Early-Stage Funding Through Angel Networks: Enabling Conditions and Strategies for Success

by

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Abstract

This paper explores strategic questions for a proposed early-stage VC fund. The fund seeks to invest in a large number of early-stage firms in startup hubs across the world. It plans to do this by partnering with angel networks located in those geographies. The paper's purpose is to explore key 'conditions and strategies' required for the success of such a fund. The paper develops hypotheses to answer four key questions: Who should the fund partner with among various forms of present angel groupings? How should the fund partner with the right angel grouping? Who should the fund invest with within those angel groupings in terms of the right characteristics of respective angel investors? How should the fund invest with such angel investors? The hypotheses developed in the paper pave the way for further primary research to test them, followed by the pilot launch of the fund.

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Introduction

This paper proposes a new early-stage venture capital (VC) fund model that invests exclusively in collaboration with angel networks located in the startup hubs globally. The fund's vision is to realize superior returns by taking a global approach to finding and financing a large number of high-quality angel-backed startups. The proposed VC fund model anticipates collaborating with various forms of angel networks or groupings globally. As presented in Figure 1, the proposed VC fund will focus on its core competence of capital allocation. At the same time, its partner angel networks/groupings will perform the other functions in a syncretic relationship, like deal sourcing, due diligence, handling deal level legal affairs, mentoring, performance monitoring, and exit management.

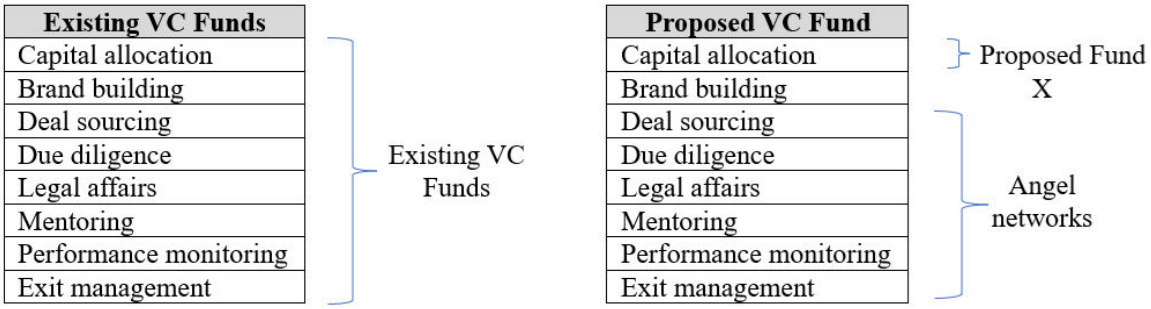

Figure 1: VC Fund Model Structure

The key goal of this fund strategy is to make a large number of small-ticket, early-stage investments without increasing the costs of administering them and without sacrificing the returns. To realize this goal, the fund must tap into startup opportunities globally since early-stage opportunities are fairly limited in a particular region. This is with the exception of a startup hub like Silicon Valley, which already has huge competition,

establishing the case for developing a new globally oriented model of early-stage startup investing. The collaboration model with angel networks will help in that endeavor.

A second goal is to invest in a larger number of early-stage companies compared to existing funds of a similar size. The underlying assumption is that a larger number of companies in the portfolio will generate higher overall fund returns, due to more probability of having unicorns in the portfolio, compared to other existing early-stage funds. A large proportion of VC funds have less than 20-40 firms in their portfolio, while most early-stage VC funds invest in below 50-75 ventures only (McClure, 2015). McClure (2015) says that since early-stage funds see a phenomenally higher number of failing startups, they depend on finding unicorns (a company with a $1B valuation) in their portfolio, each of which can give more than 50x return, to make up for an abysmal performance of other companies. He explains that a smaller portfolio size reduces the possibility of finding unicorns to almost negligible since the probability of seeing a unicorn in the portfolio is only 1-2%. McClure (2015) believes that the ideal portfolio size for an early-stage VC fund may be 100-200 companies, which can give a greater number of unicorns in the portfolio to achieve great portfolio returns.

A third goal of the model is to allow the proposed VC fund to raise a much larger fund corpus than existing early-stage funds can. The assumption is that even when the size of each single investment may remain low, the ability to make a greater number of small-ticket investments will generate better returns and attract more investor capital.

Fourth, the fund seeks to acquire wider sectoral competencies, necessary to find and evaluate early-stage opportunities from diverse industries. The assumption is that a bigger

early-stage fund will provide greater management fees to develop these competencies, which is not possible in existing early-stage funds because of their small size.

While the proposed early-stage VC model can be tested only in practice, there is a need to understand the enabling 'conditions and strategies' so it will have a better chance of success. This paper explores the literature on VC investing, angel investing, and their collaboration to develop four clear hypotheses answering four strategic questions facing the fund at the design stage. Since the proposed fund invests with the angels associated with the angel networks, it is assumed that the implications for the angels also apply to the proposed VC fund.

The first question in front of the fund is 'Who to partner with among different forms of angel organizations across the globe?' Hypothesis 1a argues that compared to the business angel networks or the angel funds, the angel groups can generate superior returns for the angels, hence the proposed VC fund. Hypothesis 1b suggests that the manager-led angel groups perform better than member-led angel groups in creating overall returns for the angels.

The second question for the fund is 'How to partner with the chosen angel grouping?' Hypothesis 2a discovers that prior approval and formal partnerships with the right angel groupings are necessary for the proposed VC fund to generate a large flow of qualified startups instead of doing a deal-by-deal assessment without prior partnerships. Hypothesis 2b explains that the proposed VC fund should partner with such angel groupings that have 'lead angel centricity' in their operations, i.e., they enable the lead angels in the deals to take responsibility for the end-to-end deal cycle.

The third question for the fund is, 'Who to invest with within the chosen angel grouping?' Hypothesis 3a develops certain specific characteristics of the angels, which enable them (and, by extension, the proposed VC fund) to generate better than the median returns of the early-stage VC funds in the market. Hypothesis 3b identifies such peculiar characteristics of the angels, which lead them (and, by extension, the proposed VC fund) to generate worse returns than the median returns of the early-stage VC funds in the market.

The fourth strategic question for the fund is 'How to invest with such angels who generate superior returns?' Hypothesis 4 states that co-investing strategy may be better than sequential investing strategy to develop a 'sustainable capacity to deploy capital' for the proposed VC fund.

This paper aims to undertake the literature review to develop the above hypotheses. The purpose, however, is not to prove why the proposed VC fund strategy is superior.

The existing literature does not pointedly answer the above strategic questions, so the above hypotheses are unique additions to the existing literature on the collaboration between VC and angel investing. Future researchers will be better positioned to undertake primary studies with market participants and test the efficacy of the above hypotheses. Eventually, this may pave the way for creating this new early-stage VC fund model.

Literature Review

General background

Angel investors and VC investors are two important equity investors for early-stage startups. An angel investor refers to a wealthy individual who uses personal wealth accompanied by his bandwidth and skill to invest in private unlisted ventures unrelated to him, generally for monetary returns (Mason, 2006). On the other hand, a VC fund deploys capital provided by other investors, either individual or established entities (Hellmann et al., 2020), into entrepreneurial ventures at different stages, in most cases purely for monetary returns.

Globally, angel investing represents a significant component of the early-stage equity investment market. However, since the angels invest at a personal level, the estimation of exact numbers is challenging due to the personalized nature of investing, creating a sizeable hidden industry segment (OECD, 2012). Most angel insights come from angels connected to formal angel groupings (OECD, 2012 as cited in Hellmann et al., 2020). At the same time, various studies point out that in the US and some European countries with evolved angel investing industry, the angel funding dollars are more significant than even VC funding dollars (Kerr et al., 2010, as cited in OECD, 2012). A 2004 study found that global angel funding exceeded the VC funding at that time by a multiple of eleven (Reynolds et al., 2004, as cited in Morrissette, 2007).

While the angel information is less trustworthy due to the market's largely unorganized nature (Hellmann et al., 2020), more concrete data is available on VC funds. The early-stage VC investments in the United States returned 20.5% annually across 20 years ending 2006, while overall, VCs returned 16.5% during this time (Cumming and Johan,

2013, as cited in McDonald and DeGennaro, 2015). However, VCs in the United States performed worse than even public market securities after 2000 (Harris et al., 2012). However, studies on angel investment returns present an inconclusive picture due to the reasons mentioned earlier. Shane (2009) calculates per annum returns as high as 19.2% for wealthy angels associated with angel groups (as cited in McDonald and DeGennaro, 2015). Wiltbank (2005) reports that investments done by angels earn a mean of 14% annually (as cited in McDonald and DeGennaro, 2015). Bygrave and Hunt (2007) estimate median annualized angel investment return of 0% for those who were not founders and 12.8% for those who were founders. McDonald and DeGennaro (2015) highlight, pointing at Wiltbank's angel return estimation, that this may be exceeding other asset classes but may not be attractive enough, considering their "risk and illiquidity" (DeGennaro, 2012, as cited in McDonald and DeGennaro, 2015). Having said that, the angel investors want an internal rate of return of 15-25%, with a pay off in 5-7 years (Wainwright, 2005, as cited in McDonald and DeGennaro, 2015). McDonald and DeGennaro (2015) observe that these were an extremely elite group among larger set of angels, earning extraordinary returns, due to which the returns generated by them may not be treated as universally applicable to angels in general.

