UNIVERSITÀ DEL PIEMONTE ORIENTALE

International Conference

CORPORATE GOVERNANCE: SEARCH FOR THE ADVANCED PRACTICES

Keynote lecture:

Corporate governance issues in the entrepreneurial finance ecosystem: an agenda for future research

Vincenzo Capizzi, *Università del Piemonte Orientale*

February 28th, 2019 – Roma Tre University

AGENDA

- ✓ Introduction and overview
- ✓ The rising volume of seed and startup investments
- ✓ The transformation of the entrepreneurial finance ecosystem
- ✓ New ventures' governance issues
- ✓ Alternative typologies of startup investors: value adding contributions and governance issues
- ✓ Recent papers addressing significant corporate governance issues within the entrepreneurial finance ecosystem
- ✓ Promising research topics within the startup ecosystem

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Introduction and overview

- ✓ In this keynote speech, I will focus on the transformation taking place within the entrepreneurial finance ecosystem, showing data, actors – traditional ones and emerging ones – and governance issues faced by new ventures getting access to such segment of capital markets.
- ✓ Starting from an updated picture is essential to understand the relevance of the investigated phenomenon and the impact of some major evolution drivers (digitization, retailization, globalization, deregulation, sharing econony).
- ✓ I will raise some seemingly interesting research questions in this area, mainly related to the new governance challenges coming from the simultaneous co-existence of many different – and heterogeneous – kind of investors as well as connecting channels between the supply and the demand for seed funding.
- ✓ Finally, basing on a couple of recent research papers contributing to the entrepreneurial finance literature, I will present some interesting results on the effectiveness of different monitoring mechanisms and co-investment strategies.

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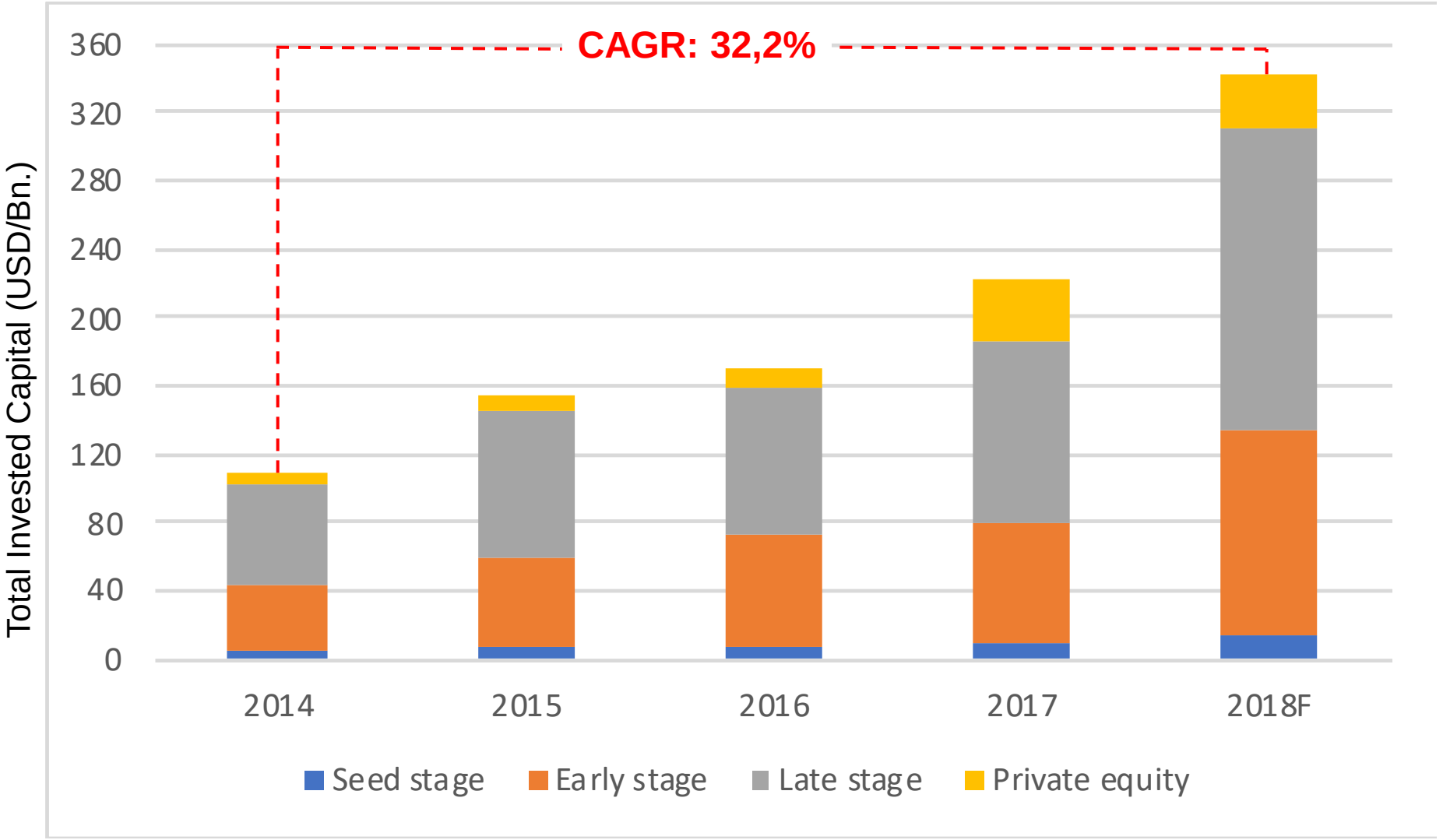
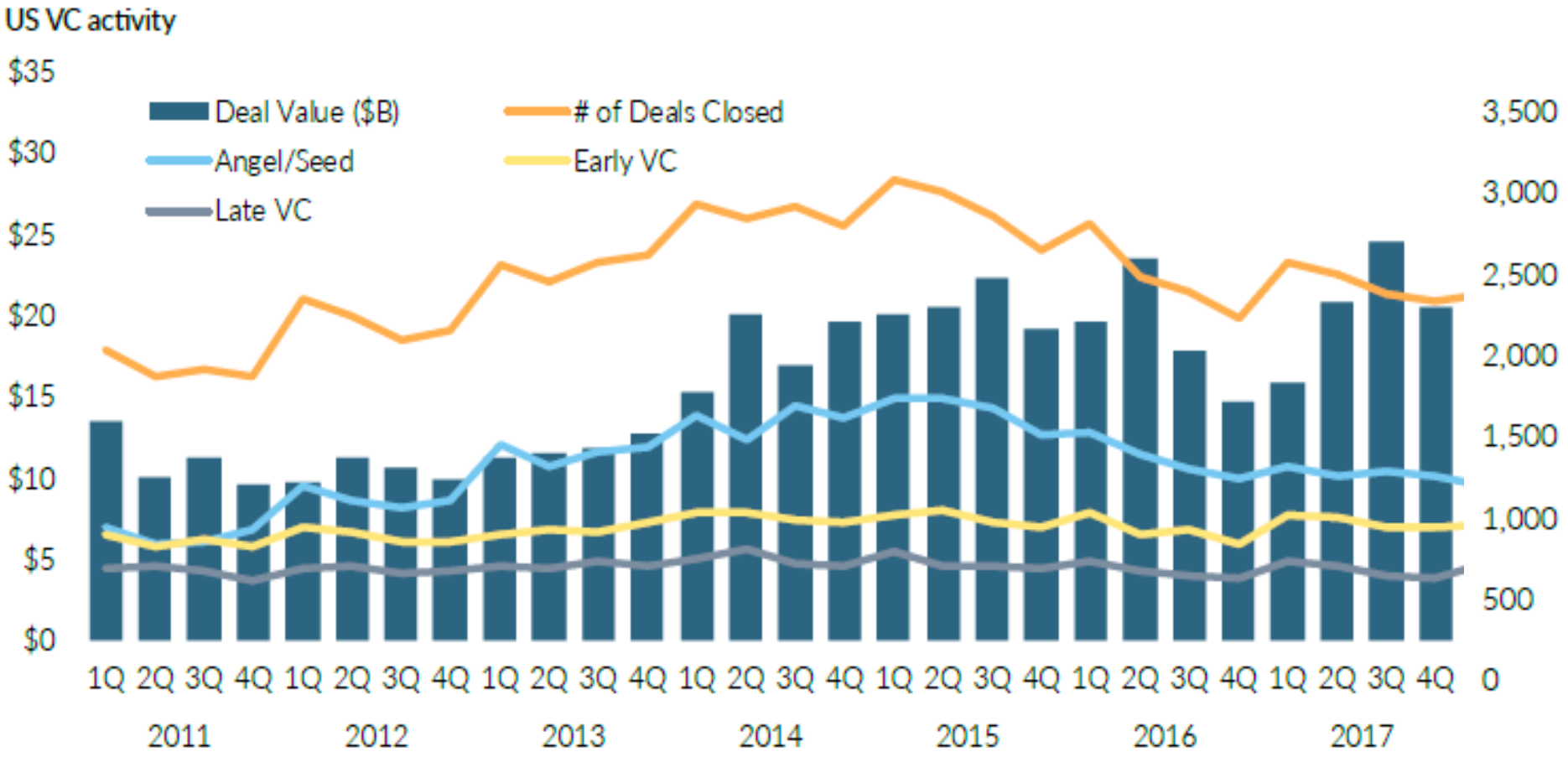
Global Venture Volume Investments



