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Micro-VCs: A Worthwhile Investment?



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Cover photo by Joshua Lanzarini on Unsplash

Executive Summary

This paper presents a top-down analysis of the Micro-VC space in the U.S. and Europe, defined as venture capital funds under \$100 million. The paper seeks to answer the key question of whether these types of funds represent an attractive investment opportunity for institutional LPs such as Sapphire Ventures, and what sets apart the best performing funds. Starting with industry sizing and aggregate performance results, we utilize a mix of quantitative and qualitative analyses to construct arguments for and against Micro-VC as a category, before presenting our ultimate recommendation.

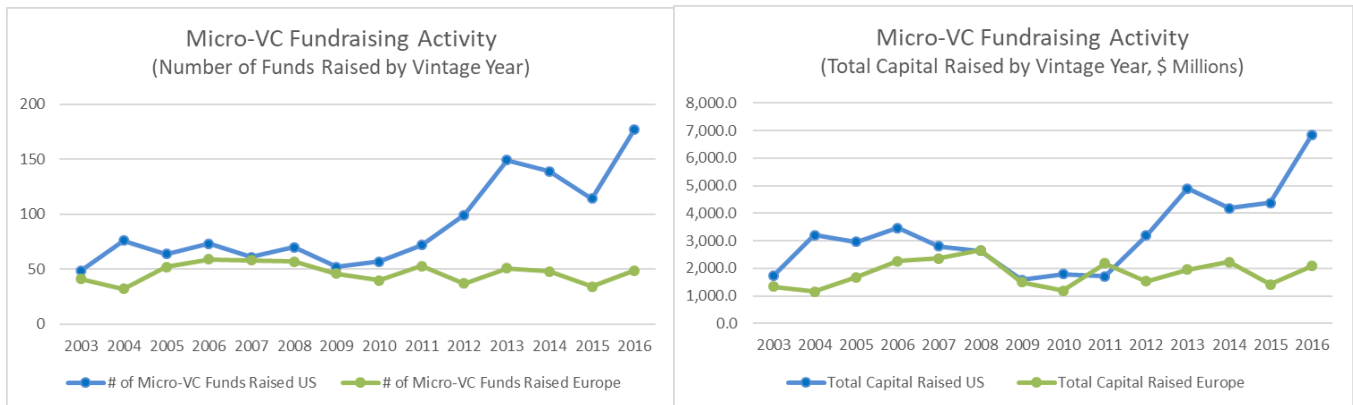
A significant limitation of this paper is that reliable performance information for specific funds was not available, especially for many of the best known Micro-VCs today. Instead, we chose to analyze the micro-VC fund model from a theoretical standpoint to identify some of the key levers that determine fund-level performance. These levers were fund size, loss ratios (influenced either by superior investment selection or by portfolio management and approach to follow-on reserves), ownership percentage in winners, and the enterprise value of winners. All have to work together in tandem to result in strong fund-level returns. Our analysis can be used as a framework through which to evaluate new Micro-VC investment opportunities, which in the long run may be more informative than identifying a list of currently compelling funds.

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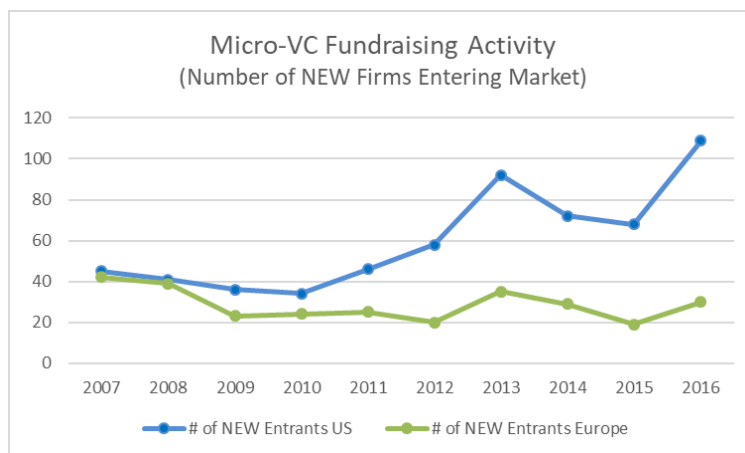
I. Overview of Recent Micro-VC Fundraising Trends

The past seven years have brought about a proliferation of Micro-VC funds, particularly in the U.S. The pace of fund formation and new firm formation has been relentless, and continues to accelerate. The tables below depict the number of funds and total capital raised in both the U.S. and in Europe by funds under \$100 million in recent years.



Data Source: Preqin

The capital raised by U.S. Micro-VC funds has grown at a 23.3% CAGR over the past 7 years, compared to a 16.3% CAGR for the aggregate U.S. Venture Capital space. The past 5 years have seen an even more pronounced pick-up in activity, with Micro-VC fundraising growing at a 32.0% CAGR, compared to 24.5% for the aggregate industry. Furthermore, as the table below demonstrates, the pace of U.S. Micro-VC fundraising is amplified by a large number of new firms being formed each year and entering the market. As one reference noted, "it is quite easy to raise \$25 million", thereby lowering the barriers to entry for new firms. It has led to a very crowded space, and LPs that were previously bullish on the investment opportunity are starting to question whether the "Micro-VC game has played out."