Harrison and Mason (2000) highlight that VCs and angels see significant value in each other when they collaborate, specifically by investing together in the same round. They reveal that the benefits perceived by angels are opportunity to invest in more significant deals, possibility of subsequent funding by VCs, and superior deal evaluation processes of VCs. They highlight some of the benefits for the VCs, such as the domain-specific understanding of angels, business skills, and connecting with the ecosystem.

Angel organisation

Over the last few decades, angels have evolved from directly sourcing deals and investing on their own into organizing themselves into groupings of varying forms, sophistication, and purpose. “Casual angels” are angel investors who are known to the entrepreneur and make investments in one company, maybe in repeat phases. However, they do this due to kinship and do not plan to undertake this in an organized manner (Hellman et al., 2020). Further, there is another category of angel investors, called the “serial angels”, who invest in more than a single firm in an organized manner and are better connected with the VC ecosystem (Hellman et al., 2020). Explaining the benefits, Werth and Boeert (2013) find that the companies whose angel investors are more connected with the ecosystem have a higher probability of securing further VC investment, and their angel investors have a higher chance of successful exit, but this happens due to direct connections of the angels, instead of secondary connections. Van Osnabrugge (2000) argues that professional angels like to place bets in sectors in which they have good expertise (as cited in Croce et al., 2018). Croce et al. (2018) explain that prior exposure to running a startup equips the angels to evaluate the deals better, as well as the ability to handle end-to-end investment cycles from putting in money to exiting the business.

In various countries across the globe, a significant proportion of angel funding happens through “angel groups or syndicates” in addition to direct investments (OECD, 2012). Angel groups represent angel investors who meet periodically, source and hear startup presentations, evaluate, and invest. Angels get together in the form of angel groups to invest their personal wealth (Ibrahim, 2008). Angel groups may be “member-led,” a group in which the angels themselves perform all the administrative functions, or

"manager-led," which is more formal since qualified management performs the operational roles and is more prevalent now (Sahlman and Richardson, 2010, as cited in OECD, 2012). An example of a member-led angel group is Tech Coast Angels, and a manager-led angel group is Common ANGELS (OECD, 2012). While the angel groups may see opportunities together, they generally allow angels to decide on their investments in an individual capacity, with some base-level yearly commitment (OECD, 2012). Companies receiving funding from angel groups survive longer and have a better chance of exiting favorably (Kerr et al., 2014, as cited in Croce et al., 2018). While angels are closely aligned with the founders, the angel groups are more strongly aligned with the VCs, giving them a better understanding of the investment, like not overpaying for the value (Ibrahim, 2008). In general, the ticket sizes of investments done by angel groups are larger than those of traditional angels (Ibrahim, 2008) due to the grouping of capital. Interestingly, unlike VCs, both angels and angel groups have non-monetary goals of investing in addition to earning monetary returns, like mixing with other investors to create the "networking effect" (Ibrahim, 2008). Another non-monetary goal is to "participate in venture development", but it is less important for angel groups than individual angels (Ibrahim, 2008, p. 1450). Deep engagement with startups has yielded superior payback for investors (Wiltbank and Boeker, 2007, as cited in Ibrahim, 2008). "Altruism" is another non-monetary objective of angel groups, like helping the founders or society in general (Ibrahim, 2008). Morrissette (2007) reveals that many angels are in the game of investing since they believe the entrepreneurship journey is enjoyable and challenging. Another critical aspect is that these angel groups should be led by experienced angel investors so that they can elevate the caliber of the angel group by

nurturing non-experienced angels through “communities of practice” (Mason and Harrison, 2015, and Mason et al., 2016, as cited in Owen and Mason, 2016).

Another form of angel organization is the “Business Angel Network (BAN)”, which introduces the angels to company founders and helps strike the deals between the two, rather than deploying its own capital into the companies (EBAN, 2006, as cited in OECD, 2012). BANs act as exclusive platforms for the founders seeking investment from the angels in an area, however, due to the above model, the respective angels largely remain anonymous (OECD, 2012). The BANs use different models to earn revenue. For example, BANs in Europe have explored charging membership fees from angels, investment closure fees, and coaching fees from startups to help them come up with future roadmap proposals etc. (Aufseb and Westphal, 2008). However, the goals of BANs may differ from those of angels since they may be keen on pushing some of non-deserving deals to the angels (Nittka, 2000, as cited in Aufseb and Westphal, 2008) to earn more revenue from investment closures. In this case, their incentives may be different from those of angels.

BANs provide multiple services, however most of these services are not valued much by expert angels. Aufseb and Westphal (2008) explore four main services provided by BANs – “matching,” “selection,” “networking,” and “consulting.” Aufseb and Westphal (2008) explain that BANs provide a “transparent marketplace” to match startup companies with angels, through different forums. The selection role involves ensuring that only “sufficiently qualified” angels and startups meet with each other (Aernoudt, 1999, and Ege, 2000, as cited in Aufseb and Westphal, 2008, p. 151). Further, BANs enable networking between angels and external consultants to help them syndicate with

each other or support the funding of transactions (Ege, 2000, Gulander and Napier, 2003, as cited in Aufseb and Westphal, 2008). Finally, the BANs provide consulting services to startups to prime them to raise funds from angels (The Evaluation Partnership, 2002, as cited in Aufseb and Westphal, 2008). Aufseb and Westphal (2008) highlight that BANs try to offer homogenous services to sell more, like the same templates for evaluating different companies, whereas expert angels look for deeper domain knowledge, which increases the deal costs for the BANs. They quote various expert angel interviews to say that expert angels also do not find much value in services like "training," "networking," or "mediation." Aufseb and Westphal (2008) go on to say that quality of BAN services is restricted due to dependence on inhouse BAN managers, whose capabilities in turn, are limited by the small resources available with BANs. They further highlight that the expert angels simply use BANs to increase their access to startup deals, the most important BAN service preferred by the expert angels, since the expert angels believe that BANs can not influence the standard of startups. For all the above reasons, Aufseb and Westphal (2008) do not find proof that BANs succeed in helping "virgin angels" make better investment decisions.

Hellman et al. (2020) mention another form of angel organization called "Angel funds," which take the commitment of funds of multiple angels in a fund structure and then invest in startups through that vehicle, like a VC fund. They explain that angel funds have more corpus than solo angels and can rival VCs in a few deals that need bigger funds. OECD (2012) calls them "super angel funds" and mentions that several such funds are emerging and growing strongly.

Investing practice

Both angels and VCs adopt different approaches to contracting when they invest in startups. Van Osnabrugge (2000, p. 107) shows that VCs evaluate the opportunities more intensively than angels before investment to show their superior investing expertise to their investors, compared to angels who use their intuition to invest, since they do not need to answer to anyone. They show that VCs depend on strong contracts before investment closure to reduce agency problems, while angels live with an "incomplete contracts approach", and deal with agency problems post-investment through monitoring to reduce their agency problems.

Both angels and VCs use different criteria to choose their investments, depending on the source of their agency problem. Hsu et al. (2014) review prior research to state that VCs and angels predominantly use four investing criteria to invest in new ventures, depending on their agency problem – the company's "economic potential", "strategic readiness" of the founder for investment (connections with people who matter), "passion" of the entrepreneur, and "specific human capital" (experience and skill) of the founder. Passion can be of two types, "cognitive passion" and "affective passion" (Chen et al., 2009, as cited in Hsu et al., 2014). In the context of entrepreneurs, an example of cognitive passion could be an entrepreneur's dedication to the business, while an example of affective passion could be an entrepreneur's love for the business (Chen et al., 2009, as cited in Hsu et al., 2014). Hsu et al. (2014) show that VCs use "outcome-oriented" factors to select the deals and influence the results, like economic potential or monetary targets, since the agency problem arises for them predominantly due to "goal conflict" with the founder. In addition, VCs obtain more strict controlling powers compared to angels, like the power to change the management, since cognitive passion matters more to them than

angels (Chen et al., 2009, as cited in Hsu et al., 2014). Further, Hsu et al. (2014) show that angels use "human factors" to make investment decisions, i.e. the founder's strategic readiness and affective passion, since for them, the agency problem arises predominantly due to "information asymmetries" with the founder. An example of affective passion could be, e.g., how the founder treats his staff. Finally, Hsu et al. (2014) show that both VCs and angels allocate roughly the same importance to the founder's specific human capital. They opine that this may be because, if the founder is highly experienced, both angels and VCs consider his plans more practical and believe more in the details he shares.

VCs and angels deploy different processes to oversee their investee companies after the investment. Van Osnabrugge (2000) highlights that, unlike VCs, angels have less control over their investee companies through contracts, therefore they are more deeply engaged with the companies after investment. Morrissette (2007) says that as many as 70-80% of the angels are actively involved with their investee companies in their operations. However, the angels undertake this kind of monitoring in a "non-aggressive" manner and with "informality" (Ibrahim 2008, as cited in Bonini et al., 2017). Angels use things like making trips to the company's office, frequent conversations, and using trust-centric methods (Bonini et al., 2017). Wong et al. (2009) find that "geographical proximity" enables the angels to offer support to the founders after investment and in fact geographical proximity is the greatest factor in deciding how much support the angel will offer to the startup. They go further to say that in case of angel investors, geographical proximity even plays a significant role in deciding the investment ticket size, and degree

of supervision. Morrissette (2007) reports that 70-80% of the startups with whom angels engage are within 50 miles of their residence.

