POLITECNICO DI TORINO

Collegio di Ingegneria Gestionale

Master of Science in Engineering and Management

Master Thesis

Impact investing:

a country-specific factors perspective

Master thesis supervisor

Prof. Elisa Ughetto

Candidate

Giulia Marega

Academic Year 2019-2020

Abstract

Impact investing is an investment approach that is attracting increasing attention. This thesis adopts a geographical perspective to the study on which could be the drivers or facilitating factors of private equity (and venture capital) impact investing. A linear regression is performed so to explain the activity of PE and VC investors, modeled as number of financing rounds. Independent variables focus on country-specific factors, namely aspects relating to financial markets, regulation, culture, innovation potential, and the political environment. Results for regulation factors are statistically significant, aligning with literature discourse; however, the interaction with financial markets appears more complicated as, according to regression results, impact investing activity and financial development appear inversely related.

Acknowledgements

Writing this thesis has been an insightful and inspiring journey. I want to thank Professor Elisa Ughetto and Francesco Fontana for allowing me to build on a spontaneous curiosity for impact investing and attentively supervising this work, while also prompting reflection with accurate comments.

I want to thank my family and friends, who unreservedly supported me, as well as all the new people I had to opportunity to meet and the new friends made over these university years.

Table of Contents

Table of Figures

1. Introduction

Impact investing is an investment approach that is attracting increasing attention due to its dual aim of generating both financial returns and social/environmental impacts. There are different force at play that spur interest towards this investment approach; however, though experiencing promising growth, the impact investing ecosystem is far from structured and further research is needed to support the choices of actors in the impact investing ecosystem.

This thesis scope of work is impact investing, in its private equity and venture capital declination. More specifically, this work adopts a geographical perspective in studying the factors that foster impact investors' activity – proxied as the number of financing rounds. To this end, a database including different country-specific indicators was constructed and then matched with another database obtained from Impactbase and Crunchbase, containing the information on impact financing rounds from private equity funds. The resulting database was then used for the linear regression model.

The thesis is articulated into five chapters. First, a review of the literature is provided, so to outline the main characteristics of traditional private equity; then, the review focuses on impact investing, its characteristics, its evolution, and the challenges it faces. Then follows the description of the methodology and the data used. After the methodology and the database are discussed, regression results are analyzed. Finally, the thesis closed with conclusions on the insights gained.

2. Literature Review

This chapter is organized in two main sections: the first consists in the description of private equity so to provide a general overview of its features and mechanisms; the second focuses on impact investing, in order to understand its characteristics.

2.1. Private equity

2.1.1. Definition

Private equity is an alternative asset class (Wilcox & Fabozzi, 2013) and it refers to the activity of investing in privately owned companies' equity, as opposed to acquiring publicly traded shares of companies listed on the stock exchange (Credit Suisse, 2020; Wilcox & Fabozzi, 2013).

Private equity investors provide equity capital to private companies because, after proper evaluations, they see a potential for the company's value to grow; indeed, the ultimate financial goal is to sell their stake and obtain a substantial return on the invested capital (Credit Suisse, 2020). This dynamic, typical of private equity, is called buy-to-sell orientation (CFA Institute, 2020).

Private equity embraces different investment strategies (CFA Institute, 2020):

- *Venture capital* – it refers to the activity of investing in early-stage companies, or startups, which may have negative cashflows but show high-growth potential thanks to their business idea or technology; indeed, venture capital investment are typically directed towards high-tech companies in the internet, healthcare, and media and telecommunication sectors (Statista, 2019). Venture capital funds are the most common private equity fund type in terms of numbers worldwide (Caceis, 2010; Statista, 2019).

  Some of the most important VC firms are Accel, Andreessen Horowitz, Index Ventures, and Sequoia Capital (CB Insights, 2020).

- *Growth equity* – it entails the provision of capital to established private businesses, often by taking a minority interest, so to allow expansion.
- *Buyout* – it refers to the acquisition of controlling interest in the target company to take over assets and/or operations, usually with the goal of improving and selling them in the future. There can be different types of buyout; most notably, a leveraged buyout (LBO) takes place when the acquisition is leveraged by resorting to debt financing, while a management buyout (MBO) happens when the company is acquired by its managers and/or employees. Conversely to venture capital, buyout focuses on mature businesses with stable cash flows. As a final note, it is worth to mention that if the buyout target is a public company, it means that the company is delisting from the stock market; in this case the private equity fund is performing a public-to-private transaction.

  Prominent actors in the buyout scene are the US megafunds, such as Blackstone, the Carlyle Group, and KKR (Preqin, 2017).
- *Special situations* – it refers to investing by taking advantage of a specific investment opportunity that can positively or negatively impact a company's short-term prospects. Examples of special situations are spinoffs, tender offers, mergers, acquisitions, bankruptcy, litigation, capital structure dislocations, shareholder activism, and stock buybacks.

Investment strategies may differ by financing and stage of the investee firm (Figure 1).

Figure 1: Private equity investment strategies

Investment strategies	Description
Venture capital	
Seed stage	Financing provided to research business ideas, develop prototype products, or conduct market research
Start-up stage	Financing to recently created companies with well-articulated business and marketing plans
Later stage	Financing to companies that have started their selling effort and may already be covering costs (financing may serve to expand production capacity, product development, or provide working capital)
Replacement capital	Financing provided to purchase shares from other existing venture capital investors or to reduce financial leverage
Growth	
Expansion capital	Financing to established and mature companies in exchange for equity, often a minority stake, to expand into new markets and/or improve operations

Buyout	
Acquisition capital	Financing in the form of debt, equity, or quasi-equity provided to a company to acquire another company
Leveraged buyout	Financing provided by an LBO firm (often configured as a SPV, special purpose vehicle) to acquire a company
Management buyout	Financing provided to the management to acquire a company, specific product line, or division (carve-out)
Special situations	
Mezzanine finance	Financing generally provided in the form of subordinated debt and an equity kicker (warrants, equity, etc.) frequently in the context of LBO transactions
Distressed/turnaround	Financing of companies in need of restructuring or facing financial distress
One-time opportunities	Financing in relation to changing industry trends and new government regulations
Other	Other forms of private equity financing are also possible—for example, activist investing, funds of funds, and secondaries

Source: Adapted from CFA Institute, 2020.

2.1.2. Actors involved

I. Investees

The array of companies a private equity fund invests in constitutes its portfolio. The investee companies are, thus, indicated as portfolio companies.

A company may be chosen as a target portfolio company based on different criteria, which in turn depend on multiple factors, such as risk-return profile and investment strategy of the fund. According to Block et al. (2019), revenue growth is the major investment criterion, followed by product or service value added, track record of the management team, and firm's profitability. The latter seems particularly important for family offices, growth funds, and LBO funds, while venture capital funds focus more on revenue growth, firm's business model and current investors (Block et al., 2019).

Since the goal of private equity funds is to invest in companies with growth potential, private equity firms not only provide capital, but also play an active role to increase portfolio companies' value. This is possible because private equity investment typically entails the acquisition of a controlling interest – if not its entirety. Private equity firms actively participate to strategy development and governance of their portfolio companies, enabling growth and providing support to management. In the case of

venture capital, the private equity firm's role is crucial in for professionalization of the portfolio company and networking opportunities (Caceis, 2010; Block et al. 2019).

II. Investors

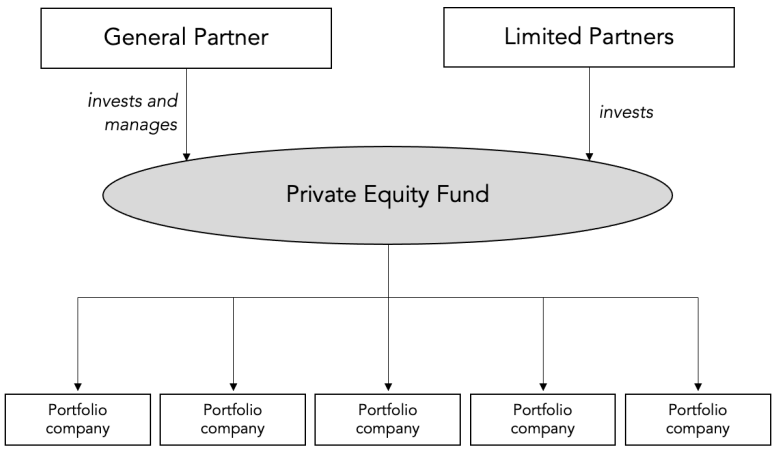
INVESTOR TYPES

According to the CFA Institute (2020), private equity monetary resources mainly come from institutional investors (e.g., pension funds, sovereign wealth funds, endowments, and insurance companies); however, there are also other players, such as family offices and high-net-worth individuals (HNWIs) that either invest directly or indirectly through intermediaries. Moreover, government agencies and corporations, who are interested in promoting regional investment and/or gaining insight into emerging businesses and technologies, often participate via venture capital investing.

