MIT Sloan School of Management

MIT Sloan School Working Paper 5126-15

Are Syndicates the Killer App of Equity Crowdfunding?

Ajay Agrawal, Christian Catalini, and Avi Goldfarb

February 25, 2015

Are Syndicates the Killer App of Equity Crowdfunding?

Ajay Agrawal[*] (University of Toronto), Christian Catalini[†] (MIT), Avi Goldfarb[‡] (University of Toronto)

Why is angel investing so geographically localized? This phenomenon is not just curious but also central to economic growth. As with other goods and services, there are gains from trade in the market for early-stage capital. Surely investors with a keen interest in a particular technology or market segment would benefit from a greater selection of investment opportunities aligned with their interests than those available in their home city. Yet, most early-stage investors focus on local deals. Thus, market failures abound such that many value-creating transactions that could have occurred do not simply due to the distance between investor and venture. The lack of long distance angel investing is largely due to informational problems that make non-local early-stage deals costly to evaluate and monitor.

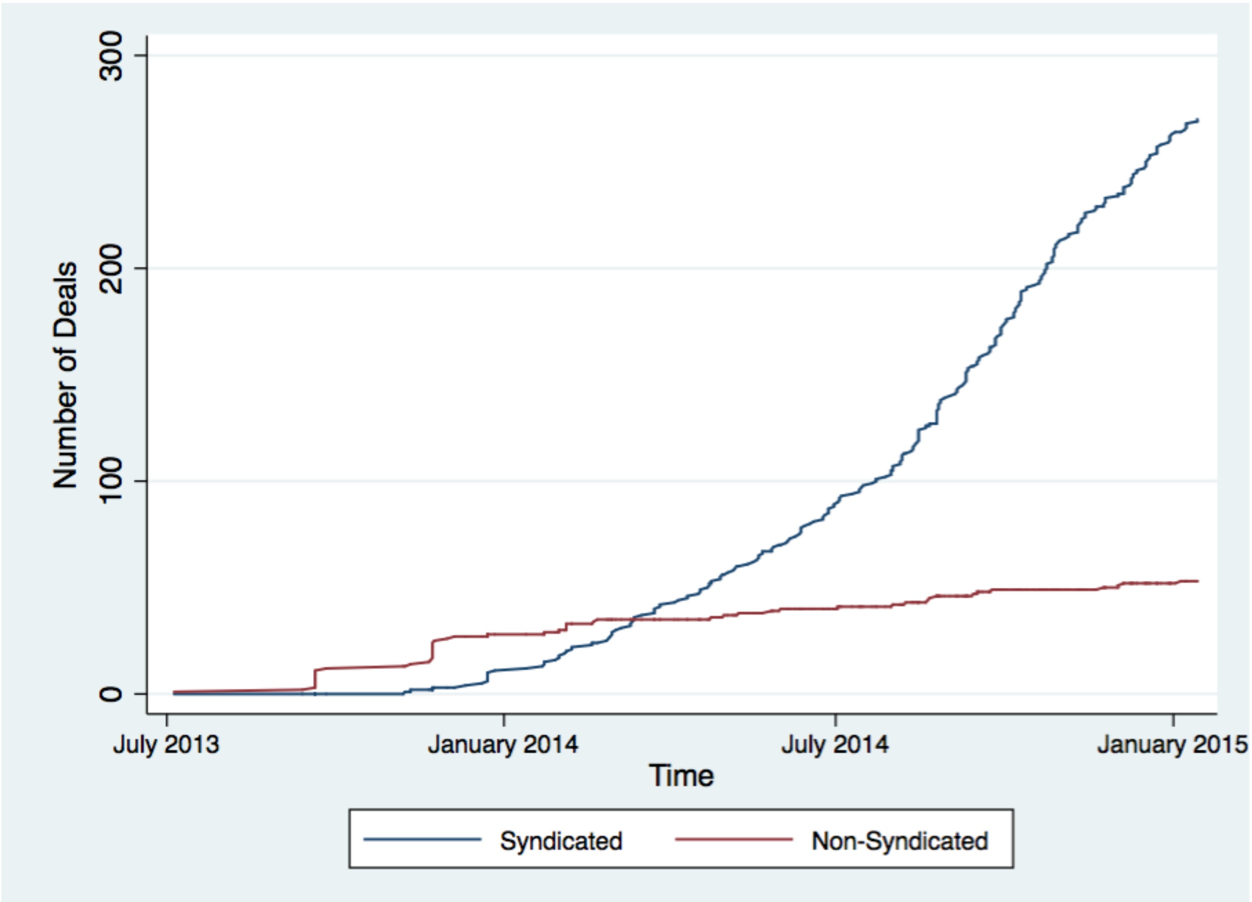
Given that the internet enables the distribution of information across distance at virtually no cost, why do such informational problems persist? Although the internet does indeed reduce certain information barriers—investors can learn a lot about ventures and their products online—it does not facilitate the transmission of other types of information that require face-to-face interaction. For example, using only online information makes it difficult to assess the founding team in terms of their grit, determination, interpersonal dynamics, and trustworthiness. Investors, especially those leading an investment round, usually meet face-to-face with founders as they conduct due diligence in order to evaluate these and other characteristics predictive of venture success.