Source: Crunchbase *(2019)*

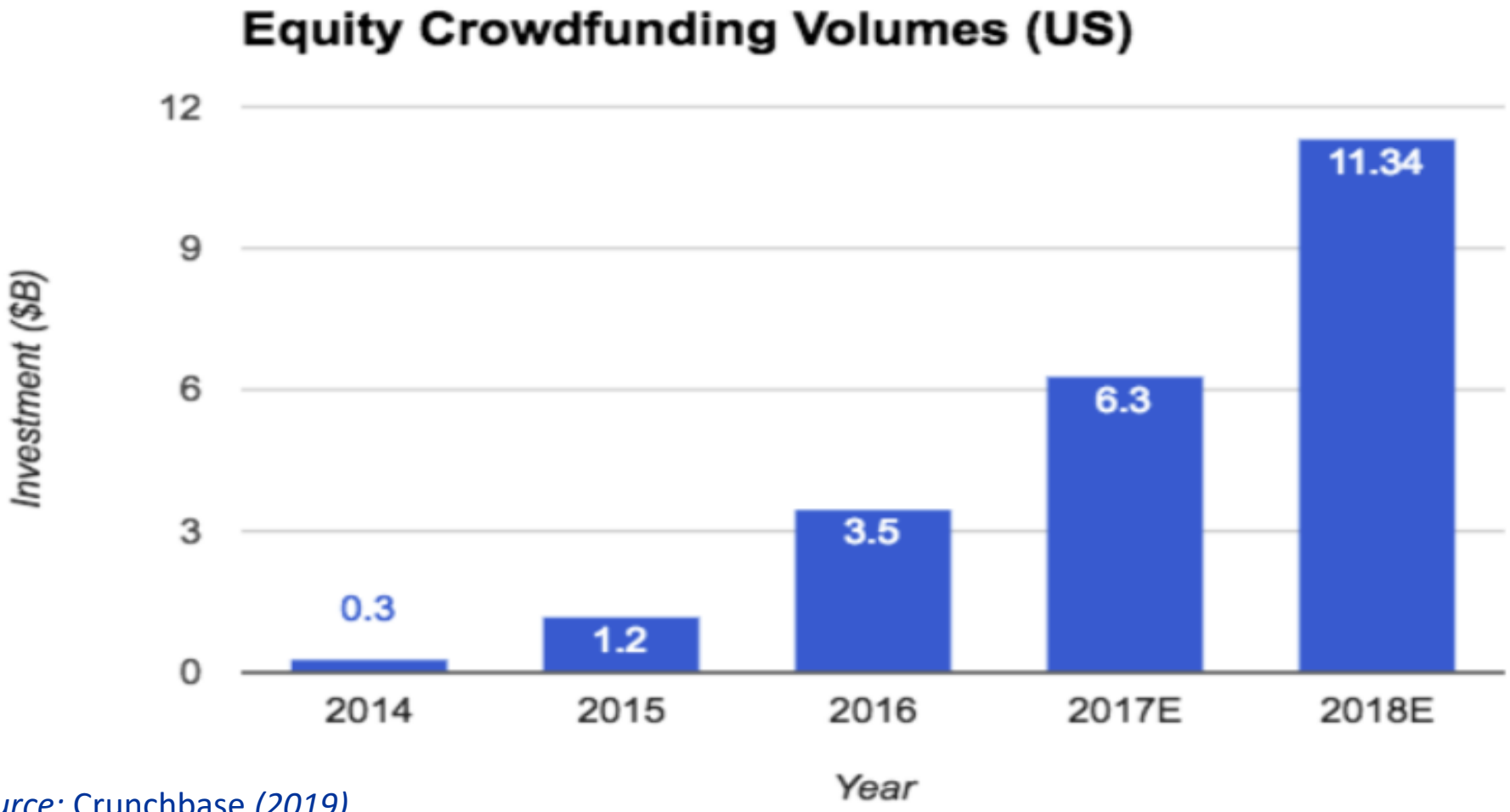
Startup Investments in USA (1/2)



Source: Pitchbook, NAVC Venture monitor *(2019)*

Startup Investments in USA (2/2)

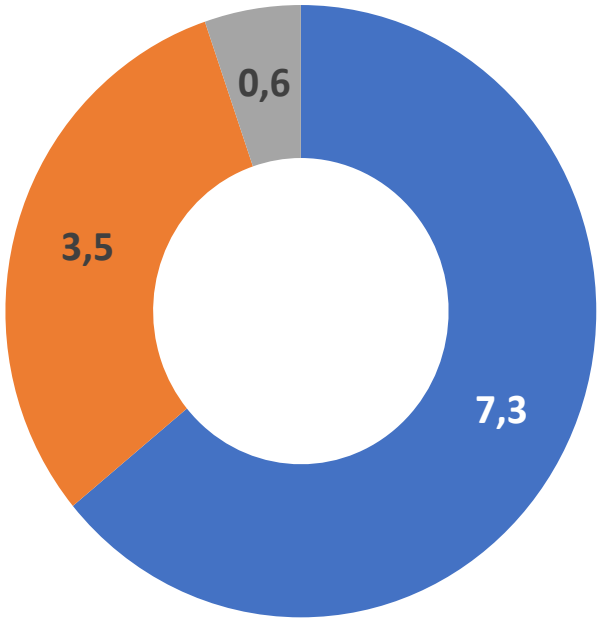
…the rising of equity crowdfunding within the entrepreneurial finance ecosystem…



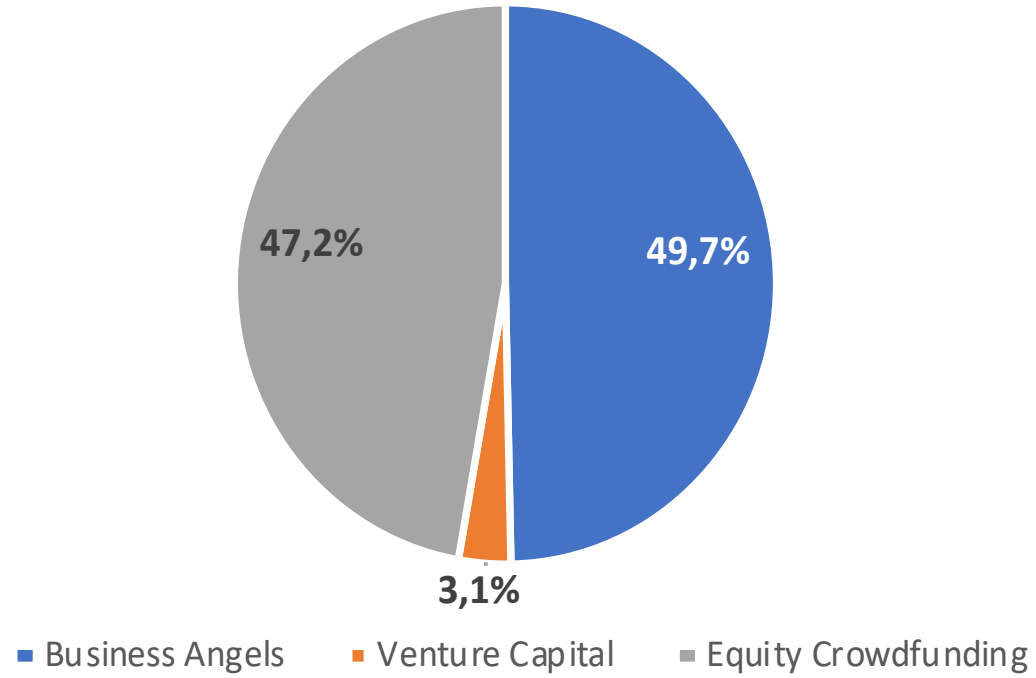
Source: Crunchbase *(2019)*

Startup Investments in Europe YE 2017

Deal volume (€ Bn.)



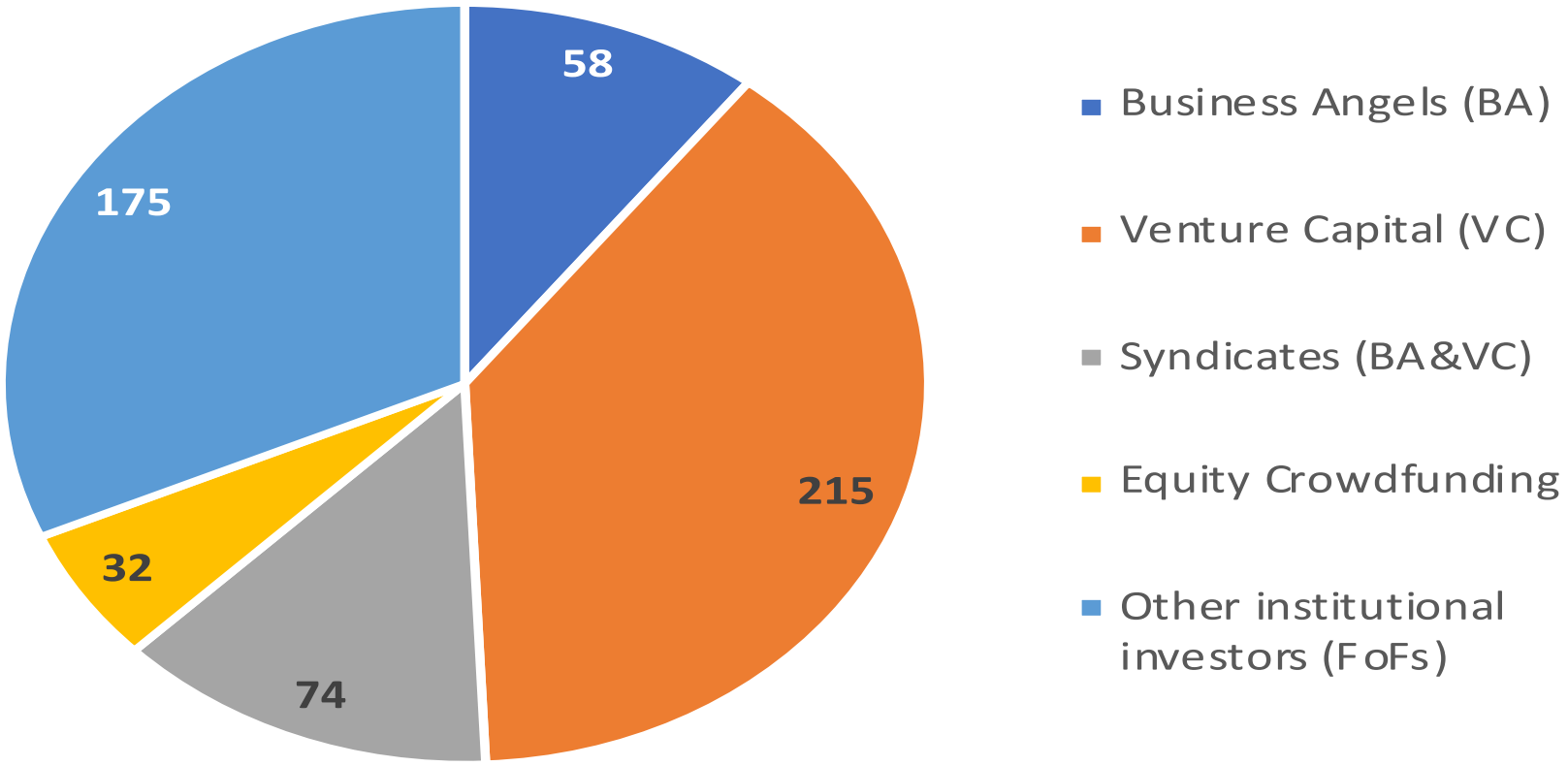
Deal numbers



Source: Pitchbook, EBAN, Dealroom.Co, Politecnico di Milano *(2019)*

Startup investments in Italy (YE 2017)

(€ m.)