FUND'S LEGAL STRUCTURE

The private equity investment model is based on the alignment of interests between a private equity firm or manager, the General Partner, and its investors, the Limited Partners (IOSCO, 2009; Caceis, 2010). Typically, the parties are organized under a legal structure called Limited Partnership (Figure 2), though there can be some variations depending on the country and the jurisdiction (IOSCO, 2009; Caceis, 2010; for a more detailed explanation of the different legal structures and configurations).

Figure 2: Private equity fund legal structure



Source: Adapted from BVCA (2002)

Rights and obligations between the parties are regulated by the Limited Partnership Agreement, a key document that legally binds and regulates the relations between the General Partner and the Limited Partners based on the terms they agree on when signing (Caceis, 2010). The document is of fundamental importance as it details any aspect related to creation, operation, and termination of the limited partnership. Provisions commonly found in the Limited Partnership Agreement cover matters such as investment targets and policy, profit sharing, fees and expenses, as well as more administrative aspects, as fund's governance, reporting, and accounting (BVCA, 2002). Moreover, specific agreements between the General Partner and a Limited Partner can be detailed in separate side letters (Caceis, 2010).

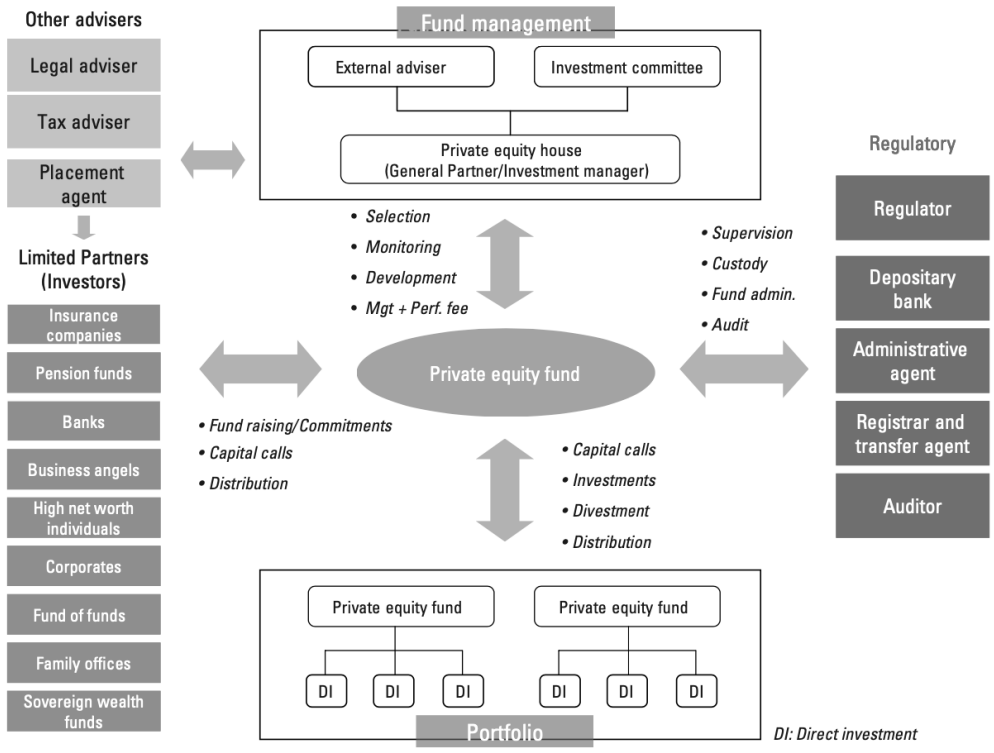
The General Partner is responsible for collecting capital from the Limited Partners, as well as selecting and managing the partnership's investments. Unlike the Limited Partners, the General Partner is jointly and severally liable for the fund's activity. The General Partner also contributes in a small portion to the partnership capital, which ensures alignment of interests with the Limited Partners, typically it is a negotiated percentage amounting to at least 1% of aggregate commitments to the current fund. The General Partner can also appoint an associated entity as investment manager, which provides advice to the General Partner. General Partners receive a management fee for running the fund and the services performed, as well as a percentage of the profits used as an equity incentive called carry or carried interest, the value of which depends on the fund performance.

Limited Partners provide equity capital to the investment fund. They can be institutional investors, such as pension funds, insurance firms and banks, as well as corporates or high net worth individuals (HNWI); fund of funds[1] are also considered Limited Partners. Limited Partners receive proceeds from investments in the form of dividends and capital gains and they can benefit from the same tax advantages the fund has (Caceis, 2010).

[1] Private equity funds of funds invest in other private equity funds, instead of directly in companies.

For the sake of completeness, Figure 3 provides a graphic representation of the main actors involved around a private equity fund.

Figure 3: Actors of a private equity fund



Source: Caceis (2010)

The partnership has a contractual lifetime of ten years (Prowse, 1998); which can be extended by one or two-year increments, up to four years maximum. The capital is invested during the third to fifth years; afterwards, investments are gradually liquidated, and proceeds are distributed to Limited Partners in form of securities or cash. A new partnership fund is raised, through the fundraising process, around the completion of the investment stage of the existing partnership; hence, every three to five year. Managers can work on several funds at the same time, each one in a different stage of its lifecycle – the different partnerships are legally separate and managed independently (Prowse, 1998).

Partnership Agreements typically terminate when the partnership term is reached; however, they may also terminate due to dissolution clauses linked to specific events such as General Partner's bankruptcy.

FUND'S LIFECYCLE

A private equity fund's life is generally of 7-10 years duration. According to Blackstone (2020), a fund's lifecycle is articulated into three phases: the fundraising period, the investment period, and the harvest period. Initially, General Partners call out investors to commit capital to the fund during the fundraising stage; then, capital is invested in opportunities selected by managers and General Partners; finally, investments are realized and the proceeds are distributed during the harvest period.

The fundraising period

Private equity funds usually last for ten years and private equity firms can raise a new fund every three to six years (Barber, 2014). When a private equity firm needs to raise a new fund, the General Partner of the current fund begins a fundraising campaign. The General Partner sets a target capital commitment at the beginning of the process and announces the closing amount at the end. Caceis (2010) describes the fundraising campaign as the process used by private equity firm to request financial commitments from the Limited Partners; funds are thus pooled into the private equity limited partnership vehicle.

Commitments represent the obligation for Limited Partners to provide capital to the fund. The committed capital will be drawn in tranches through capitals calls during the investment period to purchase assets (Figure 4).

Fundraising in private equity typically takes place through private placements, which means that fund shares are placed within a close number of private investors, contrarily to a public offering.

In the context of fundraising, the interim performance of the General Partner of the current fund is an important signal of her/his ability to reward investors. The relative performance with respect to funds of the same cohort and type is another information signal. Moreover, brand credibility and history can also affect fundraising. Young General Partners with a lack of strong brand reputation due to a short firm history

would generate scarce investors demand if not backed by good performances. By contrast, aged General Partners with solid historic brand reputation rely less on interim performances of the current fund and their ability to raise money will be less affected (Barber & Yasuda, 2014). Moreover, according to Gompers and Lerner (1998), beyond the reputation of the private equity firm, the increase in IPOs market activity leads to increases in fundraising. They show that the equity market value held by the fund in firms that are listed is highly correlated with fund returns and fundraising ability.

The fundraising processes lasts between a few months to about a year, based on the prestige and ability of the firm, the size of the fund and external market conditions. The initial offering period is the first period in which investors can commit to the fund, subscribing units/shares, as determined by the General Partner. After the first closing date, there can be subsequent closing dates (i.e., other periods offered to commit to the fund). During this period, partners meet potential investors and their advisors, prepare offering materials on the team, products and markets. Partners also participate to Q&A sessions and due diligence questionnaires with investors' advisors. They also receive term sheets, high-level documents that set out investment terms and timelines, as well as returns and distribution details, so to foster Limited Partners' capital commitment to the fund.

The final closing is announced by the General Partner when it is no longer possible to commit for new investors.

The investment period

The European Private Equity and Venture Capital Association has mapped the private equity investment process and the actions private equity firms undertake at each step. The process develops through five phases: evaluation, initial negotiation, due diligence, final negotiation, and monitoring (EVCA, 2007).

In the evaluation stage, the private equity firm receives a first teaser of the potential investment containing a review of the business plan, company and market analysis.

The General Partner, together with the management team, start a first assessment of the company in terms of future profitability, management skillset and potential return for the fund's investors.

In the initial negotiation stage, the valuation of the potential investment is conducted. The fund receives the Offering Memorandum, describing business plan and financial technicalities of the target, and guidelines for future negotiations are provided by the target's advisors. Financing (i.e., the equity and/or debt mix) is determined. After a careful valuation of target's profitability objectives, a purchase price is proposed, and an offer letter is sent to the target firm's management team. The offer letter sets out the terms and conditions for the next phase.

During the due diligence process the fund typically asks for external help from third-party advisors, such as financial advisors, lawyers, accountants, and tax advisors. Investors finally have access to all the necessary information and advisors support the private equity fund in analyzing every aspect of the transaction.

All the information and analyses gathered during the process are used during the final negotiation stage; after which, if successful, the transaction is legally secured. Final legal and financial clauses are discussed, and the final price is determined.