Equity crowdfunding syndicates involve lead investors bringing deals to a crowd of backers. Such syndicates have the potential to address this information problem and unleash the power of the internet on market failures in angel investing. They combine the global reach capability of the online world with the face-to-face due diligence and monitoring abilities of the offline world. Furthermore, the syndicate structure allows platforms to provide financial incentives to individuals for solving the information problem through the implementation of a "carry." (Carried interest is a fraction of the profits earned on capital invested by the other members of the syndicate.)

Preliminary evidence shows that this structure and incentive system may be quite effective. Although the introduction of syndicates in online equity crowdfunding is recent, their use is growing in absolute and relative terms. On AngelList, the leading equity crowdfunding platform, syndicated deals have not only grown but overtaken non-syndicated deals in terms of the number of ventures attempting to raise capital, the number of ventures that successfully raise a seed round, and the total amount of capital raised. In Figure 1, we report the cumulative trend in syndicated versus non-syndicated deals since AngelList began allowing online investments in March 2013. "Syndicates" were introduced in June 2013 and started to take off a few months later. By March 2014, the total number of successful syndicated deals exceeded the total number of successful non-syndicated deals, and this trend continues.

[*] ajay.agrawal@rotman.utoronto.ca
[†] catalini@mit.edu
[‡] agoldfarb@rotman.utoronto.ca

Figure 1: Cumulative number of successful syndicated and non-syndicated deals on AngelList



How Syndicates Work

There are many equity crowdfunding platforms (e.g., AngelList, FundersClub, WeFunder, Crowdcube, CircleUp, Crowdfunder). Although these platforms are similar on some dimensions, they each have some unique market design features that are particularly suited to certain types of investors or ventures. Although several platforms enable various approaches to syndicate-like investing, we focus on the largest one for the purpose of clarity: AngelList. The basic economic principles associated with syndication apply across platforms.

On AngelList, individuals, angel groups, and VC funds can all form syndicates. We focus here on individuals. Individual angel investors create a syndicate profile online, providing basic information for potential backers such as how many deals they expect to syndicate each year and their typical investment size. As a syndicate "lead," the investor commits to providing a written investment thesis for each investment and to disclosing potential conflicts of interest. Other accredited investors, who apply to participate in one or more specific syndicates, are referred to as "backers." If accepted by a syndicate lead, then the backer agrees to invest in the lead's syndicated deals on the same terms as the lead and to pay the lead a carry. Backers are able to opt out of specific deals, but this is not encouraged. Backers pay a 5-20% carry per deal to the syndicate lead as well as 5% to AngelList. Thus, backing a syndicate is similar to investing in a VC fund but with at least four important differences: 1) backers may choose which portfolio companies to invest in, 2) backers can stop backing at any time, 3) VC funds usually require significantly higher minimum investment amounts, and 4) leads typically invest more than general partners per deal on a percentage basis (general partners of VC funds invest only 1% on average).

AngelList provides the following example on its website to illustrate how it works: "Sara, a notable angel, decides to lead a syndicate. Investors 'back' her syndicate by agreeing to invest $200K in each of her future deals and pay her a 15% carry. The next time Sara decides to invest in a startup, she asks the company for a $250K allocation. She personally invests $50K in the startup and offers an opportunity to invest up to $200K to her backers." A detailed description of how this works is provided on the website here: https://angel.co/syndicates.