Source: IBAN, AIFI, Politecnico di Milano *(2018; 2019)*

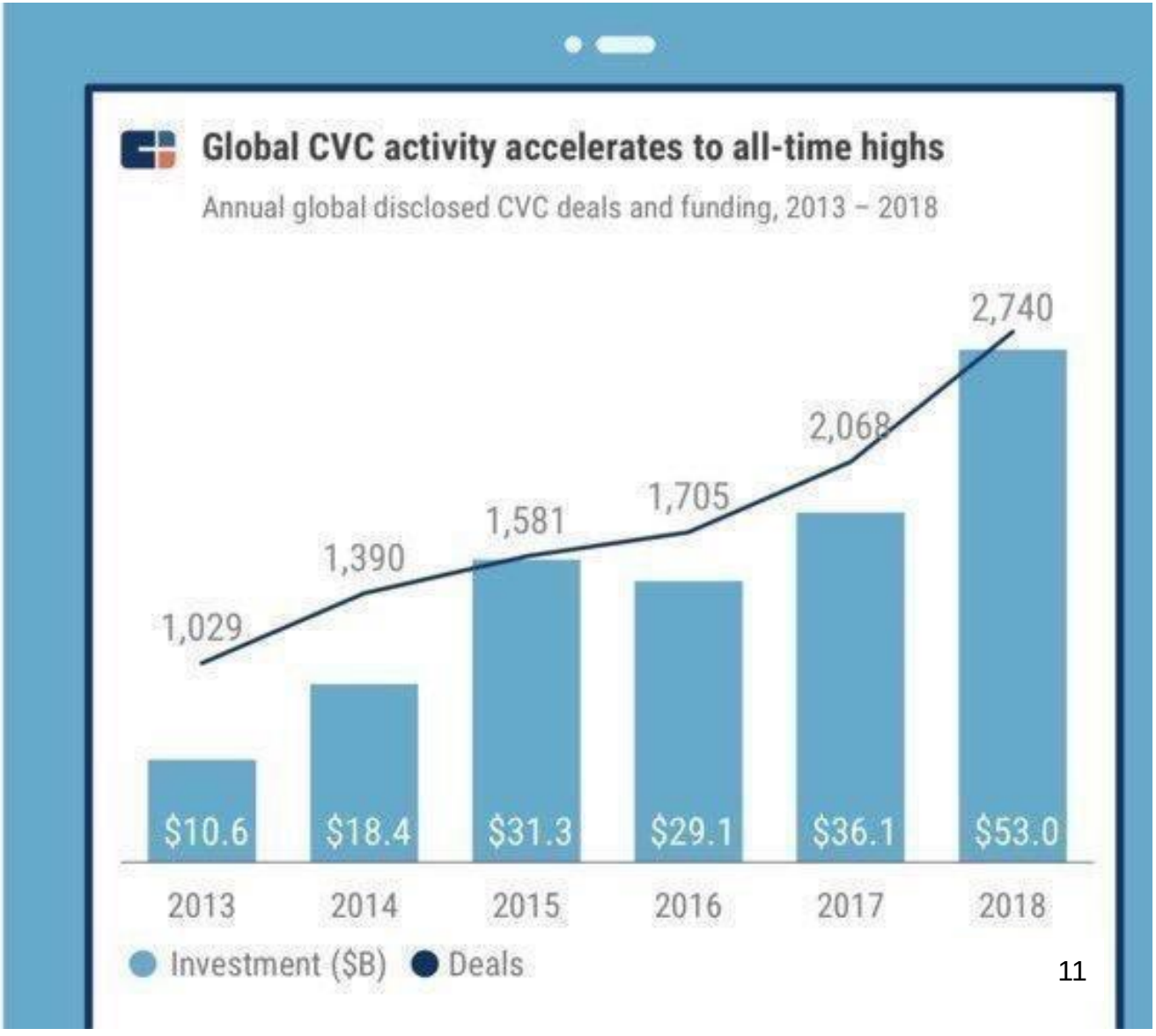
… other emerging seed and startup investors…

CVC activity surges globally

CVCs around the world participated in 2,740 global deals worth $53B in funding throughout 2018.

2018 CVC investment activity increased 32% over 2017 in terms of deals completed, and 47% in total capital invested.

The largest CVC-backed deal was a $2B round to trucking logistics company Manbang Group backed by capitalG.



Source: CBINSIGHTS (*2019)*

… other emerging seed and startup investors…

Top Performing Business Incubation programmes in the world

Capital raised: 4.7 bn. $

53 Countries

387 Locations

259 Programs

6 Regions

- North America
- Latin America
- Europe
- Asia-Pacific
- Africa
- Middle East & North Africa

Source: UBI GLOBAL (*2019)*

… other emerging seed and startup investors …

Comparison of business incubation types and features

Features / Incubation type	Investment
Incubator	N
Accelerator	Y
Pre-accelerator	N
Virtual Accelerator	Y/N
Virtual Incubator	N
Active seed / VC	Y
Coworking space +	N
Makerspace	N

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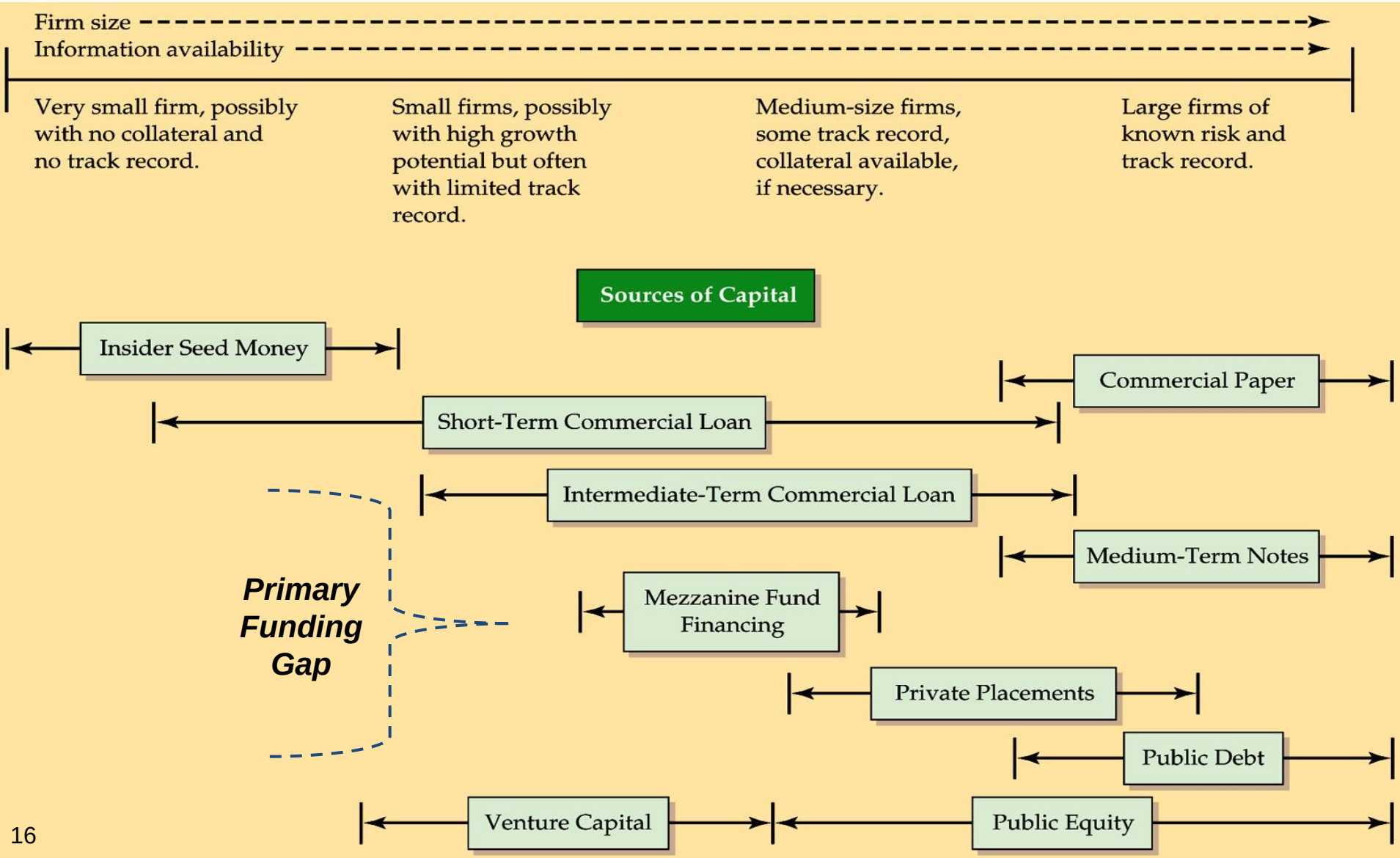
The transformation of the entrepreneurial finance ecosystem