Finally, the monitoring stage consists in the private equity firm's involvement and steering in the newly acquired company.

The harvesting period

After the Investment period, the private equity firm is focused on growing portfolio companies so to increase the value of the fund's investments.

The exit of investment usually takes place via four main strategies (Fakhro et al., 2011):

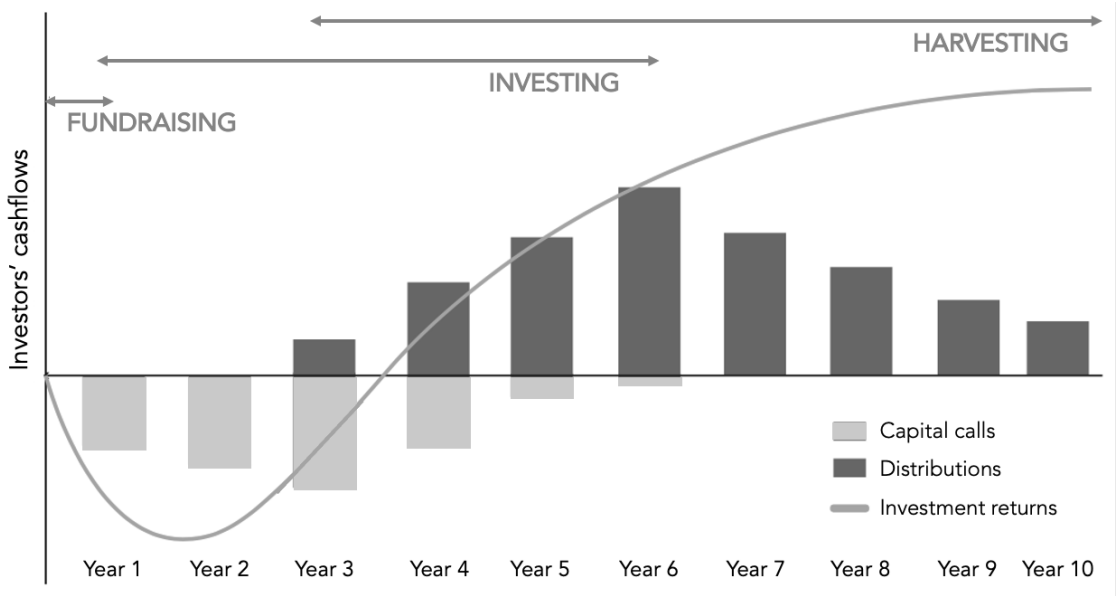
- Initial Public Offerings (IPOs) – General Partners can decide to list the portfolio company on the stock exchange. Company's shares are sold to institutional and non-institutional investors, the timing and amount of proceeds depends on

market's interest in the company it is possible to have access to more liquid capitals (Rosenbaum, 2009).

- Trade Sales – A trade sale (or strategic buyer sale) is the sale of a portfolio company to a corporate entity. It is opposed to a sale to a financial sponsor). The strategic buyer can be a direct/indirect competitor or a supplier/customer looking for vertical integration. Purchase price of a strategic sale is usually higher compared to a financial sponsor sale as incudes a premium valuation due to synergies (Fakhro et al., 2011).
- Secondary Buyouts – Secondary buyout is the sale of a portfolio company to another private equity fund. It allows GPs to access liquidity at an earlier time frame if sellers and to access private equity limited partnership positions beyond the initial investment period if buyers (Perry and Chang, 2017).
- Management Buyout (MBO) – In a Management Buyout, company's existing managers and/or employees acquire part or all the portfolio company by buying Limited Partners' stakes (Fakhro et al, 2011).

After exiting investments, proceeds are distributed to Limited Partners according with the Partnership Agreement terms.

Figure 4: Private equity fund's lifecycle



Source: Caceis (2010) and elaboration of the author

Distributions typically follow a so-called waterfall logic (Caceis, 2010). First of all, after investments are realized, the private equity fund distributes the proceeds to the Limited Partners; on top of being repaid for the capital committed, they receive an amount known as preferred return or hurdle, which corresponds to the internal rate of return (IRR). Then, the portion of investment proceeding that exceeds the amount of committed capital plus the hurdle is distributed between the General Partner and the Limited Partners. The allocation between the parties is regulated in the Partnership Agreement; for example, there usually is a catch-up provision, by which the General Partner is entitled to receive all remaining distributions as long as the split ratio reaches an agreed upon threshold, typically 80/20 (LPs/GP).

2.1.3. Market overview

Private equity[2] started in the United States around 1960[3] (Caceis, 2010) and it is now an international market. The United States remain the reference market for private equity. Roughly 50% of private equity firms are located in the United Stated (Figure 5) and they manage about half of total assets (Figure 6).

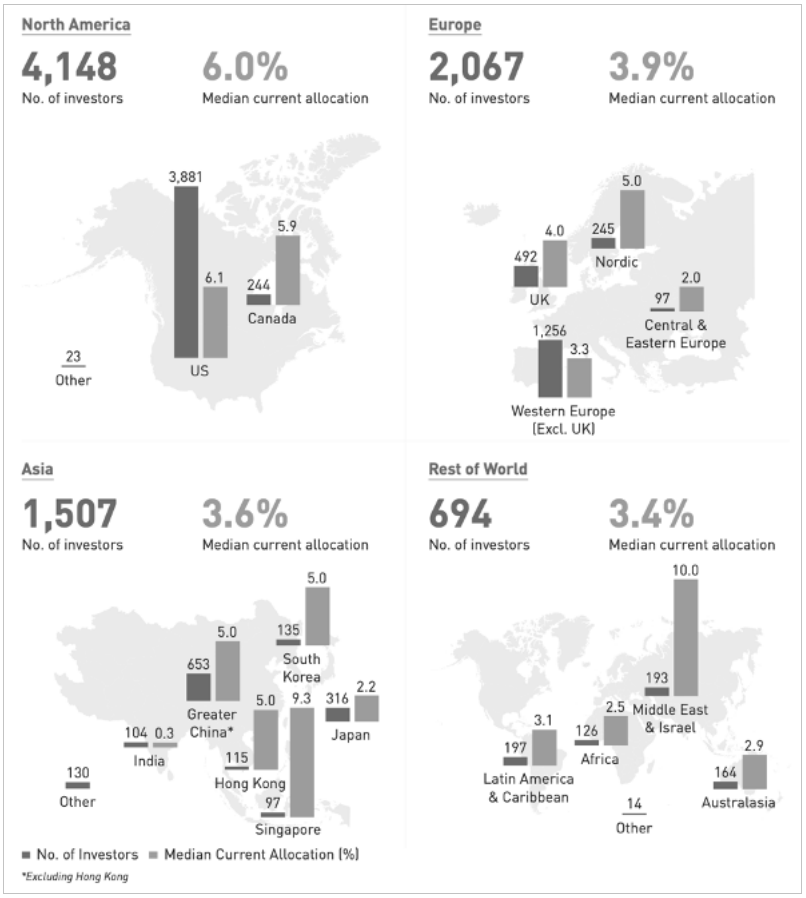
Private equity AUM[4] (Figure 6) amount to about 4 USD tn as of June 2019 (Preqin, 2020; McKinsey, 2020). According to McKinsey (2020), buyout accounts for half of the total private equity AUM, followed by venture capital, and growth equity. In terms of geographies involved, North America and Asia show opposite tendencies in AUM, with North America being the main geographical area for buyout and Asia for growth equity – while both of them are equally present in venture capital (McKinsey, 2020).

[2] Unless otherwise stated, private equity figures include venture capital.

[3] An important milestone regarding the professional management of funds to be invested in private capital was enacted by the US Congress in 1958 (Caceis, 2010); indeed, the *Small Business Investment Act* provided vehicles for small business investments such as small business investment companies (SBICs) and certified development companies (US Small Business Administration, n.d.).

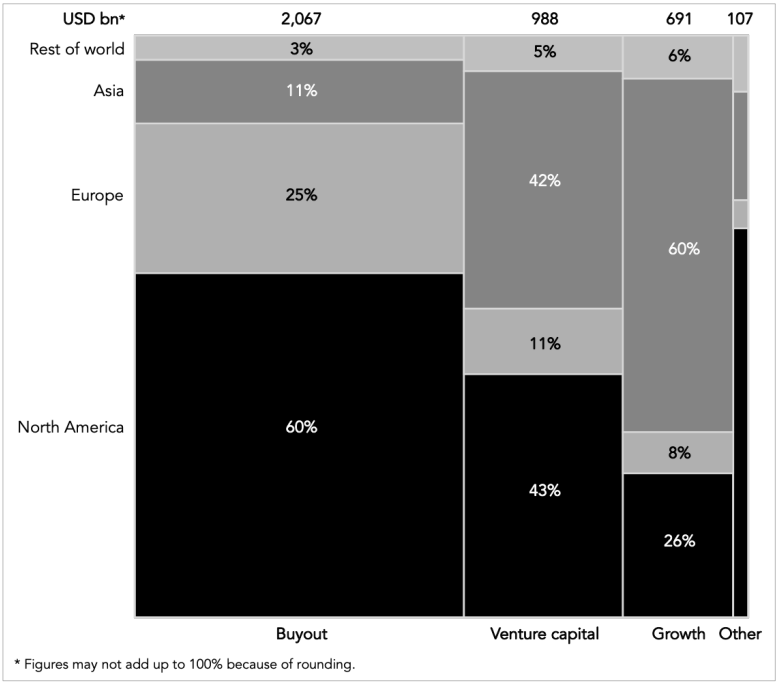
[4] Assets Under Management, meaning the total value of investments managed by an investment firm.