As of February 2015, AngelList has approximately 120 active syndicates. Some have invested with top-tier venture capital firms (e.g., Sequioa (Lifx), Andreessen Horowitz (uBiome), Khosla Ventures (OpenDoor), Accel Partners (Gametime)). Unsurprisingly, the distribution of syndicates is highly skewed. For example, the median number of backers in successfully closed deals is 29 whereas the maximum is 141. Similarly, the median investment amount is $2,500 and the maximum is $860,000. In Figure 2, we summarize key characteristics of the top five individuals who lead syndicates. This list highlights four key observations. First, concerning the skewness in the distribution, there is a significant spread even among the top five individuals. The top individual has six times as many backers and 3.5 times as much capital from backers than the fifth individual. Second, all five are focused on broad, internet-related categories that are likely of interest to and accessible by a wide range of backers (as opposed to medical technology or advanced materials, for example). Third, all have easily interpretable reputations due to prior investments in high-profile, consumer-facing ventures such as PayPal, Facebook, and Uber. Finally, four of the five live in the Bay Area, and the other is also based in California.

Figure 2: Top Five Individuals who are Syndicate Leads on AngelList as of February 2nd, 2015

Lead	Markets	Backers	$ backed	Past investments	Location
Gil Penchina	Mobile, e-commerce, marketplaces	767	$5,240,451	LinkedIn, PayPal, Fastly, Rally Software	San Francisco Bay Area
Tim Ferriss	Consumer internet, Collab. consumption	776	$4,133,063	Twitter, Facebook, Alibaba, Duolingo	San Francisco Bay Area
Jason Calacanis	Mobile, e-commerce, video streaming	527	$1,889,812	Uber, Evernote	Greater Los Angeles
Dave Morin	Digital Media, Crowdfunding, content discovery	423	$1,709,050	Path (founder), Slow, nest, Pinterest	San Francisco Bay Area
Naval Ravikant	Clean technology, e-commerce, mobile commerce	126	$1,474,483	Twitter, Uber, Yammer, Stack Overflow (AngelList cofounder)	San Francisco Bay Area

The Information Problem

Economist George Akerlof won the Nobel Prize for his research on the market for used cars. He demonstrated how the existence of "lemons," or bad cars, in a population of otherwise good cars could create the conditions under which no one is willing to pay a good-used-car price, even for a used car in good condition. That is because it is costly for sellers of good cars to credibly communicate their private information - that their car is in good condition - because buyers know that the sellers of bad cars have an incentive to represent their cars as "good" and because it is difficult for buyers to tell the difference. This problem, labeled *information asymmetry* because it arises when the buyer has significantly less information than the seller and it is costly to credibly communicate the truth, poses a substantial challenge to the operation of efficient markets across many industries, including finance, insurance, health care, online retailing – and early-stage equity capital.

Information asymmetry is the primary barrier to the financing of early-stage ventures. Hundreds of research papers in finance and entrepreneurship explore this in the context of venture capital and, to a lesser extent, angel investing. Investors hesitate to invest in a seemingly promising new venture because they do not have enough information to assess its true value. That is because a lot of information predictive of success is tacit. In particular, the personalities of and relationships among founders are of central importance in the early stage of a venture, especially since business plans often change many times before a company is profitable. At the same time, entrepreneurs are reluctant to sell equity in their venture for a price they perceive to be overly discounted for risk, given the more complete information they have about their own venture.

In other types of online transactions, the information asymmetry problem is addressed through a variety of market mechanisms. For example, online sellers engender trust through feedback systems (e.g., eBay, Amazon), branding and advertising (e.g., Nespresso), and trustworthy intermediaries (e.g., credit card companies). Syndicates borrow features from each of these mechanisms to address the information problem in the online market for early-stage capital.

How Syndicates Solve the Information Problem

Syndicates employ a market design feature that enables a division of labor among investors. Lead investors conduct due diligence and monitor progress on behalf of other investors. Syndicates are designed such that lead investors endure a reputational and financial penalty for poor performance and enjoy reputational and financial rewards for good performance. Entrepreneurs face a reputational cost within their professional network if they fail to deliver results to the lead. This aligns the incentives of leads, backers and entrepreneurs in a manner that directly addresses information asymmetry problems.