Data Source: Preqin

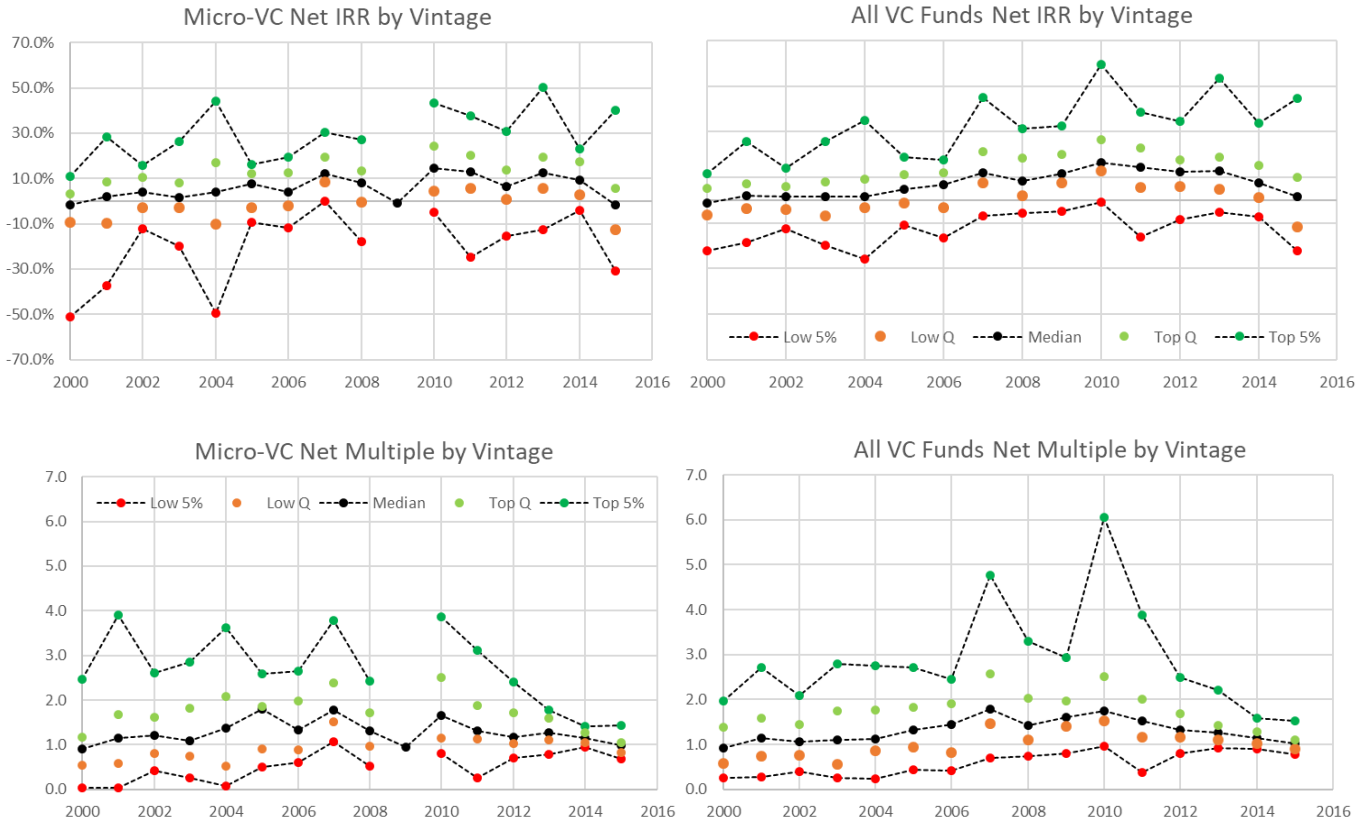
In Europe, the Micro-VC trend has been muted, with fundraising activity consistently at \$1.5 – 2.0 billion raised annually by a steady number of firms. In contrast, overall European Venture Capital fundraising has been growing at a 14.7% CAGR over the past 5 years, indicating that Micro-VC as a model has yet to take hold in a big way in that geography, and that “traditional” funds are driving European market growth instead. However, there may be a hidden piece of good news behind this trend: as Cendana’s Michael Kim recently observed¹, for the Micro-VC category to make sense, a strong ecosystem of follow-on investors (traditional venture firms) is required. In Europe, the traditional venture ecosystem is still building up, meaning that the opportunity for Micro-VC funds there may improve down the road.

II. Micro-VC Fund Performance

In aggregate, Micro-VC fund performance has mimicked that of the broader Venture Capital asset class, and the return patterns for the two fund types move in tandem (implying that Micro-VC as a category is unlikely to be a strong diversifier for an LP’s venture capital portfolio). The charts below illustrate the return distribution of Micro-VC and all VC funds by vintage year, including median results, top and bottom

¹ <https://techcrunch.com/2017/04/05/cendana-capital-which-funds-15-top-seed-stage-groups-just-raised-a-ton-of-capital/>

quartile cut-offs, and top and bottom 5% cut-offs; results are shown from the perspective of both Net IRR and Net Multiple.