Figure 5: Private equity firms' location by number and median allocation (% AUM)



Source: Preqin (2020)

Figure 6: Private equity assets under management, as of June 2019



Source: Adapted from McKinsey (2020)

According to Preqin (2020), there are more than 8,400 institutions worldwide investing in private equity, ranging from private wealth managers to sovereign wealth funds; more specifically, as of January 2020, there are 3,524 funds in the market. However, the landscape is dominated by the big players: in 2019, the 20 largest funds captured almost half (45%) of all committed capital – the same figure was 29% five years ago. Along these lines, the latest McKinsey's report on private markets (2020) states that the largest buyout funds (i.e., the so-called megafunds of more than 5 USD bn) drive private equity capital fundraising, making up more than half of total fundraising in 2019, while the share of small funds (of less than 1 USD bn) fell to a 15-year low.

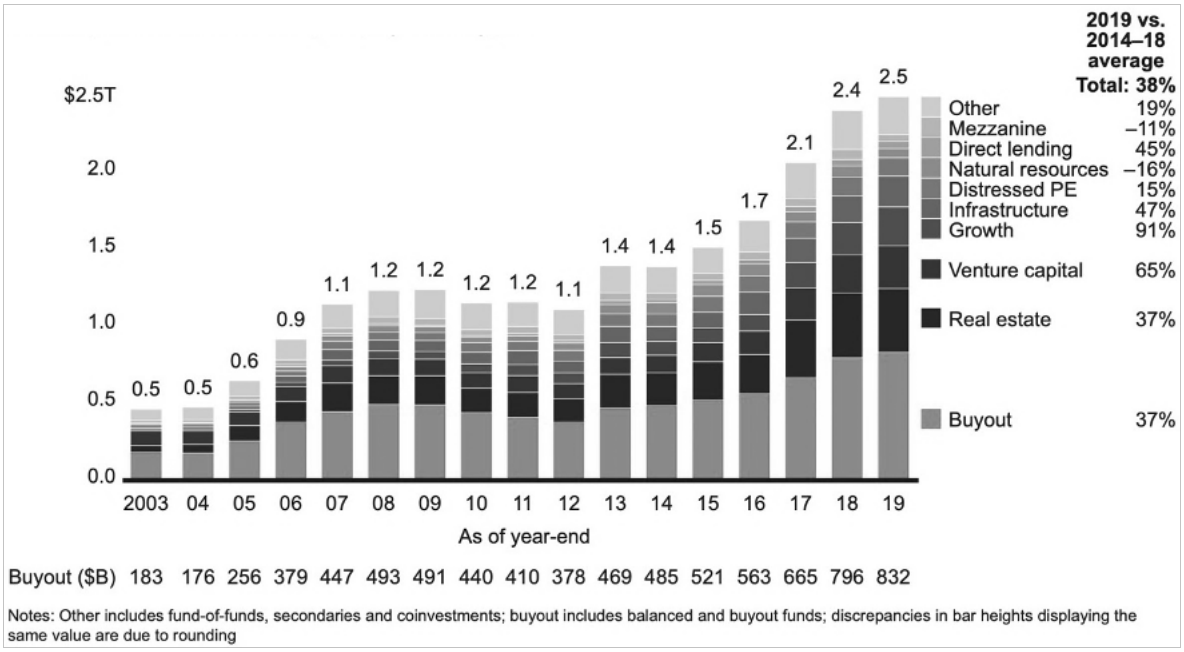
Private equity fundraising is growing at sustained levels and this is probably due Limited Partners' confidence in private equity performance; indeed, private equity funds have outperformed public markets in terms of returns (McKinsey, 2020; Bain, 2020). Top performing funds of vintages 2015 and 2016 are delivering net IRRs of 23.0% and 25.9%, respectively (Preqin, 2020).

Meanwhile, as shown in Figure 7, investors have been piling up considerable amounts of dry powder[5] in recent years (Bain, 2020; Preqin, 2020). Such amounts of investable capital, together with increased competition, contributed to more difficult market conditions and the rising of asset prices, which ultimately resulted in lower deal flow (Bain, 2020; McKinsey, 2020; Preqin, 2020). Indeed, between 2018 and 2019, private equity buyout deals' value was reduced by 21%, reaching 389 USD bn, while venture capital deal value declined by 18%, to 223 USD bn (Preqin, 2020). Though dry powder accumulation is not necessarily negative per se, some argue that, when deal activity starts to fall, it can become an issue. Portner (2020) suggests that, factoring in that limited partners require the investment manager to deploy that unallocated capital, the risk is to see an increase in multiples, since "investment managers would be doing

[5] Dry powder is the amount of committed, but unallocated capital an investment firm has on hand (PitchBook, 2020).

deals that they might not otherwise do, at multiples they might not otherwise pay—and that can become a problem".

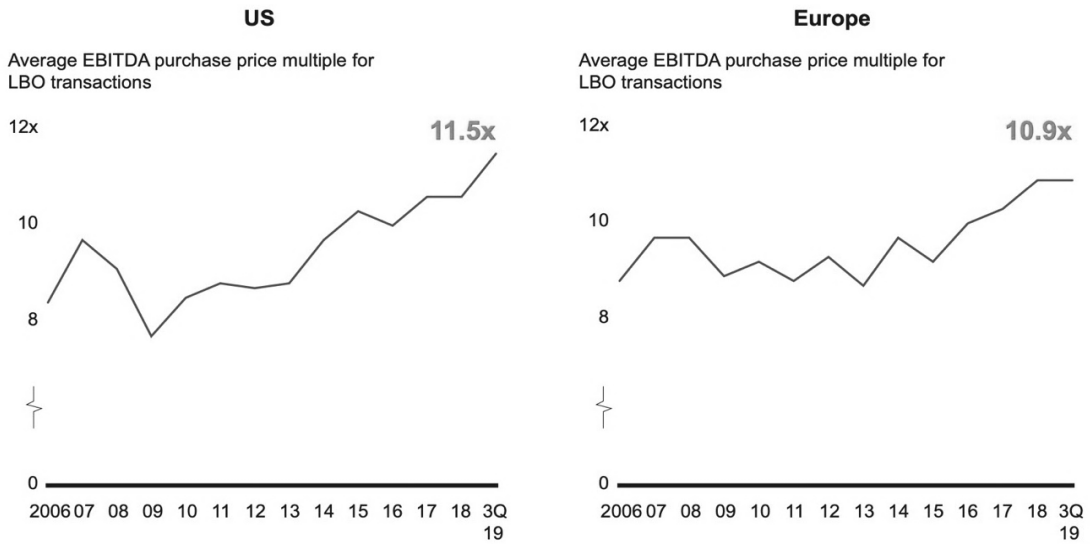
Figure 7: Private uncalled capital, global



Source: Bain (2020)

As a matter of fact, multiples have increased (McKinsey, 2020). Bain (2020) reports that LBO entry (EBITDA) multiples have reached a new high of 11.5x in the US in the third quarter of 2019, while they seem to be stable around 10.9x in Europe (Figure 8).

Figure 8: Leveraged buyouts multiples in US and Europe



Source: Bain (2020)

According to the report, with such high multiples and worsening macroeconomic conditions, the spread between entry and exit multiples has probably plateaued and will begin to shrink. This aspect is important because, based on Bain's analysis on US and Europe buyout deals data over the period 2010-2019, the EBITDA multiple expansion is the main component of returns[6] and has contributed to about half of the increase in enterprise value at exit.

With all these factors at play, investment firms are readjusting their approaches to prevent overpaying and be equipped to face a potential downturn. Within the range of possible strategic choices that general partners can undertake, they are increasingly incorporating ESG[7] matters when looking out for deals or scouting prospective portfolio companies (Bain 2020; McKinsey, 2020; Preqin, 2020).

[6] The other components are revenue growth and margin expansion.

[7] Environmental, Social, and Governance.

2.2. Impact investing

2.2.1. General definition

In recent decades, many investors have started to screen out harmful investments and/or include ESG criteria when choosing where to allocate their money. Building on these practices, the core purpose of a growing number of investors is to generate a positive impact on society overall, together with financial returns: this is known as impact investing (GIIN, 2018).

The term impact investing was coined in 2007 during a conference attended by investors and philanthropists, convened by the Rockefeller Foundation in Bellagio, Italy. However, a single, uniformly and widely adopted definition is still lacking (Höchstädter & Scheck, 2014).