Overall, angel investing is traditionally highly localized due to three central costs that increase with distance. The first is general awareness of the deal. It is costly to learn about early-stage deals located outside of one's locality, especially when ventures are prohibited from advertising private placements due to general solicitation regulations. The second is transaction costs. The overhead associated with small, ad hoc equity investment transactions increases with added communication and delivery costs. Third, the due diligence necessary to address the information asymmetry problems discussed above requires face-to-face interactions between investors and founders, and thus the cost increases with distance between the investor and the venture.

The first wave of equity crowdfunding platforms delivered a market design solution that significantly reduced the first two costs, but not the third. Specifically, crowdfunding platforms enabled ventures to communicate key elements of their business plan to a global audience of accredited investors in a manner that was standardized and efficient to consume. Furthermore, electronic platforms enabled distant accredited investors to invest relatively small amounts of capital in a cost-efficient manner. In other words, these platforms enabled distant investors to both learn about investment opportunities and to execute transactions, shifting the addressable market for early-stage capital from local to global, or at least national, depending on securities regulations in the region. However, the third cost, resulting from information asymmetry, remained. Although investors could now make early-stage investments at a much lower cost, they had limited incentive to do so because they still faced a high cost of conducting due diligence at a distance.

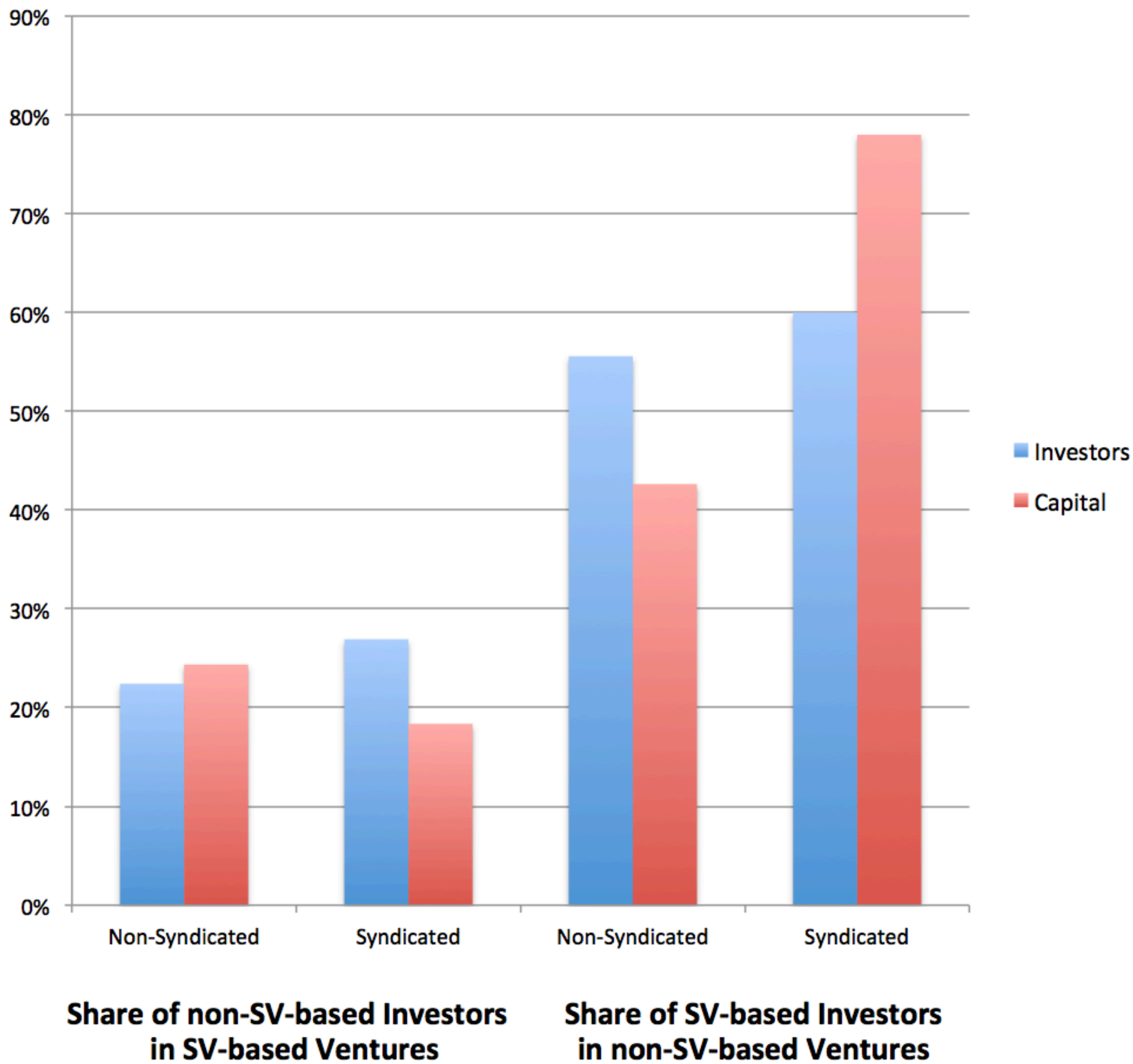
Syndicates provide a solution to the final cost barrier that prevents non-local angel investing. They give lead investors both the ability and incentive to leverage the information they collect through their relationships and due diligence on behalf of distant investors. Platform tools and features enable lead investors to communicate their skills and performance history and to put their reputation at stake. Unlike ventures that may only raise a single round of capital, active lead investors may raise multiple funds such that the value of protecting their relationship is high. Thus, like a trusted brand, a lead's reputation certifies the expected quality of a deal. Furthermore, lead investors earn a carry on their backers' capital, so their interests are aligned. The long-term success of syndicates will depend, among many things, upon an unrelenting enforcement by equity crowdfunding platforms of lead investors reporting any and all potential conflicts of interest, as well as by the availability of performance metrics on syndicate outcomes over time. The economics of this system rely upon backers trusting that the interests of the lead investor are fully aligned with their own and that the lead is actually able to select, monitor, and support high-quality deals.