Data Source: Cambridge Associates

While the return patterns for Micro-VC and traditional VC funds indeed appear similar to one another, Micro-VC funds seem to consistently underperform their traditional VC counterparts at each breakpoint in the return distribution. The tables below illustrate these return differences for vintages 2007 – 2014 (excluding younger vintages as their results are not yet meaningful.)

Net IRR Differences: Micro-VC returns *minus* All VC fund returns

Vintage	Bottom 5%	Bottom Q	Median	Top Q	Top 5%
2007	6.9%	0.9%	0.1%	-1.8%	-14.8%
2008	-12.2%	-2.5%	-0.5%	-5.1%	-4.1%
2009	NA	NA	-12.6%	NA	NA
2010	-3.8%	-8.7%	-1.9%	-2.0%	-16.3%
2011	-8.5%	-0.1%	-1.6%	-2.9%	-1.1%
2012	-7.0%	-5.2%	-5.8%	-4.2%	-3.9%
2013	-7.4%	0.7%	-0.4%	0.4%	-3.3%
2014	3.0%	1.6%	1.4%	2.3%	-10.7%
Average	-4.1%	-1.9%	-1.2%	-1.9%	-7.7%

Net Multiple Differences: Micro-VC returns *minus* All VC fund returns

Vintage	Bottom 5%	Bottom Q	Median	Top Q	Top 5%
2007	0.36x	0.04x	-0.01x	-0.19x	-0.99x
2008	-0.22x	-0.13x	-0.13x	-0.31x	-0.86x
2009	NA	NA	-0.66x	NA	NA
2010	-0.15x	-0.37x	-0.09x	0.00x	-2.19x
2011	-0.13x	-0.02x	-0.20x	-0.12x	-0.76x
2012	-0.11x	-0.15x	-0.16x	0.04x	-0.10x
2013	-0.13x	0.01x	0.00x	0.16x	-0.44x
2014	0.04x	0.03x	0.02x	0.00x	-0.18x
Average	-0.05x	-0.08x	-0.08x	-0.06x	-0.79x

Data Source: Cambridge Associates

The Micro-VC underperformance is pervasive throughout the entire return distribution, but is particularly pronounced at the extremes of the distribution, where the top and bottom 5% Micro-VCs significantly underperform each year, particularly using the Net IRR metric (which makes sense, given that Micro-VCs tend to invest earlier in the company lifecycle and consequently have longer average holding periods.) Therefore, from a manager selection standpoint, it would be a difficult argument to make that identifying the best Micro-VC funds will result in superior performance compared to a more traditional approach to venture capital.

However, this analysis is subject to an important caveat, as there is substantial bias in the dataset. On the one hand, the data exhibits survivorship bias, as poorly performing funds are less likely to report their results, leading to them being excluded from benchmark calculations. This issue affects both Micro-VC and traditional VC funds. On the other hand, the best funds also have little incentive to publicly report their results, as they do not need the publicity to help their fundraising; the Cambridge Associates database partly alleviates this issue, as all funds used by Cambridge clients get included in the benchmark, thereby including some of the top tier venture funds. However, this is not a great solution when it comes to Micro-VC funds, as their LP base consists less of large institutions (which may be Cambridge clients) but more of high-net-worth individuals. Due to these LP base differences, Cambridge may not have access to some of the best performing Micro-VCs, thereby biasing the results and under-stating Micro-VC benchmarks. Therefore, the conclusions from the analysis above must be taken with a large grain of salt.

III. Qualitative Information Obtained From Reference Calls

We conducted several reference calls and meetings to learn more about the Micro-VC space. Raw reference call notes can be found in the Appendix. Our key takeaways are organized below.

Micro-VC Landscape

- The US has seen accelerated Micro-VC fundraising trend in the past 10 years and some of the key drivers are: 1) the improved capital efficiency for start-ups has made small size checks more meaningful; 2) some traditional funds have moved up market and left more opportunities in investing in seed stages; 3) The VC industry was underperforming in the past 10 years. Without enough sizable exits the smaller funds tend to outpace larger funds.

- Many micro-VCs in the US have generated a lot of buzz and have good brands (i.e. Maples/SV Angel, Deering) but often the good performances are driven by unrealized marks, stale prices, and market exuberance.
- In Europe, we're looking at a different story. The seed stage investing is less competitive and the demand is bigger than supply. Passion was the first micro-VC launched in Europe in 2011.

Stay Micro VS Grow Fund Size

- Some high-performing funds (i.e. K9 Ventures) have chosen to keep fund sizes small. Those funds found their niche and want to stay in the space and write small checks. They are not interested in raising bigger size fund. There are also investors like Michael Deering (Harrison Metal) considering this more of a "lifestyle business" and are not interested in growing the fund size.
- On the other hand, some funds aim to demonstrate repeatable success, build a track record and have the ambition to raise larger funds down the road. Micro-VCs have to be very disciplined with respect to check size. They'll get good ownership stakes early on, but as investments mature and raise follow-on capital, the Micro-VCs can't keep up. They will either get massive dilution or end up in unfavourable share classes. To confront this issue some firms have moved up in fund size to have more capital for follow-on investments.
- There's a limit for fund size to go up by stretching on different dimensions without changing the investment strategy. When fund size goes up, incentives shift and firms end up competing against larger VCs and risk to be the "short-stacked at the poker table".