Impact investing is generally described as an investment approach that combines financial and non-financial returns, the latter often referred to as of social and/or environmental nature (Lerner et al., 2020; Tekula & Andersen, 2018; Höchstädter & Scheck, 2014; WEF, 2013; Harji & Jackson; 2012; Monitor Institute, 2009; GIIN, n.d.). The goal of generating both financial and social/environmental returns is the so-called dual or double bottom line mandate (Tekula & Andersen, 2019), which is particularly attractive to individuals and institutions looking for marked-based solutions to societal and environmental problems (Lerner et al., 2020).

Impact investing can be seen both as an investment approach and an industry (GIIN, 2018; Monitor Institute, 2009). Its vision is to create a world where social and environmental matters are ingrained into investment decisions and, as an industry, it provides and further attracts capital towards solutions to critical social and environmental issues (Lerner et al. 2020; Cambridge Associates, 2013).

2.2.2. Specific characteristics

INTENTIONALITY, MEASURABILITY AND RETURN TARGETS

In addition to the double bottom line mandate, literature points at two other distinguishing aspects of impact investing: intentionality and measurability (GIIN, 2020, 2019a; Tekula & Andersen, 2019; IFC, 2019; Calderini et al, 2018; Höchstädter & Scheck, 2014; Addis et al., 2013; WEF, 2013; Harji & Jackson, 2012; GSG, n.d.; Grabenwarter & Liechtenstein, 2011). Indeed, the creation of positive social impact must be intentional, not an accidental consequence of a purely financial oriented investment, and both outcomes (financial return and social impact) are to be measured.

The minimum required financial return seems to be the recovery of the invested principal, but it can actually span from below to above market rate returns (Cambridge Associates, 2017; Höchstädter & Scheck, 2014; Monitor Institute, 2009). Some authors (e.g., Harji & Jackson, 2012) distinguish between impact-first and financial-first investors, depending on the type of outcome they favor: a financial-first investor would prioritize financial return, establishing a non-financial impact floor, while an impact-first investor would do the opposite (Höchstädter & Scheck, 2014). According to Cambridge Associates (2017), the latter may be more prone to accept below market-rate returns, "particularly if they believe the social outcomes of the investment will adequately compensate them for any expected shortfall in the investment's financial returns relative to other investments of comparable risk". The requirement of a financial return differentiates impact investing from charity and philanthropy (GIIN, 2019a; Calderini et al, 2018; Höchstädter & Scheck, 2014).

While financial returns are measured traditional financial performance metrics, a key characteristic of impact investing is the measurement of social and environmental performance of underlying investments (GIIN, 2019a; Reeder & Colantonio, 2013). Given the nature of the object measured and the still ongoing formalization of impact investing as an industry, there exists a variety of social impact measurements (GIIN,

2020a, 2020b; Agrawal & Hockerts, 2019; Reeder & Colantonio, 2013 and Bengo et al., 2015 for more in-dept explanations). The main tools are outlined below:

- *Social Return on Investment* (SROI) – it is an adaptation of the discounted cash flow method so to measure the social value created. By monetizing inputs (resources) and outcomes (impacts), it estimates the difference between the money invested and the value perceived by all the beneficiaries, calculating an impact NPV for the investment.
- *Impact Reporting and Investment Standards* (IRIS) – promoted by the GIIN, IRIS is a directory of standardized definitions of social, environmental, and financial performance metrics. Users can choose which ones to use and, while allowing flexibility and customization, this aspect hinders comparability. Therefore, by making use of IRIS metrics and other criteria, the *Global Impact Investing Rating System* (GIIRS) builds impact ratings which can be used to compare companies and funds based on their social and environ-mental performance.
- *Global Reporting Initiative* (GRI) *standards* – they provide guidelines to create sustainability and social performance reports; their peculiarity is modularity: on top of universal standards (Foundation, General Disclosures, and Management Approach), there are specific Economic, Environmental, and Social modules.
- *Sustainable Accounting Standards Board* (SASB) *standards* – SASB's sets sustainability accounting standards, which can be adopted on a voluntary basis. They are recognized both by the US Securities and Exchange Commission (SEC) and the European Commission.
- *United Nations Sustainable Development Goals* (SDGs) – adopted in 2015 and included in the UN 2030 Agenda, the 17 goals, each accompanied by specific 2030 targets, cover different social and environmental issues. They are a reference for SDG-drive investment.
- *United Nations Principles for Responsible Investing* (UNPRI) – they outline possible actions for integrating ESG issues into investment decisions.

ASSET CLASSES AND FINANCIAL INSTRUMENTS

Impact investing spans across asset classes and financial instruments (Höchstädter & Scheck, 2014; Reeder & Colantonio, 2013). Figure 9 provides an overview of impact investing asset classes and their return range.

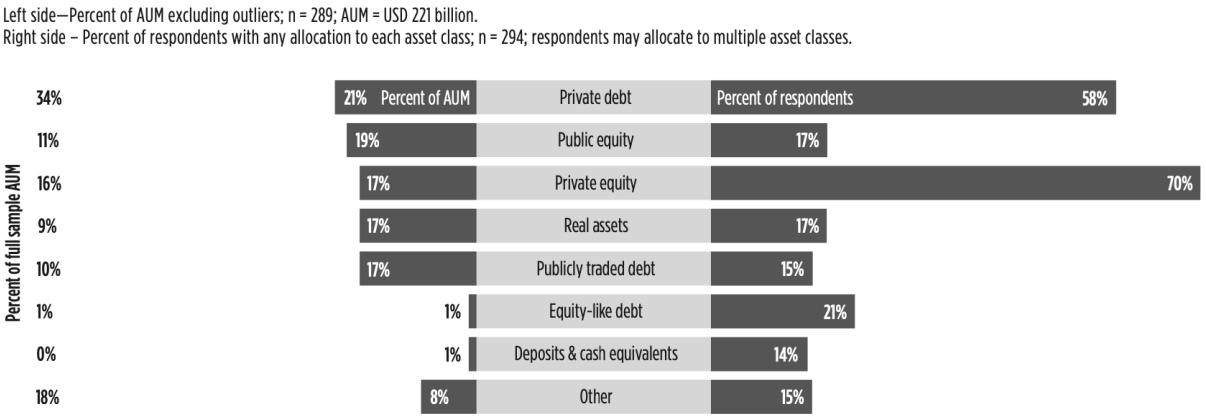
Figure 9: Impact investing asset classes and return range

Source: GIIN (n.d.)

Based on GIIN's latest *Annual impact invest survey* (2020a), impact investment activity in 2019[8] was mainly channeled through private debt (37% of invested capital, 61% of transactions); followed by publicly traded debt (25% of capital invested, 16% of transactions), and private equity (16% of capital invested, 11% of transactions).

In terms of AUM (GIIN, 2020a), the main asset classes are private debt, public equity, and private equity (Figure 10). Private equity is the most common (70% of respondents with some allocation), followed by private debt (58%); while much fewer respondents (17%) have allocations to public equity, meaning larger deal size on average.

Figure 10: Impact investment AUM by asset class



Source: GIIN (2020a)

[8] Survey based on n = 279 impact investors (47 USD bn, 9,807 impact investments). Note: the sample is composed by impact investors who may also carry out impact-agnostic investments.

INVESTMENTS ACROSS GEOGRAPHIES AND SECTORS

Geography of impact investments

Impact investing activity is present on a worldwide scale; thus, it involves investors and investees across multiples geographies (Höchstädter & Scheck, 2014; Addis et al. 2013; Harji & Jackson; 2012). Supporting evidence is found by the GIIN (2020a), when collecting data from and interviewing impact investors about asset allocation.

Most findings in the report are based on the aggregation of responses from 294 impact investors worldwide (GIIN, 2020a). About 77% of impact investors in the sample have headquarters located in developed markets, 21% in emerging markets, and the remaining 2% does not have a single headquarter location. Among them, some investors are particularly focused on some geographies, to which they allocate more than 75% of the AUM, as depicted in Figure 11.