- ✓ A wide number of contributions has addressed the theme of financial constraints for young firms and SMEs. Lack of internal cash flows and collaterals, as well as asymmetric information and agency problems, are the main reasons for the difficulties in raising external funding (Ang, 1992; Carey *et al.*, 1993; Berger and Udell, 1998; Petersen and Carpenter, 2002; Hall and Lerner, 2010).
- ✓ The entrepreneurial finance literature addresses these problems and investigates ways how startup companies can access capital for financing growth, innovation, and internationalization (Bruton *et al.*, 2015; Fraser *et al.*, 2015; Landström and Mason, 2016; Bellavitis *et al.*, 2017; Block, Colombo, Cumming and Vismara, 2017; Bonini and Capizzi, 2017; Bessiére, Stèphany and Wirtz, 2018; Bonini and Capizzi, 2019 *forthcoming*).
- ✓ Venture capital (VC) has traditionally been advocated as a major source of financing for new ventures that find it difficult to access bank or debt finance (Sahlman, 1990; Gompers, 1995; Lerner, 1995; Black and Gilson, 1998; Hellmann and Puri, 2000; Gompers and Lerner, 2001, 2004; Bruton *et al.*, 2005; Chemmanur *et al.*, 2011; Kaplan and Lerner, 2017).

Companies' life cycle and financing sources: the traditional «pecking order» framework

[Berger and Udell (1998)]



The transformation of the entrepreneurial finance ecosystem

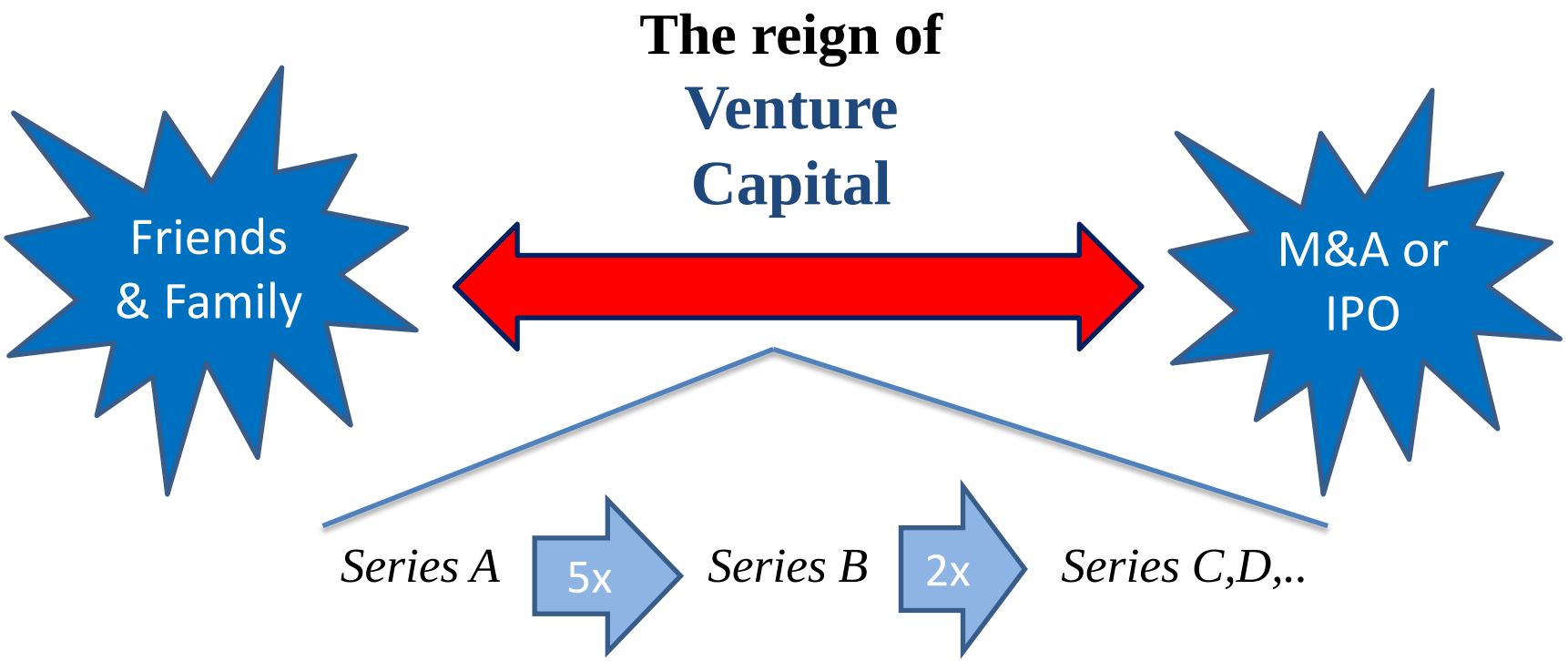
- ✓ The landscape for entrepreneurial finance has been dramatically changing over the last few years: **new actors** and **financing instruments**, focused **policy initiatives** alongside with the increasing **digitization of finance**, have been contributing disclosing both new fundraising opportunities and different growth trajectories for new ventures.
- ✓ Factors affecting and differentiating new ventures' growth paths:
  - ❑ **Business scalability**
  - ❑ **Primary funding gap**
  - ❑ **Geographical scope potential**
- ✓ A new stream of literature rose to investigate the major changes transforming the early stage financing industry, the strengths and weaknesses of its major players, the relationships across each others and their impact on new ventures' governance and growth paths (Lerner *et al.*, 2016; Hellmann *et al.*, 2017; Walmeroth *et al.*, 2018; Bonini and Capizzi, 2019 *forthcoming*).

The transformation of the entrepreneurial finance ecosystem

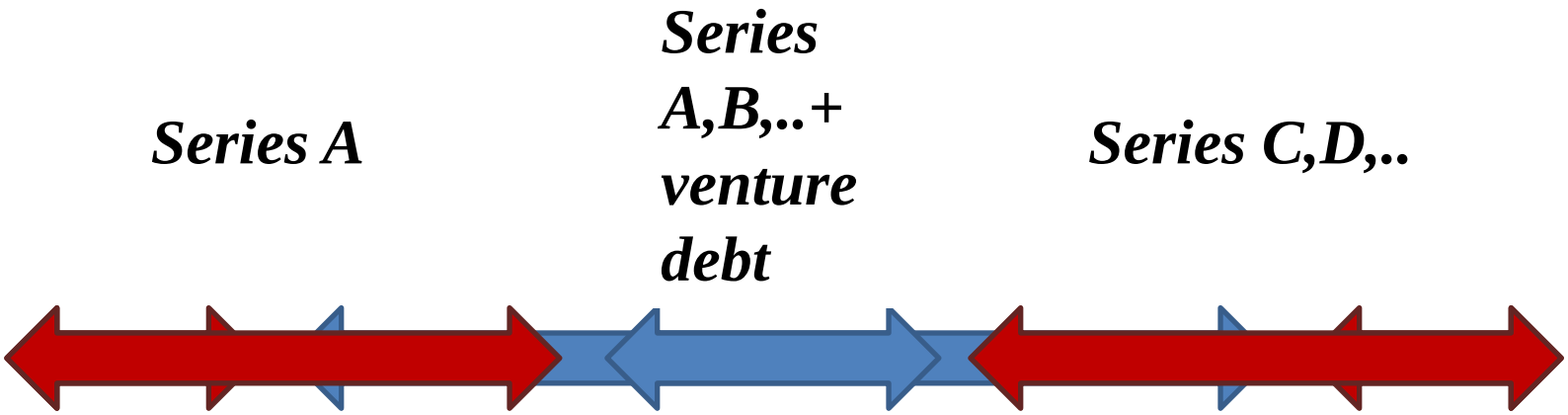
Stage	Pre-seed	Seed/Start-up	Initial growth	Expansion
Supply	Founders Crowdfunding platforms Incubators/Accelerators	Business Angels		Venture Capitalists
Demand activities	Business planning	Prototyping, technological development, sales and marketing		Market strategy, focused geographical spread-out
Capital need (€)	10k	55k	100k	200k ... 500k 1m 1.5m 2m
Supply-demand=gap		Primary funding gap		Secondary funding gap

- ✓ Is it reasonable to assume the existence of a **sequential temporal growth path** available to all startup companies? Will all startups ask for venture capital? Will all startups ever get ready for capital markets (IPOs)?
- ✓ Do incoming (different types of) investors **complement** or **substitute** the already existing ones? What are the differential governance implications coming from any possible combinations of shareholders bases?