Collaboration

Angels and VCs collaborate in various ways. Harrison and Mason (2000) discover four common modes of collaboration between them in the UK market: "sequential investing," "co-investing," "provision of funds," and "deal referring."

Sequential investing is like a "relay race", in which the angels invest in the early stages, followed by VCs once the business advances (Benjamin and Margulis, 1996, as cited in Harrison and Mason, 2000). In the context of corporate finance, Myers and Majluf (1984) show that "it is generally better to issue safe securities than risky ones" (p. 219). This pecking order theory of corporate finance is extended to "entrepreneurial preferences" for the choice of equity funding raised, in the sense that a few founders initially favor angel funding, due to its informal and humane nature, instead of VC funding, which is more regimented and involves less active post-investment support (Baldock and Mason, 2015, as cited in Owen and Mason, 2016). The above findings, hence, provide the rationale behind the sequential investing. In addition, VCs like the businesses who have secured prior angel funding since the presence of angels provide quality "signaling" and "certification" for the deals due to angels' prior startup exposure (Croce et al., 2018). VCs treat well-informed angels as useful agents to find and evaluate investment opportunities, however, VCs believe that non-expert angels invest at inflated early-stage valuations, making it difficult for VCs to get fair value when they have to invest in the same firms (Gill *et al.*., 2000, as cited in Harrison and Mason, 2000).

Co-investing is when VCs and angels invest together in a company in a particular investment deal (Harrison and Mason, 2000). Harrison and Mason (2000) find that during co-investing, VCs benefit from the business and domain relevant expertise of the angels, as well as an active role played by the angels after investment like in a non-executive director role, which otherwise VCs would need to play. In fact, VCs look for investments that take less time, so they keep their valuable time to find new deals (Gifford, 1997, as cited in Harrison and Mason, 2000). Harrison and Mason (2000) describe that in the US, it is a normal practice of VCs to depute angels for active monitoring role after funding. They further explain that co-investing with angels reduces costs that VCs bear to make low ticket investments, otherwise those deals would not be feasible. However, they mention this normally happens when the VC and angel have a solid prior relationship, else the VC will bear higher costs to oversee the new arrangement itself. Harrison and Mason (2000) highlight that VCs show a robust resolve to invest with previously successful founders who had exits. Harrison and Mason (2000) also point out that as far as angels are concerned, the most common way of collaborating with VCs is co-investing.

Provision of funds is a form of collaboration in which VCs solicit investments from wealthy angels directly in their fund vehicles (Harrison and Mason, 2000), to further invest in ventures. Harrison and Mason (2000) explain that this arrangement is lucrative for angels who lack the time or expertise to source their own deal flow or for new angels initiating their investing journey since they believe they lack the skills to assess the companies or stitch together the agreements. Receiving angel funds is particularly advantageous to VCs since, unlike large and organized funders, the angels do not press

for early returns, relieving VCs from pursuing quick gains (Financial Times, 1999 and Gannon, 1999, as cited in Harrison and Mason, 2000). However, Harrison and Mason (2000) provide an interesting insight that when angels provide capital directly to VCs, they do not engage actively during and after the investment closure.

Finally, deal referrals are another mode of collaboration in which angels and VCs share such opportunities with each other that do not fit their own criteria (Harrison and Mason, 2000). Typically, VCs pass on such opportunities, which may be below their size thresholds, require specialized expertise or intervention from angels, or do not match with the VC's thesis, while angels pass on such opportunities to VCs, which are beyond their monetary capacity (Harrison and Mason, 2000). Harrison and Mason (2000) highlight that as far as VCs are concerned, a very prevalent collaboration method is deal referrals.

The interests of angels and VCs are aligned in a few situations but rally against each other in other situations. Hellmann and Thiele (2014) offer a theory of how angels and VCs relate with each other - whether they are "friends or foes." They mention that VCs and angels behave as friends since angels look towards VCs for subsequent funding to grow their ventures, and VCs tap angels for the pipeline of companies to invest in. At the same time, Hellmann and Thiele (2014) say that during subsequent funding stage, VCs do not require the angel's money anymore since not only is the angel's earlier funding already sunk, but he provides little utility to the venture as well, causing the VC to treat the angel as a foe. This conduct of the VCs leads to the "burned angels" issue in which VCs force the terms due to sizeable ownership in the company and large corpus to invest, forcing transactions in which the angels are diluted to the extent that they do not benefit much at the time of exiting the company (Leavitt, 2005). Hellmann and Thiele (2014)

provide examples of VCs colluding with the founders to grow the venture, leaving the angel behind, and allocating option grants to satisfy the founders even as angels are diluted in down valuation rounds.

The actions of the VCs in subsequent funding stages can kill their relationship with angels, doing a disservice to the cause of VCs themselves. “VC crushing” during subsequent funding causes another serious problem which inhibits the angels to fund startups in initial stages because of the fears of being ill-treated by VCs in later stages (Owen and Mason, 2016). This potential ill-treatment hinders the referral of opportunities from the angels to VCs. As a solution, angels or angel groups could stitch together co-investing agreements with VCs such that no one is superior in the arrangement to avoid the detrimental effects of subsequent VC actions (Owen and Mason, 2016).

The prior belief that companies first receive angel funding followed by VC funding has now given way to the belief that companies essentially choose one of the two investor types and stick with them. Earlier research suggested that VCs and angels are “complements,” i.e., companies first raise angel funding, followed by VC funding (Hellmann et al., 2020). However, new research suggests that very few firms shift from angels to VCs or the other way around, i.e., they are “dynamic substitutes” of each other instead of being “complements” (Hellmann et al., 2020). Hellmann et al. (2020) show that the reason behind this is the “selection effect,” which means that depending on the peculiar traits of their business, companies prefer one of the two kinds of investors and then largely remain on “parallel streams.” They further determine that the reason is not the “treatment effect”, which implies that if the venture gets investment, that investor steers the venture to raise future capital from the same investor type. This substitute

effect started to take shape from 2000 onwards after the dot.com crash, when the angels began to organize themselves into various forms of groups, making the subsequent bigger angel funding possible (Mason et al., 2016). This increased the possibility of angels carrying the ventures to exit on their own, thereby not requiring VCs for the same (Mason et al., 2016). This effect is higher in the case of "casual angels" and "angel funds", instead of "serial angels", i.e., the ventures that receive investment from serial angels are more likely to get investment from VCs since the serial angels are more strongly connected with the VCs (Hellmann et al., 2020).

Performance drivers

Companies see better performance after angel investments, with the results improving once VCs join. Croce et al. (2018) show that if the angels have prior exposure to funding young startups, the companies in which they make investments show better results in the short term, like follow-on funding as well as subsequent funding rounds by VCs, since they provide quality "signal" to the incoming VCs. They further show that if the angels have experience of investing in later stages, the companies they invest in have a better chance of successfully exiting, however, it inhibits additional VCs from coming in since there is lower requirement for the same. Croce et al. (2018) show that the ventures raising co-investing rounds between angels and VCs see larger investments, have a higher chance of subsequent VC funding, as well as have a better chance of successfully exiting. Croce et al. (2018) also provide evidence that VCs coming in after the angel investment strongly improve the odds of the company's eventual success. If ventures and angels are "co-located" together, the ventures have a better chance to secure VC funding (Croce et al., 2018).

On their own, VCs produce superior results than angels. Hellmann et al. (2020) show that by investing on their own, VCs show better business results than angels. They also prove that VCs show superior outcomes in terms of venture exits compared to angels. They show that in their sample, ventures that received funding from VCs had a 27% bigger chance of exit and 18% smaller chance of going out of business than those funded by angels, but showing the "correlations, not causality".

Angels, in general, bear lower agency costs than VCs since they invest their own money. The angels do not have any hurry to generate returns within a slotted time either, unlike VCs who need to return money to their investors within a finite time, due to which the angels can place long-term bets (Croce et al., 2018). However, VCs are under compulsion from their investors to show early gains and wish to establish a name early in the market to get more money (Croce et al., 2018).

Angels are willing to sacrifice financial gains for other benefits of investing in startups. Song and Jain (2020) define "private benefits" as the benefits that angels derive by investing in startups, taking delight in the journey of entrepreneurship development, and becoming totally attached to the business without caring for financial outcomes. Many angels are acceptable with having less financial payback against such benefits (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). There are three kinds of angels, depending on their motivations, "economic (maximize wealth), hedonistic, and altruistic," with hedonistic and altruistic angels constituting as high as 53% (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). Song and Jain (2020) show that if the angels seek more of such private benefits, they enjoy a smaller portion of the eventual exit in the company.

Both VCs and angels bear agency costs during investing, but their genesis is different. Hsu et al. (2014) explain that one of the important reasons of agency costs for VCs is "goal conflicts" between the VC fund managers and founders. They explain that this emerges since VCs raise money from external individuals and organizations and are mandated to optimize the gains on the full bucket of investee companies, instead of one company which they can let fail. However, for the founder, that company is the only bet. Morrissette (2007) finds that as many as 80% of the angels themselves are previously successful entrepreneurs who are in the business of startup investing since they enjoy the challenging nature of the entrepreneurship journey and wish to support the entrepreneurs. Successful entrepreneurs are defined as those who manage to sell the companies they found (Benjamin and Margulis, 1986, as cited in Morrissette, 2007). Since the angels cannot always work in the company in an executive capacity, they treat the founder as a "stand-in or co-entrepreneur" (Landstrom, 1998). In that sense, the goals of the angels are more aligned with the founders than those of VCs.