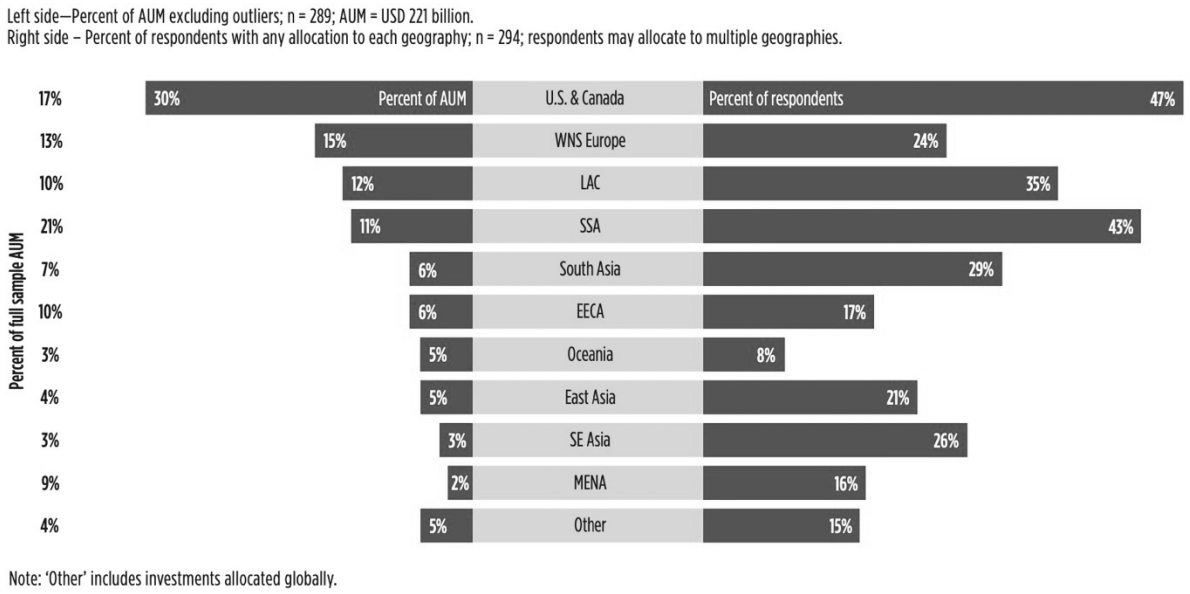
Figure 11: Impact investors geographic focus

Geographic region	No. of respondents allocating 75% or more AUM to each region
Developed markets:	**104**
East Asia	11
Oceania	4
United States & Canada	74
Western-Northern-Southern (WNS) Europe	15
Emerging markets:	**77**
Eastern Europe, Russia, and Central Asia (EECA)	1
Latin America and the Caribbean, incl. Mexico (LAC)	19
Middle East and Africa (MENA)	2
Southeast (SE) Asia	5
South Asia	13
Sub-Saharan Africa (SSA)	37

Source: GIIN (2020a)

Additional GIIN's insights on overall geographic asset allocation are shown in Figure 12, according to which – outliers excluded – 55% and 45% of AUM are allocated to developed and emerging markets, respectively, and the remaining 5% is allocated globally. The main geographic target in terms of AUM allocated is North America (with US and Canada accounting for 30% of allocated assets), followed by WNS Europe (15%), LAC (12%), and SSA (11%). In terms of commonly found region of investment, US and Canada are the main one (47%), followed by SSA (43%), LAC (35%), and Asia.

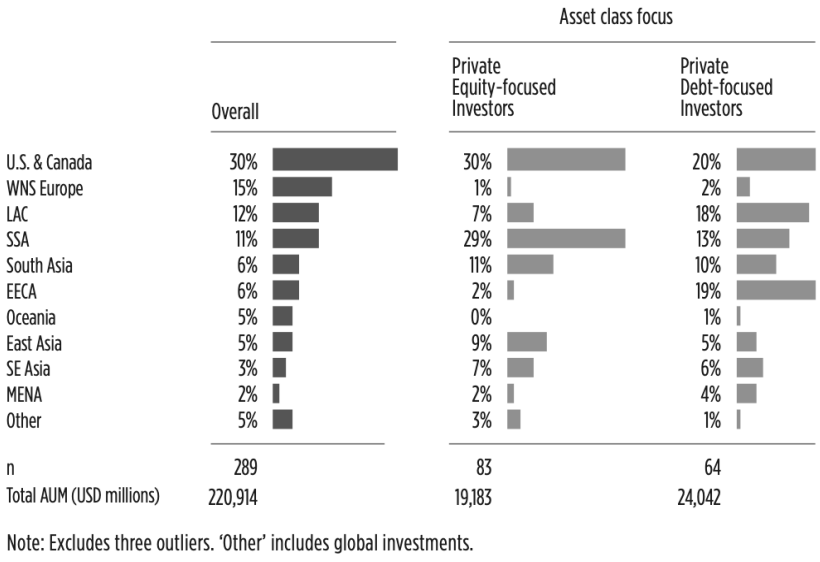
Figure 12: AUM geographic allocation (% of total) and most frequently targeted regions



Source: GIIN (2020a)

Though not tested for statistical significance, it may be interesting to observe differences with regards to specific asset classes in terms of geographical AUM allocation (Figure 13).

Figure 13: Asset class focus on AUM allocation by geography



Source: GIIN (2020a)

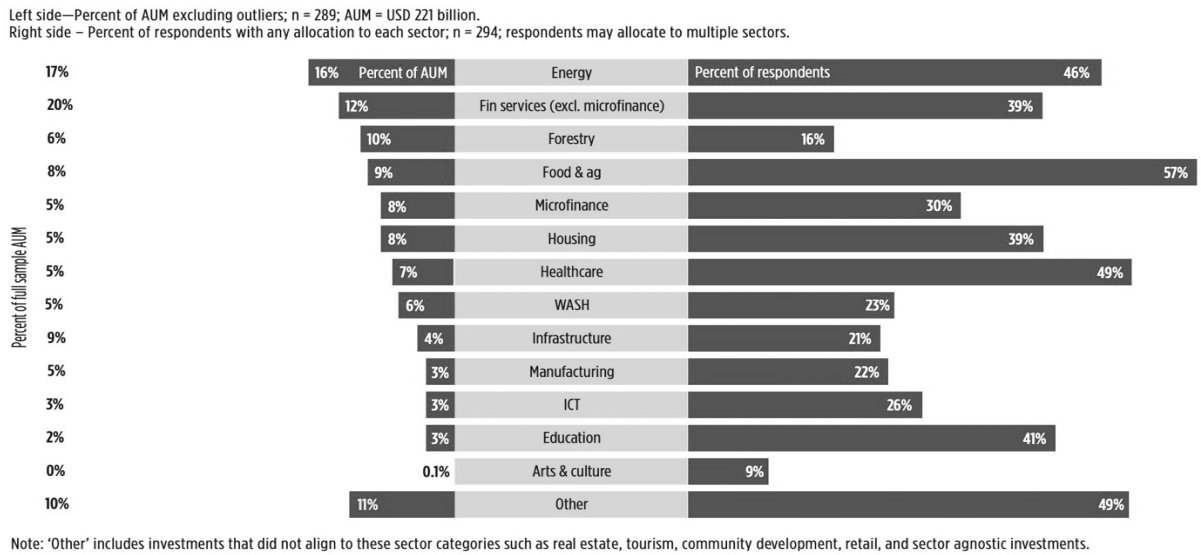
In particular, private equity-focused impact investors appear to allocate a more AUM to the US and Canada (30%) and SSA (29%) with respect to private debt-focused investors (20% and 13% AUM, respectively), while the latter show a greater focus on LAC than the former.

Sectors targeted by impact investment

Impact investing mission is to help solve social and environmental issues via market-based solutions. In this sense, impact investing is not limited to specific industries or sectors, but rather driven by the presence of social and/or environmental issues; thus, in general, impact investing resources are directed towards enabling access to critical technology and basic services, providing employment, assisting community or international development, as well as supporting environmental conservation, and driving transition to renewable energy (GIIN 2018; Höchstädter & Scheck, 2014). Moreover, the OECD states that impact investing targets social areas, such as inequality, poverty, education, disability, health, (affordable) housing, and unemployment (OECD, 2019).

According to the review of literature and research by Höchstädter and Scheck (2014), sectors typically interested by impact investment activity are agriculture, cleantech and clean/renewable energy, education, healthcare, financial services for disadvantaged communities, microfinance, housing, and water. These results from literature are consistent with GIIN's findings (2020a), as shown in Figure 14[9].

Figure 14: AUM sector allocation (% of total) and most frequently targeted sectors



Source: GIIN (2020a)

[9] Sectors reported in the GIIN's *Annual impact investor survey* (2020a) are: Energy; Financial services (excluding microfinance); Forestry; Food and agriculture; Microfinance; Housing; Healthcare; Water, sanitation, and hygiene; Infrastructure; Manufacturing; Information and communication technologies; Education; Arts and culture; Other.

In terms of percentage of AUM allocated and excluding outliers, the most targeted sector is energy (16%), followed by Financial services (12%), Forestry (10%), and Food and agriculture (9%). Moreover, it is worth noting that, 49% of respondents indicated some allocation for the Other category, which includes investments not falling in the other sector categories proposed – this further supports the idea by which impact investing is primarily driven by its mission rather than limited to certain sectors. Food and agriculture (57%) is the most popular sector, followed by Energy (40%), and Healthcare (49%).

Based on repeat respondents' data, over the past few years investors have been increasing their allocations across sectors (GIIN, 2020a). In terms of CAGR (2015-2019), WASH (33%), Financial services (30%), and Healthcare (23%) are the most rapidly growing sectors – with Financial services also being the second sector for AUM allocation.

As a final note, Figure 15 provides a picture of sector allocation by geography and offers a focus on private debt and private equity investors.