The equity funding chain: yesterday…



The equity funding chain: … today



Seed Ecosystem

- Business Angels
- Business Angels Groups and Funds
- Corporate venture capitalist
- Accelerators
- Incubators
- Science/Tech Parks
- Crowd sourcing
- Family offices
- Funds of funds (cfr. “Industria 4.0”)
- Direct investments

Growth Ecosystem

- Equity joint-ventures & M&A
- Public equity (IPO)
- Private placements
- Mutual funds
- Pension Funds
- Co-investments
- Direct investments
- Mezzanine Debt
- Public Debt (Bonds)
- Private Debt (Banks)

The transformation of the entrepreneurial finance ecosystem: Uber as a case study

$200K / Seed *Aug 1, 2009*
Garrett Camp
Travis Kalanick

$1.25M / Angel *Oct 15, 2010*
First Round (Lead)
Alfred Lin
Babak Nivi
Cyan Banister
David Cohen
Founder Collective
Jason Calacanis
Jason Port
Josh Spear
Lowercase Capital
Mike Walsh
Mitchell Kapor
Naval Ravikant
Oren Michels
Scott Banister
Shawn Fanning

$11 M / Series A *Feb 14, 2011*
Benchmark (Lead)
Alfred Lin
First Round
Innovation Endeavors
Lowercase Capital
Scott Banister

$37 M / Series B *Dec 7, 2011*
Menlo Ventures (Lead)
Benchmark
Bobby Yazdani
CrunchFund
Data Collective
Goldman Sachs
Jeff Bezos
Nihal Mehta
Signatures Capital
Summit Action Fund
Troy Carter
Tusk Ventures

$258 M / Series C *Aug 23, 2013*
Google Ventures (Lead)
TPG Growth
Benchmark

$1.2 B / Series D *Jun 6, 2014*
Fidelity Investments (Lead)
BlackRock
Google ventures
Kleiner Perkins Caufield & Byers
Menlo Ventures
Sherpa Capital
Summit Partners
Wellington Management

$1.2 B / Series E *Dec 4, 2014*
Lone Pine Capital
New Enterprise Associates
Qatar Investment Authority
Sherpa Capital
Valiant Capital Partners

$600 M / Series E *Dec 16, 2014*
Baidu

$1.6 B / Debt Financing *Jan 21, 2015*
Goldman Sachs

$1 B / Series E *Feb 18, 2015*
AITV (Accelerate IT Ventures)
Foundation Capital
HDS Capital
Times Internet

$1 B / Series F *Jul 31, 2015*
Bennett Coleman and Co Ltd
Microsoft
Microsoft Corp. - Strategic Investments

$100 M / Private Equity *Aug 19, 2015*
Tata Opportunities Fund

$200M / Private Equity *Feb 12, 2016*
LetterOne

$3.5 B / Private Equity Jun 1, 2016
Saudi Arabia's Public Investment Fund

$1.15 B / Debt Financing Jul 7, 2016
Morgan Stanley (Lead)
Barclays PLC
Citigroup
Goldman Sachs

From 2009 to 2016:

more than $ 12 bns. raised by 97 investors in 15 rounds, of which:

- 1 family & friends round,
- 1 angel round,
- 8 venture rounds,
- 3 private equity rounds
- 2 debt financing rounds

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Major governance challenges faced by startups (1/2)

In the last two decades many scholars investigated the topic of how new ventures face and solve the major corporate governance issues, identifying the most common solutions undertaken by venture-backed firms [Fried, 2005; Davila and Foster, 2005; Filatotchev et al., 2006; Cumming, 2008; Broughman, 2010; Cumming and Johan, 2013; Larcker and Tayan, 2018]

Separation between ownership and control in startups

- ✓ The owners (founders and investors) in startups are generally all represented in the board of directors, at least initially [a typical startup board will have one or two founders, one or two investors, and rarely an independent director].

Board sensitivity to institutional investors and stockholders' expectations

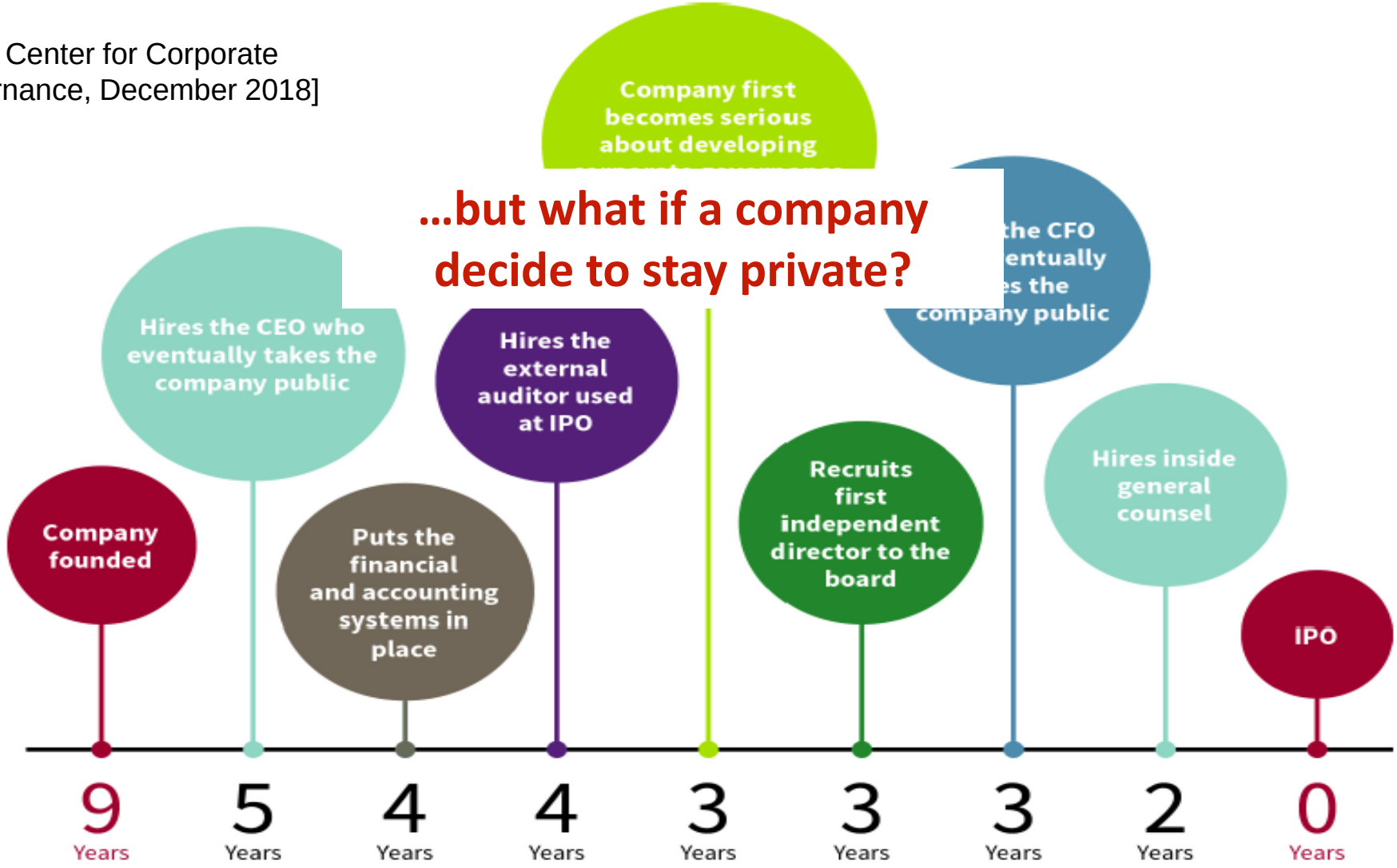
- ✓ The typical board of a startup is unaffected by "short termism" coming from capital markets or by the "voice" of institutional investors [Gow, Shin and Srinivasa, 2016; Coffee and Palia, 2016].

Corporate board duties

- ✓ Startups' boards are extremely focused on growth and current operations [boards of public companies will typically have more oversight, regulatory and compliance duties].

Major governance challenges faced by startups (2/2)

[Rock Center for Corporate Governance, December 2018]



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The entrepreneurial ecosystem and its contribution to new ventures' governance issues

- ✓ In the startup ecosystem there are many and heterogenous investors, each one implementing peculiar governance mechanisms when acquiring equity-stakes in new ventures.
- ✓ From a research standpoint, there are many possible investigation areas related to the strengths and weaknesses associated to each type of investors.
- ✓ Basing on extant literature, I will focus on **business angels**, **crowdinvestors**, **venture capitalists** and **mutual funds** making direct investments in statups, showing for each of them the peculiar contribution delivered as for corporate governance issues and the related impact on the investee firms' performance.
- ✓ Future research could try to raise data on startups backed by other actors (Incubators, science parks, accelerators, alternative investment funds, syndicate of different actors) and to investigate the differential kind of contributions brought to solve governance issues.

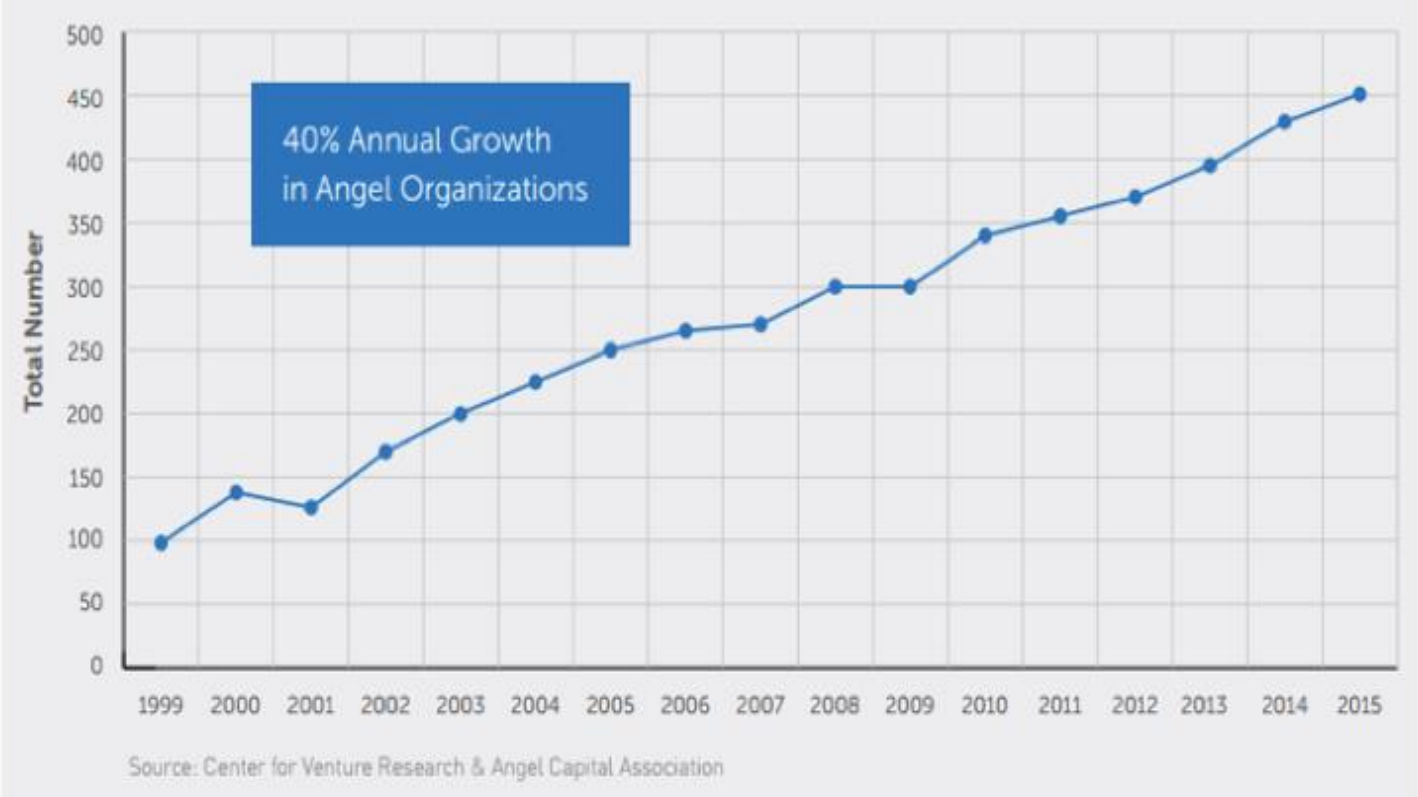
The informal investors (1/4)