Data on the geography of capital flows provide preliminary evidence that is consistent with the thesis that syndicates significantly reduce the information asymmetry problem. In Figure 3, we compare the geographic location of backers for syndicated versus non-syndicated deals, both of which are conducted online using the AngelList platform. If syndicates reduce the information asymmetry problem, then we expect to see more distant backers on syndicated compared to non-syndicated deals because investors have less need to be co-located with the venture in order to meet them offline to address information asymmetry issues since investors can rely on the lead investor to do that offline work.

The data supporting this are striking. The share of investors (blue columns) that are distant from the startup is greater for syndicated deals. This is true both for investors based outside of Silicon Valley (SV) investing in SV-based startups (bars 1 and 3), as well as for SV-based investors participating in non-SV-based startups (bars 5 and 7). In other words, syndicates give investors based outside SV enhanced access to SV-based deals. Moreover, syndicates are more likely to deliver better outcomes for other locations hoping to attract capital flows from SV, perhaps due to the benefits from connections to the SV-based network made possible by a SV-based lead investor (more than 60% of leads are based in SV). This is even more salient when looking at the share of capital instead of investors (red columns): whereas SV-based investors only account for 43% of the capital allocated to non-SV-based startups without syndication (bar 6), they account for 78% of the capital in syndicated deals (bar 8). However, non-SV-based investors represent a larger share of the capital invested in SV-based ventures in non-syndicated deals (bar 2 versus 4); this may be due to syndicate leads selecting investors they are familiar with or have offline information about (e.g., the value they offer beyond capital).

We focus on Silicon Valley-centric data because that region is disproportionately important in the market for early-stage capital and is the locus of entrepreneurial activity. However, we see similar patterns when we examine the full set of transactions: local investors represent 46% of investors (45% of the capital) for non-syndicated deals, but only 36% (40% of the capital) for syndicated ones. This is important. Reduced information asymmetries lessen the economic frictions associated with distant investments and thus extend the pool of potential matches between ventures and investors. This enhances the efficiency of the market for early-stage capital such that more and better (i.e., more strategic value) capital flows into entrepreneurial ventures, which facilitates more experimentation with respect to technologies, products, and business models. Thus, this shift in trade patterns for seed-stage capital across regions creates opportunities for entrepreneurs, investors, and policymakers. We discuss the implications of this next.