Hsu et al. (2014) reveal that the dominant source of agency costs in the case of angels is information asymmetries with the founders instead of goal conflicts. One of the reasons for this is that the contracts which the angels sign with the startups at the time of investment are not complete, due to which angels find it challenging to authenticate the details that the founders share (Fiet, 1995, Landstrom, 1998, Morrissette, 2007, Prowse, 1998, and Van Osnabrugge, 2000, as cited in Hsu et al., 2014).

The personal traits of angels and entrepreneurs significantly impact how angels decide their investments. Using data on negotiations undertaken by angels and founders on the reality television show Shark Tank, Boulton et al. (2019) find that traits like gender, race,

and age have an impact on how the angels and founders bargain with each other to close the deals, specifically on the valuation, the investment offer, and the deal completion. They conclude that female, black, and young entrepreneurs ask for valuations at a lower level, while Asian entrepreneurs, as well as founders from top universities, often ask for valuations at a higher level. In terms of whether the offer is made or not, they find that the race is indeed linked to the possibility that the offer is made, while, more the founder's age, the more the chance that the investment offer will not be made. They then discover that though the impact of personal traits on final valuation is tempered when many angels compete to make the investment, the black founders still get deals valued at a lower level compared to others. Finally, Boulton et al. (2019) discover a definite influence on the negotiation if the founder and angel have the same traits. They find there is a higher probability that the investment offer will be made, and the deal will close if both the angel and the founder are female or black. Boulton et al. (2019) also argue that the impact of personal traits might be more profound in "closed-door" negotiations compared to Shark Tank, where the negotiations are open for everyone to observe. The above findings are quite useful to guide the strategies of the proposed VC fund.

Issues to guide fund strategies

Early-stage VC funds face unique challenges due to their early-stage focus itself. Gompers & Lerner (1999) find that the VC funds investing in early-stage ventures are considerably smaller than those investing in later-stage ventures since not only can the early-stage companies absorb funding in only small ticket sizes, but the time taken for deal evaluation and post-deal monitoring is smaller as well. They further point out that VC investing is extremely local in its character, due to which there is a need to focus on

those specific hubs instead of dispersing the activity across a country. This brings out a unique geographical challenge for early-stage funds. Due to their small size, the management fees available for the early-stage VC fund managers only allow them to focus locally, which means a limitation on the number of high-quality investments that can be made unless the fund is located in a major startup hub. Further, in the case of investing in early-stage technology ventures, the VC funds need an in-depth understanding of a very broad set of technology domains and business models due to the diversity of underlying startups (Betsch et al., 2000, as cited in Aufseb and Westphal, 2008). Aufseb and Westphal (2008) point out that the need for such high niche skills means that heavy resources are required to close each deal. However, the small management fee available with an early-stage fund (due to its small size) does not give elbow room for such resources to be spent, leading to insufficient due diligence, which in turn can lead to a high rate of startup failures and can create downward pressure on the fund returns. Gompers & Lerner (1999) explain that the investors tend to show a higher inclination to provide funds to the VC fund if it can generate a higher return on its deals. They also mention that, among other factors, a bigger VC fund signals better standing in the market, due to which it can attract more funds. Since both the above may be challenging in the case of early-stage funds due to the reasons mentioned earlier, it poses problems for an early-stage fund to raise a large corpus.

There are various peculiar challenges when VCs and angels co-invest together. Goldfarb et al. (2013) show that when VCs and angels invest together in a co-investment round, there is a downward impact on business results in case there is a “split control” of the board between the VC and the entrepreneur, compared to investments in which VCs

invest alone. They explain that one reason could be that the angel engenders conflict between the VC and the founder, which causes the VC and the founder to have personality disagreements with each other. They explain that the other reason could be that the founder himself lets in the angel due to stronger "preference alignment" with him or "weaker alignment" with the VC. Either case highlights the need to ensure association with the right angel. Harrison and Mason (2000) highlight more issues faced by VCs as a result of co-investment, like difficulty in arriving at a decision due to multiple parties, heterogeneity of investment goals of VCs and angels, elusive common ground, as well as diversity in personas of VC fund managers and angels, due to the relevance of interpersonal connections during the transaction. Harrison and Mason (2000) present the problems faced by angels while co-investing with VCs, which are predominantly the result of how VCs are set up (deploying the money of someone else), which forces them to be afraid of taking bold bets, increases pressure to exit big and fast, sets rigid criteria to invest, and encourages irrational actions sometimes due to office politics. They mention the second problem related to the detailed methods of the VCs, which lead to cumbersome processes, complex contract clauses, and stretched timelines to decide. They provide the third problem as the superior power and financial capacity of the VCs, which can dilute the angels, or take away their autonomy to decide investing in subsequent rounds.

BANs are one of the potent channels to syndicate with angels; however, investing through BANs increases the risk of the angels making a wrong investment. Aufseb and Westphal (2008) show that BANs increase adverse selection in concluding the investment from angels. They explain that while BANs reduce information asymmetries

initially by introducing the companies to the angels, they increase the same when the angels use the due diligence done by the BAN to decide their startup investment. Aufseb and Westphal (2008) explain that the reason is the generic business expertise of the BAN managers, due to which they can not go deep into niche areas, while early-stage investing requires expert knowledge in niche domains. They explain that another reason is the coaching services provided by BANs to startups in developing plans, investment decks etc., which cloud the judgment of angels. They further explain that since even not-so-good ventures end up projecting themselves as good, it leads to an unjustifiably higher price per share, lopsided contracts in the startup's favour, as well as increased risk of adverse selection. They highlight that without BAN's help to founders, the expert angel can distinguish between promising and mediocre opportunities through their direct "signals." Aufseb and Westphal (2008) further explain that since startup ventures at a young age are more vulnerable, any adverse selection will most likely produce a full write-off. They show that in their sample, the ventures which were successful in closing investments, while being coached by BANs, had larger bankruptcies, since mediocre businesses were shown as extraordinary by BAN coaching.

The benefits of monitoring services BANs offer are nullified by the "double principal-agent relationships" that they introduce for the angels (Aufseb and Westphal, 2008). When BANs offer homogenous services for angels after investment, like "monthly financial controls," at one level, the angels (as principals) have to connect with the BANs (as agents), and at another level, the BANs (as principals) have to connect with the companies (as agents), increasing the information asymmetries for the angels, which are prevented if the angels deal with the companies directly (Aufseb and Westphal, 2008).

BANs also prevent angels from doing their biggest value-add role. Aufseb and Westphal (2008) reveal that in a BAN setting, due to competition from other angels, the expert angels cannot exercise informal control and advisory of the startups after investing, which is their most significant value-add for startups. They share that, unlike VCs, who have the bargaining power to force watertight contracts, the angels live with "incomplete contracts" with the startups, which they compensate with informal control and monitoring, but the BANs prevent serial angels from doing just that. Over and above, Aufseb and Westphal (2008) narrate that BANs do not provide strong startup oversight after deal closure, due to which the angels can not compensate for incomplete contracts anyway.

Further, there are some key learnings from a UK fund structure set up in 2011 to invest with angel groups. Owen and Mason (2016) research the preliminary outcomes of the GBP 100M "Angel Co-investment Fund" (ACF) launched by the UK Government in 2011 to fund UK-based startups till the Series A stage as well as to develop local angel groups by investing 49% equity capital with 51% coming from angel groups. "Co-investment Funds" (CIFs), in general, allocate investment capital in ventures together with other investors like VCs and angel groups, helping the CIFs reduce the costs of investing by utilizing the ecosystem and expertise of other investors (Owen and Mason, 2016). There are two broad kinds of CIFs - those partnering with their co-investing allies in advance and participating in each deal, subject to them abiding by pre-set criteria, and those deciding on each deal as it comes (Owen and Mason, 2016). Owen and Mason (2016) explain that the UK ACF evaluated every opportunity presented to it instead of prior vetting of the angel groups, with deals led and presented to the ACF by the "lead

angel" of the angel group. They further elaborate that the angel groups had to source the deals, evaluate the deals by collecting information, hammer out the legal agreements with the founders, and carry out post-closure oversight. Owen and Mason (2016) explain that the ACF largely followed the investment covenants of the angel groups, with only a few instances of changes. They mention that the ACF decided to invest without getting in touch with the startup but by evaluating an investment plan shared by the lead angel. They also explain that the ACF conducted a meeting with the lead angel (thereby directly evaluating the lead angel but only indirectly evaluating the business) on these key aspects – was there a possibility of appropriate return for the ACF?; did the lead angel evaluate in detail and could he communicate the deal's merits well?; and were the deal covenants proper?. Owen and Mason (2016) further mention that although the ACF kept the option to have its director or board meeting observer, they never opted for it, aiming to be a "passive investor" and wanting the angel group to lead. Owen and Mason (2016) conclude that though the ACF successfully deployed capital in fast growing startups, there was little proof that it could build the calibre of the angel groups. They show that the complicated process to apply, intensive deal evaluation, and deal-wise decisions made sense for large and organized players instead of angels and led to a long lead time, disenchanting the angel groups.

