	53
Midwest / Chicago	36
Southeast U.S.	29
Boston / New England	27
Mid-Atlantic / DC	21
Texas	18
Colorado / Utah	14
Pacific Northwest	14
New York Metropolitan Area	13
Southern California	13
Other U.S.	13
TOTAL U.S. :	**251**

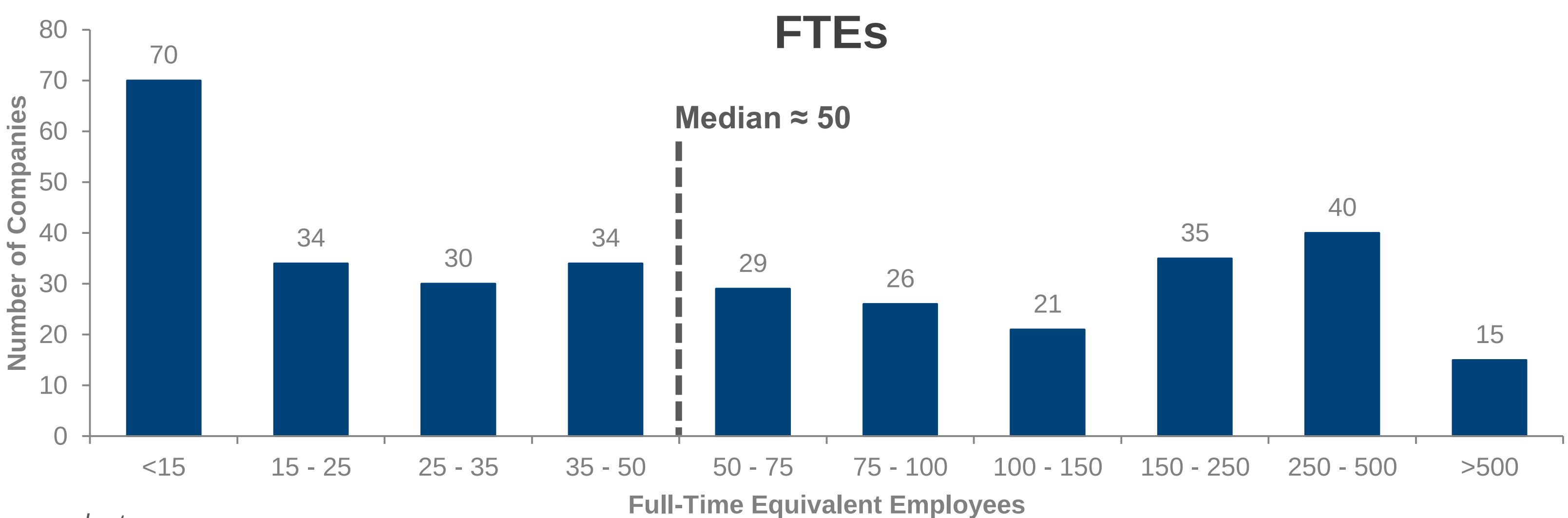
Other Locations	
Europe	36
Canada	23
Australia / New Zealand	9
Latin America	8
Asia	5
Middle East / Africa	2
TOTAL Non-U.S. :	**83**

TOTAL: **336***

** 2 companies did not indicate HQ*

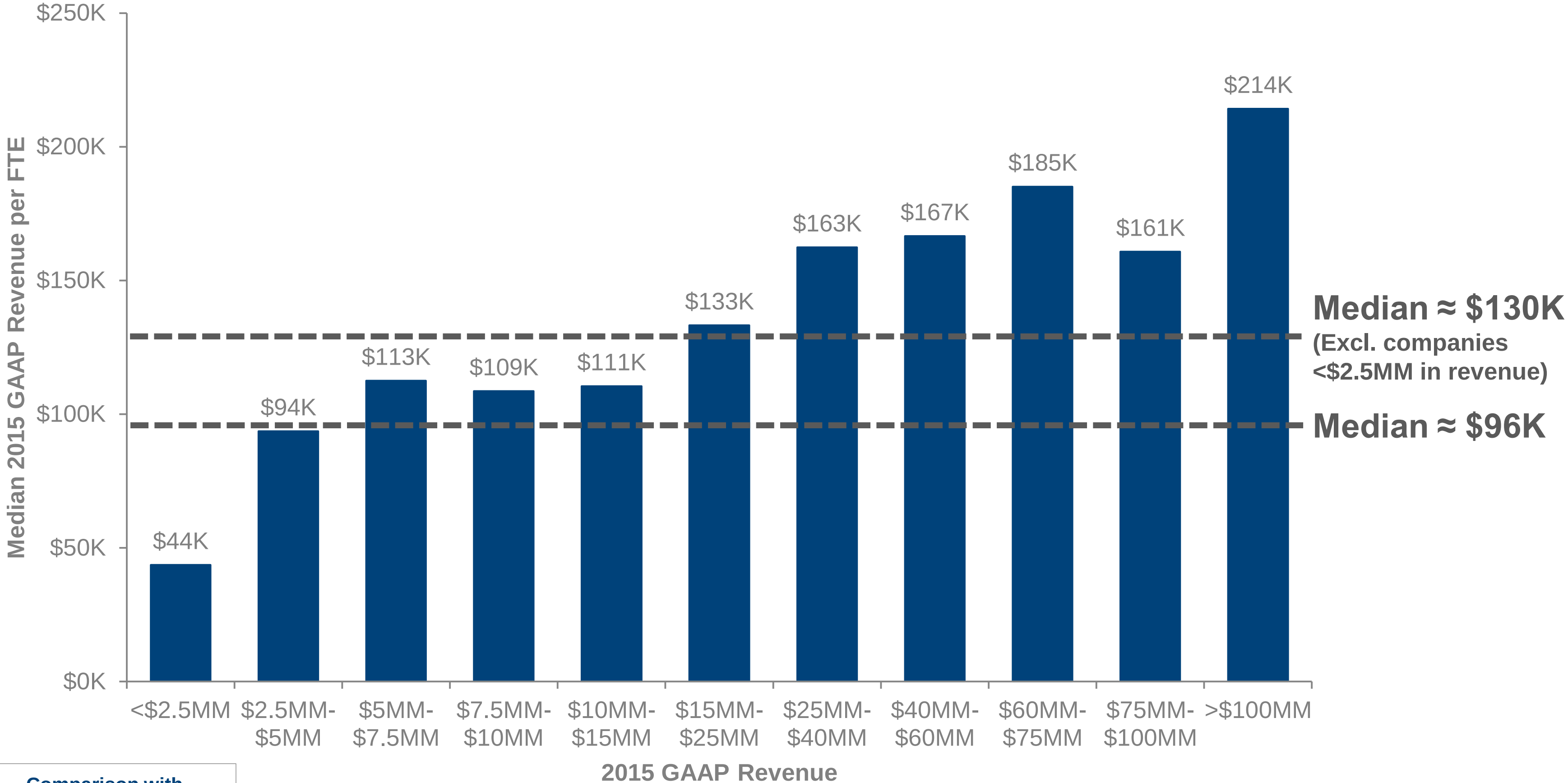
Survey Participant Size Distribution





334 respondents

Revenue per FTE Efficiency



Comparison with Previous Surveys

Somewhat lower than last year's overall median of ~$112K and a median of $142K for companies >$2.5MM in revenue

Respondents: Total: 330, <$2.5MM: 124, $2.5MM-$5MM: 50, $5MM-$7.5MM: 26, $7.5MM-$10MM: 20, $10MM-$15MM: 16, $15MM-$25MM: 34, $25MM-$40MM: 19, $40MM-$60MM: 15, $60MM-$75MM: 8, $75MM-$100MM: 11, >$100MM: 7
Respondents (Excluding Companies <$2.5MM in Revenue): 206

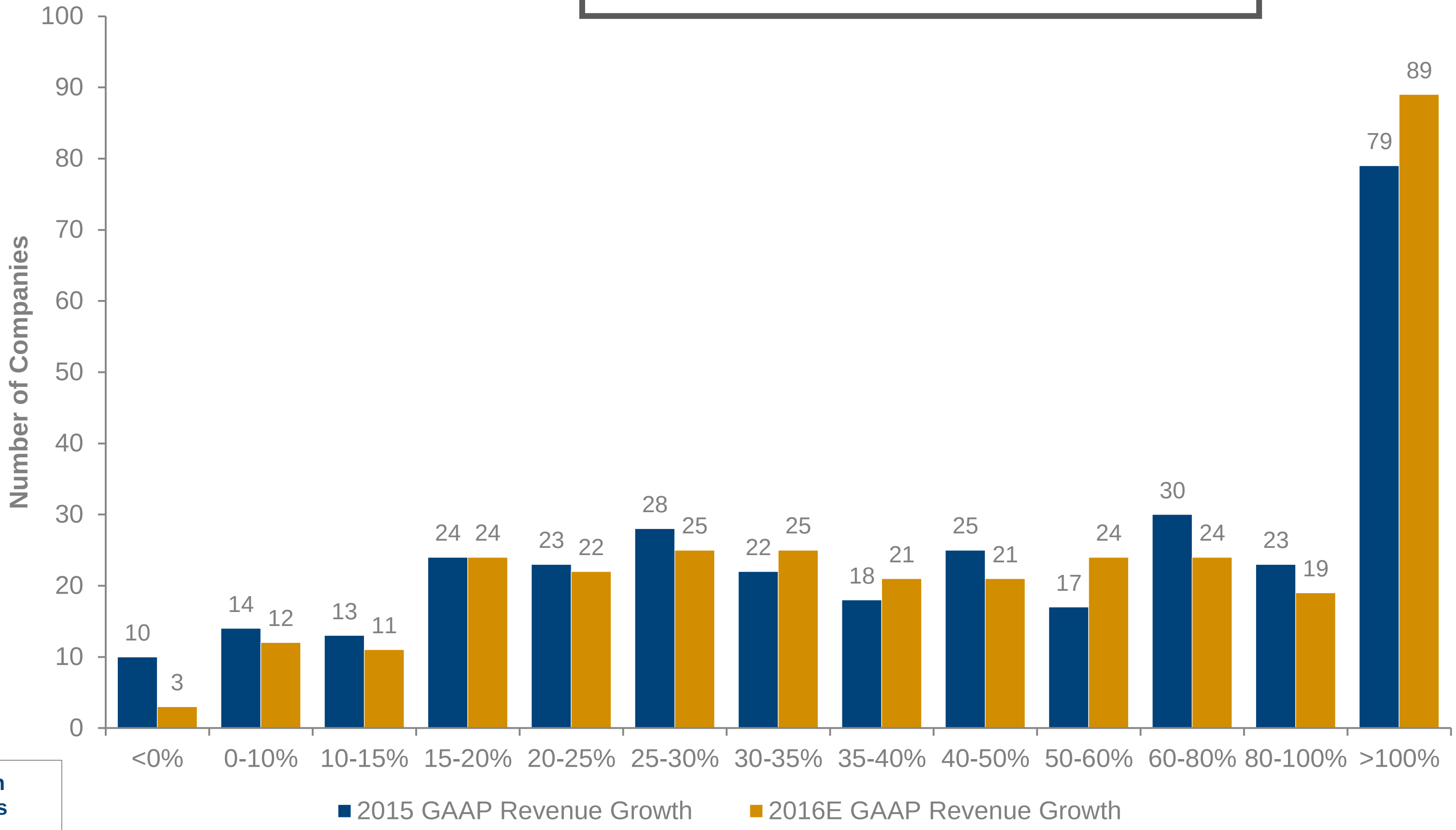
GROWTH RATES

How Fast Did / Will You Grow GAAP Revenues?
(Including All Respondents)

The median revenue growth achieved by survey respondents in 2015 was 44%, while the median projected growth for 2016 is 48%.

Median 2015 GAAP Rev Growth ≈ 44%

Median 2016E GAAP Rev Growth ≈ 48%



Comparison with Previous Surveys

Largely consistent with last year's results

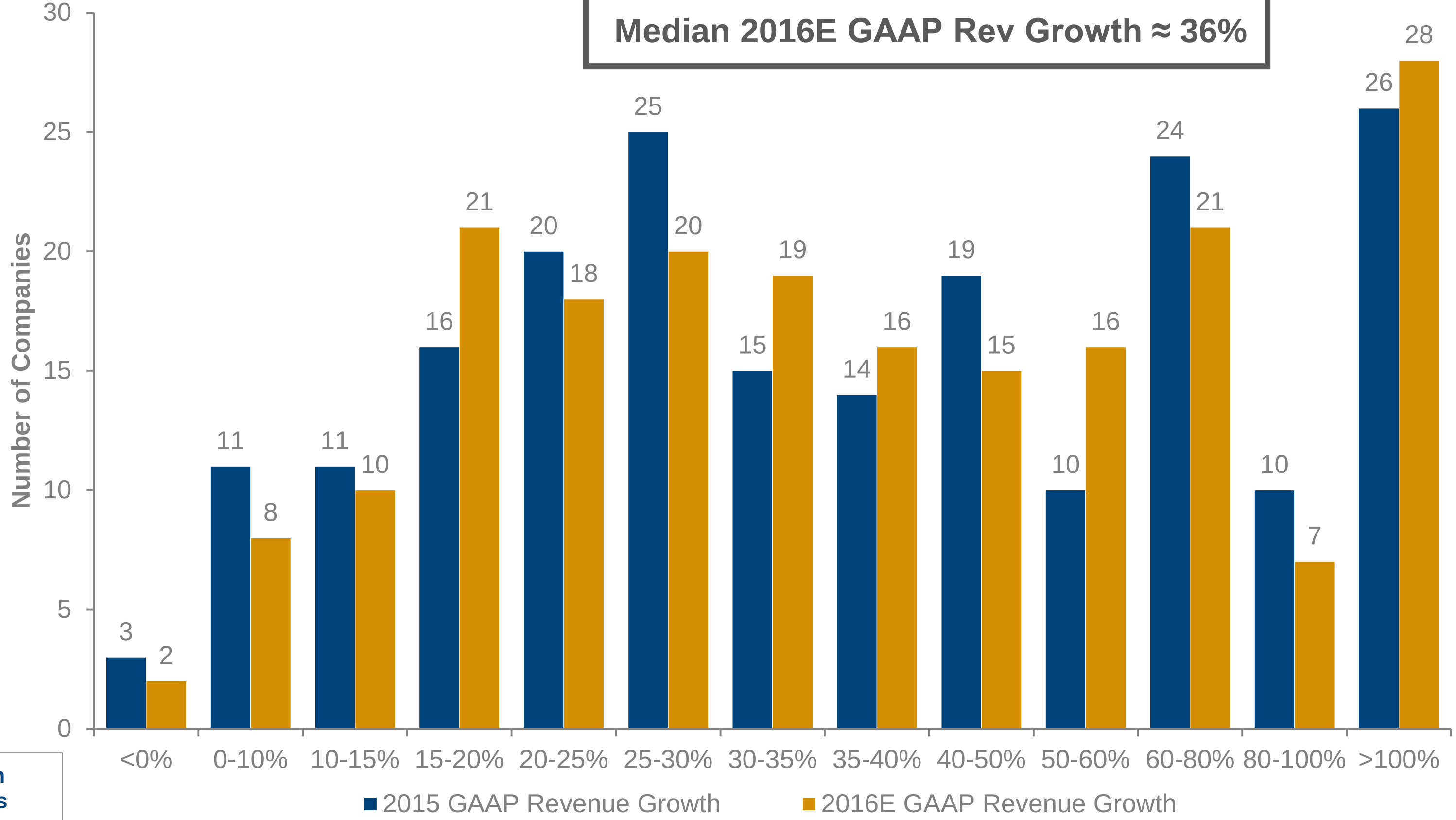
326 and 320 respondents, respectively

How Fast Did / Will You Grow GAAP Revenues?
(Excluding Companies <$2.5MM in Revenue)

As expected, many of the fastest growers are among the smallest companies. Eliminating them brings median growth rates down ~10% points.

Median 2015 GAAP Rev Growth ≈ 35%

Median 2016E GAAP Rev Growth ≈ 36%



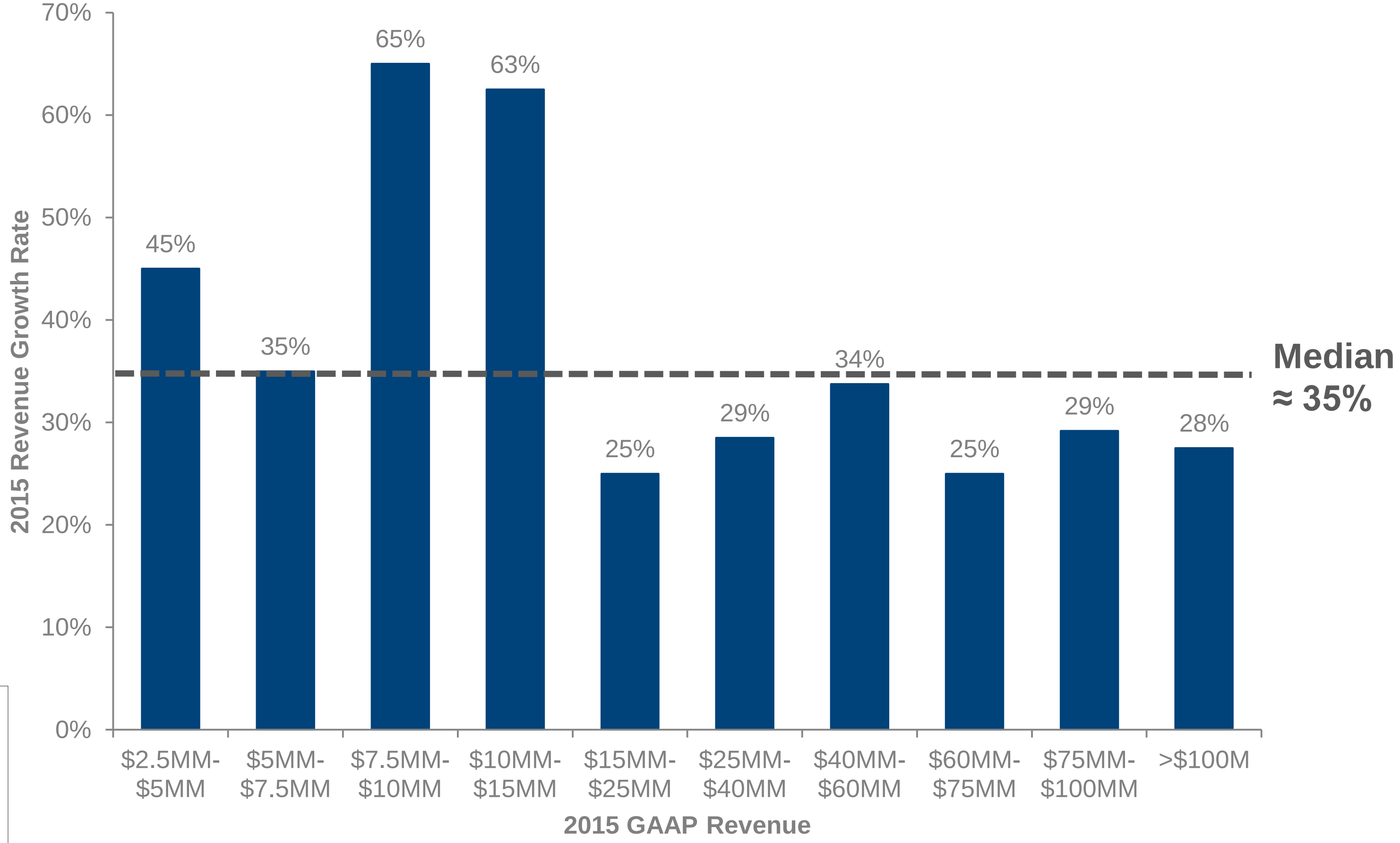
Comparison with Previous Surveys

Medians consistent with last year's results, though this year's respondent pool was more evenly distributed

204 and 201 respondents, respectively

Median Growth Rate as a Function of Size of Company
(Excluding Companies <$2.5MM in Revenue)

The results indicate that companies in the $7.5MM-$15MM range are among the fastest growers – with the median growth in this range much greater than the median of companies half their size.



Comparison with Previous Surveys

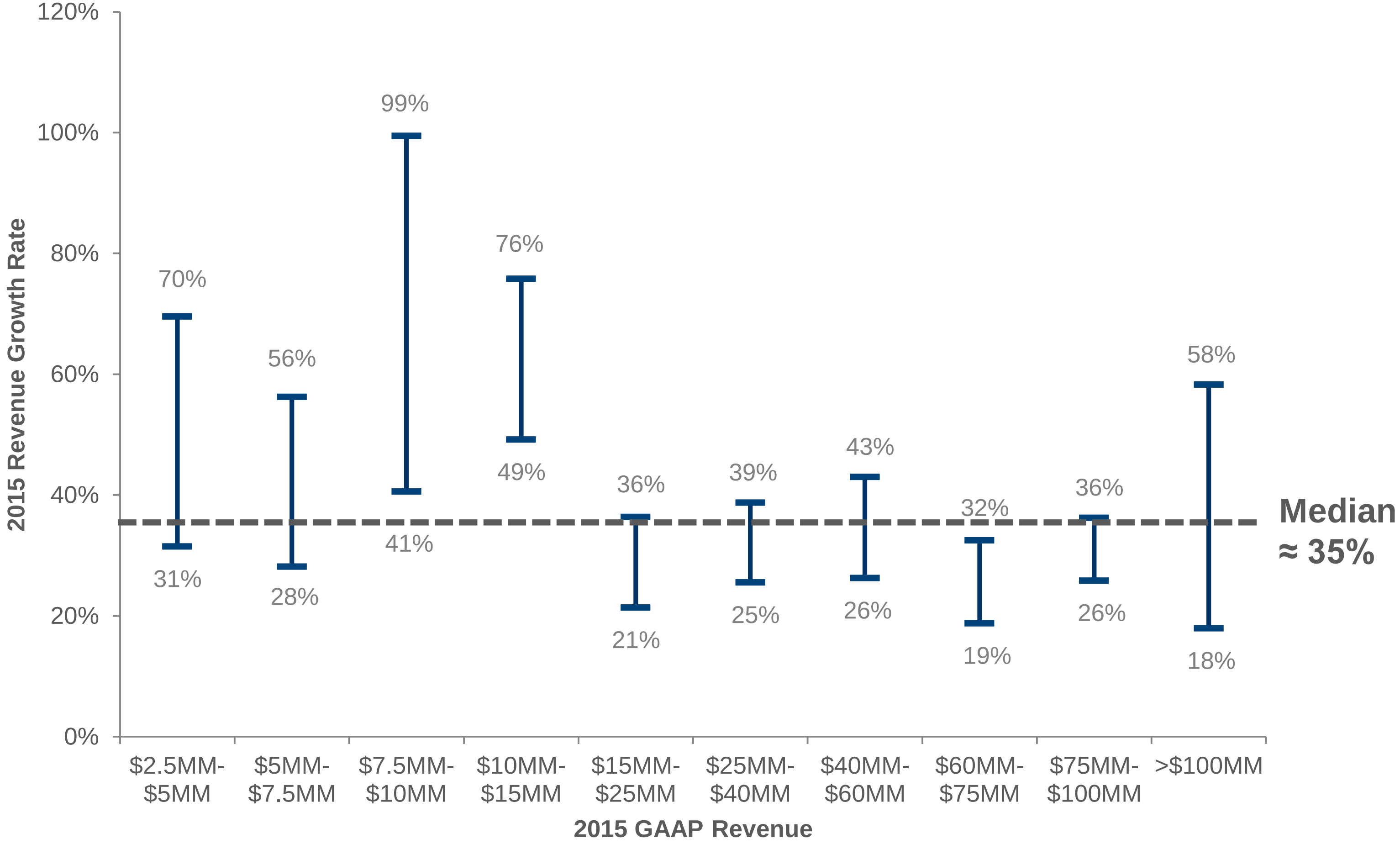
We saw a similar phenomenon of a bump-up last year, but for companies between $5MM-$7.5MM

Respondents: Total: 203, $2.5MM-$5MM: 49, $5MM-$7.5MM: 26, $7.5MM-$10MM: 19, $10MM-$15MM: 15, $15MM-$25MM: 34, $25MM-$40MM: 17, $40MM-$60MM: 17, $60MM-$75MM: 8, $75MM-$100MM: 11, >$100MM: 7

Median Growth Rate as a Function of Size of Company – Middle Third Group

(Excluding Companies <$2.5MM in Revenue)

Looking at the middle third of respondents in each size group suggests that in addition to companies in the $7.5MM-$15MM range, smaller companies are also among the fastest growers.