Investment Strategy

- The trend has shifted from being the generalist to being the specialist and it's very important to bring to the table unique capability and have a sharp focus to be perceived as attractive to start-ups. The focus could be a vertical, a domain, a function, a geography or team.

- Passion Capital prioritizes calibre of team (which translates into the ability to pivot) over business model and always take a board seat in investment.
- Adara Ventures focus on Cybersecurity and has a rigorous analytical approach on selecting and processing deals.
- Piton Capital focuses on marketplaces and network effect-driven businesses and is stage and geography agnostic.
- Sure Ventures focuses on Insurance Tech specifically in innovation, customer engagement and data analytics at pre-seed and seed stage.
- Many European funds emphasize a geographic focus as it's harder for outsiders to access the deal flow in the area.

Portfolio Construction

- As investments mature, Micro-VCs face the risks of getting massive dilution or ending up in unfavourable share classes. Some funds insist on negotiating the ability to transfer their pro-rata rights to a later fund or to LP co-invest. Passion Capital, for example, use fund capital for initial investments, then follow-on rounds via co-invest, which helps keep the fund size small.
- Some funds focus on value creation to ensure good exit opportunities and worry less about the dilution at later stage. Sure Ventures intends to save 50% for follow-on but focuses on choosing a diversified portfolio to sufficiently address the topics in a vertical, including different type of entrepreneurs and relevant geography, and playing an active role to set the start-ups for success.

LP Perspective

- Both in US and Europe, Micro VCs raise money from HNWI and UHNWI and in US for a fund size over \$30million there's typically institutional investment.
- Some European funds also received commitments from state-sponsored entities.

- Some larger funds have now set up “discovery funds” and allocate some funds to these vehicles to get an early look at compelling seed stage deals to create a pipeline of “core” investments.

IV. Stay “Micro” or “Graduate”?

Scope and methodology

In studying characteristics of funds that graduate versus funds that stay micro, we decided to focus our analysis on US and European managers that were created after the year 2000. To better observe the firms’ fund size trajectory over time, we limited our analysis to firms that have raised 3 or more funds in the past. We define funds that “graduate” as funds which started as a Micro-VC (i.e. first fund <\$100m) and subsequently raised one or more funds over \$100m. We define funds that ‘stay small’ as funds which started as a Micro-VC and never raised any fund above \$100m afterwards.

As such, we use the following criteria to screen the universe of funds and limit the scope of our study.

1. Europe and US (results by for each geography presented separately);
2. Raised its first fund after 2000;
3. Micro-VC i.e. first fund <\$100m;
4. Have raised at least 3 funds;
5. Active - raised at least one fund over the past 10 years to screen out inactive funds.

European Micro-VC Fund Size Trajectories

Category	# of funds	% of total
1 Stay small	35	65%
2 Graduate	13	24%
3 Other	6	11%
Total	54	

Data source: Preqin

In Europe, we found that 65% of Micro VC “stay small” and 24% “graduate”. Our conversations with a number of micro VCs suggest that funds in Europe can grow up to a certain size depending on their geography and/or industry specialisation. Those that ‘graduate’ tend to either specialise in a larger economy/industry or decide to go beyond their direct areas of specialisation. However, this is difficult to analyse without conducting detailed research into fund-by-fund strategy and evolution. As such, we decided to limit our analysis to high-level statistics and some anecdotal evidence.

We found that amongst the funds that ‘graduate’, 12 out of 13 funds (92%) manage to graduate before their third funds. This could be an indication of early wins (Mangrove in Skype and Wix.com, Creandum in Spotify) and/or having strong focus to be the key player in a specific sector (Notion in SaaS and cloud computing, Alven in Media, EV in oil and gas). Several funds also expanded their geographical focus as they grew (Mangrove expanded to include Israel and Russia; EV Private Equity expanded from Nordic to include UK, US, Western Europe and later became global). The average size of the largest fund of each manager is approximately \$200m, with the largest fund being an oil and gas fund from EV Private Equity of \$350m.

Amongst the funds that ‘stay small’, 86% manage to subsequently grow and raise at least one larger fund whereas 14% has shrunk and become smaller. The average size of the largest fund of each manager that ‘stay small’ is appx\$55m. We also found that a large proportion (50%) tend to focus on only one country or a mix of smaller economies (Portugal, Hungary, emerging markets). This is consistent with what we expect as funds that ‘stay small’ tend to include those that decided to play in a niche market.

Lastly, we found that 11% of the funds have graduated but subsequently raised smaller funds. The majority of these are a result of managers raising more specialised funds e.g. Kernel going from diversified

to raising separate medtech and clean tech funds, Idinvest going from diversified to raising a separate environmental fund.

US Micro-VC Fund Size Trajectories

Category	# of funds	% of total
1 Stay small	109	70%
2 Graduate	36	23%
3 Other	10	6%
Total	155	

Data source: Preqin

In the US, the number of funds that passed our screen is approximately three times the size of Europe. However, the statistics are very similar to Europe with 70% of Micro VC 'stay small' and 23% 'graduate'.