Figure 15: Sector allocation by geographic and asset class focus

		Geographic focus		Asset class focus	
	Overall	DM-focused Investors	EM-focused Investors	Private Equity-focused Investors	Private Debt-focused Investors
Energy	16%	12%	23%	12%	14%
Fin services (excl. microfinance)	12%	3%	29%	24%	17%
Forestry	10%	17%	1%	2%	1%
Food & ag	9%	10%	10%	12%	9%
Microfinance	8%	2%	12%	6%	32%
Housing	8%	11%	3%	1%	10%
Healthcare	7%	9%	4%	10%	2%
WASH	6%	10%	1%	0%	0%
Infrastructure	4%	4%	4%	2%	1%
Manufacturing	3%	3%	3%	3%	1%
ICT	3%	3%	3%	8%	1%
Education	3%	4%	1%	12%	4%
Arts & culture	0%	0%	0%	0%	0%
Other	11%	12%	6%	9%	7%
n	289	139	124	83	64
Total AUM (USD millions)	220,914	123,131	80,168	19,183	24,042

Note: Excludes three outliers. 'Other' includes investments that did not align to these sector categories such as real estate, tourism, community development, retail, and sector agnostic investments.

Source: GIIN (2020a)

DEFINITIONAL BOUNDARIES WITH RELATED FIELDS

The double soul of impact investing is what identifies it; however, in the absence of a single definition, it can be confused or assimilated to other related fields, characterized by non-financial criteria and/or goals too (Agrawal & Hockerts, 2019; Höchstädter & Scheck, 2014; Reeder & Colantonio, 2013).

Philanthropy

As previously discussed (p. 18), impact investing differs from charitable initiatives and philanthropy because of the presence of a financial return requirement.

Socially responsible investing (SRI)

According to field practitioners (e.g., Robeco), for an investment to be considered socially responsible, the company's underlying type of business is the determining factor.

SRI is usually associated with negative screening (Tekula & Andersen, 2019; Cambridge Associates, 2017; Höchstädter & Scheck, 2014; Berry & Junkus, 2012), which entails refraining from investing in companies conducting businesses considered unethical or detrimental to society, such as gambling, alcohol and tobacco production, or even oil manufacturing (Nicholls, 2010). Indeed, SRI conceptually started as a way for investors to avoid financing companies they disapproved for ethical or values-based reasons; however, other strategies developed over time, including positive screening (Höchstädter & Scheck, 2014), by which stakes are acquired only of those companies aligned with investors' values – for example, companies engaged in social justice, environmental sustainability or alternative energy.

Though even research struggles in drawing clear lines between SRI and impact investing, the latter emerges as a more proactive and engaged approach (Agrawal & Hockerts, 2019; Höchstädter & Scheck, 2014), not limited to negative and positive screening or, as it will be discussed in the next paragraph, ESG criteria implementation.

ESG investing

ESG investing consists in actively using ESG criteria and metrics, together with financial factors, when taking investment decisions (MSCI, 2018). According to the CFA Institute (n.d.), it evolved from SRI with the key difference that, despite some investments may present ESG-related risks, the investor could still deem the investment as ESG positive overall and finance it, even though it would have typically been excluded based on SRI practices. For example, investing in a fossil fuel company strongly committed to reducing greenhouse gas emissions and enhancing transparent reporting could be an ESG investment, but it might not be considered by a socially responsible investor whose values and policies exclude fossil fuel producers from financing opportunities. In this context, impact investing shares with ESG investing the practice of incorporating both financial and non-financial criteria in investment selection; however, impact investing appears to have a more proactive stance, thus going beyond the improvement of corporate practices in terms of ESG criteria (Höchstädter & Scheck, 2014; Harji & Jackson, 2012). As a matter of fact, impact investing targets a specific social or environmental objective (e.g., providing employment in a community) and makes sure it is achieved by measuring and monitoring it.

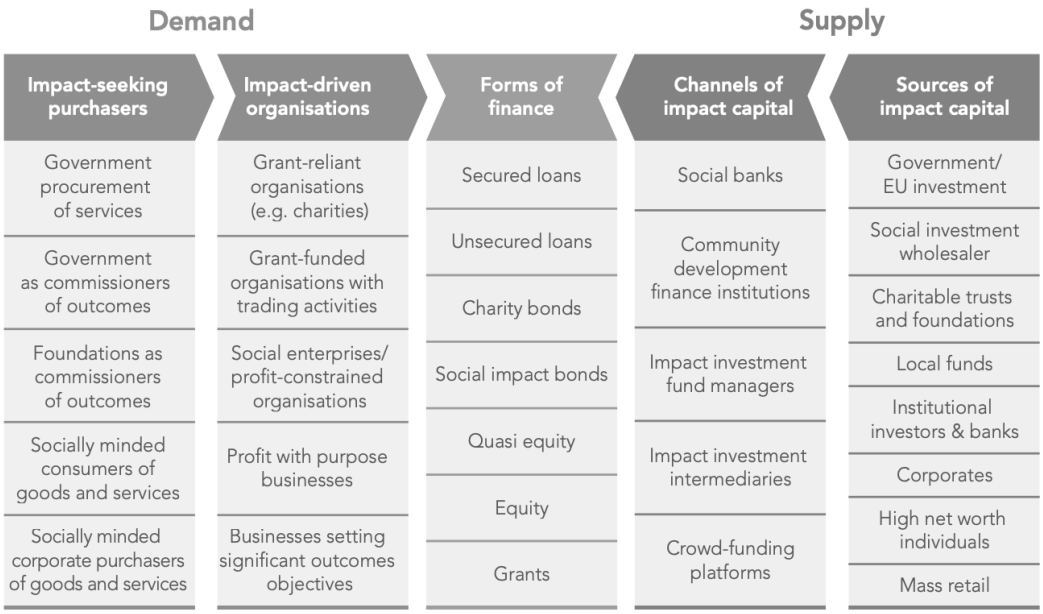
Finally, ESG investing, like SRI (Höchstädter & Scheck, 2014), is primarily focused on public securities (Lerner et al. 2020; CFA Institute, n.d.), while impact investing predominantly makes use of private capital (Höchstädter & Scheck, 2014). This is confirmed by data from the GIIN (2020a), which identifies private debt and private equity among the main asset classes by asset allocation.

2.2.3. Ecosystem

The impact investing ecosystem is composed of different actors. According to the Social Impact Investment Taskforce (2014), a first distinction can be made between demand side and supply side actors (Figure 16). On the demand side, the impact-seeking purchasers provide the necessary resources (revenues) to impact-driven

organizations allowing them to keep operating. On the supply side, there are the capital sources, which can be directed towards impact investments either directly or through specific channels to finance impact-oriented organizations. Finally, the financing can be realized through the use of different financial instruments (cf. p. 20).

Figure 16: The impact investing ecosystem



Source: Social Impact Investment Taskforce (2014)

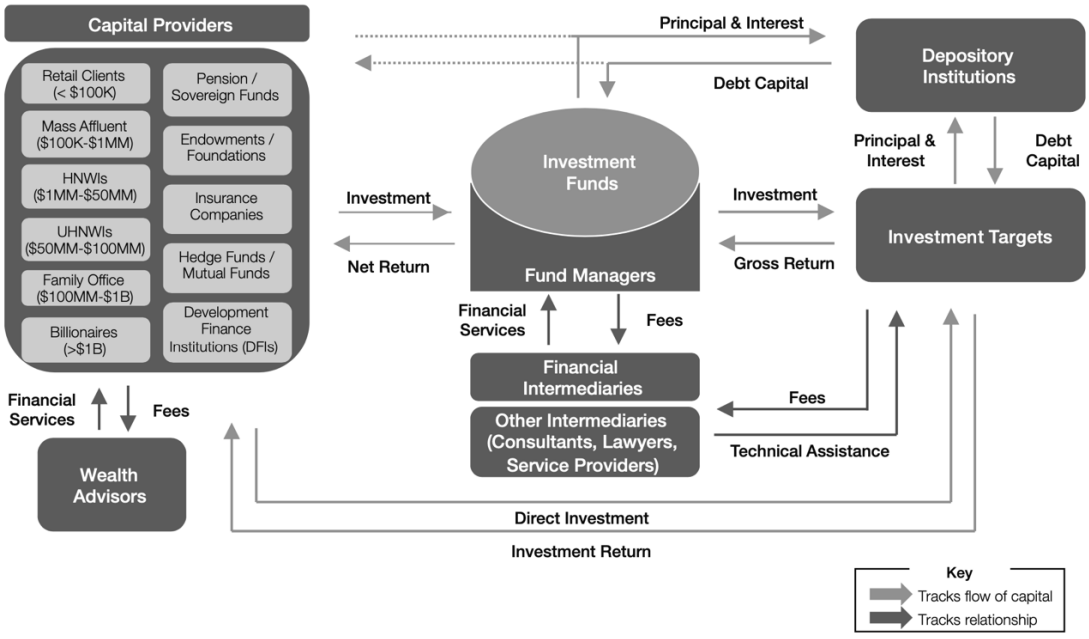
The development of the ecosystem has been fueled both by the growth of impact entrepreneurship (Social Impact Investment Taskforce, 2014) and by the financing involvement of foundations, HNWIs and family offices, investment banks, develop-ment finance institutions, and dedicated impact funds (Monitor Institute, 2009). Moreover, there exist a variety of network organization whose aim is to promote best practices, create partnerships, and increase the scale of the sector – among these, the most prominent is the GIIN, the Global Impact Investing Network.