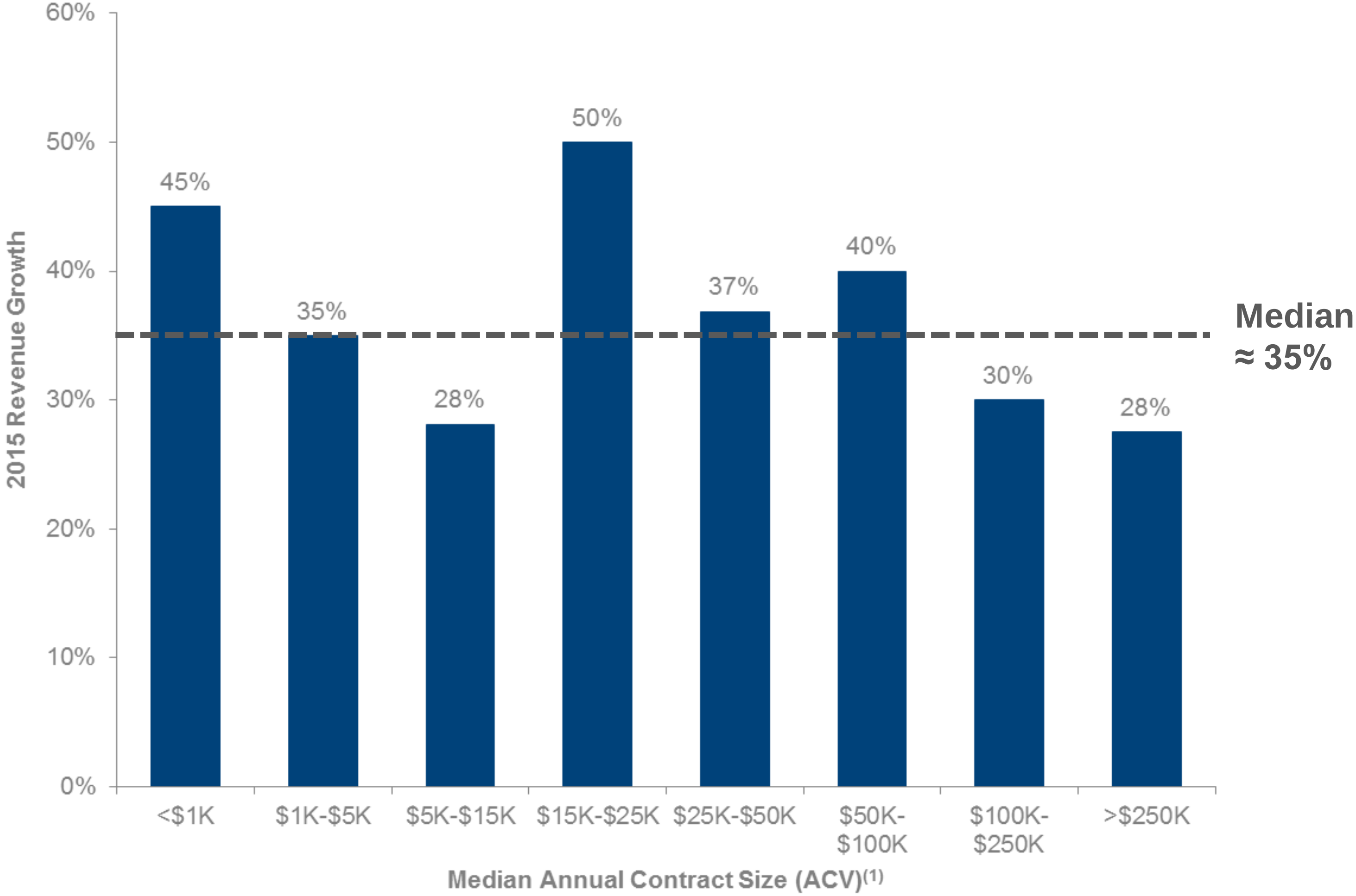


Highlighted range represents the 33rd-67th percentile of data

Respondents: Total: 203, $2.5MM-$5MM: 49, $5MM-$7.5MM: 26, $7.5MM-$10MM: 19, $10MM-$15MM: 15, $15MM-$25MM: 34, $25MM-$40MM: 17, $40MM-$60MM: 17, $60MM-$75MM: 8, $75MM-$100MM: 11, >$100MM: 7

Median Growth Rate as a Function of Contract Size
(Excluding Companies <$2.5MM in Revenue)

There appears to be no relationship between median contract size and growth other than a bump-up for the <$1K and $15K-$25K groups (though this could be skewed by sparse data in those groups).



Comparison with Previous Surveys

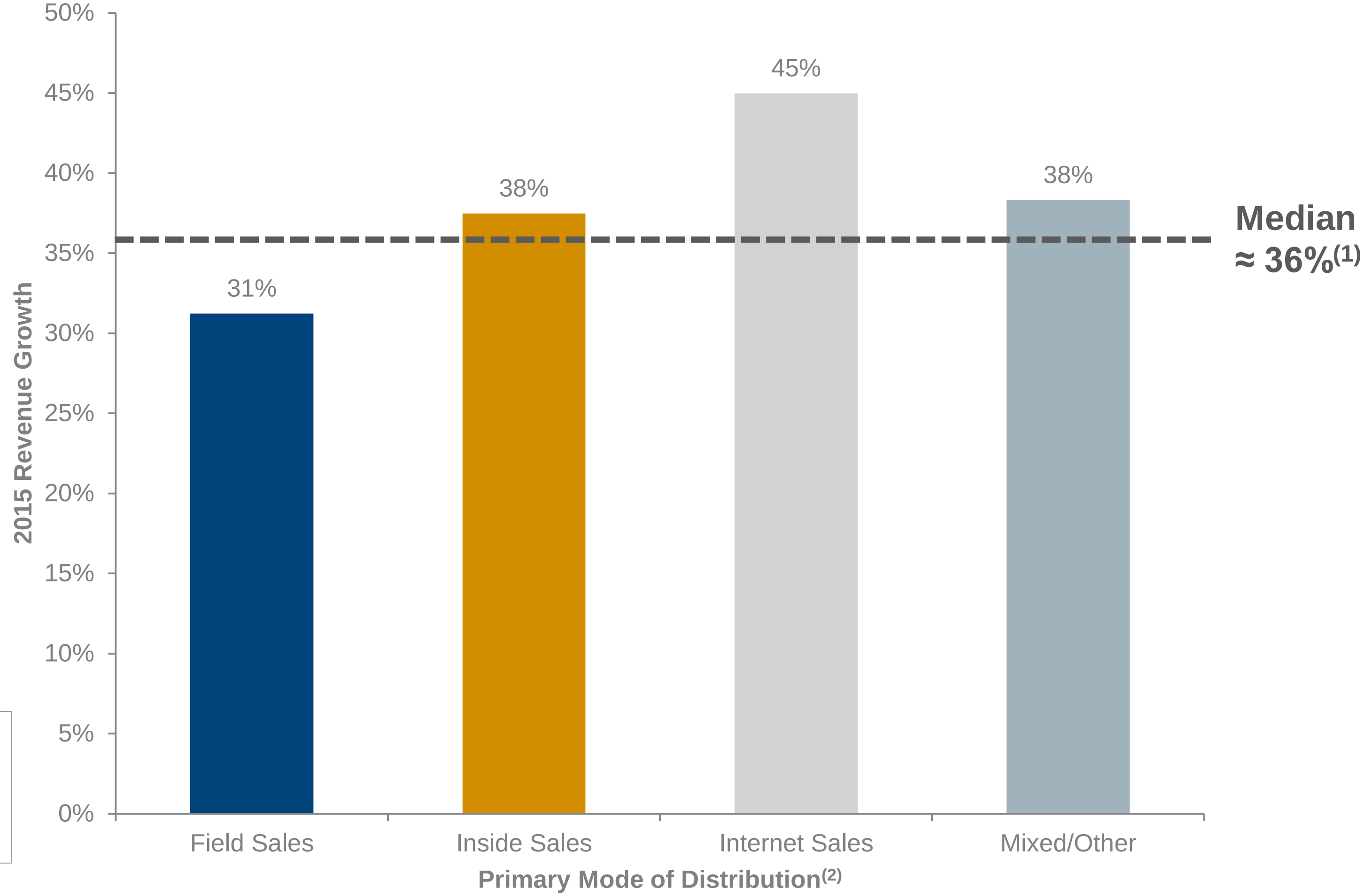
Last year, the bump-up occurred for companies in the ranges encompassing $100K-$250K ACV

(1) Annual Contract Value (ACV): annualized monthly run rate in recurring SaaS revenues, excluding professional services, perpetual licenses and related maintenance

Respondents: Total: 163, <$1K: 6, $1K-$5K: 18, $5K-$15K: 27, $15K-$25K: 20, $25K-$50K: 25, $50K-$100K: 32, $100K-$250K: 20, >$250K: 15

Median Growth Rate as a Function of Sales Strategy
(Excluding Companies <$2.5MM in Revenue)

We found that median growth among field sales-dominated companies lagged inside sales-dominated companies (by 7% points). (Internet sales driven business data is too sparse to draw conclusions).



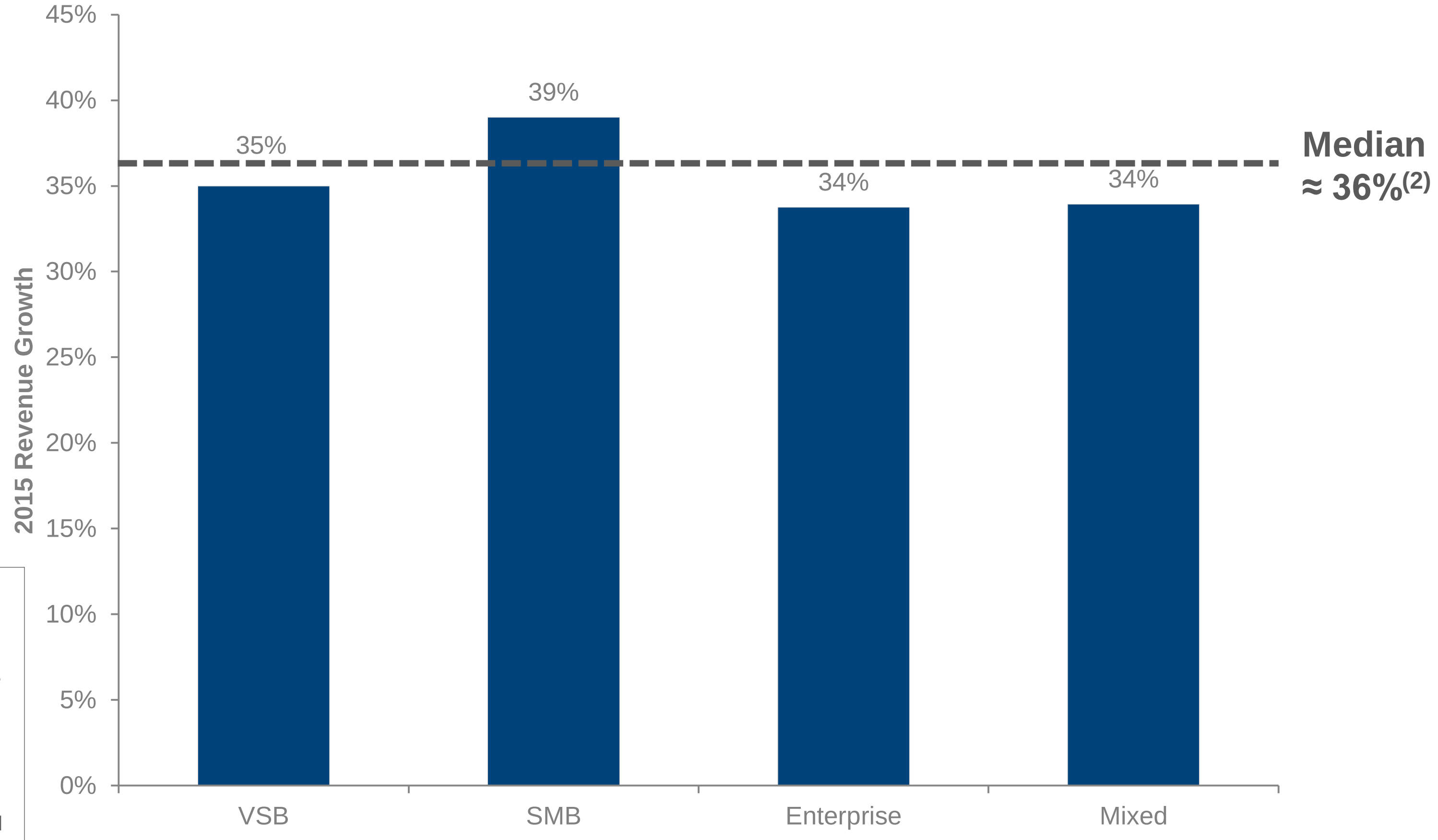
Comparison with Previous Surveys

The field vs. inside sales comparison mirrored 2015 results

(1) Discrepancy from 35% median on slide 8; smaller set of respondents answered both questions
(2) Primary Mode of Distribution – At least 25% of new ACV bookings from new customers in 2015 come from designated distribution channel with no other channel exceeding 25%; “Mixed” defined as respondents who have more than 25% of bookings in two or more distribution channels
Respondents: Total: 182, Field Sales: 81, Inside Sales: 42, Internet Sales: 9, Mixed/Other: 50

Median Growth Rate as a Function of Target Customer(1)
(Excluding Companies <$2.5MM in Revenue)

For companies >$2.5MM in revenues, target customer size was not a major indicator of growth, though companies targeting SMBs reported modestly higher revenue growth.



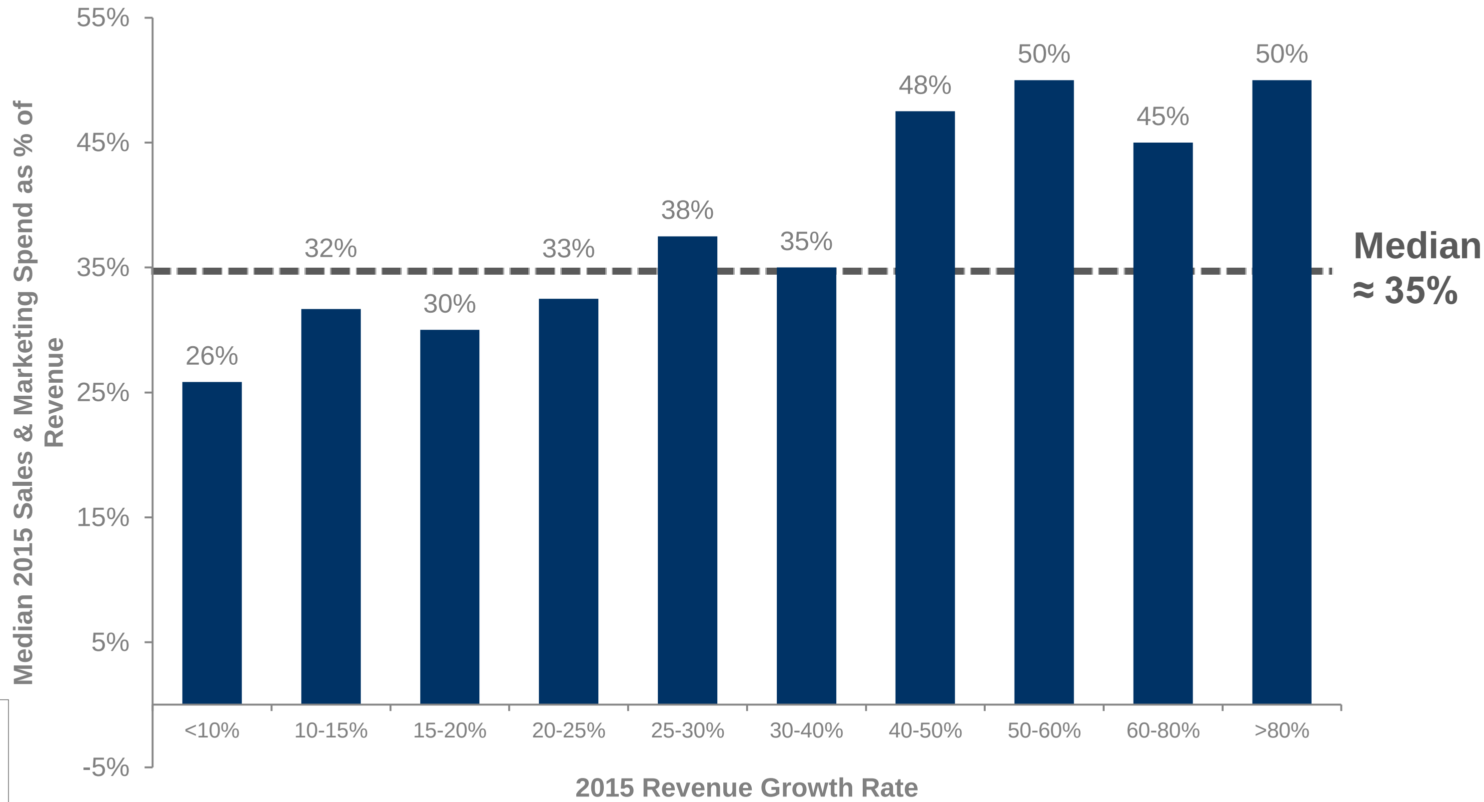
Comparison with Previous Surveys

A big change for the “mixed” group. Last year’s survey showed a distinct advantage for mixed / balanced target customer companies. However, this year’s results were in-line with the survey’s historical norms

(1) Target Customer – At least 25% of revenues come from designated customer base; “Mixed” defined as respondents who didn’t select at least 25% for any designated customer base
(2) Discrepancy from 35% median on slide 8; smaller set of respondents answered both questions
VSB customers defined as <20 employees, SMB as ~100-1,000 employees, and Enterprise as >1,000
Respondents: Total: 195, VSB: 14, SMB: 42, Enterprise: 64, Mixed: 75

Sales & Marketing Spend vs. Growth Rate
(Excluding Companies <$2.5MM in Revenue)

Not surprisingly, companies that spend more on sales & marketing (as a % of revenue) generally grew at a faster rate than those that spend less.



Comparison with Previous Surveys

In line with last year's survey results

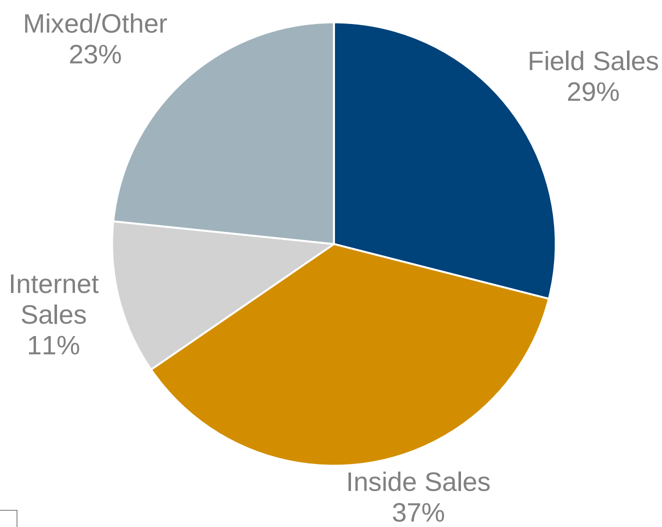
Respondents: Total: 165, <10%: 12, 10-15%: 7, 15-20%: 13, 20-25%: 13, 25-30%: 21, 30-40%: 28, 40-50%: 13, 50-60%: 7, 60-80%: 19, >80%: 32

GO-TO-MARKET

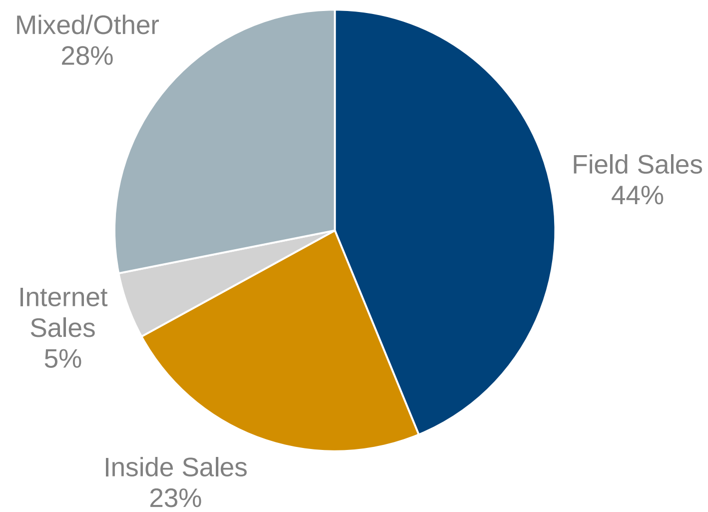
Primary Mode of Distribution[(1)]

While field sales remains the most popular way to sell for companies >$2.5MM revenue, companies with <$2.5MM revenue tended to use inside sales as their primary mode of distribution.

Smaller Companies
<$2.5MM in Revenue



Larger Companies
$2.5MM+ in Revenue



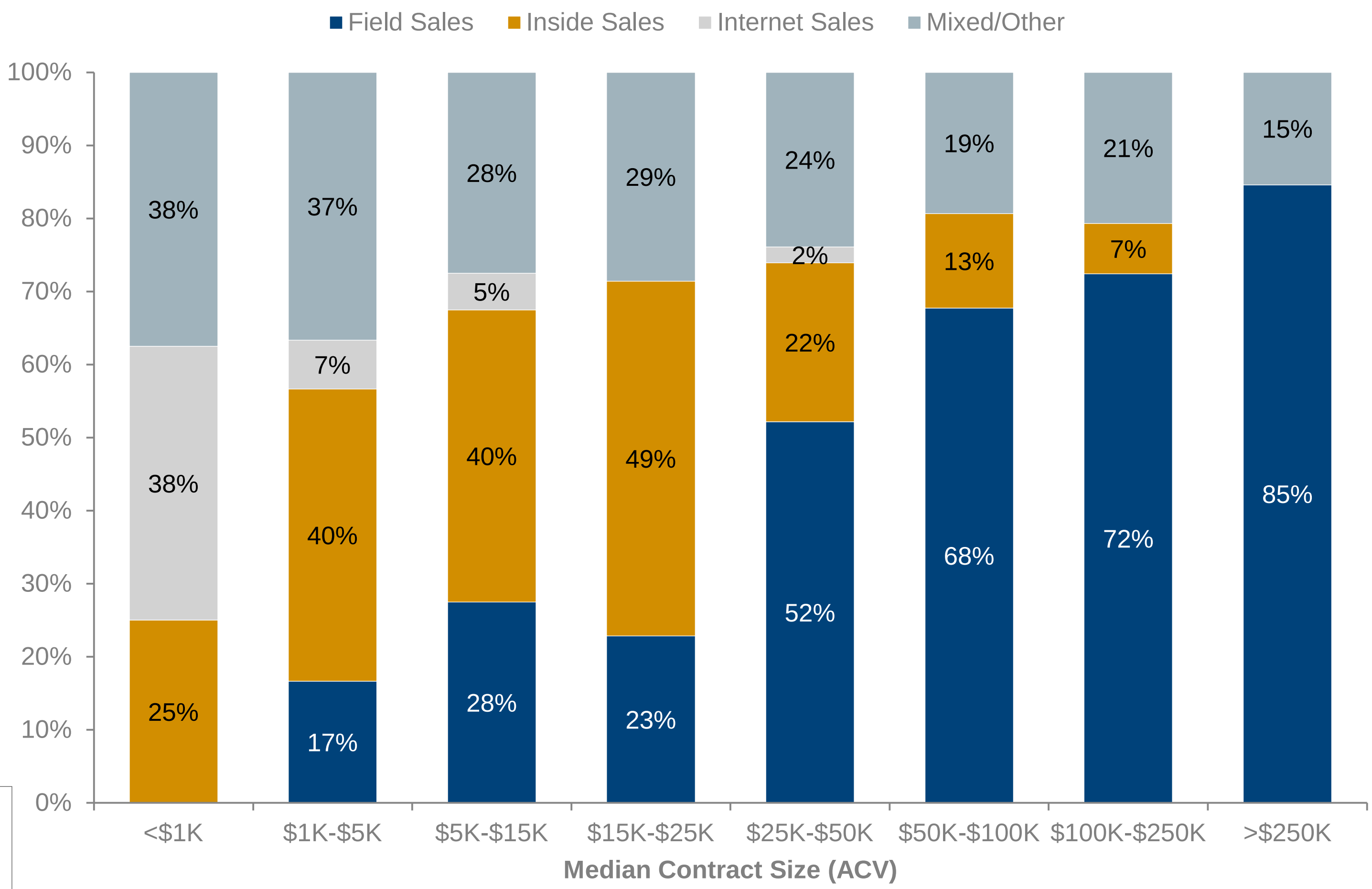
Comparison with Previous Surveys

Companies $2.5MM+ have shifted to greater use of field sales (+12% points from 2015)

(1) Mixed / Other defined as respondents who have more than 25% of bookings in two or more distribution channels or channel sales as a primary mode of distribution
107 and 185 respondents, respectively

Primary Mode of Distribution as a Function of Median Initial Contract Size

Analyzed by contract value, field sales dominates for companies with median deals over $25K. Inside sales strategies are most popular for companies with $1K-$25K median deal sizes.



Comparison with Previous Surveys

More confidence in inside sales in the $1K-$25K range

Note: Initial ACV of a contract

Respondents: Total: 248, <$1K: 24, $1K-$5K: 30, $5K-$15K: 40, $15K-$25K: 35, $25K-$50K: 46, $50K-$100K: 31, $100K-$250K: 29, >$250K: 13

Distribution Strategy – Analysis of Field vs. Inside Sales in Key Crossover Deal Size Tiers
(Excluding Companies <$2.5MM in Revenue)

Among companies selling $5K-$50K average ACV, we compared those favoring field vs. inside and found: (1) larger companies tended to favor field; (2) field sales driven companies had lower churn and higher net dollar retention rates.

	$5K-$50K Median Annual Contract Size	
	Field-Dominated	**Inside-Dominated**
Median		
2015 Revenue	$13MM	$5MM
Revenue Growth Rate	36%	33%
Revenue per FTE	$117K	$107K
Annual Gross Dollar Churn[(1)]	8%	13%
Net Dollar Retention Rate[(1)]	104%	100%

(1) See definitions described later in this presentation

Respondents (Field-Dominated / Inside-Dominated): 2015 Revenue: 23 and 23, Growth Rate: 23 and 22, Revenue per FTE: 23 and 23, Annual Gross Dollar Churn: 22 and 22, Net Dollar Retention Rate: 23 and 21, respectively

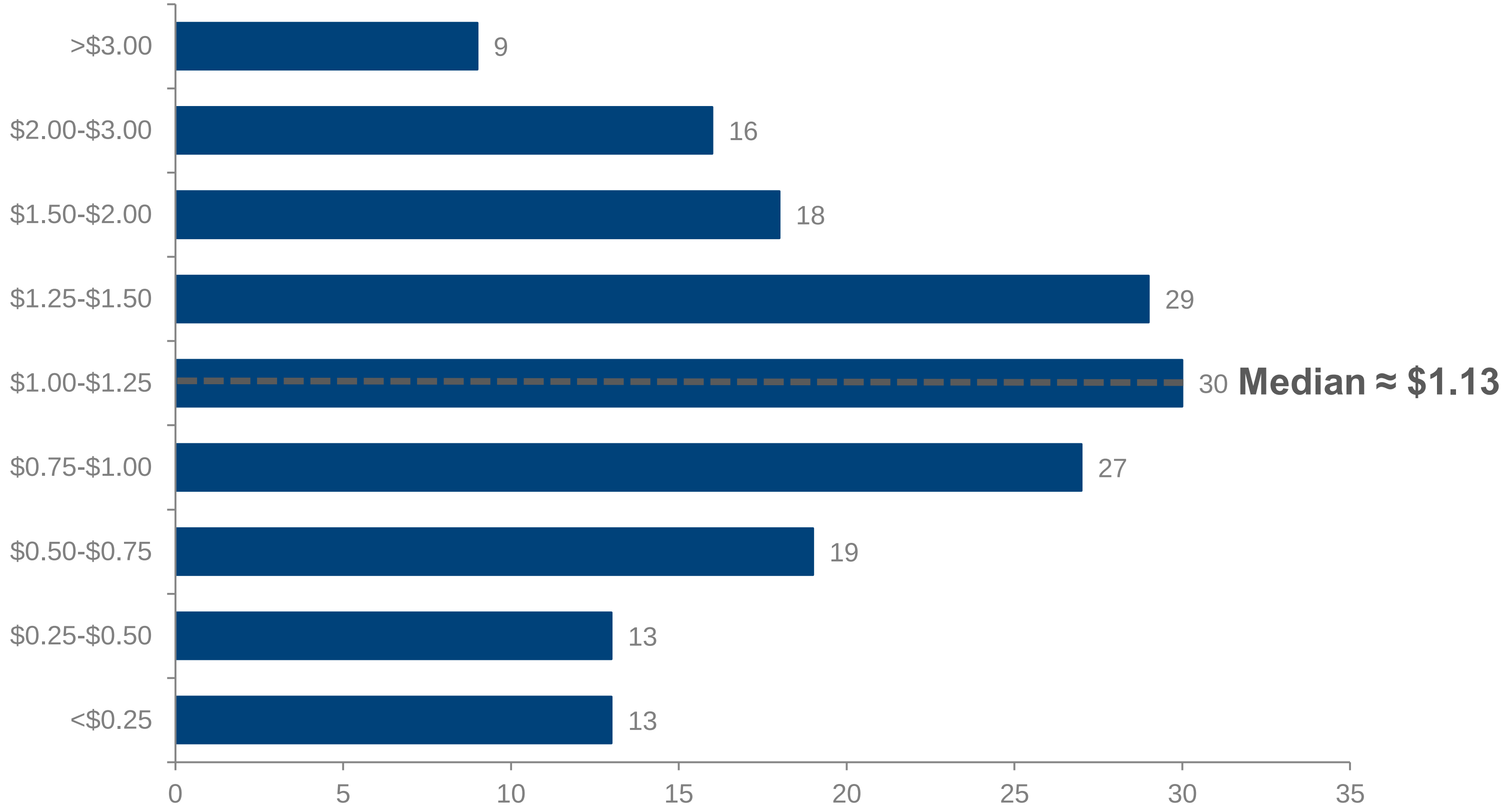
CAC Ratio(1): How Much Do You Spend for $1 of New ACV from a New Customer?
(Excluding Companies <$2.5MM in Revenues)

"How much do you spend on a fully-loaded sales & marketing cost basis to acquire $1 of new ACV from a new customer?"