Our research suggests that micro VCs tend to either specialise in being small and play within a given niche, or want to be large from the start. This in turn impacts the funds strategy and the kinds of investments they pursue. For example, some funds are explicit in saying they are not in the business of searching for the next unicorn as they will not be able to follow on in subsequent funding rounds. We note that it is difficult to see a clear trend of what characteristics are associated with the winners without conducting detail research into fund-by-fund strategy and evolution. As such, we decided to limit our analysis to high level statistics and some anecdotal evidence.

Amongst the funds that eventually 'graduate', we found that over 75% of the funds graduate before their third funds. This is similar to what we found in Europe. Two notable outliers within this group are Founders Fund, which quickly raised a \$220m fund within two years and eventually went on to raise a \$1.3bn fund, and Thrive Capital, which went from \$10m to \$700m within 7 years. These funds had ambitions to become big from the start and eventually compete with traditional VC funds such as Sequoia. However, excluding

these outliers, the average size of the largest fund of each manager within the ‘graduate’ group is about \$200m which, again, is very similar to Europe.

Amongst the funds that ‘stay small’, 42% manage to subsequently grow and raise at least one larger fund whereas 58% has shrunk become smaller. This is significantly smaller than Europe and warrant further investigation. Assuming the number is not significantly impacted by survivorship bias, this could be an indication that the US market is much more competitive and that without geographical specialisation, it might be harder for funds to create a niche.

V. Portfolio Construction Considerations

There are several levers fund managers can employ to generate strong fund-level returns. We will analyze each lever in detail to assess the robustness of the Micro-VC fund model.

1. Seek meaningful ownership stakes in large companies

The most obvious path to strong fund-level performance is to invest in portfolio companies that grow to large enterprise values, and to own meaningful percentage shares of these companies at exit. The former (company-picking skill) is due to a combination of solid investment judgment, strong deal flow and a healthy dose of luck, while the latter (ownership % at exit) has a lot to do with portfolio management and follow-on reserve allocation. As Micro-VC investor Samir Kaji first demonstrated², these two dimensions must come together to drive fund-level returns, a task which becomes more difficult as fund size increases. Using Samir’s framework³, we constructed a model to demonstrate how much aggregate enterprise value “winners” in a given fund must generate to arrive at a 3x Net Multiple (a very good result,

² <https://medium.com/vcdium/micro-vc-smaller-is-better-but-the-math-is-still-really-hard-c0cd4f62ccc2>

³ Assumptions: management fee 2% for 10 years, other fund expenses recycled; carried interest 20%.

especially in the context of the benchmark returns presented above!), as a function of fund size and ownership %.

Aggregate Enterprise Value Required for to reach 3x NET Multiple at Fund Level

(\$ millions)

		<i>Fund Size</i>									
		10	20	30	40	50	60	70	80	90	100
<i>Ownership % at Exit</i>	0.5%	7,000.0	14,000.0	21,000.0	28,000.0	35,000.0	42,000.0	49,000.0	56,000.0	63,000.0	70,000.0
	1.0%	3,500.0	7,000.0	10,500.0	14,000.0	17,500.0	21,000.0	24,500.0	28,000.0	31,500.0	35,000.0
	1.5%	2,333.3	4,666.7	7,000.0	9,333.3	11,666.7	14,000.0	16,333.3	18,666.7	21,000.0	23,333.3
	2.0%	1,750.0	3,500.0	5,250.0	7,000.0	8,750.0	10,500.0	12,250.0	14,000.0	15,750.0	17,500.0
	2.5%	1,400.0	2,800.0	4,200.0	5,600.0	7,000.0	8,400.0	9,800.0	11,200.0	12,600.0	14,000.0
	3.0%	1,166.7	2,333.3	3,500.0	4,666.7	5,833.3	7,000.0	8,166.7	9,333.3	10,500.0	11,666.7
	3.5%	1,000.0	2,000.0	3,000.0	4,000.0	5,000.0	6,000.0	7,000.0	8,000.0	9,000.0	10,000.0
	4.0%	875.0	1,750.0	2,625.0	3,500.0	4,375.0	5,250.0	6,125.0	7,000.0	7,875.0	8,750.0
	4.5%	777.8	1,555.6	2,333.3	3,111.1	3,888.9	4,666.7	5,444.4	6,222.2	7,000.0	7,777.8
	5.0%	700.0	1,400.0	2,100.0	2,800.0	3,500.0	4,200.0	4,900.0	5,600.0	6,300.0	7,000.0

Lowercase's est. share of Uber (rare event)