Discussion

This section discusses the reviewed literature to develop four hypotheses around key 'conditions and strategies' for the proposed VC fund to succeed better. Since the stated model of the fund is to invest in startups across the globe with angel networks, the first decision for the fund is to decide 'Who to partner with' since there are different forms of angel groupings operating globally. The next question to answer is 'How to partner' with the chosen type of angel grouping to answer key questions involved in structuring the partnership. The research conveys wide variation in angel investing returns generated by angels. Hence, the next logical question is "Who to invest with' among the angels associated with angel networks since not everyone might provide equally worthy investing ability. Finally, the last strategic question to explore is 'How to invest' with the right kind of angels associated with such partners. This section provides hypotheses to be tested in the future to provide strategic answers to the above four strategic questions in front of the proposed VC fund.

Who to partner with?

The proposed VC fund envisages investing in high-quality startups along with angels in startup hubs across the globe. Since angels invest their own capital, they bear lower agency costs than a usual VC fund, which deploys the capital of other investors. However, the additional costs associated with searching, partnering, and managing the relationship with individual angels may outweigh the advantages of lower agency costs. This makes the case for partnering with the right angel groups in these startup hubs to find the right angels to invest with instead of partnering with angels in an individual capacity. The proposed VC fund has different strategic choices for such partnerships.

This paper explores three plausible choices – "Angel groups or syndicates,", "Business Angel Networks (BANs),", and "Angel Funds" (OECD, 2012).

From the perspective of its investors, since the proposed VC fund invests through its associated partners, it is bound to suffer from increased agency costs. However, angel groups seem to offer the lowest agency costs compared to BANs and Angel funds. Angels get together in the form of angel groups to invest their personal wealth (Ibrahim, 2008), with the investment decisions being taken by angels in an individual capacity, even if the angel group evaluates the opportunities together (OECD, 2012). On the other hand, "Business Angel Network (BAN)" simply introduces the angels to the founders, and enables the investment transaction, instead of investing its own capital (EBAN, 2006, as cited in OECD, 2012). Aufseb and Westphal (2008) show that BANs reduce the agency costs for the angels initially at the time of introduction but increase them from the overall deal perspective. Aufseb and Westphal (2008) show that BANs lead to adverse selection of startups by the angels since their coaching services for startups make even mediocre ventures looking good to the angels. They also show that BANs increase the angels' "information asymmetries" during the post-investment monitoring stage, thereby increasing their agency costs, through "double principal-agent relationships," i.e., the angels (as principals) connect with BANs (as agents), and then BANs (as principals) again connect with the companies (as agents). The third option is the angel funds. "Angel funds" take commitment of funds from angels in a blind pool and then reinvest in startups (Hellman et al., 2020). Since the proposed fund itself is a VC fund, its agency costs increase more when it partners with angel funds than with angel groups, where angels directly invest their own capital.

Angel groups are better aligned with the angels in terms of incentives compared to BANs. BANs earn revenue through "membership fees" from angels, investment closure fees, and coaching fees from startups (Aufseb and Westphal, 2008). These revenue sources may create a divergence of goals between the angels and the BANs. Due to membership fees, BANs may be incentivized to showcase more deal flow to keep the angels engaged, even when those deals may not always be great. BANs may also be keen on closing some mediocre deals (Nittka, 2000, as cited in Aufseb and Westphal, 2008) to earn more from deal closure fees. Further, Aufseb and Westphal (2008) explain that if more and more BAN services are tuned towards startups, like coaching, angels will be at a disadvantage, since such services create incorrect signalling, leading to wrong angel decisions.

Since the proposed VC fund invests with these angels, the above agency costs and misalignment of incentives will also impact the fund's returns. The above review helps to arrive at Hypothesis 1a (H1a):

H1a: Angel groups generate better returns for the angels compared to BANs or angel funds due to favorable position on agency costs and better alignment of incentives with the angels and hence the proposed VC fund.

There is ample research on the dynamics of angel groups, BANs and angel funds. However, this paper could not find any research that compares the returns generated by the three, which makes the above hypothesis a unique line of research. This will require primary research by sampling of angel groups, BANs, and angel funds of similar size and vintage year, operating in an early-stage investing market of similar maturity. Secondary data may not be available due to the private nature of such organizations.

Manager-led angel groups may offer better overall partnership benefits for the proposed VC fund, even though member-led groups offer lower agency costs. Angel groups may be "member-led," i.e., administratively run by members themselves, or "manager-led," administratively run by qualified managers (Sahlman and Richardson, 2010, as cited in OECD, 2012). Manager-led angel groups are likely to have higher agency costs compared to member-led angel groups since the responsibilities are allocated to salaried managers who may suffer from different motives than the members. However, the professional set-up of manager-led angel groups is suitable for large-scale operations and hence seems to offer definite advantages for the angels and the proposed VC fund in terms of ease of partnership, stability of association, better-run operations, stronger deal evaluation processes, and stronger access to better-quality angels and startups in the individual regions. These advantages may override the increase in agency costs.

The above review helps to arrive at Hypothesis 1b (H1b):

H1b: Manager-led angel groups generate better returns for the angels than member-led groups despite having higher agency costs than member-led groups.

This paper did not find any research that goes into the deeper details of the manager-led and member-led angel groups and compares their return track records. The member-led and manager-led angel groups keep shifting into each other's turf as the business requirements change. Hence, one proxy to distinguish the two might be the scale of operations.

How to partner?

The proposed VC fund's key strategic goal is to make a large number of high-quality small-ticket early-stage investments without increasing the costs of administering them. This section explores different strategic choices to solve this problem.

Undertaking the assessment of each opportunity, without forging alliances with partners who source those opportunities leads to long decision lead time and complexity. Owen and Mason (2016) research the outcomes of the UK Government's GBP 100M "Angel Co-investment Fund" (ACF), which was set up to co-invest in UK-based startups with local angel groups. They mention that UK ACF evaluated every opportunity presented to it instead of prior vetting of the angel groups, which disenchanted the angel groups due to an intensive investment decision process leading to time delays. They find that deal-wise decision-making made sense for large and organized players instead of angels. Considering the proposed VC fund intends to invest in a large number of startups across the globe, the approach of evaluating each deal without pre-approval of angel groupings may prove to be a non-starter due to the lack of trust and uncertainty involved with each new group as it brings deals on the table. The issue of lack of trust and uncertainty points towards a need to pre-approve desired partners across the globe to increase the deal flow by developing long-term trust and predictability for the proposed VC fund, angel grouping and the angels. Similarly, along with prior approval of angel groupings, the expert angels in these groupings can be pre-approved as well for similar benefits. Prior approval of angel groupings and the expert angels will also set the quality expectations in advance, increasing the proportion of high-quality startups in the flow.

Prior approval of the angel grouping is likely to help the proposed VC fund to save the costs of branding and sales funnel conversion (from a startup lead to final investment).

By partnering with the appropriate angel groupings, the fund will have a constant flow of qualified startup leads coming through its partners instead of spending sales and marketing dollars to create a brand to attract startups and to manage a sales funnel to convert those leads into final investments. For example, one of the roles of the BANs is to ensure that "sufficiently qualified" angels and startups meet with each other (Aernoudt, 1999, and Ege, 2000, as cited in Aufseb and Westphal, 2008). Aufseb and Westphal (2008) also highlight that access to startup deals is the most important BAN service preferred by expert angels. Harrison and Mason (2000) explain that investing with low ticket sizes is made possible if the VC and angel group have a solid prior relation, else the VC will bear more costs to oversee the new arrangement itself. Hence, in the absence of prior approval, the proposed VC fund will need to spend additional resources on managing the partners, over and above the cost of finding and pre-approving such partners, which the fund will nevertheless have to bear while following the strategy of investing with angel networks across the globe.

This provides grounds for Hypothesis 2a:

H 2a: Prior approval of angel groupings and expert angels increases the deal flow of high-quality startups due to higher trust, pre-set expectations, and predictability without increasing the associated costs.

Multiple research papers explore the investment policies of various existing co-investment funds. Categorizing and distinguishing them based on their investment policies may be the first starting point for testing the above hypothesis. After that, the deal flow data from these funds, as well as qualitative surveys of their stakeholders, should be sought.

Despite their disadvantages, BANs offer certain specific benefits, such as the ability to connect with a large number of startups and anonymous angels in distant geographical regions across the globe. BANs are becoming exclusive platforms for the founders to find angels in a region who remain unknown on their own (OECD, 2012). Aufseb and Westphal (2008) explain that BANs provide a "transparent marketplace" to match the startup companies with the angels through different forums. Without losing cognizance of the problems that BANs create, and while working on their solutions, partnership with BANs can provide the ability for the proposed VC fund to access these startups and angels in distant places, which may not be possible otherwise.