Respondents (excluding the smallest companies) spent a median of $1.13 to acquire each dollar of new ACV from a new customer. The result drops to $1.00 if we include companies with <$2.5MM in revenues.

Comparison with Previous Surveys

Similar to last year's results of $1.18



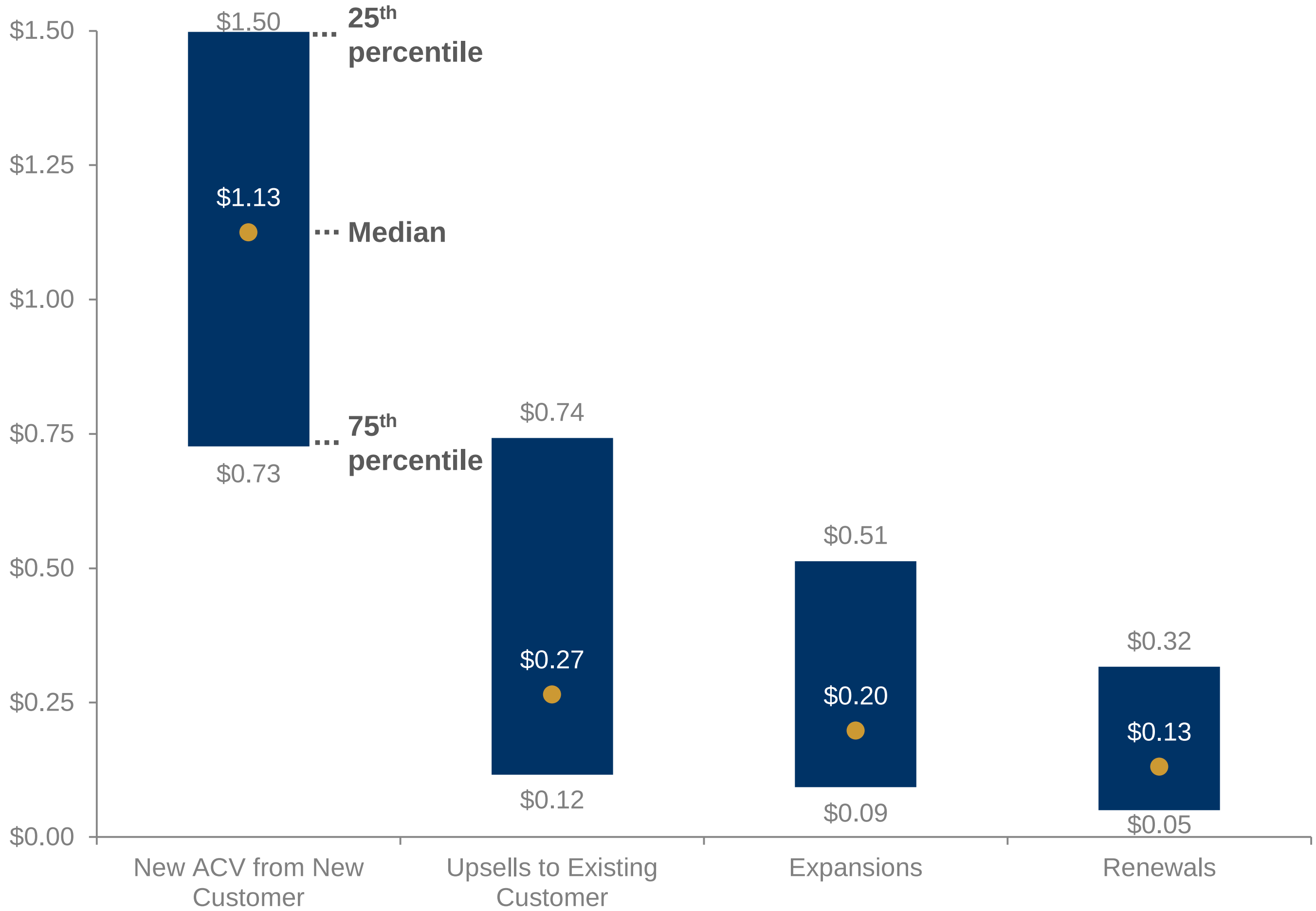
(1) CAC Ratio: Includes the fully-loaded amount spent on sales & marketing for the win, over multiple periods, if necessary
174 respondents

CAC Ratio on New Customers vs. Upsells vs. Expansions vs. Renewals
(Excluding Companies <$2.5MM in Revenues)

The median CAC ratio per $1 of upsells is $0.27, or 24% of the CAC to acquire each new customer dollar. The CAC ratio number for expansions is $0.20, or 18% of the CAC to acquire each new customer dollar, and for renewals, it is $0.13, or 12%.

Comparison with Previous Surveys

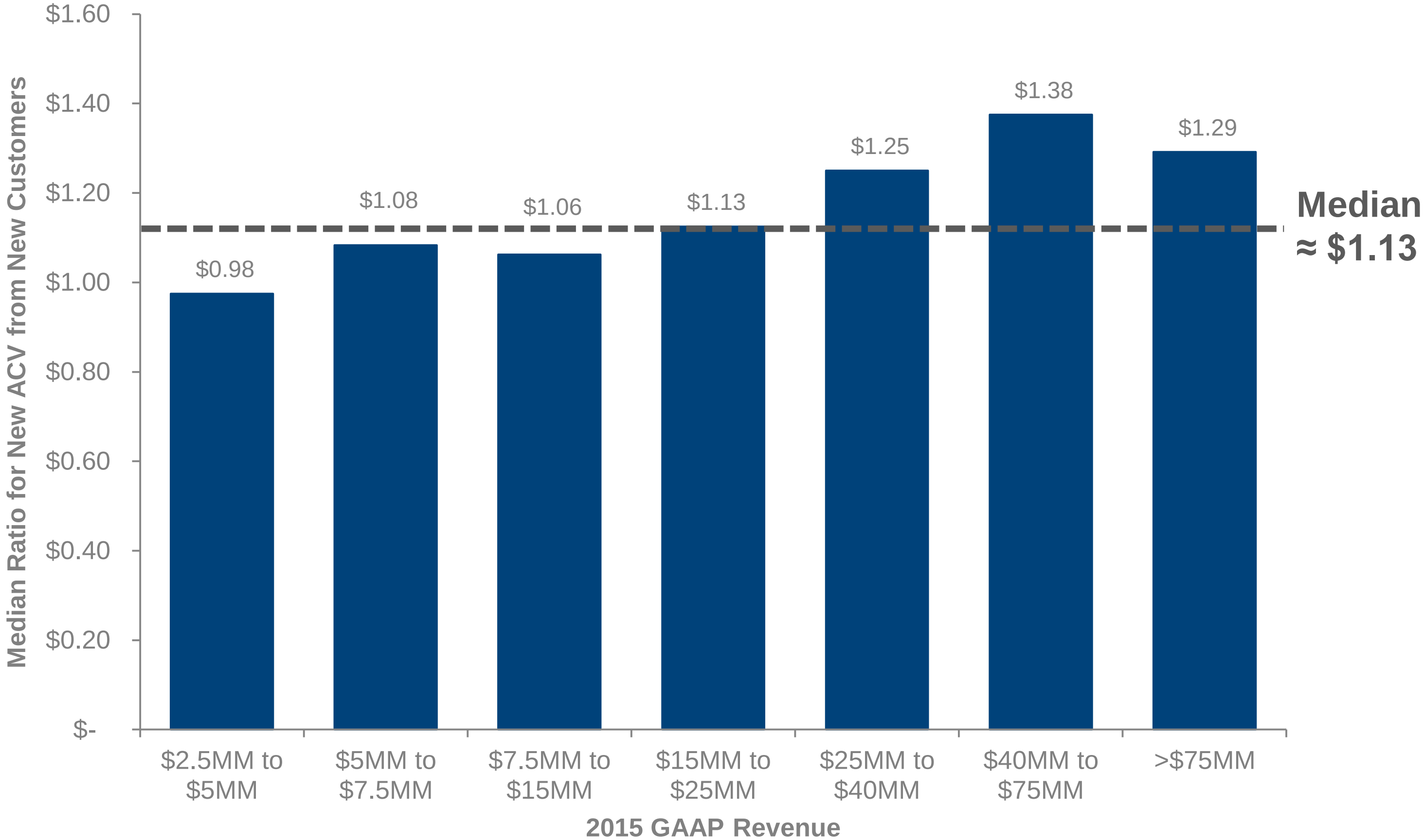
Substantially similar results to previous years



Respondents: New ACV from New Customer: 174, Upsells to Existing Customer: 127, Expansions: 131, Renewals: 137

CAC Ratio on New Customers as a Function of Size of Company
(Excluding Companies <$2.5MM in Revenues)

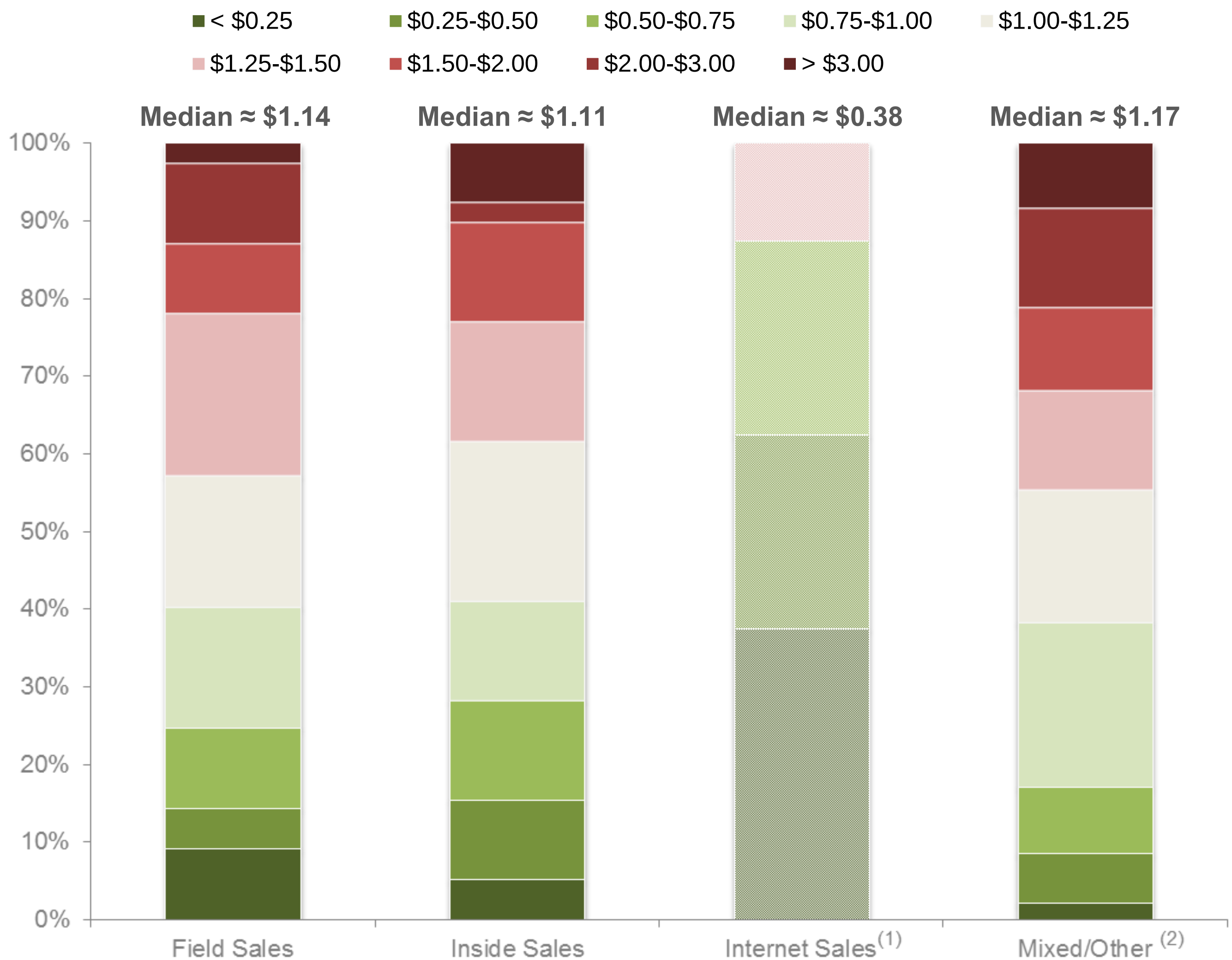
Larger companies tended to report increasing CAC ratios for new ACV from new customers.



Respondents: Total: 174, $2.5MM-$5MM: 41, $5MM-$7.5MM: 22, $7.5MM-$15MM: 31, $15MM-$25MM: 27, $25MM-$40MM: 16, $40MM-$75MM: 22, >$75MM: 15

CAC Ratio Spend by Primary Mode of Distribution
(Excluding Companies <$2.5MM in Revenues)

Other than Internet, where CAC appears significantly lower (but data is sparse), there is no significant correlation between go-to-market approach and median CAC – nor is there a meaningful difference between the distribution of responses.



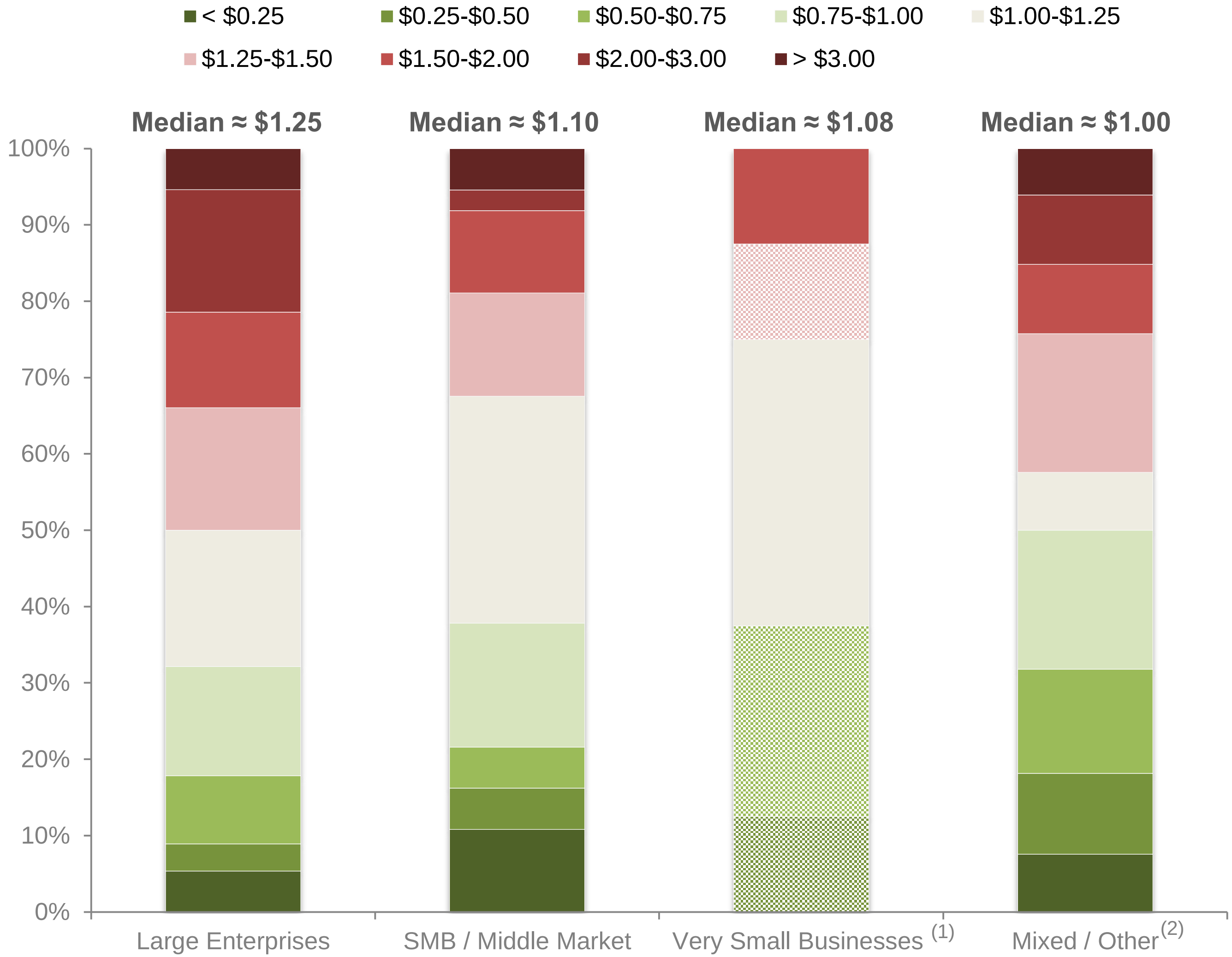
(1) Results may be skewed by small respondent sample size

(2) Mixed / Other defined as respondents who have more than 25% of bookings in two or more distribution channels or channel sales as a primary mode of distribution

Respondents: Total: 171, Field Sales: 77, Inside Sales: 39, Internet Sales: 8, Mixed/Other: 47

CAC Ratio Spend as a Function of Target Customer
(Excluding Companies <$2.5MM in Revenues)

Not surprisingly, the median CAC ratio for companies targeting larger enterprises is higher than that for those targeting VSB, SMB and middle market companies.



(1) Results may be skewed by small respondent sample size

(2) Mixed / Other defined as respondents who have more than 25% of revenue in two or more target customer segments (including consumer)

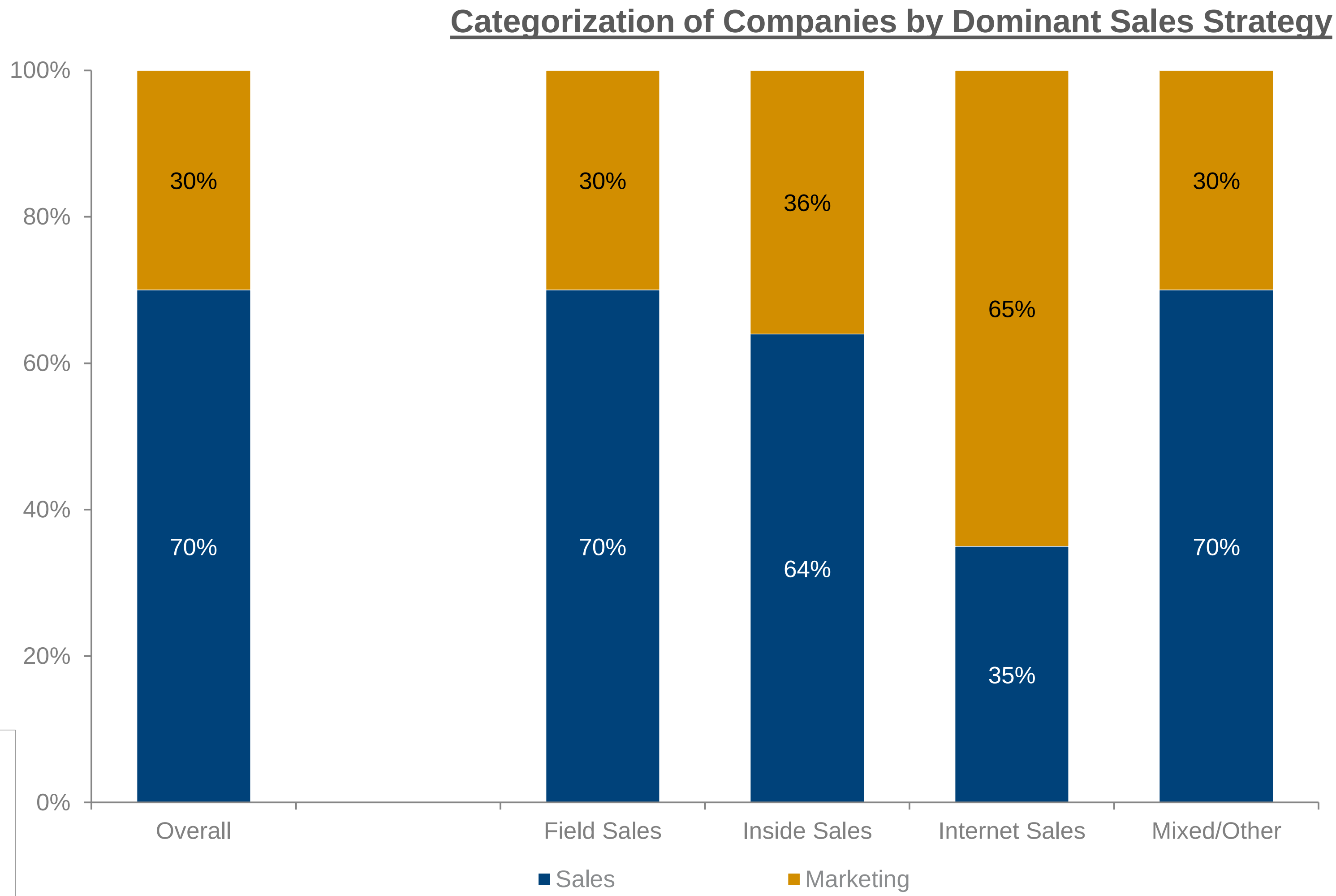
Respondents: Total: 167, Enterprise: 56, SMB: 37, VSB: 8, Mixed: 66

CAC Composition: Sales vs. Marketing Cost % of CAC

Overall, the median company devotes 30% of their CAC to marketing expenses, with the remainder allocated to sales. However, Internet sales-driven companies have a much greater reliance on marketing, with 65% of the median company's CAC budget devoted to marketing.

Comparison with Previous Surveys

Besides a slight shift towards greater marketing spend by field sales companies, the results are largely consistent with last year's results

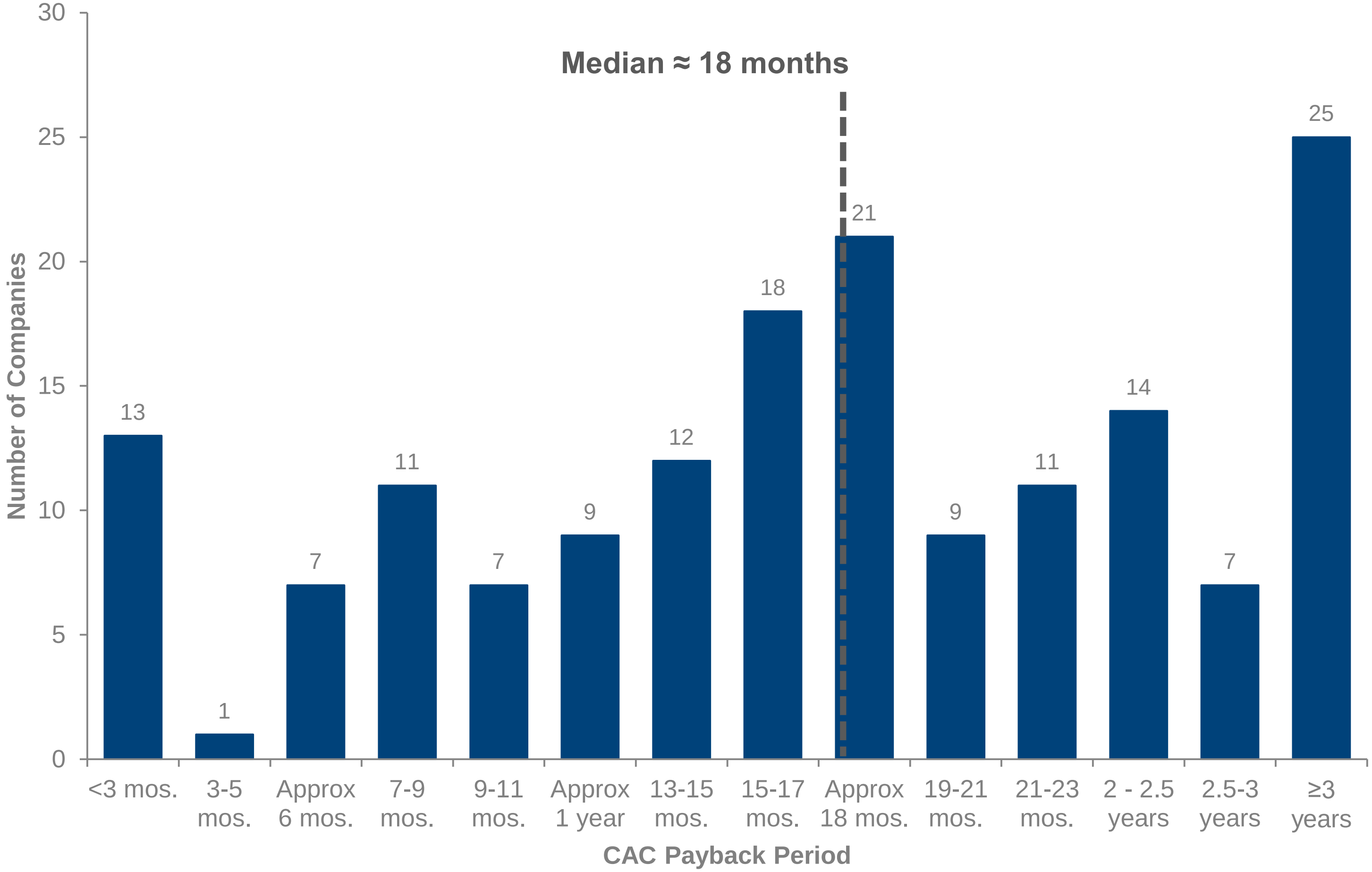


Respondents: Overall: 238, Field Sales: 100, Inside Sales: 63, Internet Sales: 12, Mixed/Other: 63

CAC Payback Period(1) (Gross Margin Basis)
(Excluding Companies <$2.5MM in Revenues)

We used answers on CAC ratio and subscription gross margin questions to determine an implied CAC payback period.