Forerunner's est. share of Dollar Shave Club

Data Source: internal analysis

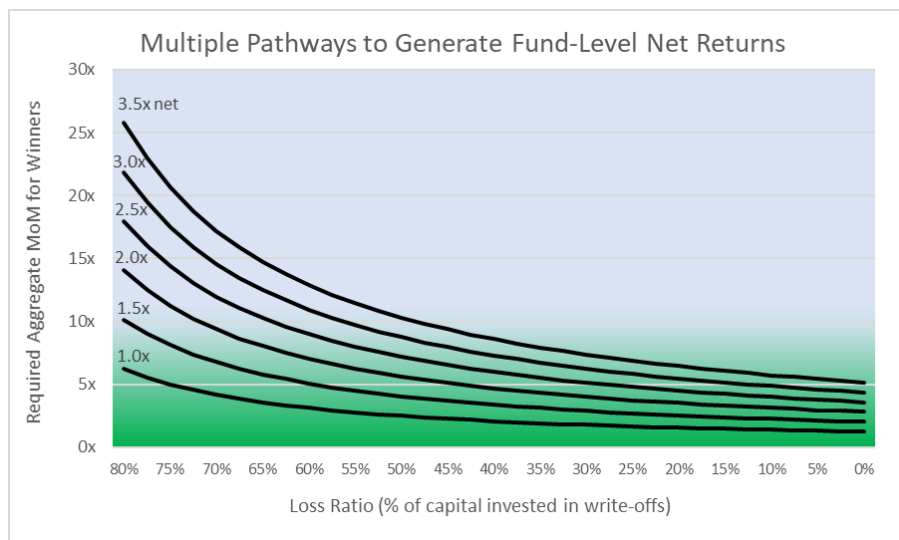
The table above demonstrates that achieving a 3x net return is generally a tall order, and that outsized outcomes are mandatory especially at larger fund sizes. For example, a \$50 million fund must invest in companies worth \$7 billion in aggregate, if the fund manager expects to own 2.5% of these companies at exit. However, a 2.5% stake may not be achievable if these companies require multiple large rounds of financing and the fund does not have adequate reserves for these follow-on investments. Seed-stage investors can easily get diluted at subsequent financing rounds and can end up with ownership stakes under 1% in their winners, such as Forerunner Ventures' stake in Dollar Shave Club and Jet.com, both of which were exits above \$1 billion. In that case, the same \$50 million fund would have to invest in companies worth a combined \$35 billion, which is unlikely (e.g. Airbnb is currently valued at \$31 billion⁴, hardly a common outcome for a venture-backed company!)

⁴ <https://techcrunch.com/2017/03/09/airbnb-closes-1b-round-at-31b-valuation-profitable-as-of-2h-2016-no-plans-for-ipo/>

Based on this model, Micro-VC funds face steep odds to succeed. An alternative model may be more sustainable, whereby the manager invests in companies with lower ambitions but which require less capital to get off the ground, meaning that the manager’s ownership share can be quite high at exit and suffer much less dilution. For example, if the manager were to own 10% of its winners, a \$30 million fund would only need to generate \$1 billion in enterprise value to return 3x net, significantly lessening the burden on any one company to exit at “unicorn” level. For an LP investing in Micro-VC funds, this model may be more lucrative over the long term, even while being less “glamorous.”

2. Trade-off between portfolio loss ratio and aggregate MoM on winners

As Adara Ventures’ Nico Goulet described in his recent talk at INSEAD⁵, fund level returns depend on two key attributes: the proportion of total capital invested in companies that end up as write-offs (“loss ratio”) and the aggregate result (measured as gross multiple of invested capital) for the remaining companies. To increase fund-level returns, GPs should either decrease their loss ratio or increase the result for winners, as the model below illustrates⁶.



Data Source: internal analysis

⁵ Private Equity class guest lecture, September 2017.

⁶ Assumptions on fees and carry same as in previously discussed model.

According to this model, reducing the loss ratio can take a substantial amount of pressure off the performance of winners, and can enable managers to achieve robust fund-level returns without having to rely on astronomical outcomes from their winners. A frequently cited analysis by Correlation Ventures⁷ claims that only 4% of all venture-backed deals returned over 10x capital; therefore, running a fund model that heavily depends on successes of this magnitude (captured by the blue zone on the chart above) seems unsustainable. LPs should screen for managers that exhibit the portfolio management skill to minimize their loss ratios.

3. Levers for controlling loss ratio: company selection vs. capital allocation

A venture capital's loss ratio depends on two factors: the number of investments written off as a % of total number of investments, and the average initial amount invested in each investment as a % of average check size. The table below illustrates this concept.

Strategies for Improving Loss Ratios

	Baseline	Scenario 1	Scenario 2
Fund size	40,000,000	40,000,000	40,000,000
Number of investments	40	40	40
Average ticket size	1,000,000	1,000,000	1,000,000
Number of investments written off	10	4	10
# of write-offs / # of investments	25%	10%	25%
Average initial investment	1,000,000	1,000,000	400,000
Average initial investment / average ticket size	100%	100%	40%
Loss Ratio (% of total capital)	25%	10%	10%

Data Source: internal analysis

⁷ <https://www.sethlevine.com/archives/2014/08/venture-outcomes-are-even-more-skewed-than-you-think.html>

These two strategies are pursued by different types of venture capitalists. On one hand, managers who pursue “Scenario 1” are “Pickers”: they seek to minimize the number of investments written off, i.e. they generate their returns through individual company selection. For this strategy to be successful, these managers must rely on high-quality deal flow, coupled with strong investment judgment and a detailed investment screening process. On the other hand, managers who pursue “Scenario 2” are “Harvesters”: they make small initial investments into many companies and use their follow-on reserves to back the winners that emerge over time, i.e. they generate their returns through portfolio management. For this strategy to succeed, managers must practice rigorous reserve management, and must exhibit strong investment judgment across the portfolio company lifecycle.