Figure 3: Investment flows in and out of Silicon Valley



Opportunities for Investors, Entrepreneurs, and Policymakers

Syndicates enable a broad community of investors interested in exposure to the pre-VC asset class to leverage the expertise and due diligence of lead angel investors from around the world. As such, syndicates unlock meaningful opportunities for investors, entrepreneurs, and policymakers. We describe these opportunities below and summarize them in Figure 4.

Investors

Syndicates generate opportunities for both general investors ("backers") as well as for lead angel investors. For general investors, syndicates increase the set of opportunities for allocating capital to the early-stage asset class. Investors now may choose to invest directly in local ventures with whom they have a personal connection, as they did before, but also in deals where they do not have a personal relationship and thus did not have access to in the past (both local and non-local). They accomplish the latter by relying on the reputation and incentives of lead investors. To some extent, syndicates shift the locus of investment from early-stage ventures to early-stage investors. In other words, general investors increase their reach by backing lead investors who then source investment opportunities. Although backers choose to invest in a lead's portfolio on a venture-by-venture basis, norms forming on these platforms suggest that the dominant pattern is for backers to back lead investors overall, rather than on specific transactions. Thus, syndicates may be viewed as offering general investors a new form of exposure to this asset class by way of backing lead investors rather than backing ventures.

Syndicates offer lead investors the opportunity to leverage their reputation, capabilities, relationships, and effort to increase their influence and returns. Traditionally, the returns to angel investors with good reputations, capabilities, and relationships have been limited by the size of their local market because, with the exception of a few high-profile angel investors such as Fred Wilson, Ron Conway, and Paul Graham, most transactions at that early stage are local and therefore the sphere of influence and reputation of angel investors is also local. In addition, the return to angel investors is a function of the capital they deploy. Syndicates increase returns by scaling reputation and influence through the reporting of standardized information on transactions on a verifiable and globally accessible platform. In addition, syndicates enable lead angel investors to scale their returns through the carry mechanism that allows them to generate returns not just on their own capital but also on that of their backers. Thus, by increasing the returns to reputation, capabilities, relationships, and effort, syndicates enhance the incentives for angels to improve their performance with respect to sourcing and overseeing early-stage investment opportunities with significant upside potential. In addition, syndicates enable individuals with a valuable skill (e.g., a computer science professor with the ability to evaluate the technical advantages of startups in a specific domain, such as machine learning) to lead angel investment rounds despite not having access to significant amounts of capital either directly via their own personal wealth or indirectly through personal relationships. Thus, syndicates create opportunities for certain types of individuals to engage in lead investing, whereas this was less feasible before.

Entrepreneurs

Syndicates provide opportunities to entrepreneurs located in regions with high-performing angel investors who have or develop a good reputation since such lead angel investors attract capital from outside the region to back their investments. Because lead investors still focus most of their investments on ventures with which they can develop and nurture relations, they continue to concentrate their investments locally. Therefore, entrepreneurs who launch their businesses in regions with such angel investors benefit from increased access to both capital and the network of individuals who back lead investors. Some backers will be in a position to benefit the companies that receive their investment capital by providing access to relationships for customers, recruits, or partners. However, entrepreneurs in regions without reputable angel investors may not benefit. Under certain circumstances, entrepreneurs may even be harmed if the net effect of syndicates is to cause capital that might otherwise be invested in their region to instead flow out to other regions with more compelling angel investors.

Policymakers

Syndicates provide policymakers an opportunity to take actions that influence capital flows into their jurisdiction. Policymakers are already acutely aware of the importance of local entrepreneurship; interventions abound to stimulate the birth and development of startups. However, the rise of syndicates puts increasing emphasis on the role of angel investors. Not only are high-performance angels important for allocating early-stage capital, but in a world of syndicates, high-quality angels are critical for attracting capital from outside the region. The capital pool associated with investors who back a local lead investor is made even more valuable by the accompanying social networks that expand the reach of funded ventures through backers' relationships with potential customers, recruits, partners, and follow-on investors. In other words, from the perspective of the policymaker, the rise of syndicates increases the returns to attracting high-quality angels to the focal region. Accordingly, policymakers should look more closely at levers they control to attract and maintain the number of star angels in their jurisdiction.