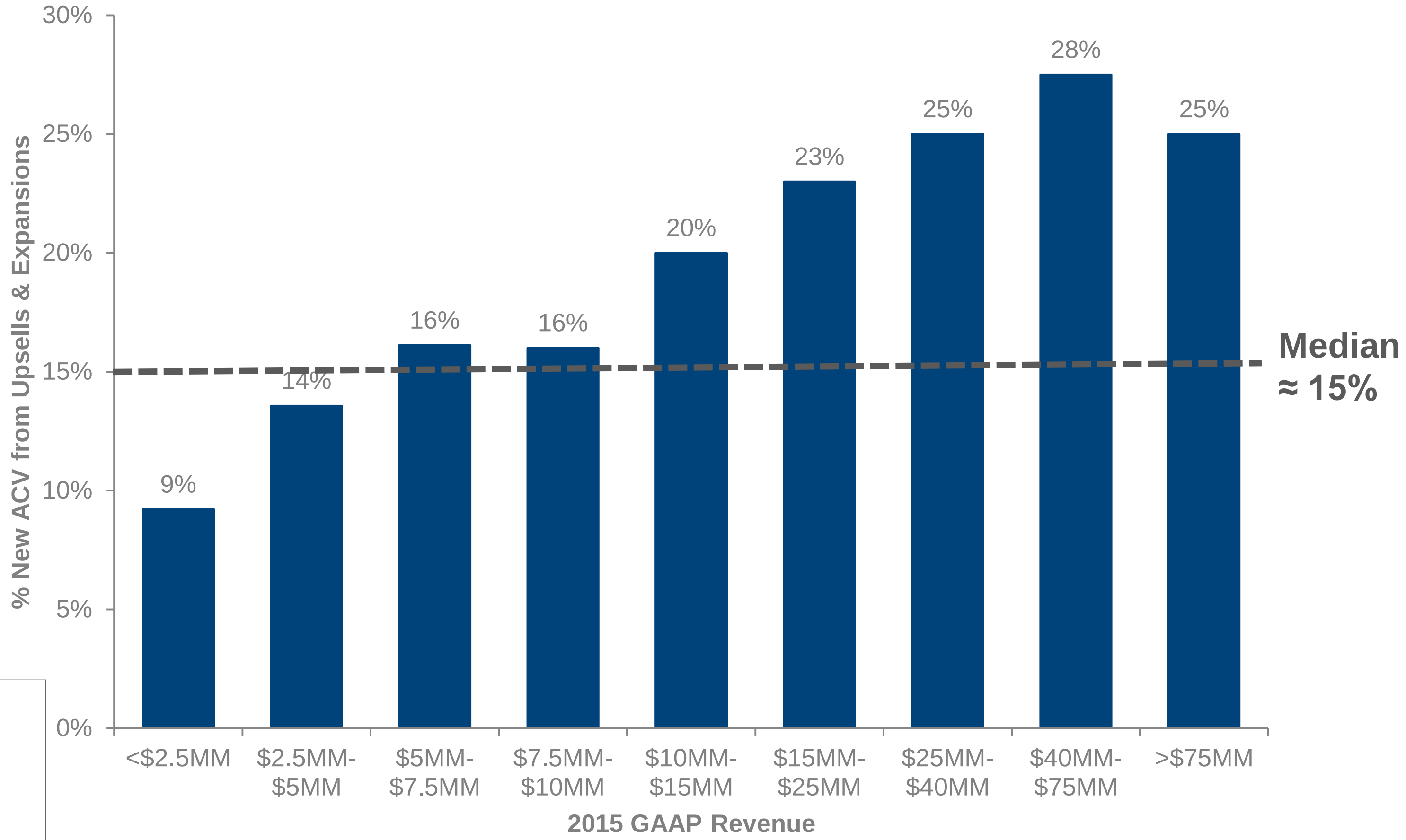
Respondents reported an implied median CAC payback of ~18 months, though there was a wide distribution of responses.



(1) Implied CAC Payback Period: Defined as # of months of subscription gross profit required to recover the fully-loaded cost of acquiring a customer; calculated by dividing self-reported CAC ratio by subscription gross margin
165 respondents

What Percentage of New ACV is from Upsells & Expansions to Existing Customers?

The median respondent gets 15% of new ACV sales from upsells and expansions; larger companies rely more heavily on upsells and expansions.



Comparison with Previous Surveys

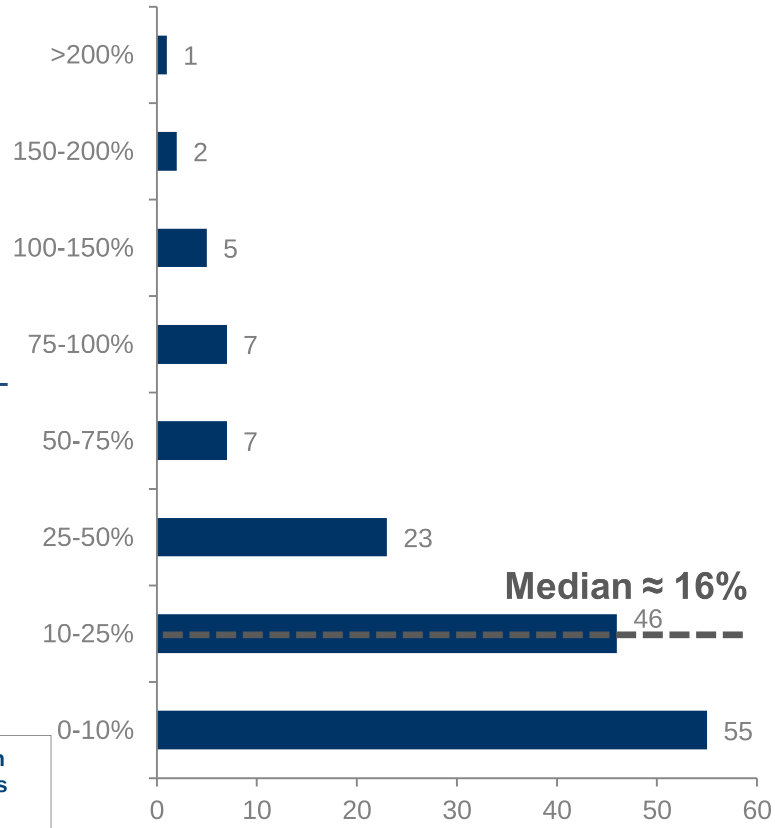
Consistent with last year's overall median of 16%, though companies with revenue between $10MM-$40MM are relying more heavily on upsells and expansions

Respondents: Total: 285, <$2.5MM: 106, $2.5MM-$5MM: 46, $5MM-$7.5MM: 23, $7.5MM-$10MM: 20, $10MM-$15MM: 12, $15MM-$25MM: 27, $25MM-$40MM: 15, $40MM-$75MM: 22, >$75MM: 14

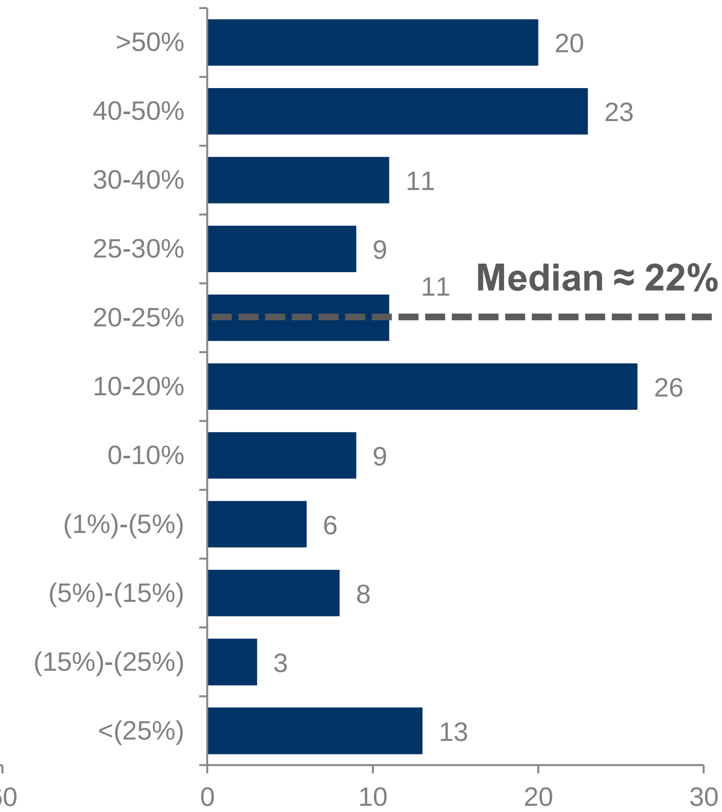
Professional Services' Impact on Go-to-Market
(Excluding Companies <$2.5MM in Revenue)

Professional services play a minor role for most, with the median company booking P.S. revenues on new deals equivalent to 16% of first year subscription contract value. Median P.S. margins are approx. 22%.

Professional Services (as % of 1st year ACV)



Professional Services Margin



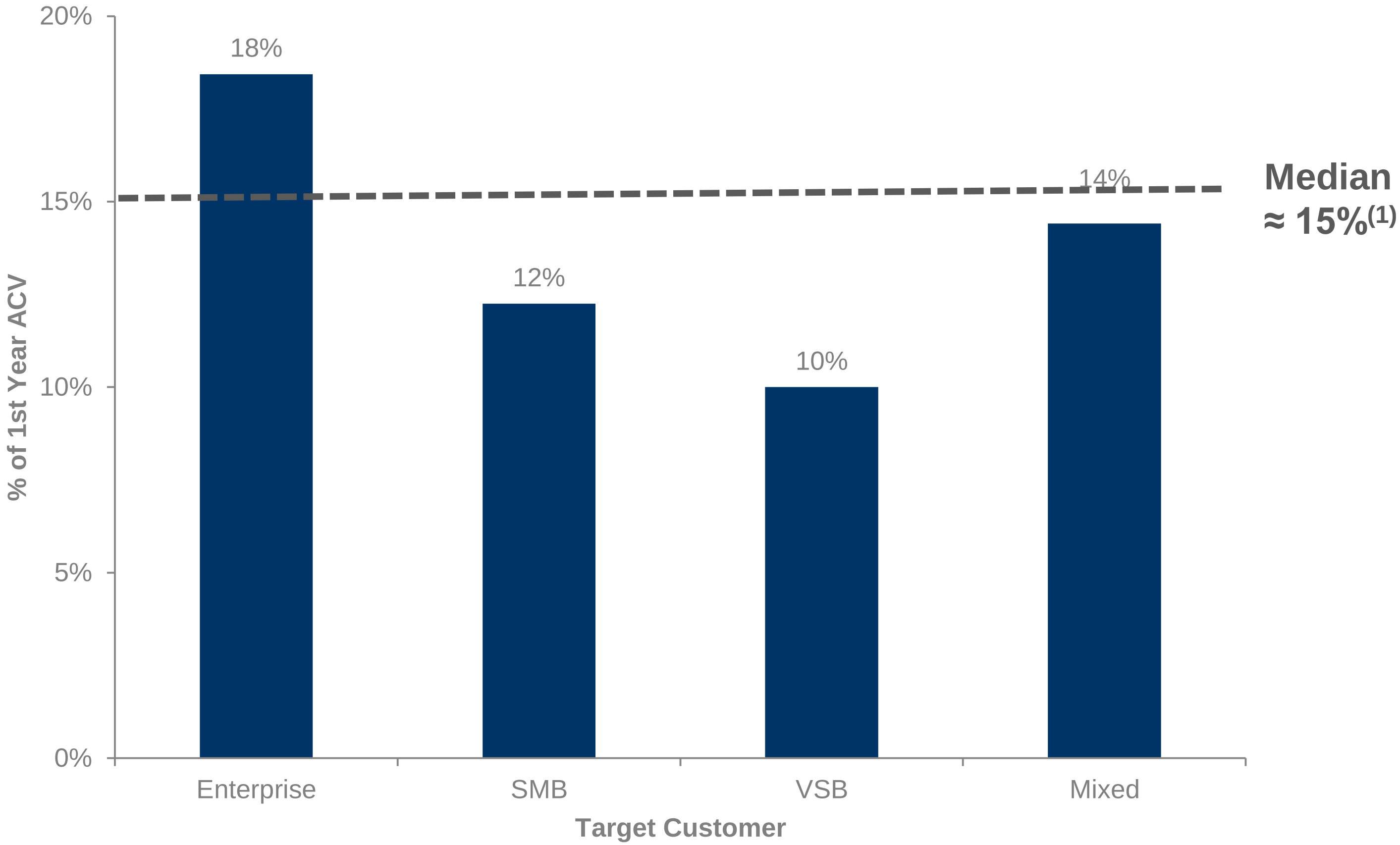
Comparison with Previous Surveys

Consistent with last year's results

146 and 139 respondents, respectively

Professional Services (% of 1st Year ACV) as a Function of Target Customer
(Excluding Companies <$2.5MM in Revenue)

As expected, companies which are focused mainly on enterprise sales have higher levels of professional services.



Comparison with Previous Surveys

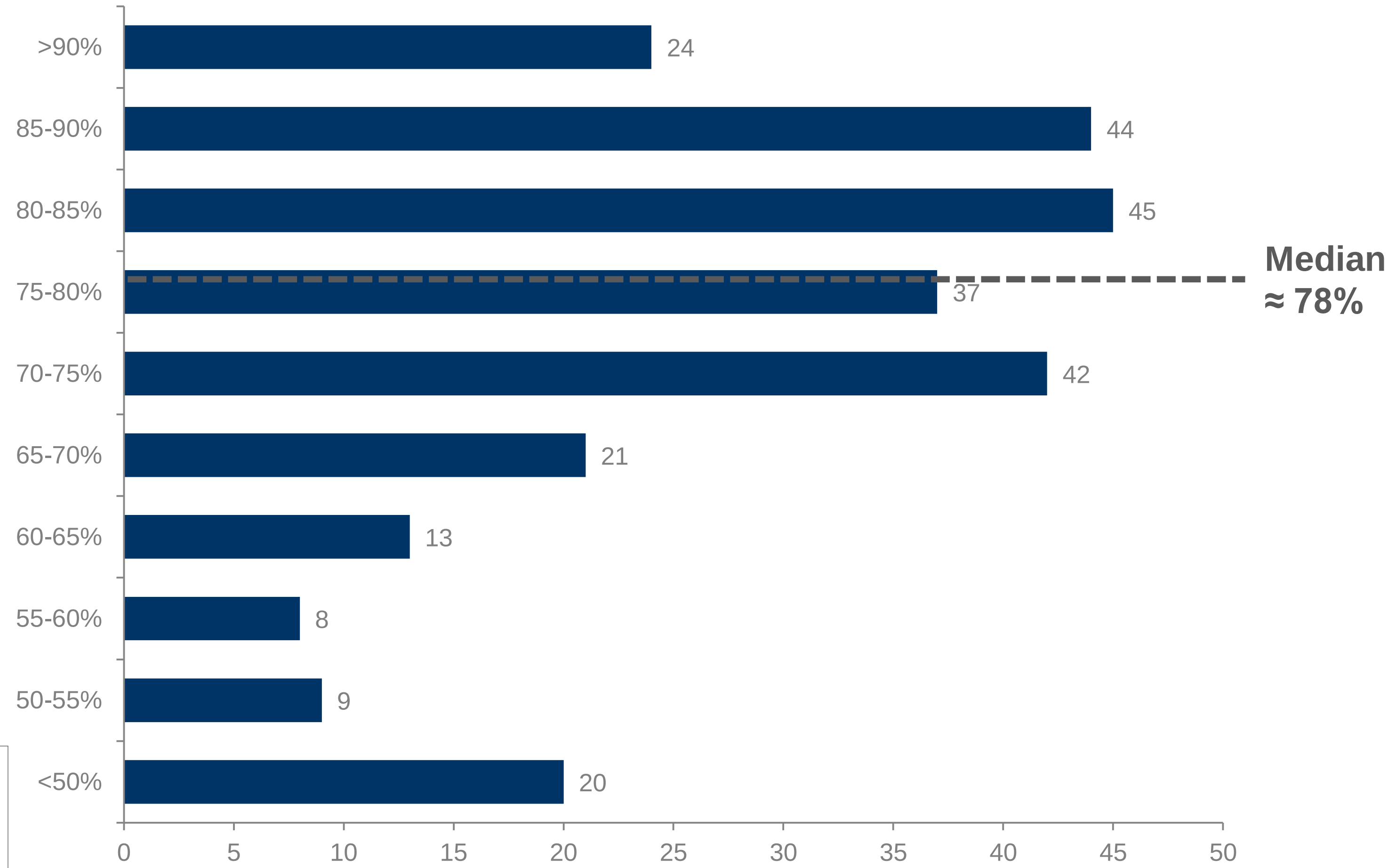
Attach rates ticked down for Enterprise and SMB (2015 survey: Enterprise 26%, SMB 18%)

(1) Median lower than slide 27 due to slight differences in respondent pool
Respondents: Total: 141, Enterprise: 52, SMB: 31, VSB: 6, Mixed: 52

Subscription Gross Margin

"What is your gross profit margin on just subscription/SaaS revenues?"

Median subscription gross margins are 78% (nearly identical when removing the smallest companies from the group).



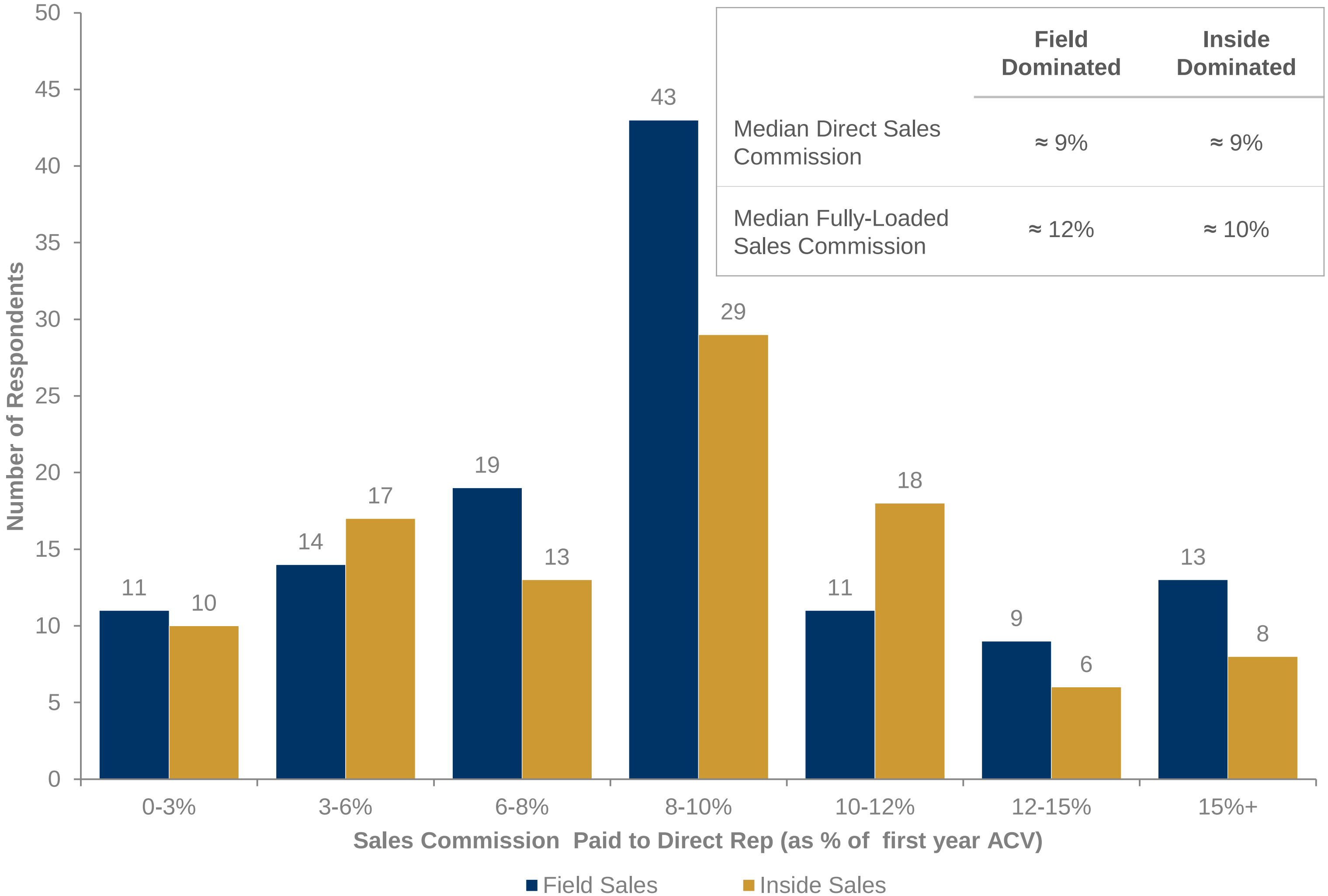
Comparison with Previous Surveys

Virtually unchanged from the 2015, 2014 and 2013 results

263 respondents

Direct Sales Commissions by Sales Strategy

The survey results did not point to a significant difference in direct commissions between companies that predominantly use a field go-to market strategy versus inside sales. However, the median fully-loaded commission for field sales (12%) was higher than that for inside (10%).

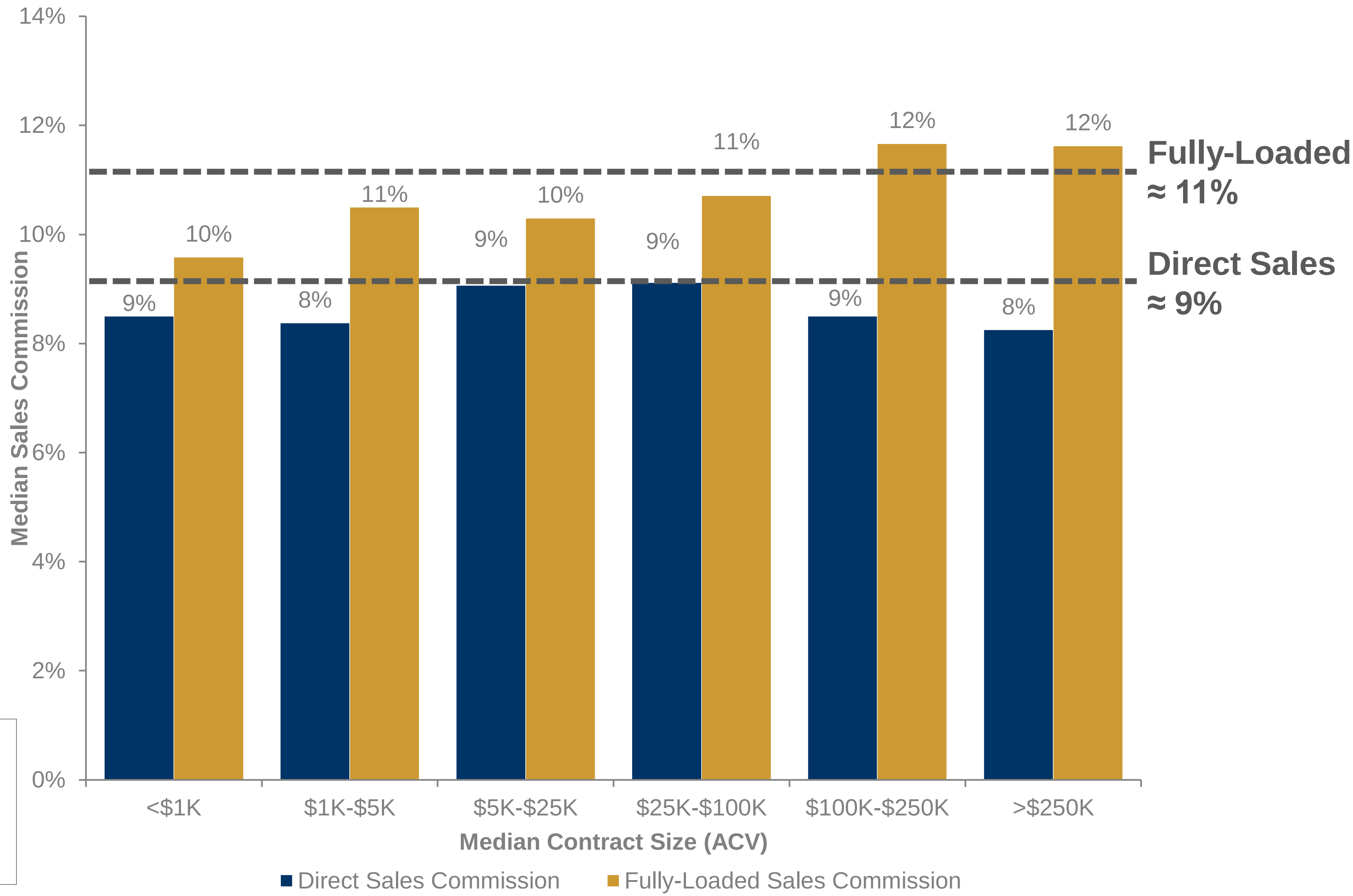


	Field Dominated	Inside Dominated
Median Direct Sales Commission	≈ 9%	≈ 9%
Median Fully-Loaded Sales Commission	≈ 12%	≈ 10%

Respondents: Total: 221, Field Sales: 120, Inside Sales: 101

Sales Commissions as a Function of Median Contract Size

Median direct sales commission rates did not vary across contract sizes, however fully-loaded sales commission rates did increase modestly with larger contract sizes.