- ✓ BAs are high net worth or affluent individuals, acting alone or in formal or informal syndicates, who invest their **own money** in small unlisted companies with which they have no family connections, typically assuming a minority equity stake, as well as becoming actively involved in portfolio companies (Harrison and Mason, 1992; Mason, 2008).
- ✓ Alongside capital injection, BAs provide valuable **non-monetary resources**, such as industrial knowledge, management experience, mentoring, and personal networks (Harrison and Mason, 1992; Landström, 1993, Politis, 2008; Capizzi, 2015; Avdeitichikova and Landström, 2016).
- ✓ Regarding their decision making processes, BAs are highly selective in their investment decisions, which are mostly related to the **perceived quality** of both the entrepreneur and the management team (Van Osnabrugge, 2000; Sohl, 2007; Mason, et al., 2016).
- ✓ However, in the due diligence and valuation of investment opportunities, their screening process gives a relevant role to **personal and informal sources** over formal **sources of information**, thus bringing subjectivity, personal relations and qualitative nonfinancial information to the investment decisions (Ibrahim, 2008; Harrison and Mason, 2017; Capizzi et al., 2018).

The informal investors (2/4)

- ✓ Another unique feature of the angels' operations is the method used for their investment's monitoring, which is based on what Capizzi et al. (2018 JCF; 2019 JBF) refer to as "**soft-monitoring**" mechanisms.
- ✓ Different from contractual-based monitoring mechanisms typically used by venture capitalists the monitoring mechanisms preferred by angel investors are **non-aggressive** and informal control mechanisms based upon a close post investment involvement in the relevant company through **company visits**, **interactions** with entrepreneurs, and other control techniques based on **trust** (Van Osnabrugge, 2000; Wiltbank and Boecker, 2007; Ibrahim, 2008; Wong et al., 2009; Goldfarb et al., 2013; Bonini and Capizzi, 2016).
- ✓ Furthermore, the small amount of formal control is beneficial to the development and the duration over time of a trust-based relationship between the angel investor and the entrepreneur. This, in turn, could make it easier to involve venture capitalists and other institutional investors: many contributions find evidence of the **scarce appetite of formal equity investors for target companies with complex underlying contractual relationships between the entrepreneur and a business angel** (Ibrahim, 2008, Landström and Mason, 2016, Hellmann et al., 2017).

The informal investors (3/4): the rising of Angel Investment Organizations (AIOs)



- ✓ AIOs provide many different advantages to their members (Paul and Whittam, 2010; Mason et al., 2013Lahti and Keinonen, 2016)
- ✓ Among the others, by sharing the cost of due diligence, contract designing, negotiating and closing, as well as the post investment monitoring costs, AIOs contribute to the improvement of the governance procedures within the angel-backed companies.

The informal investors (4/4)

Business Angels' governance issues

- ✓ Relying on informal investors might lead entrepreneurs to be exposed to idiosyncratic funding risks either because the BAs themselves might be affected differently by idiosyncratic liquidity shocks over time than formal investors are or because BAs may change their opinions more frequently about what projects to fund (Kerr et al., 2014).
- ✓ Additionally, angels might not be prepared to invest in truly radical high-growth projects since they are usually more risk averse than institutional investors are due to the angels' assumed lower portfolio diversification (Lerner et al., 2016).
- ✓ They are also not supposed to have the required professional expertise to evaluate/monitor disruptive technologies or complex ventures operating in many different industries (Mason and Harrison, 2004; 2008).

Crowdfunding (1/4)

- ✓ The most recent innovation within capital markets and particularly within the entrepreneurial ecosystem is the possibility of raising funds through equity crowdfunding campaigns [Lambert and Schwienbacher, 2010; Belleflamme et al., 2013; Harrison, 2015; Cumming et al., 2016; Giudici, 2016; Pichler and Tezza, 2016; Cumming and Hornuf, 2018; Signori et al., 2018; Wallmeroth et al., 2018].
- ✓ KickStarter, Pebble Smartwatch, Indiegogo and Crowdcube are just some examples of the most known and active internet-based online platforms
- ✓ Many platforms try to adequately manage information asymmetries by the following methods: performing **screening activity**; **extracting** and disclosing **signals** to the market—such as, for example, the campaigners' social capital and reputation; providing **sophisticated investors** with exclusive access to investment opportunities; stimulating **syndicated investments**; **monitoring** the development of funded projects on a regular basis; **deferring** the money transfer to entrepreneurs; and providing investors with **risk management contracts** hedging specific risks.
- ✓ To date, little is known regarding the crowdfunding campaigns' performance and the determinants of success and the investment decision-making process of the crowd.

Crowdfunding (2/4)

- ✓ Bonini, Capizzi, Giudici and Pavesi (2019, forthcoming) are comparing for the tirst time the differential impact of trust-based informal monitoring mechanism on the performance of a sample of both angel-backed and crowded-backed companies.

Crowdinvestors' governance issues

- ✓ First, a crowdfunding campaign may fail to reach its funding target, which could also lead to increased difficulty in obtaining access to other segments of the capital markets.
- ✓ Second, given that crowdinvestors are usually less sophisticated and inexperienced investors, when performing due diligence and screening the investment opportunities, they may not invest based on the same amount of background experience or with the expertise of professional investors, such as venture capitalists or angel investment organizations (**selection bias**).
- ✓ Third, in some cases, an apparently successful campaign may lead to overfunding, meaning the capital raised is well above the funding goal: a possible effect is that an apparently successful crowdfunding campaign does not necessarily evolve into a successful business.

Crowdfunding (3/4)

Crowdinvestors' governance issues

- ✓ As a fourth problem affecting crowdfunding, the lack of experience, business and financial knowledge as well as a lack of a network of relations may generate a competitive disadvantage against VCs and BAs also in the post-investment phase because of the **lower non-monetary contributions** the backers may provide to the target companies, thus impacting the company's value creation path.
- ✓ Additionally, the crowd may not have the adequate **background** and **cognitive orientation** required to understand and select radically innovative projects (which is not a problem of information asymmetry).
- ✓ Sixth, investors might be exposed to significant **liquidity risks** due to the lack of an officially regulated secondary market.
- ✓ **Furthermore, it's truly costly identifying the right contracts required to realign different incentives of entrepreneurs and a multitude of crowdinvestors (due to the limited ticket size of the investment).**
- ✓ A final issue is the possible **plagiarism risk** that has emerged from the internet-based, public nature of crowdfunding (it is not always possible to protect with patents or to enforce property right mechanisms for every product or idea posted in a web platform).

Crowdfunding (4/4): Fraud and Regulation

- ✓ One of the major issues potentially affecting crowdfunding campaigns is **fraud** (hiding the true financial status of the funded venture or using the money raised for purposes different from those disclosed to the backers o pursuing money laundering goals).
- ✓ In the case of crowdfunding, given the limited ticket size of a given campaign, it would be too expensive for issuers to sustain the compliance costs of a fully applicable ordinary securities regulation
- ✓ Therefore, in the last few years we have been experiencing across the world alternative regulatory measures ultimately aimed at incentivizing equity crowdfunding by relaxing the rigor of ordinary securities regulation (Pope, 2011; Weinstein, 2013; Armour and Enriques, 2018).
- ✓ However, in Europe there is a great deal of flexibility for platforms in setting the appropriate screening mechanisms, thus leading to significant heterogeneity among platforms in terms of operations, contract designing and offering procedures.
- ✓ In low regulated environments (China) the platforms failed to both perform their screening role and to disclose adequate levels of information on the quality of the listed ventures to the backers (Liang, 2015; Lin, 2017)

Venture Capital (1/2)

Also in the case of private venture-backed companies low quality corporate governance systems might give rise to some relevant issue (Epstein, 2018).

1) The "Unicorn" phenomenon and its governance consequences

- ✓ These companies often keep minimum (and insufficient) governance standards: they look increasingly like a public company, though lacking of adequate board representation, accountability and internal controls.

2) Conflict of interests and the dual fiduciary conflict

- ✓ The problem stems from the "two hats" worn by VCs sitting on venture-backed company boards: they owe a duty both to the VC fund and to the portfolio company. Listed company solve the issue through specific structural protections.

3) Supermajority voting structures

- ✓ Dual class share structures giving founders more control vis-à-vis investors [Snapchat in 2017 run an IPO with a triple class share structure, providing no voting power to public shareholders!].