In reality, venture capitalists exhibit both Picker and Harvester characteristics, but each firm may tilt more towards one approach than the other. These characteristics can work together to drastically reduce loss ratios in a fund, as the chart below illustrates. Venture capitalists clearly seek to be in the top left corner of the chart, where loss ratios are lowest. However, Pickers focus more on moving up along the Y axis, while Harvesters focus more on moving to left along the X axis.

Heat Map of % Invested Capital Lost

		← Harvesters															
		Average initial investment / average ticket size															
		30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	
← Pickers	No losers / No of investments	10%	3%	4%	4%	5%	5%	6%	6%	7%	7%	8%	8%	9%	9%	10%	10%
	15%	5%	5%	6%	7%	8%	8%	9%	10%	11%	11%	12%	13%	14%	14%	15%	
	20%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
	25%	8%	9%	10%	11%	13%	14%	15%	16%	18%	19%	20%	21%	23%	24%	25%	
	30%	9%	11%	12%	14%	15%	17%	18%	20%	21%	23%	24%	26%	27%	29%	30%	
	35%	11%	12%	14%	16%	18%	19%	21%	23%	25%	26%	28%	30%	32%	33%	35%	
	40%	12%	14%	16%	18%	20%	22%	24%	26%	28%	30%	32%	34%	36%	38%	40%	
	45%	14%	16%	18%	20%	23%	25%	27%	29%	32%	34%	36%	38%	41%	43%	45%	
	50%	15%	18%	20%	23%	25%	28%	30%	33%	35%	38%	40%	43%	45%	48%	50%	
	55%	17%	19%	22%	25%	28%	30%	33%	36%	39%	41%	44%	47%	50%	52%	55%	
	60%	18%	21%	24%	27%	30%	33%	36%	39%	42%	45%	48%	51%	54%	57%	60%	
	65%	20%	23%	26%	29%	33%	36%	39%	42%	46%	49%	52%	55%	59%	62%	65%	
	70%	21%	25%	28%	32%	35%	39%	42%	46%	49%	53%	56%	60%	63%	67%	70%	
	75%	23%	26%	30%	34%	38%	41%	45%	49%	53%	56%	60%	64%	68%	71%	75%	
	80%	24%	28%	32%	36%	40%	44%	48%	52%	56%	60%	64%	68%	72%	76%	80%	

Data Source: internal analysis

VI. Conclusion: To invest or not to invest? That is the question

Based on the analyses presented above, the following investment case emerges for Micro-VC funds:

Reasons to Invest ("Bull Case")	Reasons NOT to Invest ("Bear Case")
<ul style="list-style-type: none"> • Micro-VCs occupy an important place in the broader VC ecosystem, and participating firms can get an early seat at the table for creating meaningful businesses. • A handful of Micro-VC firms have generated much "buzz" substantiated by impressive 	<ul style="list-style-type: none"> • Space has become overcrowded in the U.S., making it more competitive and harder to identify winners. In Europe the space is less crowded, but also unproven. • It is difficult to generate compelling returns at the fund level in a repeatable way, based on

<p>exits, earning them a spot on the Midas List. (Ten such firms are on the 2017 list.)</p> <ul style="list-style-type: none"> • Some Micro-VC funds are very focused on a particular market niche, compared to more generalist early stage firms. This may afford them significant competitive advantages in terms of deal flow and domain expertise. • Seed and early stage investing (on which Micro-VCs focus) has the highest potential to generate strong realized returns. • Firms that do not rely on “unicorn” exits to drive their fund results may generate strong track records with less ownership dilution. 	<p>fund model analyses. Portfolio/reserve management is key.</p> <ul style="list-style-type: none"> • Holding periods are long, compressing IRRs. Returns may underperform traditional VC without diversifying the risk. • Fund sizing creates a double bind: (1) if chose to stay “micro”, won’t “move the needle” for a large LP; (2) if “graduate” to larger fund size, model changes and firms must compete directly against traditional top tier firms. • Small fund sizes may confront either alignment issues (LP base composition) or structural issues (European funds with substantial state backing.)
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In aggregate, these arguments suggest that Micro-VC as a category today may not be an attractive opportunity in the U.S. However, this analysis was performed in a very top-down way; of course, the possibility exists that some individual Micro-VC funds (in all likelihood niche players with specific domain expertise) may end up posting exceptional returns, and a savvy LP should not write the U.S. Micro-VC space off entirely based on this analysis, but just be aware of the headwinds it faces. In Europe, the answer is quite different, and we recommend a “wait and see” approach with respect to this geography (but meet with prospective firms and understand the key players better while waiting). If the broader VC ecosystem continues on its current trajectory, European Micro-VCs could play an increasingly important role and could become compelling investment opportunities down the road.