Comparison with Previous Surveys

Last year's survey also saw a high degree of consistency in direct sales commissions

Respondents: Total: 242 and 229, <$1K: 22 and 26, $1K-$5K: 30 and 25, $5K-$25K: 73 and 70, $25K-$100K: 76 and 69, $100K-$250K: 29 and 27, >$250K: 12 and 12, respectively

Commissions for Renewals, Upsells and Multi-Year Deals

Commissions on renewals are either non-existent or very low, with 40% paying no commission and a median rate of 3% among those paying one. Upsells command a median rate of 7%, and more than half of the companies pay full commissions on upsells.

Renewals	
% of Respondents Not Paying Any Commission on Renewals	40%
Median Commission Rate on Renewals(1)	3%

Upsells	
Median Commission Rate on Upsells	7%
% of Respondents Paying Full Commission(2)	59%

Additional Commission for Extra Years on Initial Contract	
% of Respondents Paying:	
• No Additional Commission	33%
• Nominal Kicker	30%
• Full Commission	11%

Comparison with Previous Surveys

The most significant changes this year include:

1) Upsells: 59% paid full commission rates on upsells, vs. 45% in last year's group; comparable to 58% in 2013 results.

2) This year just 11% paid full commission on TCV for multiple year contracts vs. 20% in last year's group

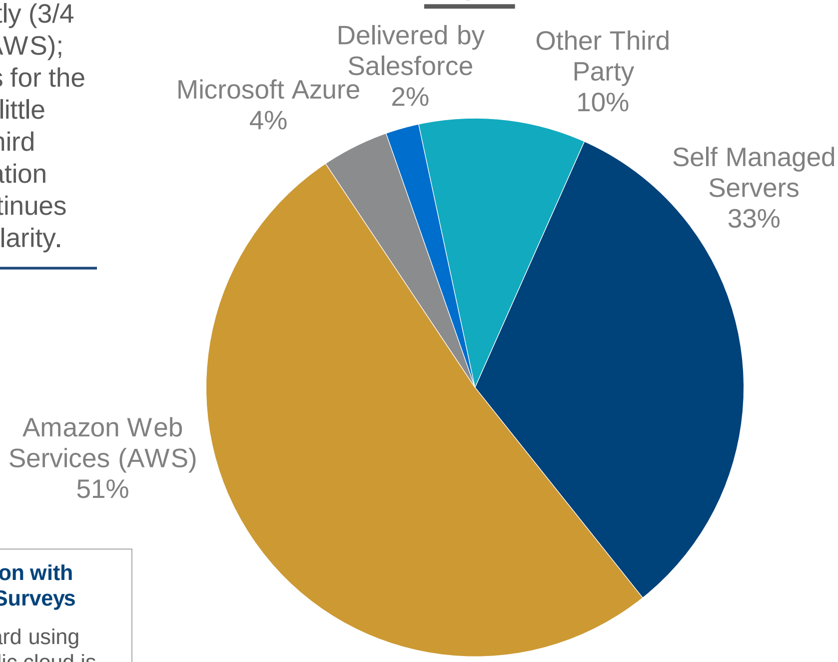
(1) Among companies paying a commission
(2) Same rate (or higher) than new sales commissions
Respondents: Renewals: 244, Upsells: 254, Extra Years on Initial Contract: 235

OPERATIONAL ASPECTS

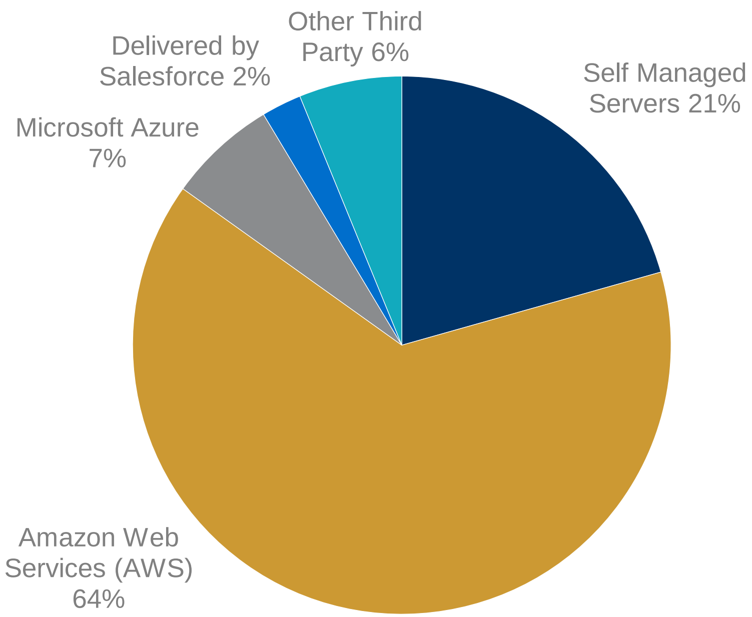
How is Your SaaS Application Delivered(1)?

67% of participants use third parties predominantly (3/4 of which is AWS); expectations for the future show little change as third party application delivery continues to gain popularity.

Now



3 Years from Now



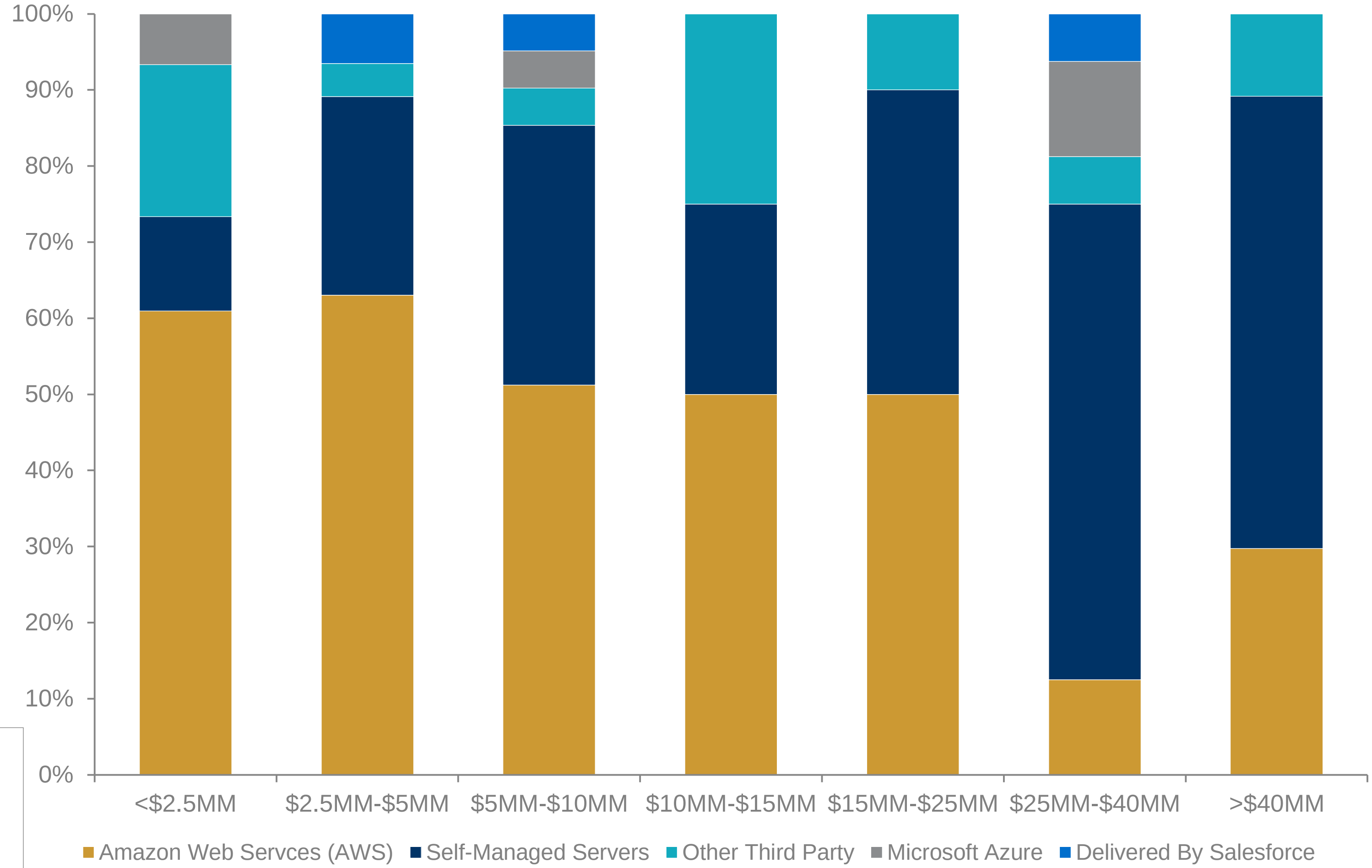
Comparison with Previous Surveys

The trend toward using third party public cloud is huge (mostly AWS) – self-managed is down from 37% last year to 33% this year and the percentage planning to use AWS three years from now increased from 44% last year to 64% this year.

(1) Reported "predominant" mode of delivery
289 and 291 respondents, respectively

SaaS Application Delivery Method as a Function of Size of Company

When filtered by company size, smaller respondents reported more frequent use of third-party providers as their primary application delivery method, while the largest companies were more likely to use self-managed servers.



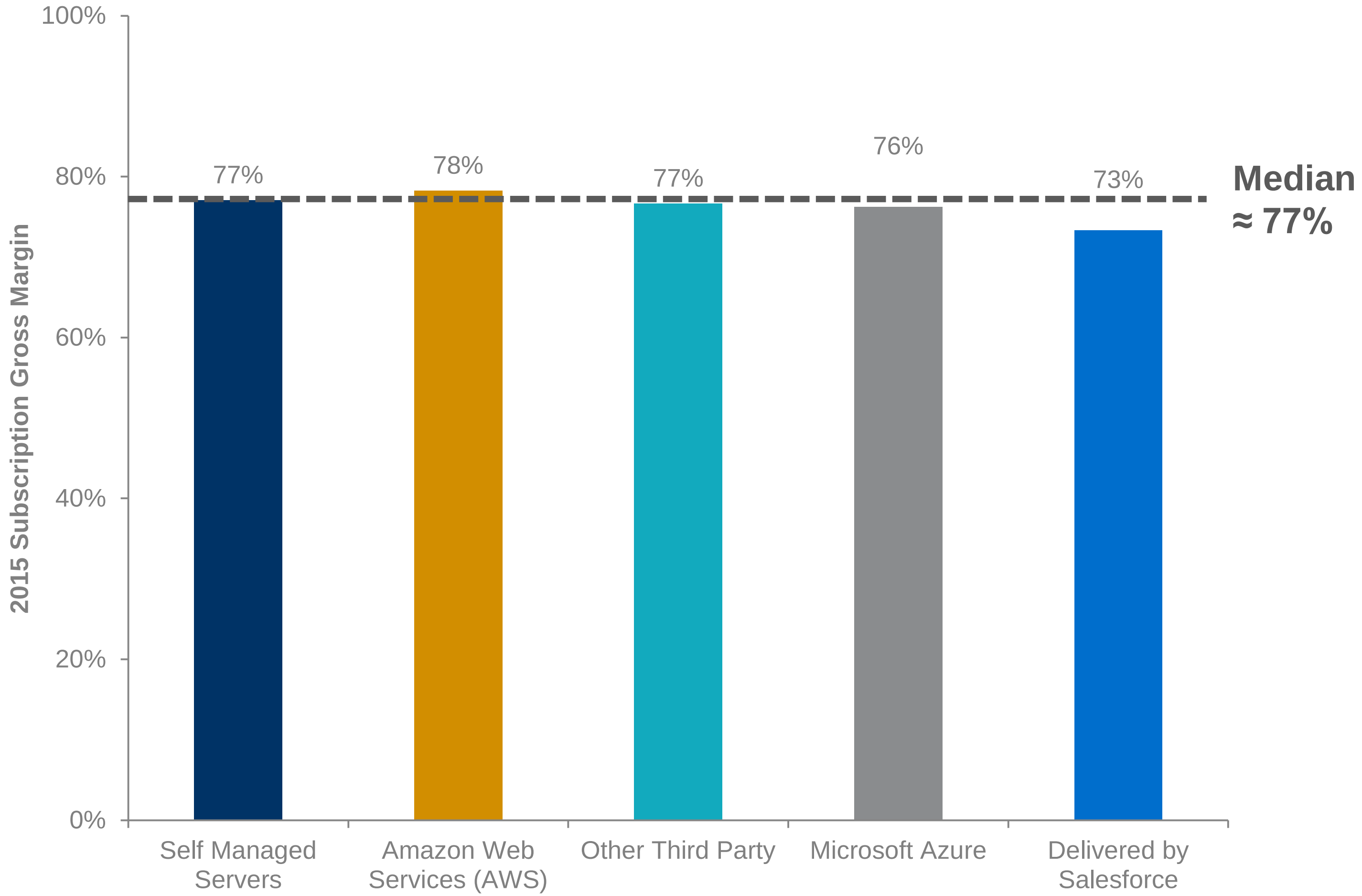
Comparison with Previous Surveys

Self-managed servers are declining in usage among all revenue groups, other than $25MM-$40MM

Respondents: Total: 287, <$2.5MM: 105, $2.5MM-$5MM: 46, $5MM-$10MM: 41, $10MM-$15MM: 12, $15MM-$25MM: 30, $25MM-$40MM: 16, >$40MM: 37

Subscription Gross Margin as a Function of SaaS Application Delivery Method
(Excluding Companies <$2.5MM in Revenue)

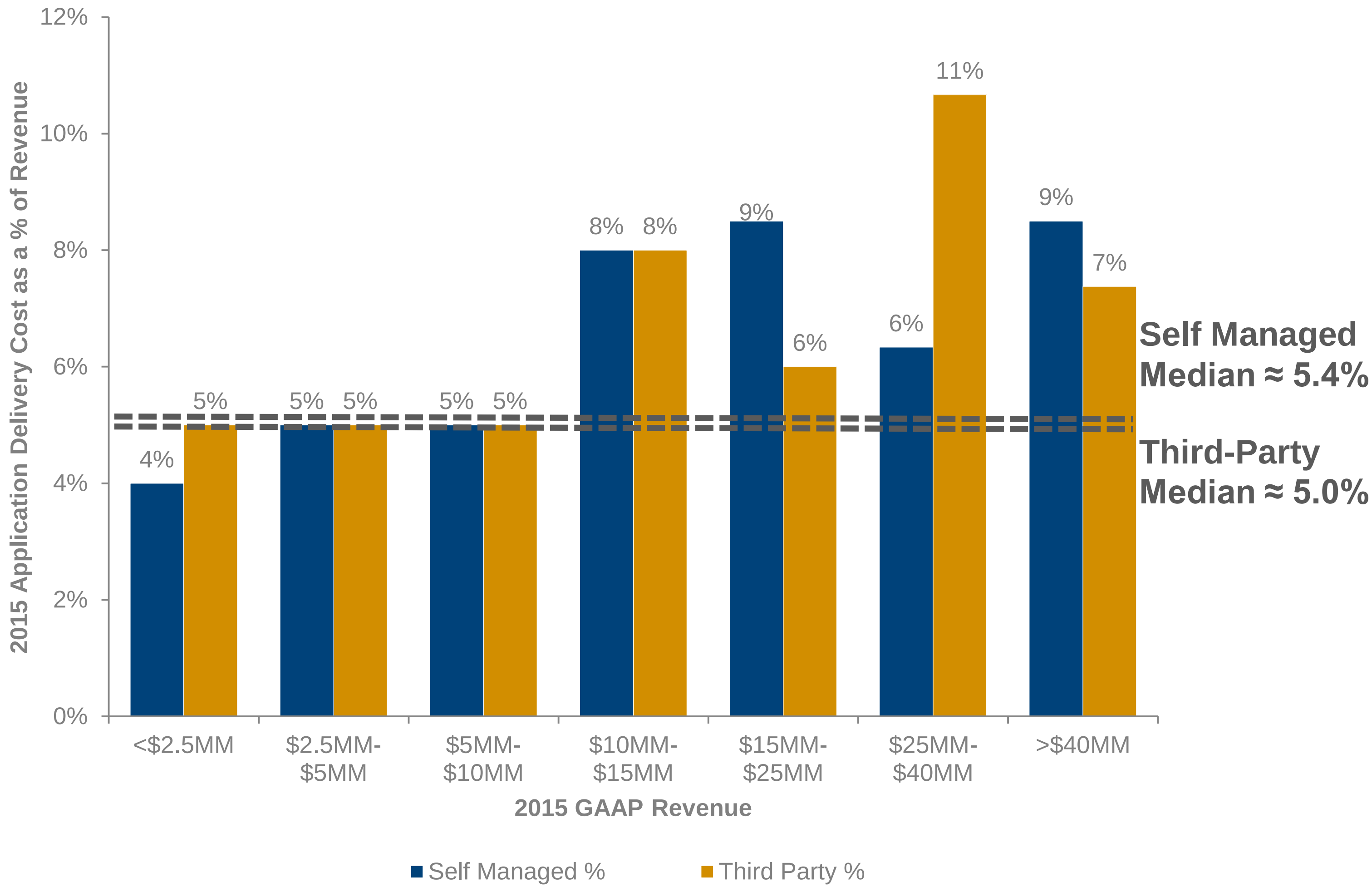
Median subscription gross margins did not appear to vary much when filtered by SaaS application delivery method (note that the Salesforce data is sparse).



Respondents: Total: 214, Self Managed Servers: 74, Amazon Web Services (AWS): 104, Other Third Party: 21, Delivered by Salesforce: 5, Microsoft Azure: 10

Operational Costs as a Function of SaaS Application Delivery, Grouped by Size Tiers

This year's results appear somewhat counterintuitive with larger companies' accounting showing operating costs as a greater % of revenue.



Respondents: Total: 269, <$2.5MM: 21 and 77, $2.5MM-$5MM: 11 and 33, $5MM-$10MM: 14 and 25, $10MM-$15MM: 3 and 9, $15MM-$40MM: 19 and 22, >$40MM: 21 and 14

COST STRUCTURE

Cost Structure
(Excluding Companies <$2.5MM in Revenue)

	2015 Median
Gross Margin	75%
Operating Expense Margins:	
Sales & Marketing	35%
R&D	26%
G&A	18%
EBITDA	(15%)
FCF	(13%)
YoY Growth Rate	*35%*

Comparison with Previous Surveys

Results are largely in-line with previous results, but EBITDA and FCF margin were much more negative than respondents previously predicted (1% EBITDA margin and 3% FCF margin for 2015)

Respondents reporting: Gross Margin: 170, Sales and Marketing: 168, R&D: 166, G&A: 167, EBITDA Margin: 169, FCF Margin: 157, YoY Growth: 204

Median Cost Structure by Size
(Excluding Companies <$2.5MM in Revenue)

	All Respondents	Size of Company (2015 Rev)							
		$2.5-$5M	$5-$10M	$10-$15M	$15-$25M	$25-$40M	$40-$60M	$60-$100M	>$100M
Total Gross Margin	**75%**	**79%**	**77%**	**68%**	**73%**	**73%**	**68%**	**68%**	**68%**
Subscription	79%	80%	84%	68%	76%	75%	78%	76%	81%
Professional Services	11%	13%	7%	25%	11%	NM	11%	13%	8%
Operating Expense Margins:									
Sales & Marketing	35%	**26%**	**35%**	**38%**	**38%**	**38%**	**44%**	**46%**	**24%**
R&D	26%	**26%**	**30%**	**43%**	**30%**	**25%**	**23%**	**21%**	**18%**
G&A	18%	**21%**	**22%**	**22%**	**20%**	**14%**	**17%**	**13%**	**13%**
EBITDA Margin	(15%)	(24%)	(26%)	(40%)	(14%)	(13%)	(8%)	(10%)	20%
YoY Growth Rate	**35%**	**45%**	**46%**	**63%**	**25%**	**29%**	**34%**	**28%**	**28%**

Comparison with Previous Surveys

Results are largely in-line with last year's survey. A few anomalies from last year have been eliminated

Note: Numbers do not add due to the fact that medians were calculated for each metric separately and independently
Average Number of Respondents: Total: 171, $2.5MM-$5MM: 41, $5MM-$10MM: 40, $10MM-$15MM: 11, $15MM-25MM: 27, $25MM-$40MM: 16, $40MM-$60MM: 15, $60MM-$100MM: 14, >$100MM: 7

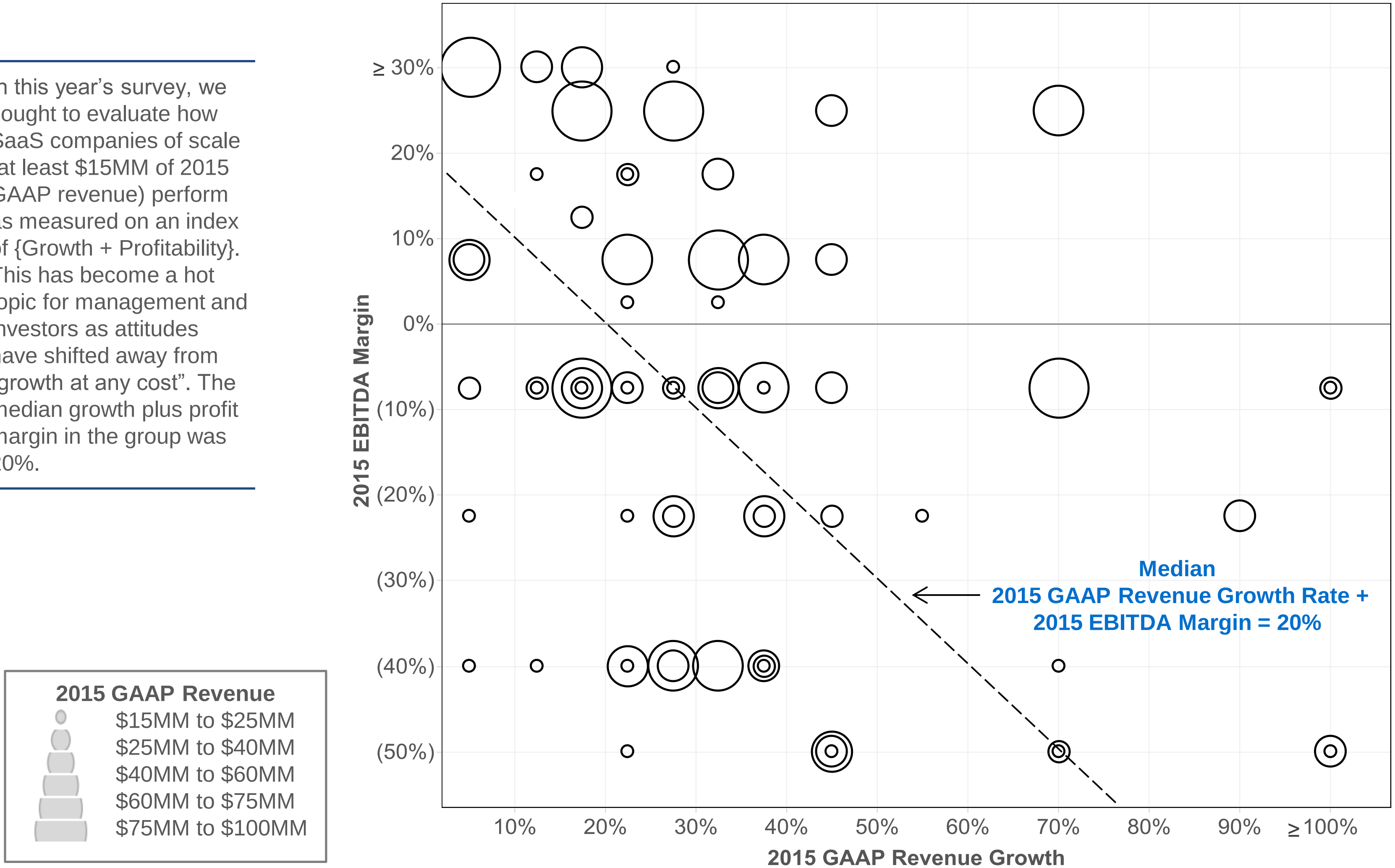
For Comparison: Historical Results of Selected Public SaaS Companies

	Total Revenue Run-Rate		
	~$25MM	~$50MM	~$100MM
	Median Values		
Gross Margin	60%	65%	69%
Sales & Marketing	47%	44%	44%
Research & Development	23%	20%	21%
G & A	17%	16%	18%
EBIT Margin	(29%)	(18%)	(17%)
Adj. EBITDA Margin	(25%)	(7%)	1%
FCF Margin	(25%)	(15%)	(9%)
YoY Revenue Growth Rate(1)	126%	54%	36%

(1): YoY Revenue Growth compares against previous year's revenue of the companies at the time
Note: Excludes stock-based compensation (SBC)
Median includes ALRM, AMBR, APPF, ATHN, BCOV, BNFT, BOX, BV, CNVO, COVS, CRM, CSOD, CTCT, CVT, DMAN, DWRE, ECOM, EOPN, ET, FLTX, HUBS, LOGM, MB, MKTG, MKTO, MRIN, N, NEWR, NOW, OPWR, PAYC, PCTY, PFPT, QLYS, RNG, RNOW, RP, RPD SFSF, SHOP, SPSC, SQI, TLEO, TWLO, TXTR, VEEV, VOCS, WDAY, WK, XTLY, YDLE and ZEN
~$25M median excludes ALRM, COVS, FLTX, PAYC, PFPT, QLYS, RNG, RP, RPD, TWLO, WK, YDLE and ZEN
~$50M median excludes BNFT, N, RP and WDAY
~$100M median excludes AMBR, APPF, CNVO, DMAN, DWRE, EOPN, NOW, VEEV, XLTY and ZEN

Measuring Performance Based on an Index of Growth Plus Profits (Including Companies $15MM+ in Revenue)

In this year's survey, we sought to evaluate how SaaS companies of scale (at least $15MM of 2015 GAAP revenue) perform as measured on an index of {Growth + Profitability}. This has become a hot topic for management and investors as attitudes have shifted away from "growth at any cost". The median growth plus profit margin in the group was 20%.