'Lead angel centricity' is critical to remove or limit the agency costs induced by BANs or even angel groups. The increased agency costs in case of BANs, provide a template to look for while partnering with any grouping, whether it is an angel group (member-led or manager-led), a BAN or even an individual expert angel himself. 'Lead angel centricity' refers to an expert angel leading the entire investment process directly on behalf of the angel grouping, from interacting directly with the startup founder, analyzing the deal, leading the contracting process, and then representing the round investors on the board of the investee company. If the lead angel is allowed to perform his own due diligence directly with the startup on behalf of the BAN, the problem of BANs increasing the possibility of adverse selection by providing coaching to startups, as discussed earlier, may be addressed. Further, in addition to the startup founder pitching to the angel grouping, if the lead angel showcases the deal to the other angels (including the proposed VC fund) and proves his own conviction on the deal, there is a high likelihood of minimizing the agency costs. Owen and Mason (2016) explain that UK ACF made

investment decisions without getting in touch with the startups, but by evaluating an investment plan shared by the lead angel. They further explain that the ACF conducted a meeting with the lead angel to evaluate him directly, while evaluating the business only indirectly. Furthermore, during the post-investment phase, BANs increase information asymmetries for the angels through "double principal-agent relationships", offering homogenous services for angels, where information asymmetries can be prevented if the angels deal with the companies directly (Aufseb and Westphal, 2008). In this case, if the lead angel is given a board member or observer role on behalf of the round investors (including the proposed VC fund), he will undertake post-investment oversight without the negative intervention of the BAN. Van Osnabrugge (2000) shows that angels deal with agency problems post-investment through monitoring. Morrissette (2007) says that as many as 70-80% of the angels are actively involved with their investee companies in their operations hence this role comes naturally to them. In fact, deep engagement with the startups has been proven to yield superior payback for investors (Wiltbank and Boeker, as cited in Ibrahim, 2008).

'Lead angel centricity' in the deal is also critical for the proposed VC fund due to its stated strategy of investing in a large number of startups across the world with its partners. This poses potential problems since the proposed VC fund may not have the opportunity to meet with the startup founders beyond the standard 1-2 meetings due to the presence of other investing members of the angel group or BAN. In addition, the problem of making a large number of bets will make the process of conducting direct due diligence with the startup founder in a distant location almost impossible. This increases the need for 'lead angel centricity' in all the deals conducted by the proposed VC fund.

Hence, entrusting the lead angels to undertake due diligence and undertaking post-investment monitoring will save costs for the proposed VC fund, per its stated model.

Based on above research, 'lead angel centricity' is defined here as BANs: not giving startups the upper hand over angels in terms of services like coaching; allowing the lead angel to do direct due diligence with the startup; making the lead angel pitch the deal directly to other angels instead of the BAN manager doing so; and making the lead angel take up a board member or observer role, undertaking post-investment oversight.

This follows on to Hypothesis 2b (H 2b):

H 2b: 'Lead angel centricity' in the operations of BANs removes the negative impact of BANs on agency costs.

Several studies highlight the importance of expert angels in the investment process. At the same time, despite their effectiveness in playing a match-making role, the negative role played by BANs in the angel investment process is also well documented. However, this paper did not find any research that provides evidence that BANs can shed their negative impacts if lead angels are central to their investment processes. Such research will pave the way for BANs to become an effective and scalable form of angel organization. This hypothesis could be studied through a qualitative survey of BANs, their angels, the investee startups, and associated VCs.

Who to invest with?

The proposed VC fund models itself on the strategy of investing exclusively through angel networks across the world. It makes sense for the proposed VC fund to identify the specific characteristics of the angels, which predispose them to generate superior or

worse returns than the existing early-stage VC funds. By investing with or avoiding the angels with such characteristics respectively, the proposed VC fund can achieve superior or worse returns respectively, like the angels themselves.

Difficulty in estimating angel investing returns, a wide range of reported returns and the fact that some angels do generate exceptional returns, points to the need to identify the special characteristics of such angels who can generate superior returns. Angel data is less trustworthy due to the market's largely unorganized (Hellmann et al., 2020) and personalized nature, creating a large hidden market (OECD, 2012). Having said that, various research shows the angel investing returns in a wide range of 0-19.2% (McDonald and DeGennaro, 2015). Indeed, an elite group of angels makes extraordinary returns, but the returns generated by them may not be treated as universally applicable to angels in general (McDonald and DeGennaro, 2015). This highlights that the proposed VC fund will need to discover specific characteristics of those angels who consistently generate better returns than the others, evolving beyond just the partnerships with the suitable angel groupings.

Research points towards certain specific characteristics of an angel, which predispose him towards generating better financial returns from angel investing. "Serial angels" invest in more than a single firm, in an organized manner, leading to more experience and better connections with the VCs (Hellman et al., 2020). Werth and Boeert (2013) find that the companies in which the angels are connected more, raise more subsequent VC investments, and have better chance of exits due to the direct connections of the angels. Hellmann et al. (2020) also find similar results for the ventures receiving investment from "serial angels" that are more connected with VCs. Further, the professional angels place

bets in sectors they have experienced before as an entrepreneur or investor (Van Osnabrugge, 2000, as cited in Croce et al., 2018). In addition to this, prior startup experience equips these angels not only to evaluate the deals better but also to handle end-to-end investment cycle (Croce et al., 2018). Finally, VCs are highly inclined to invest with previously successful founders who had exits (Harrison and Mason, 2000). Morrissette (2007) finds that as many as 80% of the angels themselves are previously successful entrepreneurs. Successful entrepreneurs are those who manage to sell the companies they start (Benjamin and Margulis, 1986, as cited in Morrissette, 2007). Lastly the angel groups need to be led by experienced angel investors in order to improve their investing standards (Mason and Harrison, 2015, and Mason et al., 2016, as cited in Owen and Mason, 2016).

Looking at the above research, the characteristics that orient the angels towards superior returns are: serial angels, previous or existing entrepreneurs, who have seen successful startup exits before, and who invest in an industry in which they have prior experience.

This leads into Hypothesis 3a:

H3a: Such angels generate higher returns than the median returns of the early-stage VC funds, who possess following characteristics - serial angels, previous or existing entrepreneurs, have seen successful startup exits before, and invest in an industry in which they have prior experience.

Like the angel characteristics which increase the likelihood of superior returns, the research also points towards such characteristics of the angels which increase the likelihood of inferior returns. Unlike VCs, angels have non-monetary goals in addition to earning monetary returns, like mixing with other investors for “networking,”

"participating in venture development,", and "altruism" in the form of helping the founders or society at large (Ibrahim, 2008). Some of these non-monetary goals indirectly contribute towards monetary returns, like networking and participating in venture development, however, others like altruism have the potential of generating conflicting priorities in the minds of angels. Morrissette (2007) reveals that many angels invest since they find the entrepreneurship journey enjoyable and challenging. Angels can contribute positively, since they enjoy the fun and challenge of investing in the companies and growing them. However, the motive may not sustain for long, propelling the angels on the adventurous path of value destruction. Song and Jain (2020) define the non-monetary goals as the "private benefits" that angels derive by investing in startups while willingly sacrificing monetary returns. Significant number of angels are willing to sacrifice financial payback against such benefits (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). In fact, the proportion of angels showing these tendencies is considerably high. Out of three kinds of angels, depending on their motivations, "economic (maximize wealth), hedonistic, and altruistic," hedonistic and altruistic angels constitute as high as 53% (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). Further, Hellman et al. (2020) talk of "casual angels" who invest in a company due to a relation with the founder. The phenomenon of casual angels reflects the motivation of helping a known entrepreneur. However, it is highly likely to cloud the rational business judgment of the casual angel. Finally, new angel investors who are making a first investment or have only made a handful of investments without any proven success may not know the trade as well as serial angels. Moreover, Aufseb and Westphal (2008) find no proof that BANs can even help the "virgin angels," make better investment decisions.

Based on the above, the characteristics of angels that increase the likelihood of inferior returns are: virgin angels, casual angels, angels with hedonistic motivations, and angels with altruistic motivations.

This helps in arriving at Hypothesis 3b:

H3b: Such angels generate worse returns than the median returns of early-stage VC funds, who have the following characteristics - virgin angels, casual angels, angels with hedonistic motivations, and angels with altruistic motivations.

Various research papers speak of angels with the above characteristics. Some papers even quantify the negative impact of the non-monetary angel goals on their investing returns. However, this paper did not find any research which proves that the angels with a specific set of characteristics generate better or worse returns than the early-stage VC funds in a particular geography and by how much. Since the proposed VC fund is an early-stage VC fund, the above comparison will give clear direction to the choice of angel investors, with whom the fund could invest. The subsequent research can start with listing down the representative sample of early-stage VC funds, followed by determining their returns for the suitable past duration and comparing with the returns generated by the angels with the above characteristics in the same geography. The data on whether the angel is a first-time angel or whether he made the investment due to a relation with the founder can be collected through a normal survey. However, the information around hedonistic and altruistic motivations may be collected through psychometric surveys. Finally, various characteristics highlighted above were identified by the researchers as per the data samples they used. These characteristics will need to be further defined precisely at the time of the primary research, considering the specific model of the proposed VC fund.

How to invest?

After developing the hypothesis on 'who to partner with,' 'how to partner with them,' and 'who to invest with,' the outstanding question is 'how to invest' with the chosen investors. The proposed VC fund has two broad options. Harrison and Mason (2000) mention two ways for angels and VCs to invest together in startups – "co-investing" or "sequential investing." In sequential investing, angels invest first, followed by VCs (Benjamin and Margulis, 1996, as cited in Harrison and Mason, 2000). In co-investing, VCs and angels invest together in the company's investment round (Harrison and Mason, 2000).