While most policy points in articles on crowdfunding are focused on existing or anticipated securities regulations administered by the United States Securities and Exchange Commission (SEC), the more relevant regulatory bodies in this case are those outside the United States. In March 2013, AngelList obtained a "No-Action Relief" from the SEC indicating that their "…Staff will not recommend enforcement action against AngelList." At present, it is less obvious whether investors from outside the US can lead investment rounds for ventures inside the US or within their own countries and attract backers from both inside and outside the US using AngelList or similar platforms. Jurisdictions that anticipate this channel of capital flows becoming important will adapt their securities laws to ensure their venture and investor communities are connected to the global flows of capital in this asset class.

Summary

It is too early to state with certainty that syndicates are the "killer app" of equity crowdfunding. However, it is not too early to observe that syndicates have economic properties that lend themselves to significantly reducing the information asymmetry problem. In other words, the economics of information associated with early-stage investing are much better suited to crowdfunding angels than crowdfunding ventures. This is not only true in theory but also evident in the data on AngelList investment activity. Syndicates amplify the impact of high-performing angel investors by providing them with a more explicit reputation and online tools, both of which can be leveraged to attract capital from a global rather than local community of investors. Syndicates increase the volume and also influence the pattern of capital flows in this asset class. Not all locations will benefit equally. Regions that have both quality ventures and angel investors with reputation and profile will benefit even more than before as they attract increased capital flows from other locations. Overall, syndicates enhance economic growth by reducing market failures and allocating capital more efficiently.

Figure 4: Opportunities in equity crowdfunding syndicates

Economic Agent	Opportunities
Lead investors	Syndicates provide lead investors the opportunity to leverage their reputation, capability, network, and effort to generate higher returns. This is accomplished through a combination of: 1) the global distribution of standardized and verifiable information through the online platform, and 2) the market design that enables lead investors to collect a "carry" such that their return is not only a function of their own capital but also the capital of their backers.
Other investors ("backers")	Syndicates provide investors an opportunity to greatly expand their access to investment opportunities in the pre-VC asset class. This is accomplished by enabling investors to "back" lead investors who have both the capability and incentives to conduct due diligence and share investment opportunities, including those based in locations distant from the investment target.
Entrepreneurs	Syndicates provide opportunities to entrepreneurs who are located in regions with high-performing angel investors who have or develop a good reputation. This is accomplished by increasing access to capital and relationships for entrepreneurs through local angel investors who attract backers from outside the region with both capital and relationships to support the lead angel's investments.
Policymakers	Syndicates provide policymakers an opportunity to take actions that influence capital flows into their jurisdiction. The rise of syndicates increases the returns to having high-quality angels in the focal region. Therefore, policymakers will benefit from the careful management of levers they control to attract and retain in their jurisdiction angel investors with strong reputations.

References

Agrawal, A., Catalini, C., and Goldfarb, G. (2015) "Crowdfunding: Geography, Social Networks, and the Timing of Investment Decisions," Journal of Economics and Management Strategy (forthcoming).

Agrawal, A., Catalini, C., and Goldfarb, G. (2015) "Slack Time and Innovation," Working paper.

Agrawal, A., Catalini, C., and Goldfarb, G. (2014) "Some Simple Economics of Crowdfunding," In *Innovation Policy and the Economy*, Volume 14, Josh Lerner and Scott Stern, editors. University of Chicago Press/NBER.

Akerlof, G. A. (1970) "The Market for Lemons: Quality Uncertainty and the Market Mechanism," The Quarterly Journal of Economics, Volume 84, Issue 3, pp. 488-500.

Cabral, L. (2012). "Reputation on the Internet." In *The Oxford Handbook of the Digital Economy*, Martin Peitz and Joel Waldfogel, editors, pp. 343–354. New York: Oxford University Press.

Li, Y. and Siegel, R. (2014) "AngelList: Changing the Landscape of Investing," *Stanford Graduate School of Business* Case E-520. June 15, 2014.