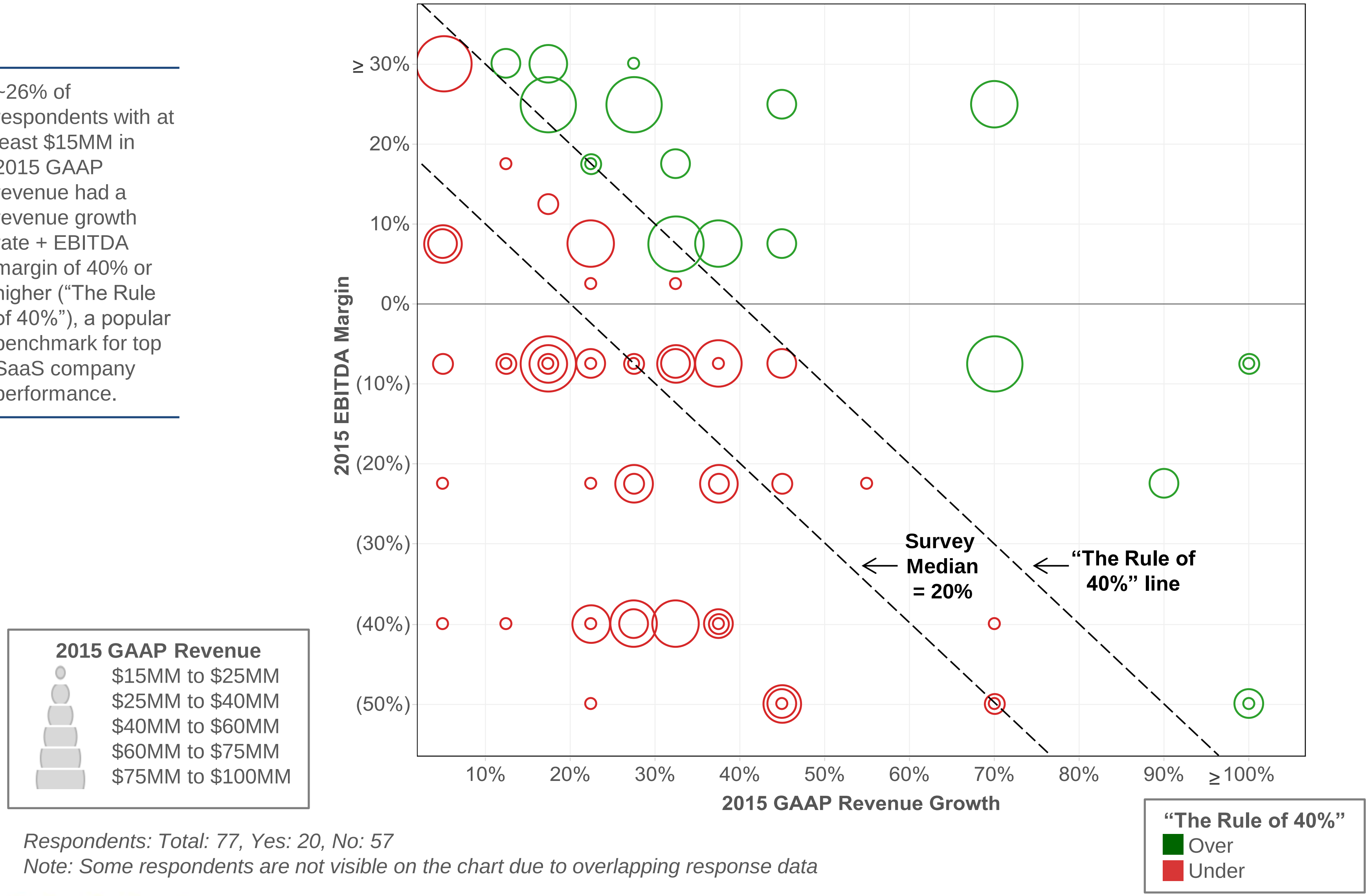


Respondents: Total: 77, Yes: 20, No: 57

Note: Some respondents are not visible on the chart due to overlapping response data

Measuring Survey Participants Against "The Rule of 40%"
(Including Companies $15MM+ in Revenue)

~26% of respondents with at least $15MM in 2015 GAAP revenue had a revenue growth rate + EBITDA margin of 40% or higher ("The Rule of 40%"), a popular benchmark for top SaaS company performance.



Respondents: Total: 77, Yes: 20, No: 57
Note: Some respondents are not visible on the chart due to overlapping response data

Comparison of "The Rule of 40%": Leaders vs. Others
(Including Companies $15MM+ in Revenue)

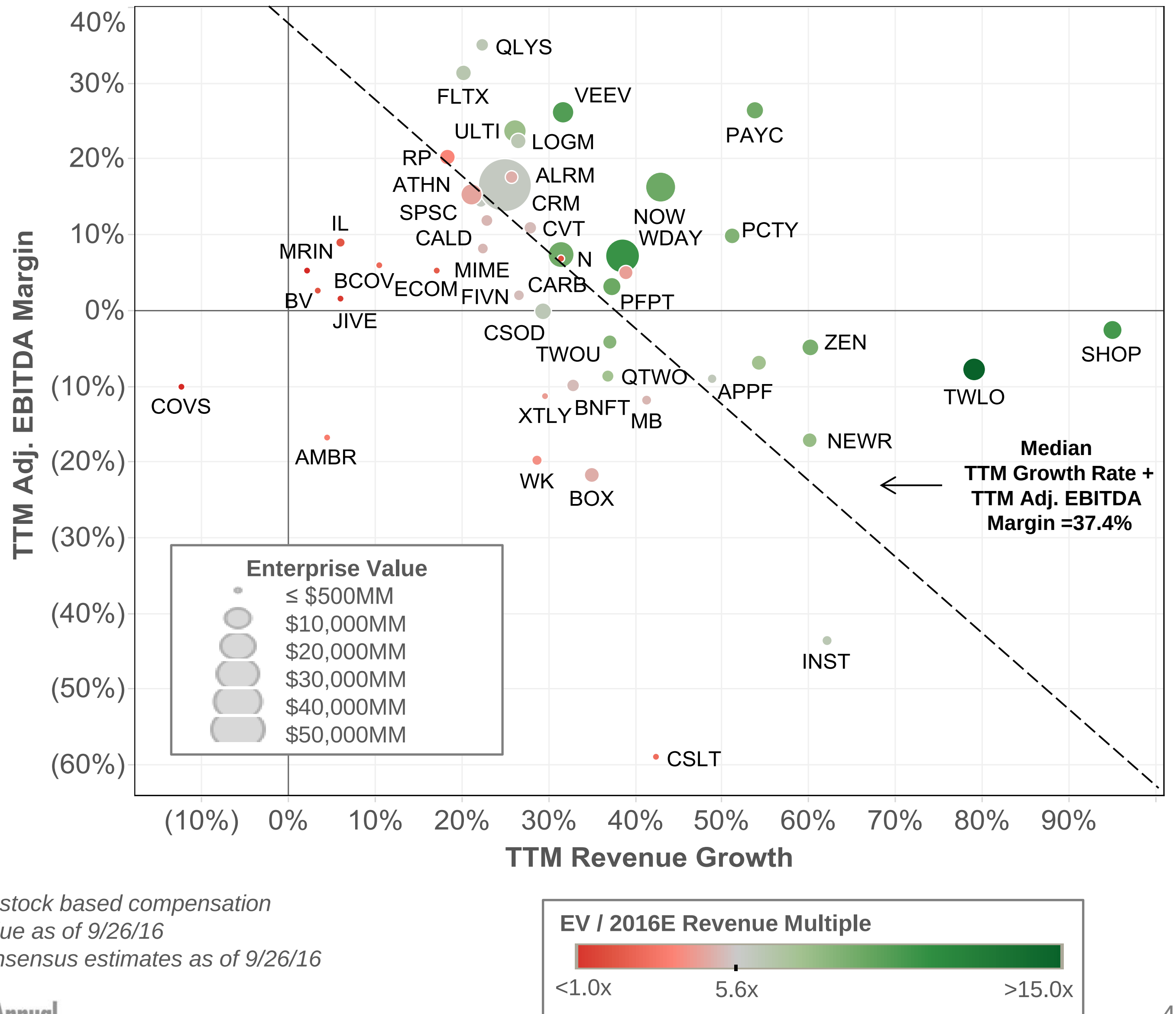
The median results of those respondents meeting or exceeding "The Rule of 40%" showed that they tended to report lower churn and lower CAC ratios, were more enterprise-focused with larger contracts, rely more heavily on field sales, and more often report a vertical focus.

	"The Rule of 40%"	
	Over	**Under**
	(Medians)	*(Medians)*
Scale / Growth / Profitability:		
2015 Revenue	$50MM	$33MM
2015 Revenue Growth Rate	40%	27%
2015 Revenue per FTE	$167K	$149K
2015 EBITDA Margin	15%	(15%)
SaaS Metrics:		
Annual Gross Dollar Churn (1)	5.6%	10.6%
Net Dollar Retention Rate (1)	103%	102%
CAC Ratio for New Customers (1)	$1.06	$1.33
Business Focus / Go-To-Market:		
Vertical Focus	35%	19%
End Customer	55% Enterprise	47% Enterprise
Median ACV per Customer	$58K	$35K
Inside Sales Dominated	10%	11%
Field Sales Dominated	60%	49%
Capital / Maturity:		
Equity Capital Raised	$46M	$50M
Years in Operation	10 years	10 years

(1) See definitions described later in this presentation
Respondents: Total: 77, Yes: 20, No: 57

For Comparison: Growth and Profitability of Public SaaS Companies

The median TTM revenue growth rate + adj. EBITDA margin for publicly traded SaaS companies was ~37%, implying that just under one half met or exceed "The Rule of 40%".

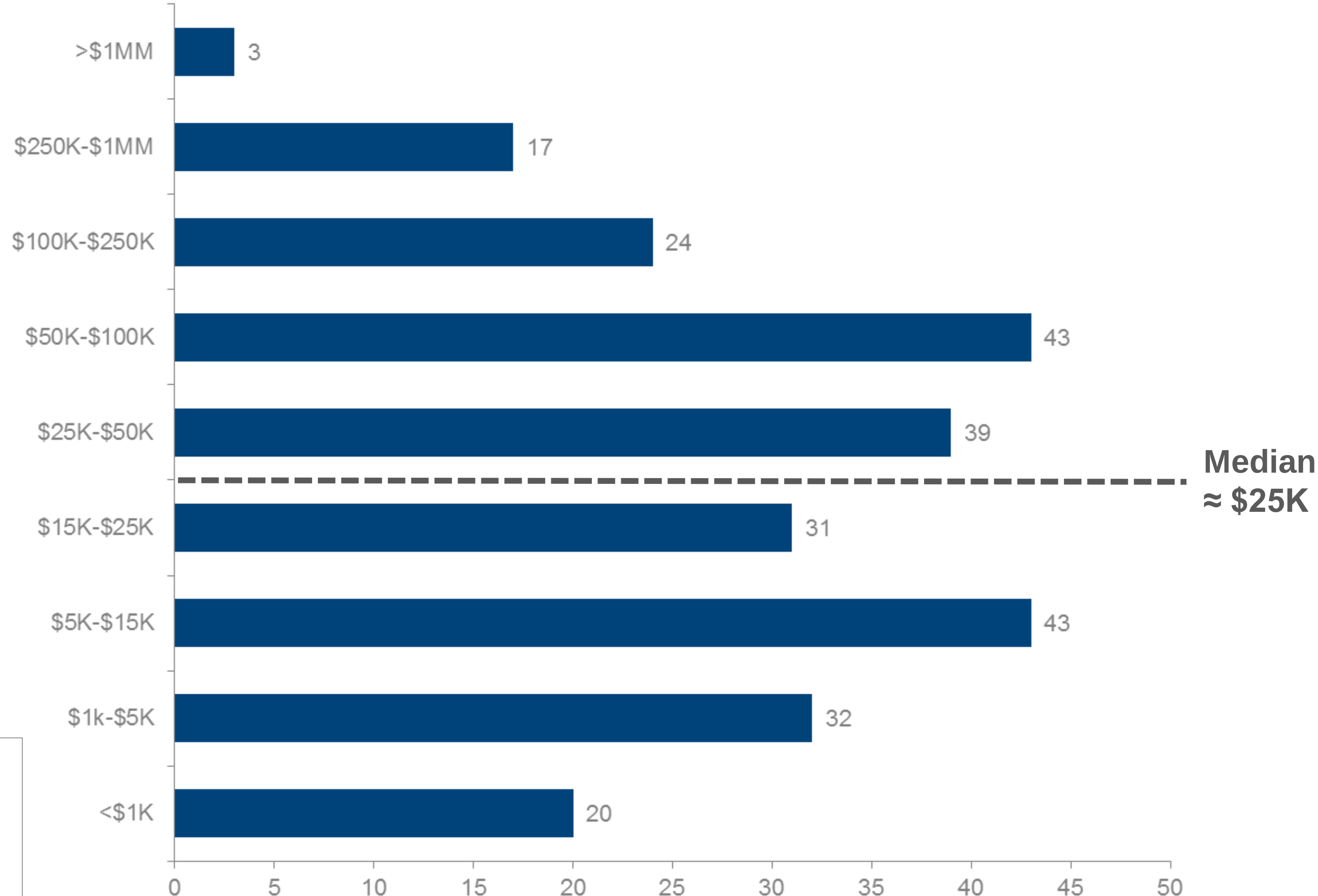


Note: Adj. EBITDA excludes stock based compensation
TTM data and Enterprise Value as of 9/26/16
2016E revenue based on consensus estimates as of 9/26/16

CONTRACTING & PRICING

Median Annual Contract Value (ACV) of a Customer

The median initial annual contract size (subscription component only) for the group was $25K per year.



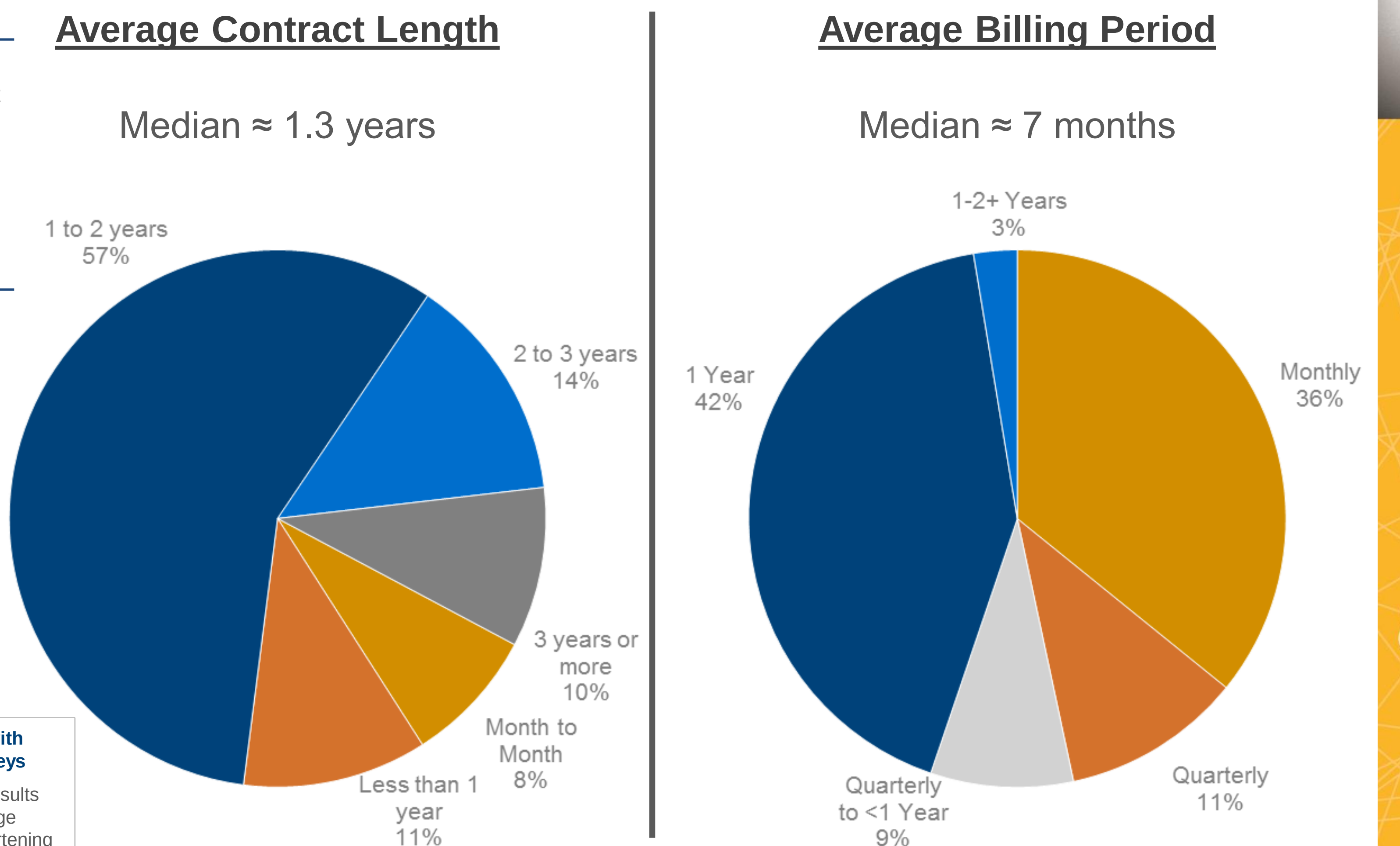
Comparison with Previous Surveys

These results are somewhat above the previous survey medians of $21K, $21K, $20K in 2015, 2014 and 2013, respectively

252 respondents

Median / Typical Contract Terms for the Group

The median average contract length is 1.3 years; and the median billing term is seven months in advance.



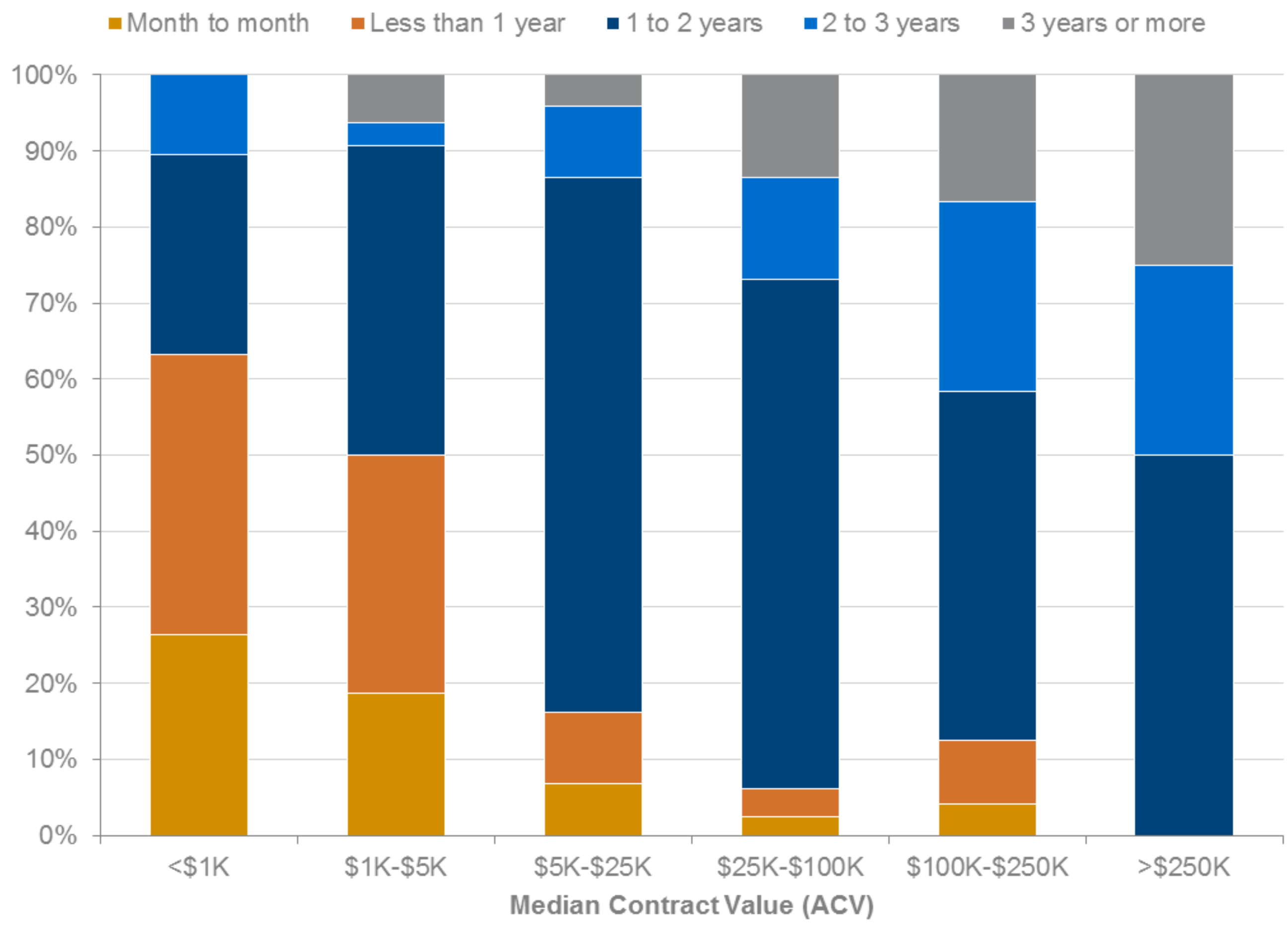
Comparison with Previous Surveys

Very comparable results to 2015, with average contract length shortening from 1.5 years to 1.3 and average billing period increasing one month over 2015 to seven months

Respondents: Average Contract Length: 270, Average Billing Period: 268

Contract Length as a Function of Contract Size

The phenomenon of longer contract terms for larger contracts is pretty clear.

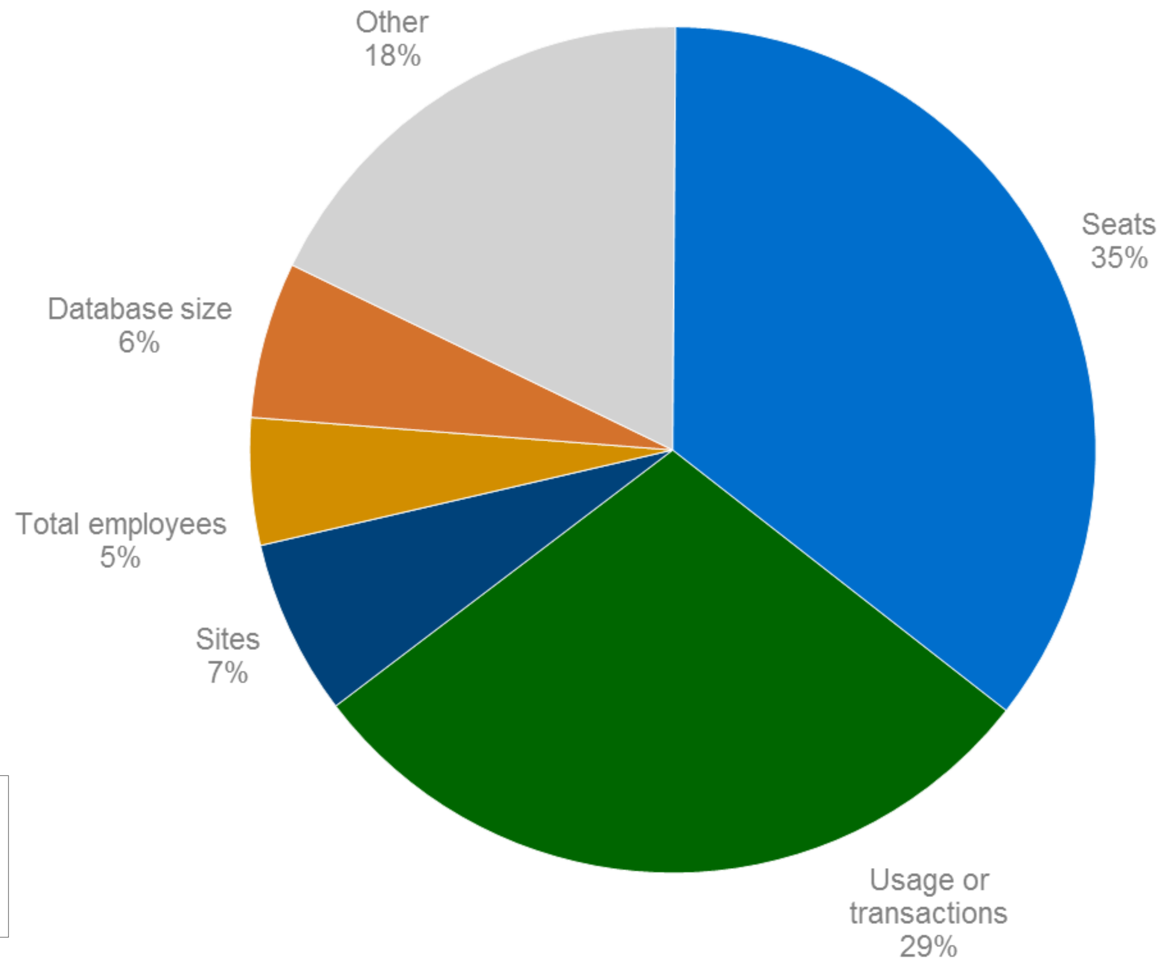


Comparison with Previous Surveys

Companies in the "elephant hunter" group are less aggressively booking super long-term contracts. Respondents with >$250K median ACV book nearly 25% of their contracts at 3 years or longer (down from 35% in the 2015 group)

Respondents: Total: 251, <$1K: 19, $1K-$5K: 32, $5K-$25K: 74, $25K-$100K: 82, $100K-$250K: 24, >$250K: 20

What is Your Primary Pricing Metric?