The co-investing strategy may allow VCs and angels to strike equal agreements at the time of investment, thereby increasing the chances of long-lasting relationships and more transactions together, compared to sequential investing. Hellmann and Thiele (2014) show that VCs are "friends" at the time of initial investment since VCs get their pipeline to invest from angels, and angels court VCs for next-round funding. However, during the subsequent funding stage, VCs and angels become "foes," since VCs find little utility from angels due to their inability to invest at that stage (Hellmann and Thiele, 2014). Leavitt (2005) describes this as "burned angels" issue, in which VCs force the terms, like forcing transactions in which the angels are diluted to the extent that they do not earn much when exiting the company. Owen and Mason (2016) describe this as "VC crushing," due to which angels stop investing at earlier stages, disrupting the deal flow for VCs. While co-investing can not completely solve the problem of VCs turning foes to angels at later stages, it may provide angels with an opportunity to strike equal deals with the founders and VCs at the time of investing (more so, since VCs need angels in the

model of the proposed VC fund), instead of sequential investing, in which they may not be able to control the investing terms. Owen and Mason (2016) also suggest the solution of angel groups stitching together equal co-investing agreements to avoid this. This signals that the co-investing strategy may allow the proposed VC fund to do more deals over time (thereby forging long-lasting relations with the angel groupings), by stitching equal agreements with the angel groupings, compared to one and done in sequential investing.

The co-investing strategy may allow the proposed VC fund to encounter lower competition from the VCs, compared to the sequential investing strategy. Hellmann et al. (2020) show that the earlier belief that VCs and angels are "complements" (angels invest first, followed by VCs) has now given way to them being "dynamic substitutes" of each other (ventures receiving investment from angels are less probable to receive investment from VCs later, and the other way around). They explain that the reason is peculiar traits of the business, due to which the companies prefer one of the two kinds of investors and then largely remain on "parallel streams" with either angels or VCs, instead of switching in their life journey. The above theory implies that the VCs are less likely to invest in companies funded by angels (and the other way around). This suggests that the proposed VC fund will find lesser competition from other VCs in such deals. These companies will continue to get investment from the angels in the lead (which the above theory explains) due to their peculiar characteristics. However, the co-investing strategy helps the proposed VC fund to get entry into each company, with less competition from other VCs, which is not possible with the sequential investing strategy (based on above theory).

By positively complementing the investment decision criteria used by angels with its own, the proposed VC fund may generate better returns than sequential investing after taking protective measures against the known problems in co-investing. Hsu et al. (2014) explain that the dominant source of agency costs for VCs is the "goal conflicts" with the founders since VCs are looking at the gains on the full bucket of investee companies instead of one single investee company. Hsu et al. (2014) show that due to this reason, the VCs use "outcome-oriented" factors to select the deals and influence the results, like the company's "economic potential" or monetary targets. They also that compared to angels, VCs use more strict controlling powers through contracts (like power to change the management). Hsu et al. (2014) reveal that the dominant source of agency problems for angels is the information asymmetries with the founders instead of goal conflicts. The reason is that the contracts signed by the angels with the entrepreneurs are not complete, due to which angels find it challenging to authenticate the details that the founders share (Fiet, 1995, Landstrom, 1998, Morrissette, 2007, Prowse, 1998, and Van Osnabrugge, 2000, as cited in Hsu et al., 2014). Due to the above, Hsu et al. (2014) show that angels use "human factors" to make investment decisions, i.e., founder's "strategic readiness," and "affective passion". Since VCs will be investing together with angels, there is a good chance that the final investing decisions of the VC will benefit both from the outcome-oriented factors used by VCs as well as human-oriented factors used by angels, leading to superior returns than when both parties invest alone. However, Goldfarb et al. (2013) show that when VCs and angels do co-investment, the business performance falls due to "split control" of the board between the VC and the entrepreneur. They explain that one reason could be that the angel engenders conflict between the VCs and the founder,

which causes the VCs and the founder not to get along well with each other. Harrison and Mason (2000) also highlight various issues when VCs and angels co-invest, like difficulty in decision-making, potential problems in interpersonal connections, and long decision timelines, etc. Despite the above problems, Croce et al. (2018) show that the ventures seeing co-investing raise more funds, secure more subsequent investments, and have a better chance to exit successfully. Interestingly, they report that the results of sequential investing are also good, with VCs coming in after the angel investment strongly improving the chance of eventual success. Despite the lack of a clear verdict from research, by positively complementing its own decision criteria with those of angels and by taking protective measures against the known sources of problems during co-investing, the proposed VC fund may generate superior returns through co-investing than through sequential investing, since the prior research on sequential investing may or may not apply in the context of the proposed VC fund's unique model. This is a question that can be answered only by testing the below hypothesis.

The above synthesis allows this paper to define a phrase, 'sustainable capacity to deploy capital,' as the ability to make a large number of deals over time with the angel groupings (signalling long-lasting relationships), with lower competition from other VCs, while generating healthy returns.

This brings us to Hypothesis 4:

H4: In comparison to sequential investing, a co-investing strategy develops more 'sustainable capacity to deploy capital' with angels at early-stages.

Considerable research is available on angels and VCs investing together, either through co-investing or sequential investing. However, this paper could not find any research that

suggests which investing strategy is better, in what way, and how much. Specifically, the proposed VC fund wishes to find an investment strategy that helps it to do a large number of high-quality deals over time with its investment partners, i.e., angel groupings and angels, avoiding competition with other VCs. The willingness for all the parties to continue to make several investments together will signal 'sustainable capacity to invest.' Undertaking such research will clearly find a go-to strategy for the proposed VC fund, as well as guide the differences in co-investing and sequential investing in general. Any VC fund is likely to have deals in its portfolio, which has elements of sequential investing as well as co-investing with angels; hence such data should not be difficult to find.

Below is the final summary of the findings (Tables 1 - 4):

Question	Hypotheses	Options	Arguments	Hypothesis statement
Who to partner with?	Hypothesis 1a	**Angel groups or syndicates**	Angel members make investment decisions on their own (OECD, 2012).	Angel groups generate better returns for the angels compared to BANs or angel funds due to favorable position on agency costs and better alignment of incentives with the angels and hence the proposed VC fund.
			They invest their own capital (Ibrahim, 2008), avoiding agency costs.	
			They earn from capital gains, aligning their incentives with angels.	
		Business angel networks (BANs)	BANs do match-making between angels and startups, instead of investing their own capital (EBAN, 2006, as cited in OECD, 2012).	
			They increase overall agency costs, while reducing information asymmetries during introduction, increasing adverse selection during due diligence, and increasing information asymmetries during monitoring (Aufseb and Westphal, 2008).	
			Their revenue levers like membership fees, investment closure fees, and startup coaching fees (Aufseb and Westphal, 2008) misalign their incentives from angels.	
		Angel funds	Angel funds take angels' money in a blind pool and reinvest for a fee (Hellman et al., 2020), thereby increasing the agency costs.	
	Hypothesis 1b	Member-led angel groups	Members themselves manage operations, lowering the agency costs. They have inconsistent quality due to adhoc and small scale processes.	Manager-led angel groups generate better returns for the angels than member-led groups despite having higher agency
		Manager-led angel groups	Managers handle the operations, increasing the agency costs. They have more consistent quality due to orderly and large scale processes.	

Table 1: Who to partner with?

Question	Hypotheses	Options	Arguments	Hypothesis statement
How to partner?	Hypothesis 2a	Deal-wise assessment without partner pre-approval and partnership	This approach increases difficulty of deal decisioning. Lack of trust increases the transaction scrutiny.	Prior approval of angel groupings and expert angels increases the deal flow of high-quality startups due to higher trust, pre-set expectations, and predictability without increasing the associated costs.
			Unqualified deals increase the decision time, leading to angel dissatisfaction (Owen and Mason, 2016).	
			Lack of information rules leads to complex decisioning, which is more suitable for institutional investors (Owen and Mason, 2016).	
		Partner pre-approval and partnership	This approach increases the ease of deal decisioning. Higher trust reduces the need for scrutiny. Qualified deals reduce the decision times, increasing the angel satisfaction. Clear expectations lead to faster information discovery and hence more deal closures.	
			This approach reduces the costs of small ticket investments. Deal sourcing from partners reduces the spend on branding. Qualified leads (Aernoudt, 1999, and Ege, 2000, as cited in Aufseb and Westphal, 2008) lower the cost of converting leads into deals. Prior relationships with partners lower the costs of partner handling (Harrison and Mason, 2000).	
	Hypothesis 2b	**Critical condition to partner**	BANs are critical to find otherwise anonymous angels (OECD, 2012), but they also increase agency costs. 'Lead angel centricity' in the BANs, i.e. lead angels playing central role in the deals, addresses various BAN problems.	'Lead angel centricity' in the operations of BANs removes the negative impact of BANs on agency costs. The paper defines 'Lead angel centricity' such that the lead angels in the deals receive focus of BAN services over the startups, undertake direct due diligence with startups, pitch the deals directly to the VC funds, and assume active monitoring role via board membership.
			Adverse selection is reduced, if lead angels do direct due diligence of startups (Aufseb and Westphal, 2008) and pitch directly to the proposed fund (Owen and Mason, 2016).	
			Post-investment information asymmetries are reduced, if lead angels monitor the startup directly as a board member, removing the double principal-agent problem (Aufseb and Westphal, 2008). They are also reduced, if lead angels do active monitoring (Van Osnabrugge, 2000), since deep engagement yields better pay offs (Wiltbank and Boeker, as cited in Ibrahim, 2008).	
			The proposed fund's problem of front facing with the startups from distant location is handled, if lead angels fulfil that responsibility.	

Table 2: How to partner?