Venture capital (2/2)

- ✓ In the last two decades many scholars investigated the issue of how new ventures face and solve the major corporate governance issues, identifying the most common solutions provided by venture capitalists [Fried, 2005; Davila and Foster, 2005; Filatotchev et al., 2006; Cumming, 2008; Broughman, 2010; Cumming and Johan, 2013; Larcker and Tayan, 2018]
- ✓ VCs basically adopt **contractual-based mechanisms** aimed at realigning different incentives of entrepreneurs and investors, which cannot be **complete** (Aghion and Bolton, 1992).
- ✓ As a result, the allocation of **board seats** become important; however, when the VC control the board there might be some risks for the entrepreneurs (Fried and Ganor, 2006)
- ✓ Adding an **independent director** to the board allow an alternative: control of the board can be shared with an independent director acting as the tie-breaking vote (Broughman, 2010; Larcker and Tayan, 2018)..

Direct investing

- ✓ A further category of emerging players is constituted by **institutional investors undertaking direct investments in small unlisted ventures**, and therefore bypassing the traditional closed-end fund structure of venture capital and private equity funds.
- ✓ This way, open-end mutual funds can save on the management and performance fees charged by the traditional VC (closed-end fund structure).
- ✓ However, such an investment strategy implies financial and nonfinancial capabilities in the selection phase as well as in the monitoring phase during the holding period; therefore, to build a truly skilled and legitimated internal investment team, there are significantly higher in-house costs to be sustained.
- ✓ Fang et al. (2015) found that direct investments in start-up companies underperform when compared to the performance achieved by a wide sample of venture capital funds: the asset managers lack the VCs' focused skillset
- ✓ Chenernko et al. (2017), focusing on traditional corporate governance provisions (cash flow rights, voting and control rights, board representation mechanisms), found that mutual funds provide much fewer governance services than traditional closed-end venture capital funds do.

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Angel network affiliation and business angels' investment practices

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Contribution

- ✓ In this paper we compare investment practices of independent business angels to those of business angels associated joining an angel investment organization (group or network).
- ✓ In particular we look at whether and how being member of a semi-formal organization affects the size and magnitude of angels investments.
- ✓ Our paper is one of the first to use an extensive data set obtained from repeated annual surveys on a country angel market.

Research hypotheses

1. **BAN membership** increases the amount invested by each business angel and decreases the equity stake in the target company
2. Both amount invested and equity stakes are negatively affected by the **co-investment intensity**
3. **Soft monitoring** (not based mainly on contractual mechanisms) and **passive** (hands off) **investments** are attenuated by BAN membership

Data (1/2)

- ✓ Unique proprietary dataset obtained from sequential surveys administered by **IBAN** (Italian Business Angels Network) to its associates and other unaffiliated BAs.
  - ❑ Painstaking effort of identifying the "true" population of angels by browsing in the "invisible market" of informal venture capital:
    - "Snowball sampling" leveraging on BAN members' connections

      +
    - Isolation of domestic young SMEs and VC-backed companies
    - Estimation of possible angels by looking at shareholders data on startups and SMEs (obtained from BVD Amadeus/AIDA/Orbis)
    - Shareholders identified as "angel" if three conditions are met:
      - repeated investor
      - non-executive role
      - non-majority ownership

Data (2/2)

- ✓ Unique proprietary dataset obtained from sequential surveys administered by **IBAN** (Italian Business Angels Network) to its associates and other unaffiliated BA

	Surveys sent	Surveys received	Final surveys sample	# of deals reported	Unique investors	Unique companies
Overall sample	3.000	1.250 (41.7%)	439 (14.6%)	810	330	619
BAN Members	929	438 (47.2%)	246 (26.5%)	438	150	334
Non-BAN members	2.071	812 (39.2%)	193 (9.3%)	372	180	285

- ✓ Responses coming from 2009 (on 2008 investment year) to 2015 (2014 investment year) annual surveys.
- ✓ Sample size is significantly larger than comparable papers

Methodology: unit of analysis

- ✓ Our unit of analysis is the **amount of risk capital invested by business angels**, measured by two different metrics:
  - ❑ the amount of capital invested as a share of a single business angel's personal wealth ("***WEALTH%***");
  - ❑ the amount of capital invested as a share of the equity capital of the investee company ("***PARTICIPATION%***").

Descriptive statistics: dependent variables

Dependent variable = *Wealth%*	Total sample	BAN members	Non-BAN members
Mean	15.48	17.09***	13.67
Median	14	14***	8
Maximum	60	60	60
Minimum	5	5	5
Standard deviation	11.8	13.13	9.8
No. observation	669	354	315
Dependent variable = *Participation%*			
Mean	14.74	14.87	14.59
Median	8	8***	4
Maximum	100	100	100
Minimum	1	1	1
Standard deviation	19.54	18.3	20.93
No. observation	808	436	372

Descriptive statistics: independent variables

	Description	Obs.	Mean	Std.Dev.	Min	Max	Dummy=1 percentage
BAN_membership	Dummy =1 if the BA is a BAN member	810	-	-	-	-	54.1
Co-investors	Number of co-investors	809	4.3	4.99	0	15	-
Passive Investor	Dummy =1 if the investment is exclusively driven by capital gain motivations	668	-	-	-	-	22
Monitoring	Ordinal variable ranging from 1 to 5, where 1 means monitoring very low or absent and 5 means monitoring very high, with a constant presence in the firm	668	2.75	1.25	1	5	-
Angel specific controls							
Age	Age of the BA	668	48.32	9.4	28	71	-
Education	Dummy = 1 if the BA holds a high school diploma or a lower educational qualification	668	-	-	-	-	6.7
Wealth (in euro)	BAs' financial wealth in the year of the investment	669	1,480,682	1,515,290	250,000	7,500,000	-
Entrepreneur	Dummy =1 in case of prevalent working occupation as entrepreneur (excluding his/her involvment in the invested companies)	668	-	-	-	-	37.7
Manager	Dummy =1 in case of prevalent working occupation as manager (excluding his/her involvment in the invested companies)	668	-	-	-	-	16.8
Experience	Number of BA' investments in lifetime	668	6.36	4.01	0	26	-
Firm specific controls							
Net_Asset_Value (in euro/th.)	Enterprises' net asset value in the year of the BA's investment (pre-money)	806	1,389.67	2,281.66	20.08	8,928.57	-
Seed	Dummy = 1 if the BA has invested in a seed enterprise	810	-	-	-	-	35.7
Foreign	Dummy = 1 if the BA has invested in a foreign enterprise	711	-	-	-	-	12.1
Industry controls							
Industry PBV	Industry price-to-book value, in the investment year	810	3.05	1.36	0.71	8.62	-
Net capex/Sales	Industry net capital assets to sales, in the investment year	810	0.8	3.18	-4.47	22.96	-

Methodology: regressions

- ✓ We run – over the full sample and over the two separate sub-samples of BAN members and non BAN members - the following OLS regressions (including firm specific controls, industry controls and time fixed effects):

First metric:

WEALTH% = f (BAN_MEMBERSHIP, CO-INVESTORS, PASSIVE_INVESTOR, SOFT-MONITORING, AGE, EDUCATION, WEALTH, EXPERIENCE, ENTREPRENEUR, MANAGER)

Second metric

PARTICIPATION% = f (BAN_MEMBERSHIP, CO-INVESTORS, PASSIVE_INVESTOR, SOFT-MONITORING, AGE, EDUCATION, WEALTH, EXPERIENCE, ENTREPRENEUR, MANAGER)

Results – dep. var. *WEALTH%* (1/2)

	Whole Sample		BAN Member	Non-BAN Member
Independent Variables	(1)	(2)	(3)	(4)
BAN_membership	0.125**	0.155***		
	(0.05)	(0.05)		
Co-investors	-0.021***	-0.017***	-0.035***	-0.007
	(0.00)	(0.01)	(0.01)	(0.01)
Pa				**
		(1.08)	(0.25)	(2.08)
Soft-Monitoring		0.054*	-0.053	0.154***
		(1.92)	(1.62)	(4.60)

Angel communities seem to be able to decrease and distribute the need for individual monitoring while increasing member confidence in the investments.

Results – dep. var. *PARTICIPATION%* (1/2)

	Whole Sample		BAN Member	Non-BAN Member
Independent Variables	(1)	(2)	(3)	(4)
BAN_membership	-0.163**	-0.139*		
	(0.07)	(0.07)		
Co-investors	-0.089***	-0.067***	-0.075***	-0.069***
	(0.01)	(0.01)	(0.01)	(0.01)
Passive Investor		-0.186**	-0.262**	-0.264***
		(0.08)	(0.13)	(0.09)
Soft-Monitoring		0.214***	0.116**	0.287***
		(0.04)	(0.05)	(0.06)

Conclusive remarks and suggestions for future research

- ✓ BAN membership has a meaningful effect on investments practices increasing angels propensity to invest more of their wealth.
- ✓ BAN members invest more but acquire smaller equity stakes. Diversification effect following greater access to deals.
- ✓ Co-investments in BANs reduce capital commitments and investment sizes.
- ✓ **BAN membership mitigates the effects on investment practices of** angel-specific factors such as passive attitude to investment and **soft monitoring attitude**.

- ❑ First work on BANs and angel groups.
- ❑ Results are likely to apply globally but significant potential for cross-country comparisons & extensions.
- ❑ Increasing interest on research on business angels by major finance journals.

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The performance of angel-backed companies☆

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Motivation and contribution

- ✓ We propose a **novel performance metric** that captures the time-series evolution of early stage companies.
- ✓ **Using a unique database of 111 angel-backed companies that received angel investments between 2008 and 2012 and at least 3 years of post-investment financial data, we provide first-time evidence of the post-investment performance and survivorship profile of angel-backed companies.**
- ✓ We show that the performance and the probability of survival of investee companies are positively affected by the **presence of angel syndicates** and negatively related to the **intensity of angel monitoring** and the **structure of equity provision**.
- ✓ We perform several **endogeneity tests**, including: alternate clustering&fixed effects strategies, control function methods, dynamic regressions.