Comparison with Previous Surveys

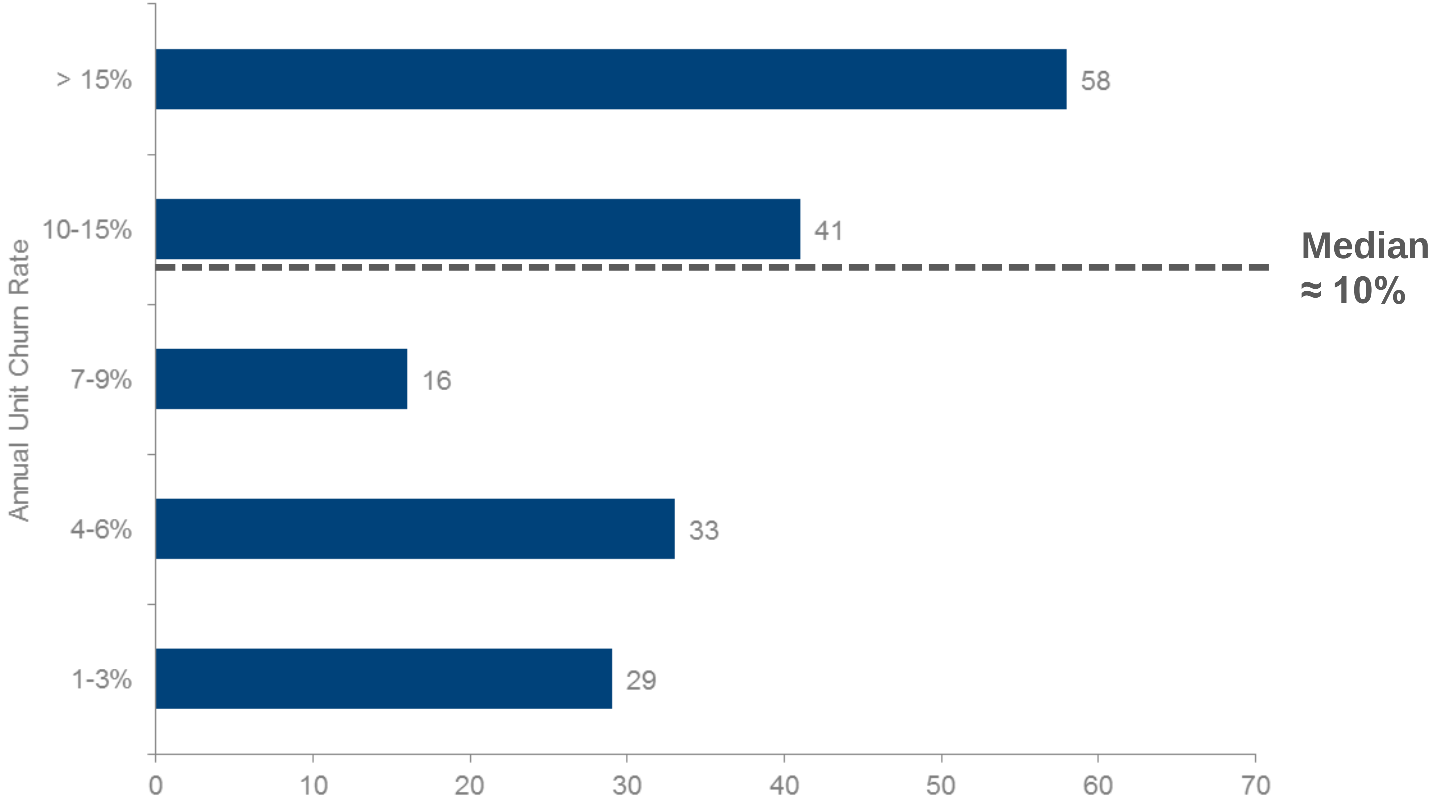
These results are largely in-line with 2015, 2014 and 2013 results

"Other" includes: Data usage, number of apps being tested, email volume, customer devices and amount of content
268 respondents

RETENTION & CHURN

Annual Unit Churn[1]
(Excluding Companies <$2.5MM in Revenue)

Reported median annual unit churn (by customer count) is 10% for the group.



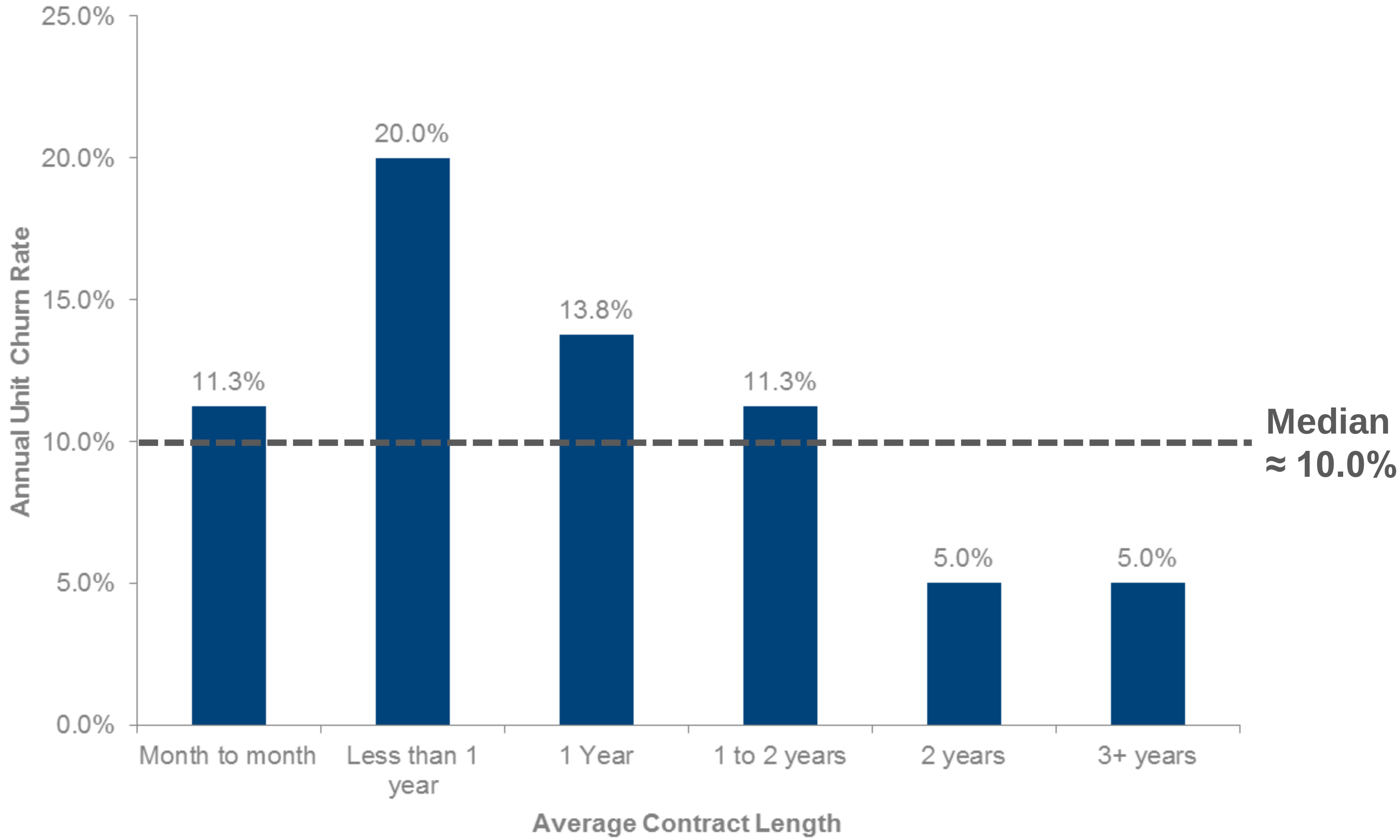
Comparison with Previous Surveys

This median has remained relatively consistent with 2015 findings

(1) Annual Unit Churn: Percentage churn of # of paid customers at year-end 2014 that were still customers at year-end 2015
177 respondents

Annual Unit Churn as a Function of Contract Length
(Excluding Companies <$2.5MM in Revenue)

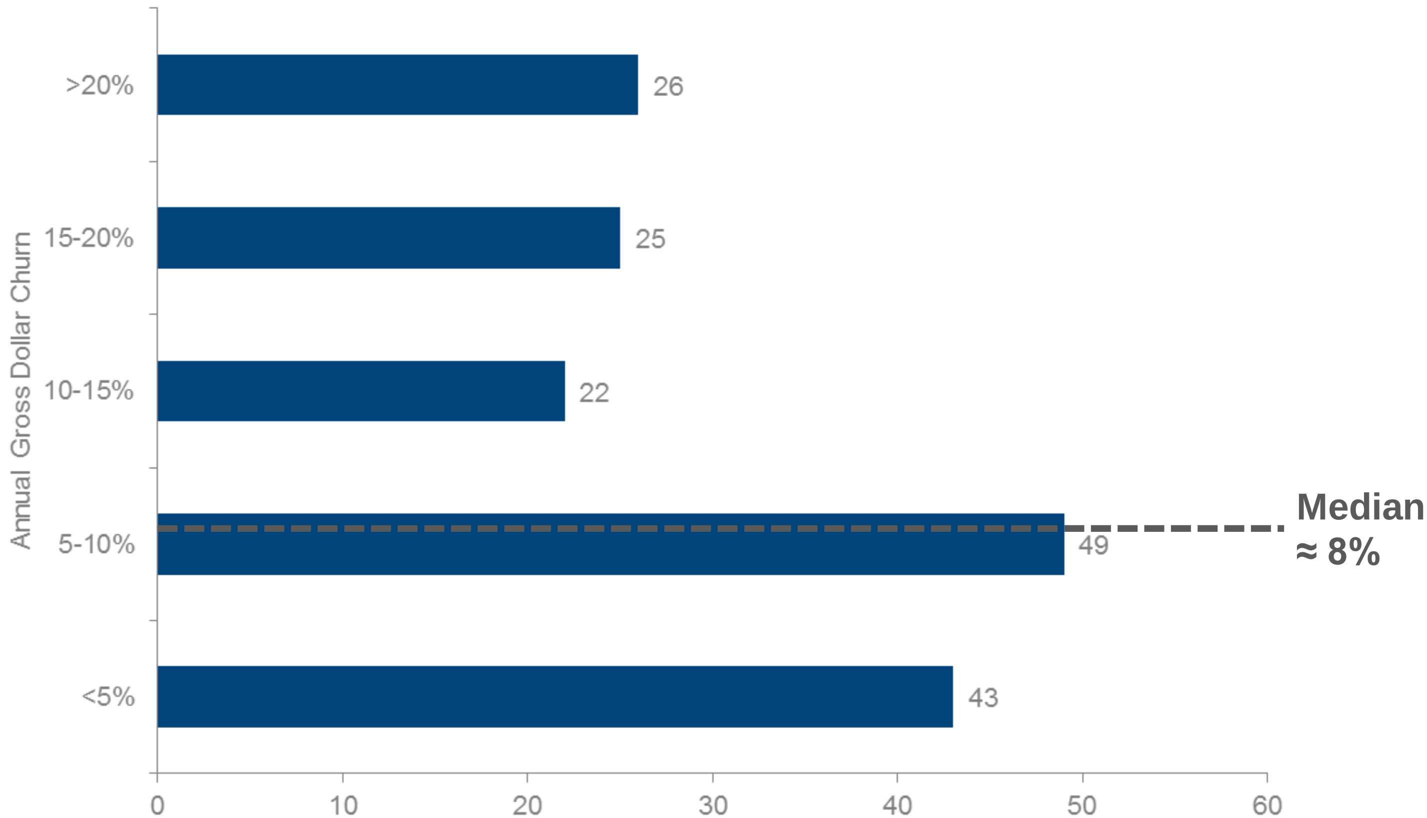
Not surprisingly, companies with longer contracts (2+ years) reported the lowest annual unit churn.



Respondents: Total: 172, Month to Month: 13, Less than 1 year : 13, 1 year: 31, 1 to 2 years: 70, 2 years: 36, 3+ years: 9

Annual Gross Dollar Churn(1)
(Excluding Companies <$2.5MM in Revenue)

Median annual gross dollar churn (without the benefit of upsells) is ~8%.



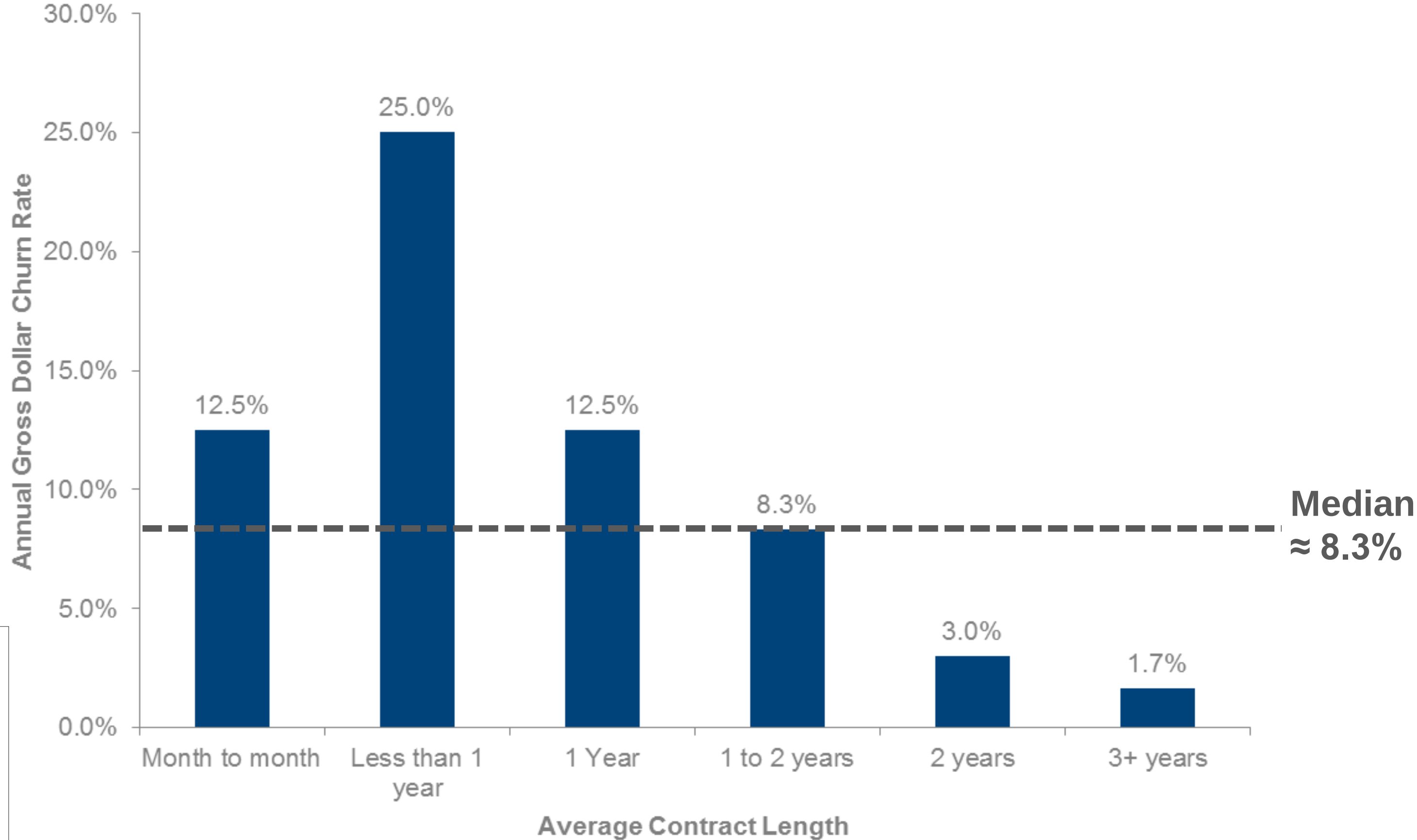
Comparison with Previous Surveys

This result is comparable to past survey results (7% in 2015, 6% in 2014, 8% in 2013)

(1) Annual gross dollar churn is the % of dollar ARR under contract at the end of the prior year which was lost during the most recent year (excludes the benefits of upsells and expansions).
165 respondents

Annual Gross Dollar Churn as a Function of Contract Length
(Excluding Companies <$2.5MM in Revenue)

As with unit churn, companies with longer contracts (2+ years) tend to report lower annual dollar churn.



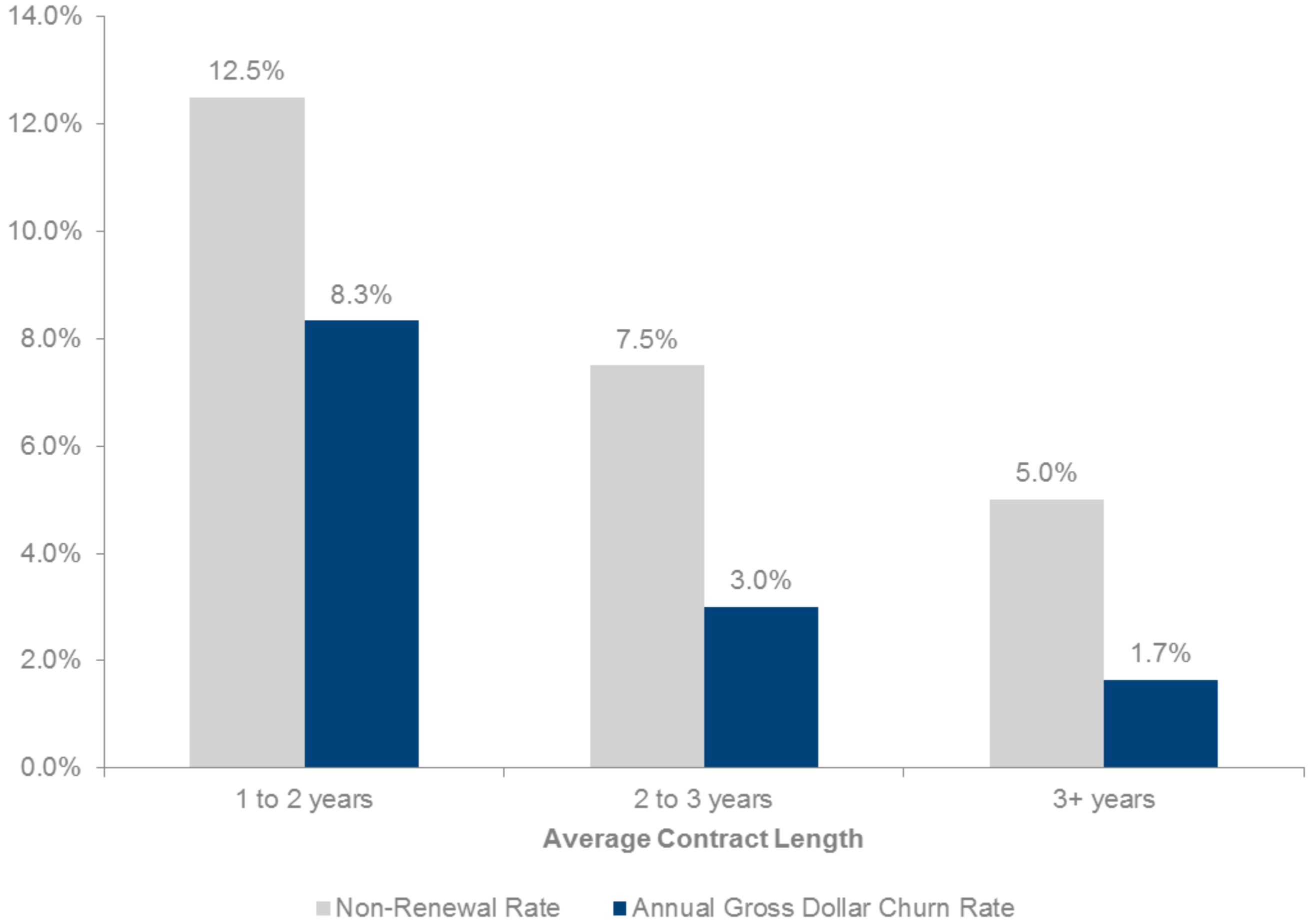
Comparison with Previous Surveys

Companies with shorter contracts (under 2 years) saw increased dollar churn compared to last year; Contracts 2 years and greater were relatively consistent with prior survey results

Respondents: Total: 165, Month to Month: 10, Less than 1 year: 13,1 year: 30, 1 to 2 years: 69, 2 years: 35, 3+ years: 8

Annual Non-Renewal Rates(1) vs. Gross Dollar Churn for Companies with Long-Term Contracts
(Excluding Companies <$2.5MM in Revenue)

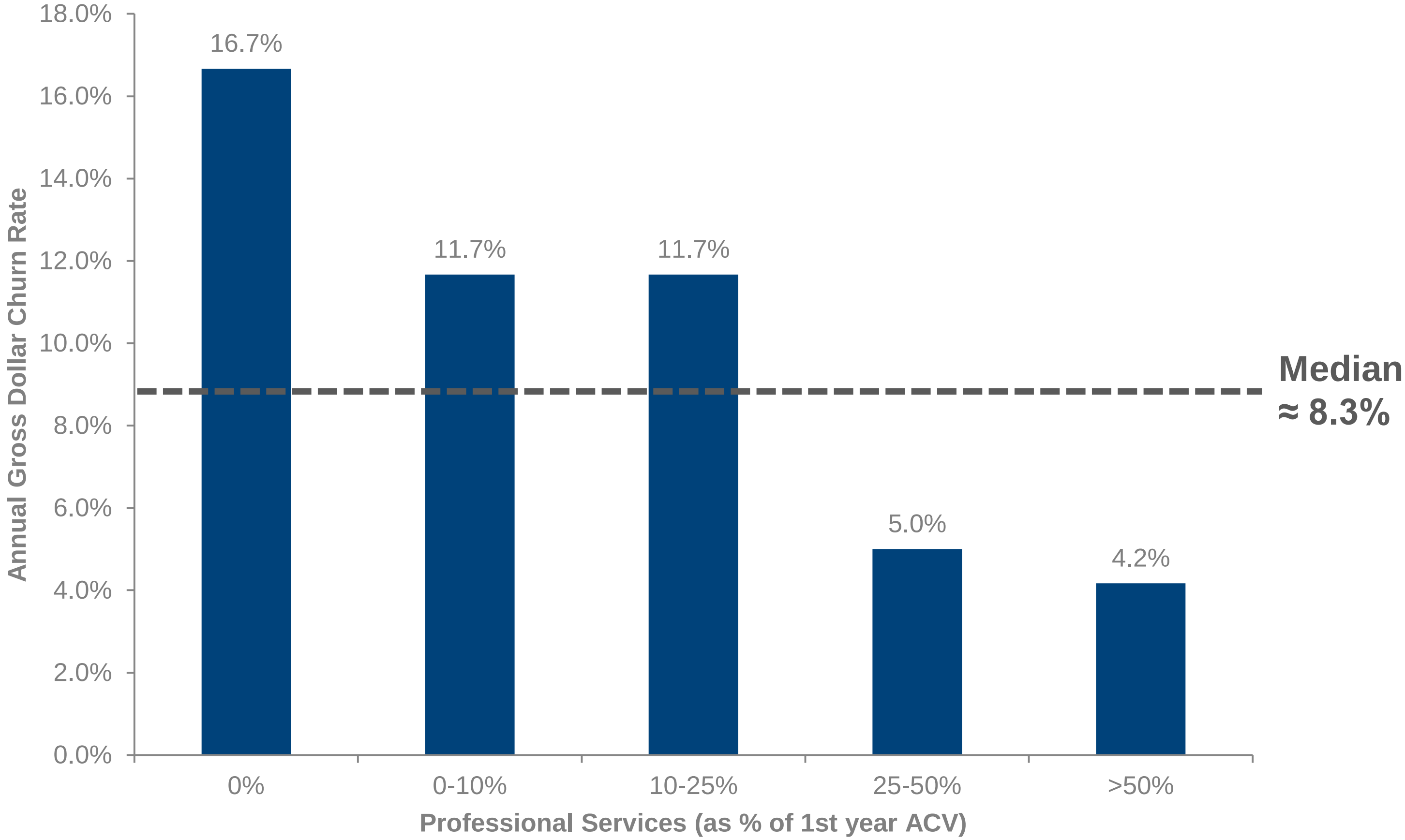
By definition, non-renewal rates are higher than gross dollar churn rates; however, it is interesting to see that the non-renewal rates are also higher for shorter duration contracts.



(1) Annual Non-Renewal Rate defined as the dollar ARR up for renewal in the year which does not renew; based on only contracts up for renewal in a particular year
Respondents: Total: 112, 1 to 2 years: 69, 2 to 3 years: 35, 3+ years: 8

Annual Gross Dollar Churn as a Function of Upfront Professional Services
(Excluding Companies <$2.5MM in Revenue)

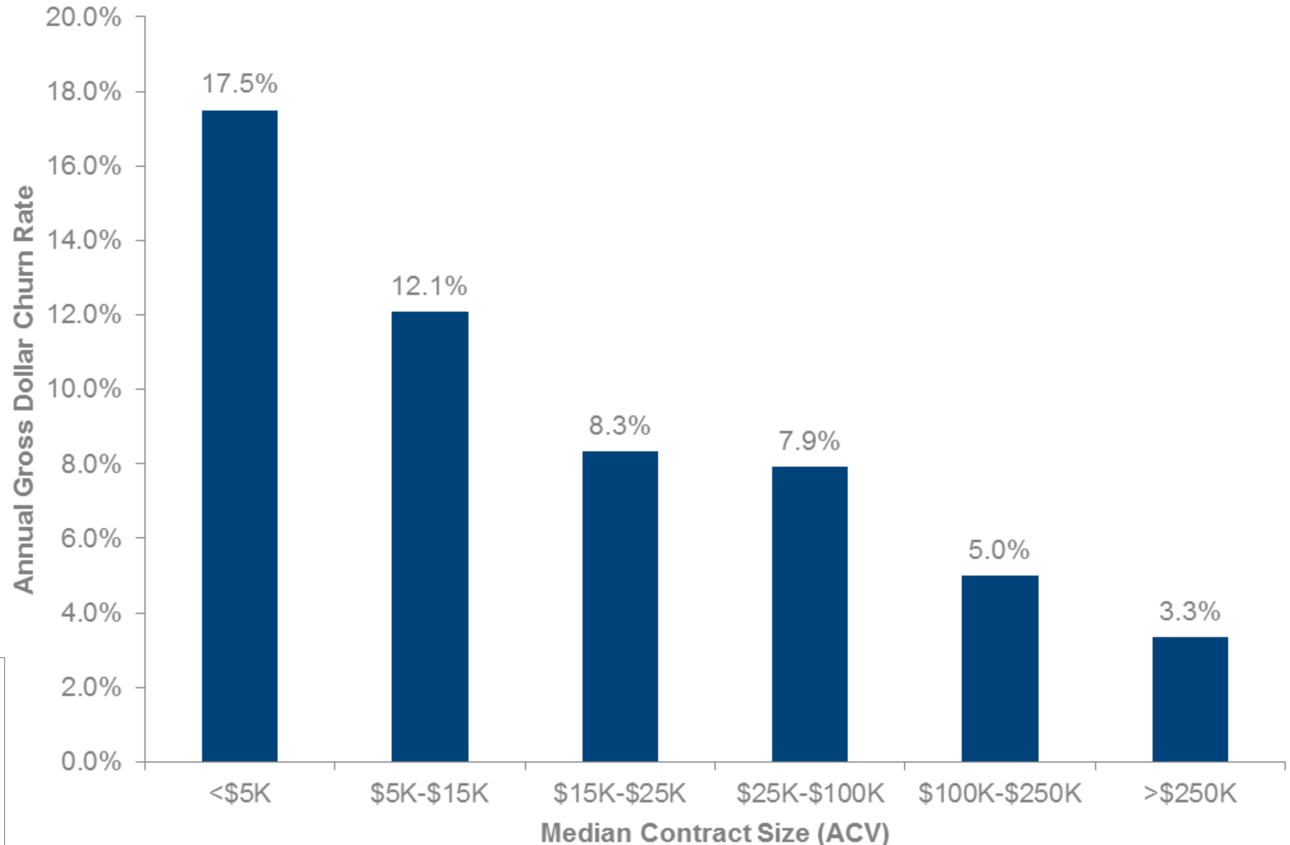
Respondents with higher levels of professional services reported lower churn rates. What is unclear is whether the reduced churn is due to the services or the fact that such companies tend to also have larger, long-term contracts.