Appendix (Reference Calls)

Notes from the meeting with Nico Goulet, Adara Ventures

- Do not see the micro VC goes above €150m as it will change the investment dynamics
- You can increase on pro rata or invest in next rounds but there's a limit you can stretch on those dimensions without changing the dynamics
- There're two profitability models: 'pickers' are good at choosing companies to invest into and the 'harvesters' have rigorous selective processes
- Would rather focus on a certain expertise area and have geography expansion rather than venturing into a different area. The VCs are not real expert but they'll need to know more than enough the areas that they're invested in.

Reference Call with Chris Douvos, Venture Investment Associates

- Chris has been investing in micro-VCs since 2005, has seen the space evolve considerably since then. At this point, he is completely "over" the space, thinks it is "wrecked" at this point (in the U.S.)
- Many funds are showing great performance, but that is driven by unrealize marks, stale prices, and market exuberance. There are 450 micro-VC funds out there now, if even 10% of these succeed, that would be a lot.
- Acknowledged that many micro-VCs have generated a lot of buzz and have good brands: Maples/SV Angel, Deering, etc.
- Choosing to stay micro-VC versus grow fund size:
 - o With very few exceptions, the ambition is to raise larger funds down the road
 - o Exceptions are folks like Michael Deering/Harrison Metal, which Chris considers more of a "lifestyle business" (invest for fun, not as a primary goal)
 - o Easy to raise \$20-25 million, but being a VC is tough with respect to portfolio construction. Have to be very disciplined with respect to check size. Example – Founder Collective and Data Collective have very large portfolios now, but they include small stakes in very large companies (Uber...)
 - o Being a "good firm" → demonstrate repeatable success → have a clear process/model
 - However, LUCK also plays important role: First Round Capital will have an amazing outcome with Uber, but Travis never took FRC's advice or used the firm's services or platform.
 - o Micro-VCs are able to get good ownership stakes early on, but as investments mature and raise follow-on capital the micro-VCs can't keep up → either massive dilution or end up in unfavorable share classes. Examples – SoftTech VC, Forerunner (their portfolio companies were worth \$4.2 billion in TEV at exit, but that barely returned the fund because the ownership % was so small). These firms have moved up in fund size to confront this issue and have more capital for follow-on investments. Precursor Ventures is using a different model – using AngelList syndicates to take up their pro-rata share in later rounds; unclear if this model will work.
 - o When fund size goes up, incentives shift and firms end up competing against larger groups (Sequoia, a16z, etc) → "short-stacked at the poker table"
- Europe:
 - o Admittedly hasn't spent much time on the space. It is a very different market, it is not clear if the momentum is there.
 - o Heard good things about Hoxton Ventures
 - o Recall that micro-VC popped up in the U.S. to fill an emerging capital gap. Is the same true in Europe?

- Optimal positioning = “U.S. VC firm 20 years ago”

Notes from the meeting with Robert Dighero, Passion Capital

Seed investing in Europe is less competitive than in the U.S. \$-supply <<< \$-demand.

- Passion was first micro-VC in Europe, launched in 2011.
- Recently raised third fund (still “micro”), moved a bit more into pre-seed deals because of valuation issues. However, risk has also increased.
- Always take a Board seat for every investment → must have high level of conviction
- Strategy: prioritize caliber of team over business model (can pivot later). Currently looking at AI, fintech, security, ed-tech, legal-tech, med-tech
- Portfolio construction: they always negotiate the ability to transfer their pro-rata rights (either to later fund or to LP coinvest)
- LP base complicates structure: UK government-entity was 2/3 of Fund I, have scaled back since.

Notes from the meeting with Natasha Ratanshi, Piton Capital

- Strategy: marketplaces/network effect-driven businesses. Stage & geography agnostic (team based in London but investments spread throughout Europe, many in Germany)
 - Example: Betfair – Piton invested in Flutter which merged with Betfair in 2002. Piton remained on the Board after the merger through the IPO in 2010.
- Firm founded in 2010, raised two funds so far, working on raising Fund III now (all “micro”)
- LP base: all HNWI, no institutions. End up doing a lot of coinvest for follow-on rounds.
- Definitely prioritize team caliber over business model.

Reference call with Gopi Rangan, Sure Ventures

- Key levers for Micro VCs growing trend: Capital efficiency; some funds moved up market to invest in later rounds; fast growth in seed stage and pre-seed stage.
- Top performers are focused and have an expertise in a domain, function, geography or unique access to deal flow
- Micro VCs replaced traditional fund that left the space of seed stage. The traditional VCs are very good at later stage but rely on micro VC to build pipeline. i.e. discovery fun to generate deal flow
- Some fund stays micro (K9 ventures) as they found their niche or simply enjoying staying at early stage working with entrepreneurs, some funds move up. The investors also play a role.
- Sure focuses on Insurance tech and related fintech at pre-seed to seed stage with further interests in innovation, customer engagement and data analytics
- On portfolio construction, focus on having a diversified portfolio covering different dimensions and close engagement with entrepreneurs to ensure portfolio company success.
- Micro VC helps larger fund generate deal flow and gain access. Micro VC + larger fund to cut out the guys in series A?
- Solo GP benefits (speedy execution) and risks