Research design and hypotheses development (2/5)

		Distribution of ordinal value in T0 to T3				
Description	Value	T0	T1	T2	T3	Total by value
Net asset value, Net income and Revenues are positive	2	20	20	30	21	91
Net asset value and revenues are positive but net income is negative	1	47	41	50	41	179
Both net asset value and net income are negative but revenues are positive	0	3	8	9	20	40
Net asset value is positive revenues are equal to zero and net income is negative	-1	8	31	12	3	54
Both net asset value and net income are negative and revenues are equal to zero	-2	2	1	10	3	16
Number Firms with incomplete info for the year		31	10	0	23	64
Observation by year		111	111	111	111	444

- -2: Null/limited probability of survivorship
- 0: Question mark...
- +2: High probability of survivorship

Research design and hypotheses development (3/5)

Independent Variables

1. The role of co-investments

- ✓ A company being funded by a syndicate of angels can leverage on a wider set of both **pecuniary** (size of funding, lower cost of debt, follow-on investments) and **non pecuniary** (multiple sources of coaching, mentoring, industrial knowledge, previous entrepreneurial/managerial experience, relationship network) **benefits**

H1: ***The performance of angel-backed companies is positively affected by the presence of co-investors joining simultaneously a given deal***

2. The role of business angel networks

- ✓ The membership of its informal investors to a BAN benefits the angel–backed companies mainly through the ***information and knowledge sharing*** effect taking place inside the community.
- ✓ The quality of the post-involvement contribution given to the investee companies is enhanced by BAN membership (Wiltbank et al. 2009; Bonnet et al., 2013)

H2: ***The performance of angel-backed companies is positively affected by membership of BAs in a given BAN.***

Research design and hypotheses development (4/5)

Independent Variables

3. The role of the equity infusion pattern

- ✓ It is frequent to observe that **the capital injection is not completed all at once in a single investment round**, but it is fractioned in two or more cash outs and deferred within a period of 12 months: we can not talk about "stage financing", rather about a phenomenon related to (i) disposable financial wealth or (ii) information-gathering aims or (iii) other behavioral issues.

H3: ***The performance of angel-backed companies is negatively affected by a temporally deferred equity infusion pattern***

4. The role of business angels' active/passive involvement

- ✓ An active involvement post investment is one major driver of BAs' investment decision making process (Mason, 2006; Politis, 2008) and, because of that, should be associated with the highest performance percentile of the investigated sample of angel-backed companies.

H4: ***The performance of angel-backed companies is positively affected by BAs' active involvement post deal***

Research design and hypotheses development (5/5)

Independent Variables

5. The role of monitoring

- ✓ Angels seldom adopt the typical control and governance provisions of venture capital investors (Van Osnabrugge, 2000; Wiltbank and Boecker, 2007; Goldfarb et al., 2012; Bonini and Capizzi, 2017), implementing monitoring mechanisms "*non aggressive and striking in their informality*" (Ibrahim, 2008).
- ✓ The kind of monitoring taking place in the informal venture capital market is a "soft" one, implemented through **company visits**, interactions with entrepreneurs and other control techniques based upon trust.
- ✓ However, a tightening of the degree of soft monitoring over the investee companies could damage the trust-based relationship between the founder and the angel investor.

H5: ***The performance of angel-backed companies is negatively affected by BAs' soft monitoring***

Sample data (1/2)

- ✓ Our data are obtained from an unique proprietary dataset, assembled from sequential surveys administered by **IBAN** (Italian Business Angels Network) to its associates (BAs and BANs) and other unaffiliated Bas/BANs.
- ✓ After the completion of the surveys, we collected **1.421** full responses by investors who performed at least one investment, for a total of about **1.576 investments** during the 2007 – 2015 time period.
- ✓ However, in our empirical analysis we considered deals resulting from the **2008-2012** surveys, in order to have for all the angel-backed companies a four-year time period (the firs year – t_0 – is the year of the BA's investment). The average response rate over the reference period is 38% (57% for BAN members and 28% for non-BAN members).
- ✓ From the original sample of **695** investee companies in the 2008-2012 time period, dropping all the anonymous ones, we identified **302 companies** and then collected financial statements and other relevant information (liquidation, bankruptcy, M&A, IPO) from public databases (Orbis and Lexis/Nexis), leading to **111 companies** (444 data points in the four-year time period).

Independent variables: descriptive statistics

Variables	Description	Obs.	Median	Mean	St.Dev.	Min	Max	Dummy=1 percentage
Co-investors	Numbero of co-investors	444	1	3.766	5.1	0	15	
BAN_Membership	Dummy=1 if at least one BA owns to the Italian BA Network (IBAN)	440						0.53
Equity_infusion_pattern	Dummy = 1 in presence of different investment rounds	444						0.05
Active Involvement	Dummy =1 if the BA has made managerial contributions to the invested firm	444						0.68
Soft-Monitoring	Ordinal variable ranging from 1 to 5	392	3	2.95	1.18	1	5	
Angel-specific controls								
Age-BA	Average age of the BA/BAs participating to each investment	396	49	48.17	9.56	30	70	
Experience-BA	Number of past deals of angel financing. In presence of co-investing, it is the number of deals of the most expert BA.	396	7	6.69	3.96	0	12	
Share-BA	Share of BAs' participation in the firm	444	0.08	0.16	0.20	0.01	1	
Firm-specific controls								
Age-Firm	Number of years since the BA investment	428	1	2.96	4.22	0	16	
Equity	Firm's equity in euro	361	156,872	366,000	511,221	2501	2,525,291	
Foreign	Dummy =1 for foreign firms	428						0.07
Pre-Investment Revenues	Dummy = 1 if revenue was greater than zero when the BAs' investment occurred	420						0.66

Methodology

- ✓ We run – over the sample of 111 angel-backed companies – the following Ordinal-Logit Regression on our set of independent variables, using as dependent variable the 5-stages ordinal **Performance Index.**

Performance_Index = f (Co-investors, BAN_Membership, Equity_infusion_pattern, Active Involvement, Soft-Monitoring, Age-BA, Experience-BA, Share-BA, Age-Firm, Equity, Foreign, Pre-Investment Revenues, Industry, Year**)**

- ✓ The models includes also **angel-specific controls**, **firm-specific controls**, industry and time fixed effects:

$$y_i = BX + \Phi FirmControls + \Xi AngelControls + \tau + \theta + \epsilon$$

where:

$$\Pr\{y_i < j\} = \frac{\exp\left(X_i\beta_j\right)}{1 + \sum_{j=1}^{J} \exp\left(X_i\beta_j\right)}$$

Results

	(1)	(2)	(3)	(4)	(5)
Co-investors	0.057**	0.057**	0.064**	0.057*	0.063**
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
BAN_Membership	0.306	0.181	0.109	0.303	0.225
	(0.24)	(0.32)	(0.38)	(0.38)	(0.37)
Equity infusion pattern	-1.638***	-1.584***	-1.787***	-1.824***	-1.971***
	(0.38)	(0.41)	(0.45)	(0.46)	(0.44)
Active Involvement		0.151	0.624*	0.439	0.479
		(0.27)	(0.32)	(0.31)	(0.31)
Soft-Monitoring		-0.09	-0.398***	-0.317**	-0.316***
		(0.11)	(0.12)	(0.13)	(0.12)
CONTROLS	NO	NO	YES	YES	YES
Time-effect	YES	YES	YES	YES	YES
Industry-FE	YES	YES	YES	YES	YES
cut 1	-3.890***	-4.046***	-7.603***	-6.331***	-7.129***
cut 2	-2.109***	-2.405***	-5.793***	-4.569***	-5.354***
cut 3	-1.433***	-1.666***	-5.304***	-4.093***	-4.874***
cut 4	0.828***	0.721	-2.625**	-1.449	-2.235*
Pseudo R^2	0.06	0.07	0.10	0.09	0.09
N	377	336	303	306	303

Conclusions

- ✓ We propose and adopt a comprehensive ordinal metric (”Performance Index”) that is more effective at capturing the performance and survival of angel-backed companies**.**
- ✓ We test hour hypotheses on a proprietary database of 111 companies that we track over a 3-year post-investment horizon.
- ✓ Our results show that:
  - ❑ the index performs well in measuring performance both cross-sectionally and over time, and is more effective than standard measures in capturing the probability of survival of companies;
  - ❑ the performance and probability of survivorship of investee companies are positively affected by the presence of syndicates of co-investing angels;
  - ❑ a fragmented over time equity provisioning does negatively affect both performance and survivorship;
  - ❑ **we find evidence of a negative relationship between the soft monitoring intensity and the probability of survival of the angel-backed companies, especially for the less experienced angels.**

AGENDA

- ✓ Introduction and overview
- ✓ The rising volume of seed and startup investments
- ✓ The transformation of the entrepreneurial finance ecosystem
- ✓ New ventures' governance issues
- ✓ Alternative typologies of startup investors: value adding contributions and governance issues
- ✓ Recent papers addressing significant corporate governance issues within the entrepreneurial finance ecosystem
- ✓ Promising research topics within the startup ecosystem

Corporate governance issues in the entrepreneurial finance ecosystem: an agenda for future research

- ✓ What are the most effective governance mechanisms suggested by each typology of investors within the startup ecosystem?
- ✓ What's the role of regulation in inspiring effective governance procedures?
- ✓ Is it possible to design/formalize a trade-off between the soft-monitoring and the contractual-based monitoring mechanisms implemented by the different players?
- ✓ What is the differential impact of BAs, VCs, Mutual funds, Crowdinvestors on the effective functioning of startup boards?
- ✓ What is the impact on governance practices coming from composite syndicates made up by different typologies of investors?
- ✓ What policy measures might affect investors' capability to improve the quality of new ventures' governance practices?
- ✓ What factors could strengthen or undermine the trust-based relationship between informal investors and entrepreneurs?
- ✓ What about the possible crucial training contribution of business incubators and accelerators?