Respondents: Total: 165, 0%: 32, 0-10%: 47, 10-25%: 42, 25-50%: 22, >50%: 22

Annual Gross Dollar Churn as a Function of Median Contract Size
(Excluding Companies <$2.5MM in Revenue)

As contract sizes increase, gross dollar churn consistently trends downwards (presumably related to longer term contracts).



Comparison with Previous Surveys

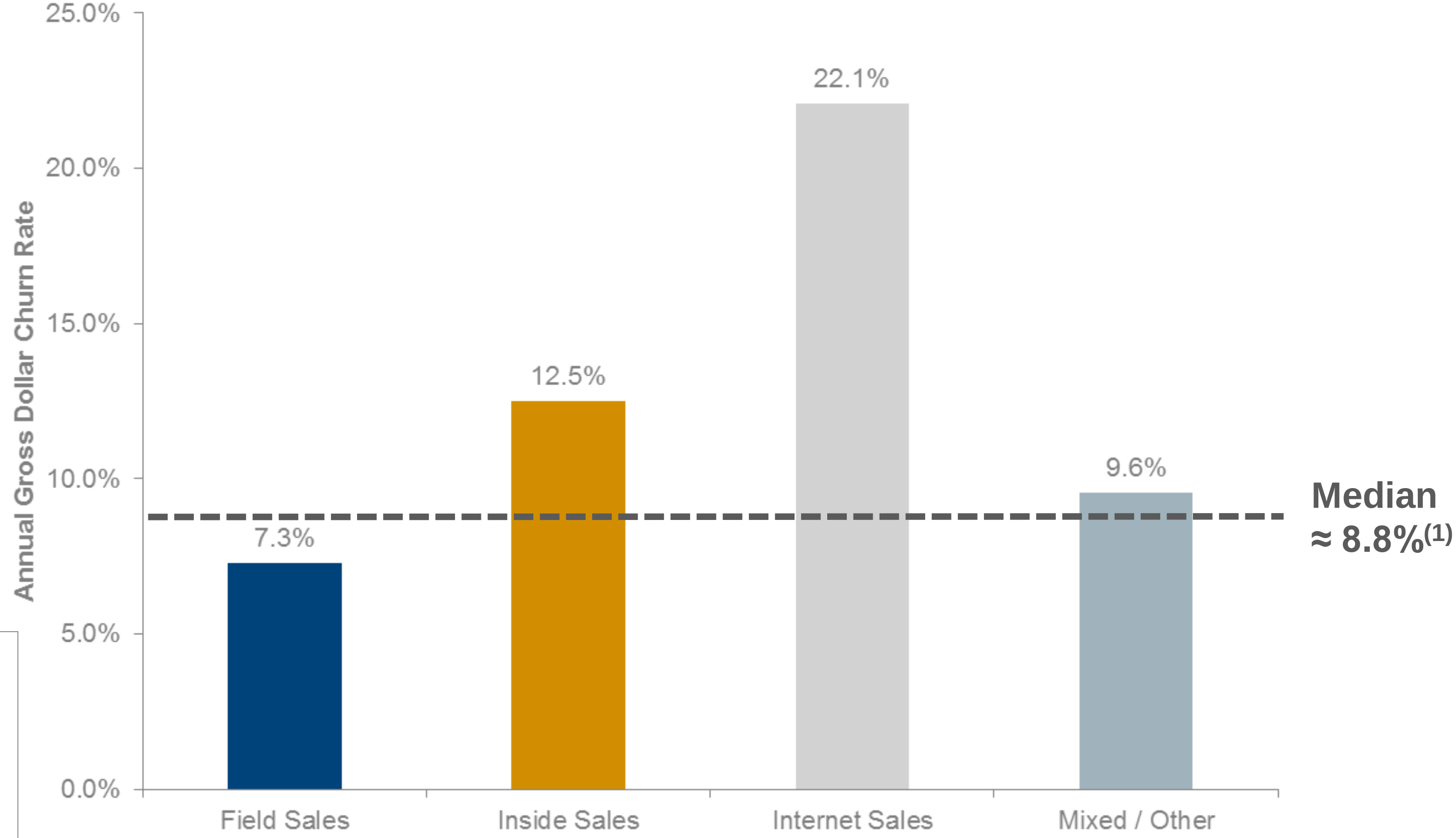
Largely consistent with last year's results; however, churn trended up markedly for the smaller sized contract groups (<$5K median ACV)

Respondents: Total: 154, <$5K: 19, $5K-$15K: 26, $15K-$25K: 19, $25K-$100K: 56, $100K-$250K: 19, >$250K: 15

Annual Gross Dollar Churn as a Function of Primary Distribution Mode

(Excluding Companies <$2.5MM in Revenue)

Those companies employing primarily field sales had lower gross dollar churn rates than those employing primarily inside sales or mixed distribution.



Comparison with Previous Surveys

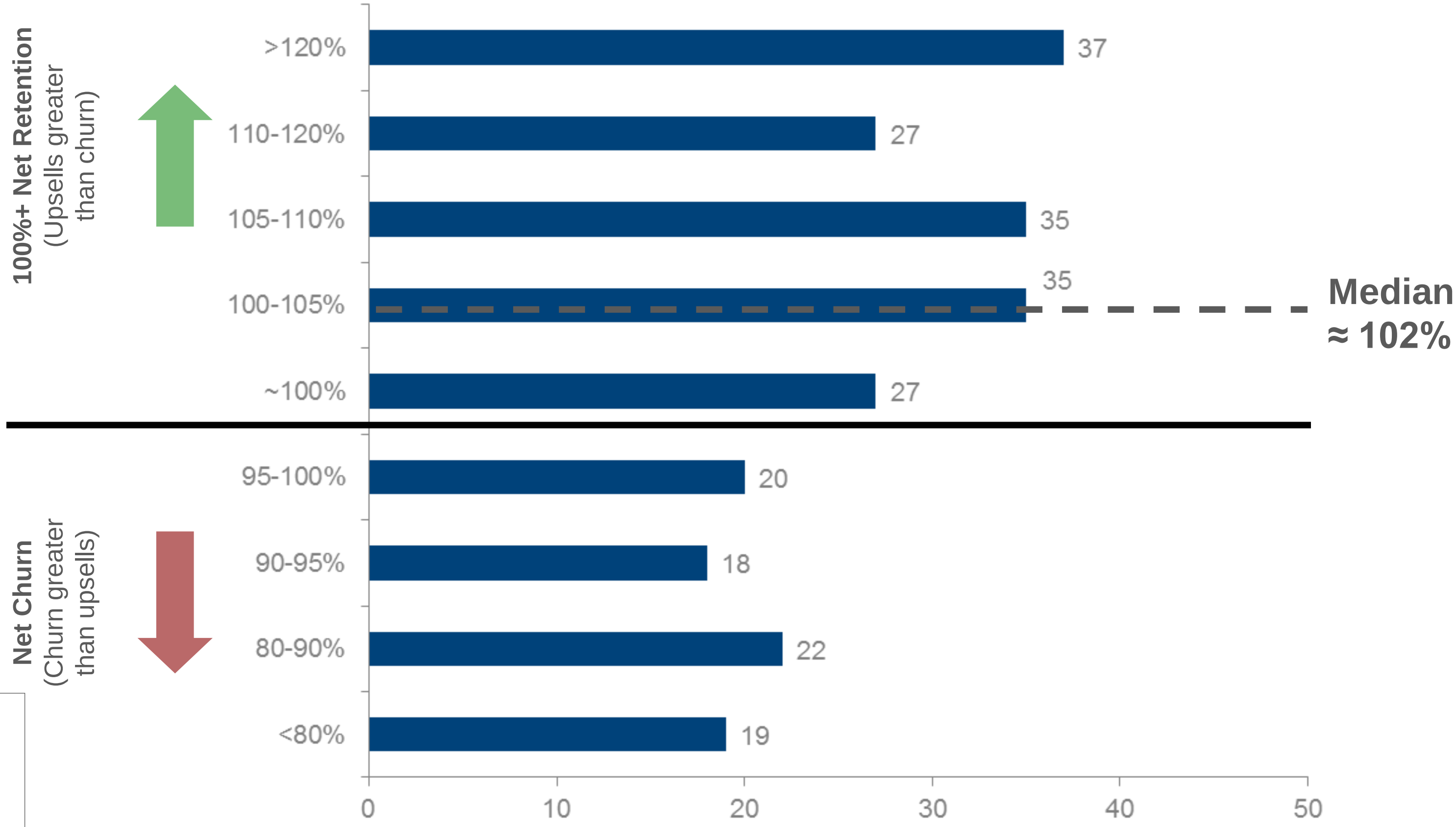
Gross dollar churn among companies with an Internet go-to-market strategy saw a meaningful increase, up from 8% in 2015, though this could be due to a small sample size for this group

(1) Discrepancy from 8% median on slide 54; smaller set of respondents answered both questions
Respondents: Total: 163, Field Sales: 77, Inside Sales: 34, Internet Sales: 7, Mixed/Other: 45

Annual Net Dollar Retention from Existing Customers

"How much do you expect your ACV from existing customers to change, <u>including</u> the effect of both churn and upsells?"(1)

The median annual net dollar retention rate, including churn and the benefit of upsells, is 102%. The result does not change materially when removing the smallest companies (<$2.5MM in revenue) from the group .



Comparison with Previous Surveys

Largely consistent with past two years' results (2015: 104% and 2014: 103%)

(1) We define this as the "net dollar retention rate"
240 respondents

CAPITAL REQUIREMENTS

Analysis of Companies by Equity Capital Raised
(Excluding Companies <$2.5MM in Revenue)

		2015 Median			
Amount Raised to Date	No. of Respondents	GAAP Revenue	GAAP Revenue Growth	ARR	ARR Growth
Less than $5MM	41	$5MM	46%	$4MM	55%
$5MM to $15MM	30	$6MM	38%	$5MM	50%
$15MM to $25MM	21	$7MM	36%	$9MM	50%
$25MM to $50MM	30	$19MM	40%	$20MM	47%
Greater than $50MM	48	$40MM	34%	$39MM	37%

Comparison with Previous Surveys

The 2016 respondents have less revenue traction per dollars raised than previous years' groups

170 respondents

Capital Efficiency

Time and equity investment required to reach:

	Median for Participants[1]	
Threshold	Years Required	Investment Required
$5MM ARR	3	$8MM
$10MM ARR	4	$16MM
$20MM ARR	6	$25MM
$40MM ARR	8	$43MM

(1) Those who have already reached target scale or greater
Respondents: $5MM ACV: 141, $10MM ACV: 97, $20MM ACV: 62, $40MM ACV: 35

Use of Debt Capital Among Private SaaS Companies

2015 Revenue Range	% Using Debt[1]	Median Debt Level[2]	Median Debt-to-MRR Ratio[2]
Less than $5MM	27%	$1MM	5.0x MRR
$5MM to $10MM	76%	$3MM	3.5x MRR
$10MM to $15MM	82%	$3MM	4.0x MRR
$15MM to $25MM	95%	$5MM	3.0x MRR
$25MM to $40MM	93%	$14MM	4.0x MRR
Greater than $40MM	91%	$19MM	2.5x MRR

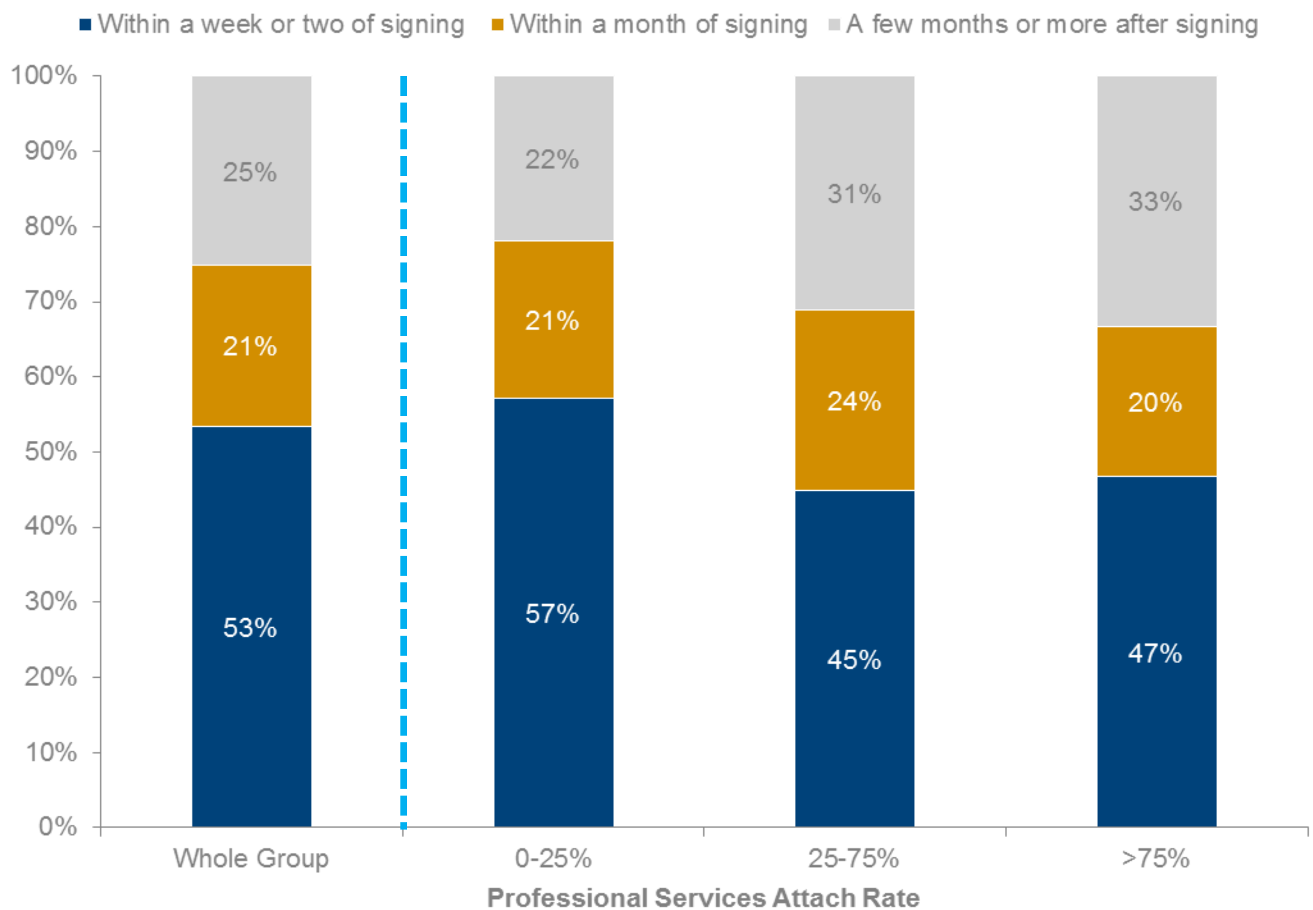
(1) Of at least $1MM in debt
(2) Median among companies with at least $1MM of debt; includes debt outstanding plus availability under existing lines
Respondents: Total: 231, Less than $5MM: 113, $5MM to $10MM: 37, $10MM to $15MM: 11, $15MM to $25MM: 22, $25MM to $40MM: 14, Greater than $40MM: 34

ACCOUNTING POLICIES

Subscription Revenue Recognition Policies
(Excluding Companies <$2.5MM in Revenue)

"When do you typically begin recognizing subscription revenues on a new contract with a new customer?"

Approximately 53% of the respondents indicated that they begin recognition very soon (within a week or two) after signing new contracts. It's interesting to see that many companies with significant services were still able to start subscription revenue recognition quickly.



Comparison with Previous Surveys

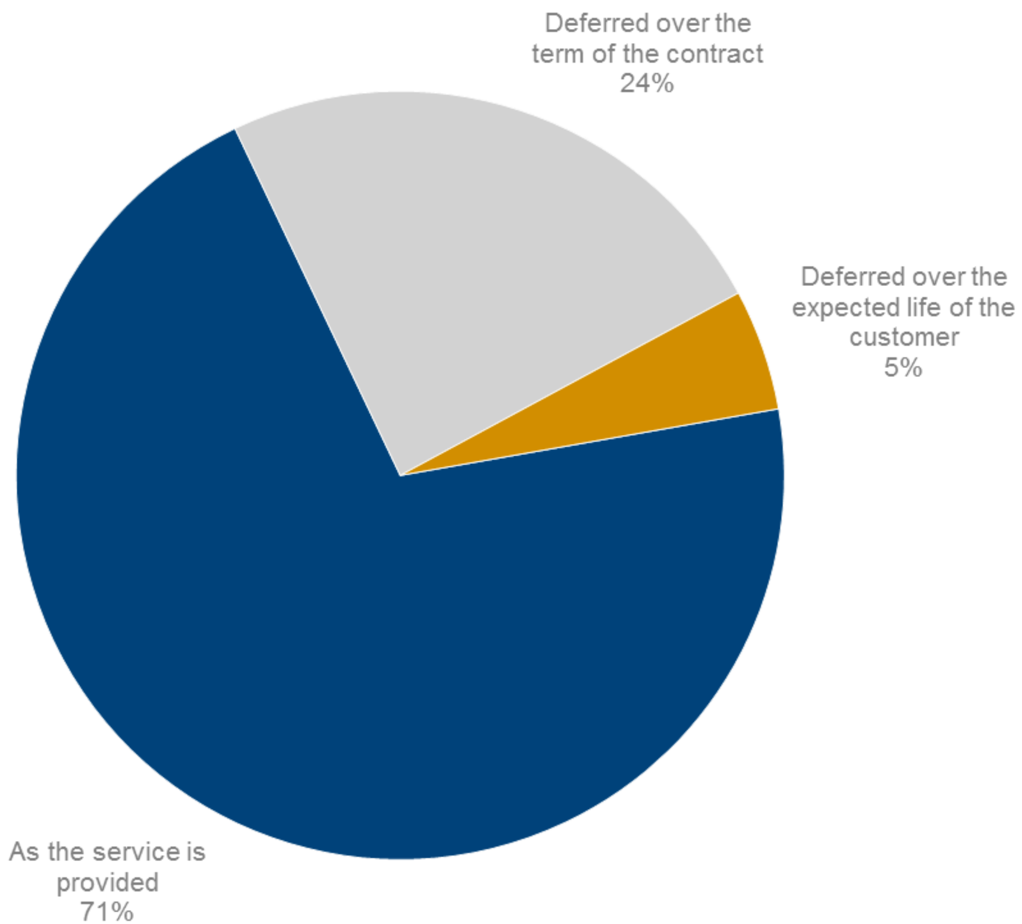
A greater percentage of companies are recognizing subscription revenue "a few months or more after signing"; 25% this year vs. 17% last year

Respondents: Whole Group: 135, 0-25%: 91, 25-75%: 29, >75%: 15

Professional Services Revenue Recognition Policies
(Excluding Companies <$2.5MM in Revenue)

"What is the predominant mode for recognizing professional services revenues?"

The clear majority of respondents offering professional services indicated that they recognize that revenue as the services are provided.

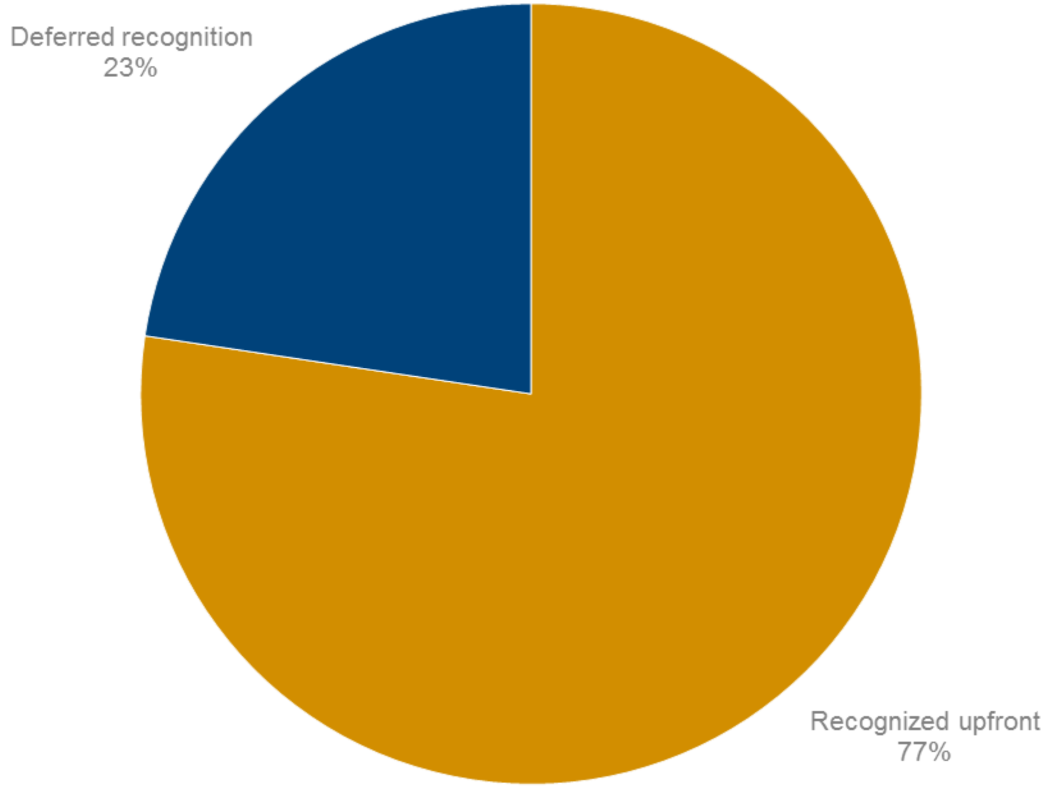


157 respondents

Sales Commission Cost Recognition Policies
(Excluding Companies <$2.5MM in Revenue)

"How do you recognize sales commission costs (deferred or recognized upfront)?"

We also inquired as to the recognition of sales commission costs. We found ~3/4 of respondents indicating that they recognize commission costs up-front.



Comparison with Previous Surveys

Slight shift toward upfront recognition vs. 72% last year

168 respondents

Accounting Policies Across Selected Accounting Firms

(Excluding Companies <$2.5MM in Revenue)

	Subscription Revenue Recognition					Professional Services Recognition			Sales Comission Recognition	
	Within days of signing a contract	Within a week or two of signing	Within a month of signing	A few months after signing	A few quarters or more after signing	As the service is provided	Deferred over contract term	Deferred over the life of customer	Deferred recognition	Recognized upfront
BDO	33%	20%	13%	33%	0%	83%	8%	8%	20%	80%
Deloitte	50%	8%	25%	17%	0%	82%	18%	0%	42%	58%
E&Y	39%	6%	33%	11%	11%	73%	27%	0%	6%	94%
KPMG	75%	8%	17%	0%	0%	64%	27%	9%	33%	67%
Grant Thornton	60%	0%	0%	40%	0%	67%	33%	0%	33%	67%
McGladrey	30%	10%	10%	40%	10%	60%	20%	20%	30%	70%
PwC	58%	5%	26%	11%	0%	78%	22%	0%	17%	83%
Other	34%	15%	23%	22%	6%	69%	24%	6%	24%	76%
Total	42%	12%	22%	20%	4%	72%	23%	6%	23%	77%

Respondents: Total: 154, BDO: 15, Deloitte: 12, E&Y: 18, KPMG: 12, Grant Thornton: 4, McGladrey: 10, PwC: 19, Other: 64

Pacific Crest SECURITIES
Technology Specialists of KeyBanc Capital Markets

Leadership in SaaS Transaction Execution

2011-2016 YTD Software and SaaS IPOs			
Rank	**Firm**	**Deals**	**Value ($MM)**
1	Pacific Crest / KBCM	42	$6,307.9
2	Morgan Stanley	33	6,511.7
3	Goldman Sachs	29	5,122.3
4	J.P. Morgan	28	4,870.9
5	Credit Suisse	24	3,258.6
6	Cannaccord	22	3,942.6
7	Raymond James	22	3,321.7
8	William Blair & Co	20	2,527.0
9	Stifel Nicolaus Weisel	20	2,483.6
10	JMP Securities	19	3,328.6
11	Deutsche Bank	18	2,822.5
12	UBS	17	3,664.2
13	Barclays	14	2,127.6
14	Needham & Co	14	1,329.1
15	Bank of America	13	1,708.9
16	RBC Capital Markets	13	1,506.6
17	Oppenheimer & Co	9	815.1
18	Allen & Co	8	2,146.3
19	Wells Fargo	7	1,856.3
20	Jefferies	6	1,072.0
21	Citi	6	1,040.7
22	Piper Jaffray & Co	6	792.3
23	Cowen & Co	5	1,376.4
24	BMO	5	879.4
25	Lazard Capital Markets	4	446.2

Corporate Finance

$110,400,000 APPTIO Apptio (APTI) Initial Public Offering	$103,500,000 everbridge Everbridge (EVBG) Initial Public Offering	$172,500,000 twilio Twilio (TWLO) Initial Public Offering
$85,560,000 appfolio AppFolio (APPF) Initial Public Offering	$100,100,000 MINDBODY MINDBODY (MB) Initial Public Offering	$150,535,000 shopify Shopify (SHOP) Initial Public Offering
$201,250,000 box Box (BOX) Initial Public Offering	$143,750,000 HubSpot HubSpot (HUBS) Initial Public Offering	$114,999,993 zendesk Zendesk (ZEN) Initial Public Offering
$114,626,250 paycom Paycom Software (PAYC) Initial Public Offering	$133,073,876 2U 2U (TWOU) Initial Public Offering	$110,503,887 Amber Road POWERING GLOBAL TRADE Amber Road (AMBR) Initial Public Offering
$300,035,000 veeva Veeva Systems (VEEV) Initial Public Offering	$135,240,000 cvent Cvent (CVT) Initial Public Offering	$732,550,000 workday. Workday (WDAY) Initial Public Offering

Advisory

marketlive acquired by Vista Equity Partners	Shopatron acquired by Vista Equity Partners	liveops acquired by MARLIN EQUITY PARTNERS
Grasshopper has been acquired by CITRIX	WebPT has received an investment from BV Battery Ventures	PLEX has received an investment from T.RowePrice INVEST WITH CONFIDENCE
STACKDRIVER has been acquired by Google	Passkey has been acquired by Lanyon	BoxTone has been acquired by Good
JAMF software has received an investment from SUMMIT PARTNERS	COMPENDIUM has been acquired by ORACLE	kxen has been acquired by SAP
SevOne has been recapitalized by BainCapital	dynaTrace software has been acquired by Compuware	NVIcode has been acquired by Microsoft

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