Question	Hypotheses	Options	Arguments	Hypothesis statement
Who to invest with?	Hypothesis 3a	**Angel characteristics for superior returns**	Serial angels systematically invest in multiple firms (Hellman et al., 2020). They make better investing decisions due to experience of making multiple investments (Hellman et al., 2020). Their connectedness leads to higher follow-on VC funding and better chance of exit for companies (Hellman et al., 2020, and Werth and Boeert, 2013).	Such angels generate higher returns than the median returns of the early-stage VC funds, who possess following characteristics - serial angels, previous or existing entrepreneurs, have seen successful startup exits before, and invest in an industry in which they have prior experience.
			Past or present entrepreneur angels evaluate the deals better and handle the full investment cycle better (Croce et al., 2018). Angels who are previous entrepreneurs generate 12.8% annual median returns, while those we are not previous entrpreneurs generate 0% annual median returns (Bygrave and Hunt, 2007).	
			Angels who have seen exits before as entrepreneurs, attract VC investments (Benjamin and Margulis, 1986, as cited in Morrissette, 2007).	
			Professional angels invest in sectors in which they have prior experience (Harrison and Mason, 2000).	
	Hypothesis 3b	**Angel characteristics for inferior returns**	Casual angels invest in a single company in a known founder (Hellman et al., 2020). They invest with an intention to help, leading to a likely irrational investment judgment.	Such angels generate worse returns than the median returns of early-stage VC funds, who have the following characteristics - virgin angels, casual angels, angels with hedonistic motivations, and angels with altruistic motivations.
			Virgin angels are just beginning their angel investing journey (Aufseb and Westphal, 2008). They are likely to make wrong decisions due to unfamiliarity with the discipline. Even BANs are unable to improve investment decisions of virgin angels (Aufseb and Westphal, 2008).	
			Angels have non-financial motives of investing in addtion to financial motives (Ibrahim, 2008, and Song and Jain, 2020). 53% angels have hedonistic and altruistic motivations to invest, while only 47% angels have economic motivations (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). Angels with hedonistic (Morrissette, 2007) and altruistic motivations are willing to sacrifice financial returns (Sullivan and Miller, 1990, as cited in Song and Jain, 2020). Such angels have a smaller share at the time of exit from an investment (Song and Jain, 2020).	

Table 3: Who to invest with?

Question	Hypotheses	Options	Arguments	Hypothesis statement
How to invest?	Hypothesis 4	**Co-investing strategy**	VCs and angels are friends initially, but turn foes later, since VCs no longer need angels at that stage (Hellmann and Thiele, 2014). This leads to "burned angels" problem in which VCs dilute angels, leading to angels earning little at the time of exit (Leavitt, 2005). This in turn leads to "VC crushing" problem, in which angels stop investing due to ill-treatment and stop referring the deals to VCs (Owen and Mason, 2016). Co-investing approach helps the angel groups strike equal terms with the VCs thereby addressing the above problems better (Owen and Mason, 2016), leading to both doing more number of deals together (hence developing long lasting relationships).	In comparison to sequential investing, a co-investing strategy develops more 'sustainable capacity to deploy capital' with angels at early-stages. The paper defines 'Sustainable capacity to deploy capital' as more number of deals together between VCs and angels leading to long lasting relationships, better investing decisions generating better returns, and lower VC competition in the deals enabling lower valuations.
			VCs use outcome-oriented investing criteria, like economic potential, since the source of their agency costs is "goal conflicts" (Hsu et al., 2014). Angels use human-oriented investing criteria, like founders' strategic readiness (connections) and affective passion, since the source of their agency costs is "information asymmetries" (Hsu et al., 2014). Co-investing strategy can helps both the VCs and the angels to combine their complementary investing criteria to make better investing decisions. Co-investing is known to produce bigger rounds, more follow-on funding, and better chance of exit (Croce et al., 2018).	
			While VCs and angels were believed to be "complements" to each other earlier (angels investing first and giving way to VCs later), they have now largely become "substitutes" to each other, which means that once companies choose either VCs or angels, they don't switch to the other investor type in their lifetime (Hellman et al., 2020). This trend is prevalent since 2000s (Mason et al., 2016). This means that the co-investing strategy allows the proposed fund to get access to such angel backed companies, which are otherwise shunned by VCs as per above theory. This leads to less VC competition for the propsed fund and hence lesser valuations.	
		Sequential investing strategy	When VCs invest in later stages than the angels, the angels have little control over the terms of investing agreements since they no longer have capital to invest. Hence, sequential investing strategy does not do as well as co-investing strategy to solve the problem of "burned angels" or "VC crushing".	

Table 4: How to invest?

Conclusion

This paper proposes a new early-stage VC fund model that invests exclusively in collaboration with angel networks in startup hubs across the globe. While the proposed early-stage VC model can be tested only in practice, the purpose of this research was to establish hypotheses around the most important 'conditions and strategies', through a literature review, which will give the proposed VC fund a better chance of success.

The paper explored various pieces of literature on VC investing, angel investing, and their collaboration. The literature review led to four clear hypotheses to be tested through further primary research, using four strategic questions that the proposed VC fund needs to answer.

The first question is 'Who to partner with' among different forms of angel organizations across the globe? The paper developed two sub-hypothesis 1a, and 1b, to find answers. H1a addresses the ability of angel groups to generate better returns for the angels, and hence, by extension, the proposed VC fund, since they provide a more favorable position to the fund with regard to agency costs and incentive alignment, compared to BANs and angel funds. H1b goes further to propose that within angel groups, manager-led angel groups can contribute more towards the creation of stable partnerships and professional operations for the fund compared to member-led angel groups due to their professional management, thereby contributing more towards the overall fund returns and more significant success, compared to member-led angel groups, despite lower agency costs offered by the member-led angel groups.

The second strategic question for the fund was 'How to partner' with the chosen type of angel grouping. The paper developed two sub-hypothesis 2a and 2b, to answer this. H2a

highlights the importance of partnering with prior-vetted and prior-approved angel groupings to establish higher trust, better pre-set expectations, and predictability of deals, compared to evaluating each deal as it comes. The prior approval of such angel groupings across the globe will enable a large flow of qualified startups in a predictable manner, which is a must for the fund to make a larger number of investments compared to existing early-stage funds. H2b highlights the importance of 'lead angel centricity' in the operations of the chosen partners in terms of direct deal evaluation, as well as post-investment oversight of the investee companies since lead angels are best placed to reduce or altogether remove the higher agency costs in terms of adverse selection and information asymmetries, which the intermediaries like BANs bring into the deals. The hypothesis mentions that BANs that uphold 'lead angel centricity' can remove the negative impact on agency costs and can be partnered with. The paper defines 'lead angel centricity' as a situation in which the BANs: should not give upper hand to startups against angels in terms of services like coaching, should allow the lead angel to do direct due diligence with the startup, should make the lead angel pitch the deal directly to other angels instead of BAN manager doing so, as well as should make the lead angel take up board member or observer role, undertaking post-investment oversight.

Once the paper established the hypothesis for 'Who to partner with' and 'How to partner', the next logical question was 'Who to invest with' within the chosen angel grouping? The premise is that all the angel investors will not be the best in their trade. This paved the way for sub-hypothesis 3a and 3b. H3a presumes that angels with certain specific characteristics will generate higher returns than the median returns of the early-stage funds today. The paper defines the angels with such characteristics as: serial angels,

previous or existing entrepreneurs, who has seen successful startup exits before and who invest in an industry in which they have prior experience. The literature review found that these angel characteristics have been associated with an increased possibility of angel investing performance. H3b goes further to say that there are also certain characteristics of the angels, which predispose them towards generating worse returns than the median returns of the early-stage funds today. The paper defines such characteristics as: virgin angels, casual angels, angels with hedonistic motivations, and angels having altruistic motivations. Again, these angel qualities have been found in the literature to increase the odds of angel investing failure.

The final question to answer was 'How to invest' with such angels, that have been found to increase the chances of success. The research helped establish Hypothesis 4. H4 says that co-investing may be better than the strategy of sequential investing in order to develop a 'sustainable capacity to deploy capital' for the fund. The paper defines 'sustainable capacity to deploy capital' as the ability to do a large number of deals over time with the angel groupings (signalling long-lasting relationships), with lesser competition from other VCs, while generating healthy returns.

The literature review done as part of this paper has brought direction to questions which have not been answered precisely previously and more so in the context of the proposed VC fund. Due to this reason, the development of the above hypotheses may be a significant contribution to the research. The development of the above hypotheses also goes a long way in determining the direction for the key 'conditions and strategies' for the success of the above fund. This paper started the process in the direction of setting up such a fund one day.

Limitations

This research paper has a few limitations.

This paper does not explore all the collectively exhaustive questions in front of the proposed VC fund. Instead, it approaches finding literature on a best-efforts basis, considering the time limitations induced by the graduate research course. Due to this reason, certain aspects may need to be taken care of while planning such a fund.

Secondly, this paper did not have an opportunity to confirm or discuss the hypotheses developed with the practitioners of the trade. The literature review may have brought out certain aspects related to VC and angel investing, which may be slightly different from what the practitioners hold important.

Thirdly, a vast amount of literature on the topic has been written in multiple geographies and over multiple time horizons. The nature of VC investing, angel investing, and their interaction is not only evolving very fast, but it is also widely different in different geographies of the world due to different levels of sophistication of each market. The conclusions drawn from one geography and time horizon may need certain calibration, when they are applied during the actual roll out of the proposed VC fund.

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