According to Calderini et al. (2018), governments, charities and foundations have proved their ability to play a catalytic role in developing the impact investing ecosystem. However, the development is not homogeneous: they distinguish between *roadrunner* countries, notably the United States and the United Kingdom, where impact investing activities have been institutionalized, and *chasers*, characterized by the lack of any

systematization. In roadrunner countries, impact investing programs are no longer in an experimental phase, and have evolved into a more systematic and strategic approach to this form of investment; moreover, multiple sources of capitals are active and both privates and governments channel capitals towards impact investments – as a result of the joint commitment of public and private sector, the amount of capitals channeled in the market is higher. Finally, both market regulation and private intermediation have set the bases to build a solid market infrastructure which has resulted in a legal framework that favors impact investing and investment banks; intermediaries specialize in impact investing and set impact investing funds.

As a final note, Figure 17 depicts the impact investing ecosystem with specific reference to impact private equity funds.

Figure 17: Impact funds ecosystem



Source: WEF (2013)

The structure and the mechanisms of the fund are the same as those described for traditional private equity funds in the first section of the chapter. According to Wood & Thornley (2013), impact private equity funds specifically target investments in underserved communities and impact venture capital funds that focus on new

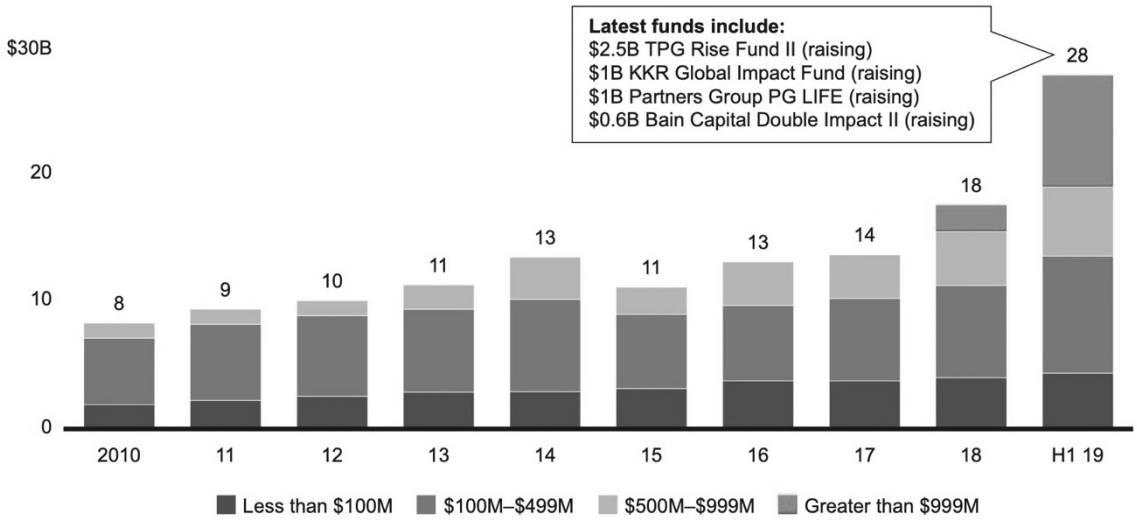
technologies for renewable energy production or energy efficiency improvements or support for impact-oriented enterprises.

2.2.4. Impact market

SIZE

Albeit still a small niche (Calderini et al., 2018), the impact investing market is growing. In a recent report, the GIIN (2019b) estimated the impact investing market to be of 502 USD bn in terms of AUM; in 2013, the figure amounted to 25 USD bn (WEF, 2013). Moreover, according to Bain (2020), a rising number of investment firms are launching pure-impact funds and their AUM is increasing (Figure 18).

Figure 18: Total AUM of dedicated impact PE/VC funds



Notes: Data as of December 2019; includes private equity and venture capital funds classified as "socially responsible" or "environmentally responsible" by Preqin; total AUM calculated as sum of AUM for all funds launched in the past seven years (i.e., lifetime of each fund assumed to be seven years)

Source: Bain (2020)

Overall, there is a mounting level of activity and financial resources involved also in related fields – thus indicating a broader investment trend. Based on US SIF data, sustainable, responsible and impact investing AUM represent 26% of the total 46.6 USD tn of US AUM (US SIF, 2018). Moreover, according to the Climate Bonds Initiative (CBI, 2019), the issuance of global green bonds and loans has reached a record level in 2019, up to 257.7 USD bn, marking a +51% on 2018. Meanwhile, as reported in the Principles for Responsible Investment quarterly update (PRI, 2020), the number of

signatories has been growing, reaching a total of 3,300 as of March 2020 – comprising 561 asset owners managing 103.4 USD tn.

GROWTH FACTORS

In general, as explained by Geobey and Callahan (2017), there is a "widespread belief – reflected by the creation of the Sustainable Development Goals and the ratification of the Paris Agreement on climate change – that big actions with correspondingly large capital investments are required to respond to pressing social and ecological concerns" (p. 18). This view has materialized in a spectrum of different activities, such as (but not limited to) SRI, ESG investing, and impact investing.

Public institutions, charitable and philanthropic organizations have historically been the main source of capital (Clarkin & Cangioni, 2016; WEF 2013). However, on the one hand, governments worldwide are facing significant fiscal challenges, raised by a variety of social issues, which may become critical difficulties considering constraints on public budgets due to increasing debt and fiscal austerity (GIIN, 2018; Geobey & Callahan, 2017); on the other hand, philanthropy alone may not have the means to solve such demanding social problems (Calderini et al., 2018; WEF, 2013). An estimated 5 to 7 USD tn are needed to reach the Sustainable Development Goals and, though governments will continue to play a prominent role, private capital has growth perspectives too; indeed, the achievement of SDGs is expected to unlock market opportunities for up to 12 USD tn by 2030 (Niculescu, 2017). Thus, impact investing makes business sense, and it can contribute to filling the financing gap as it has the potential to pool large capitals by involving asset owners such as pension funds, insurance firms, sovereign wealth funds, foundations, family offices and HNWI and asset managers such as private equity firms, mutual funds, hedge funds and asset management divisions of banks (WEF, 2013).

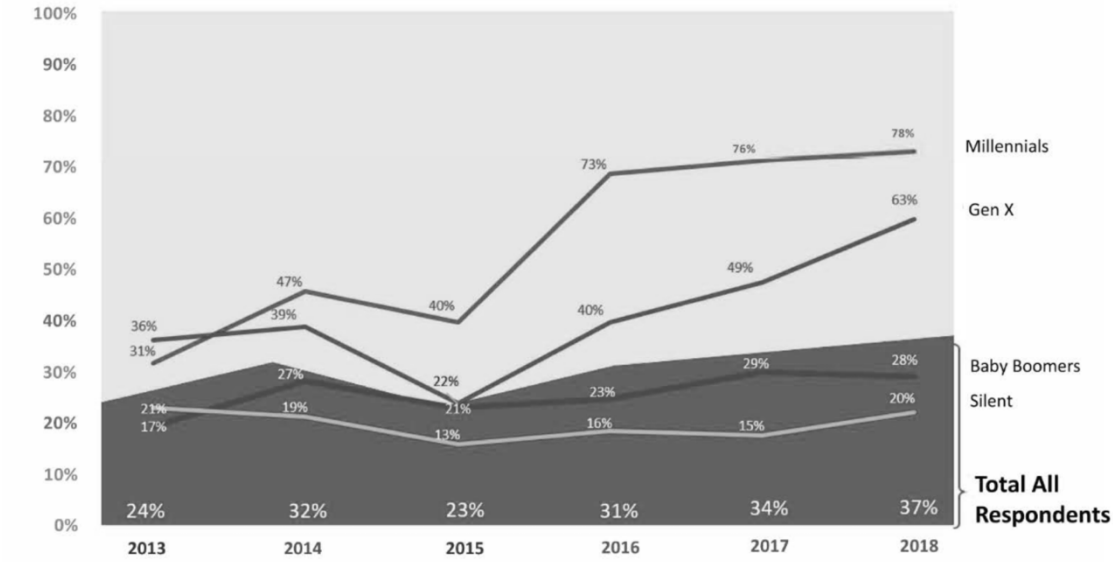
Large-scale dynamics are at play; indeed, as highlighted by Snider (2016), it is the investment community in the first place that is shifting towards more conscious

investment approaches. There is a growing sensitivity with regards to the effects that businesses (and investors backing them) have on multiple stakeholders, including communities and the environment (GIIN, 2018).

Individual investor's focus is changing. According to a recent US Trust survey study on HNWI in the United States, the change is driven by millennials (US Trust, 2018): indeed, 78% of millennials have readjusted their portfolios for impact (Figure 19), representing the highest percentage by demographic group, followed by Gen X. It estimated that, just in North America, millennials will control about 20 USD of assets by 2030 and that an additional wealth transfer of 30 USD tn will take place by 2050 (CB Insights, 2018).

Figure 19: HNWI who reviewed their investment portfolio for impact (% by demographic group)

6-yr trend (2013-2018)



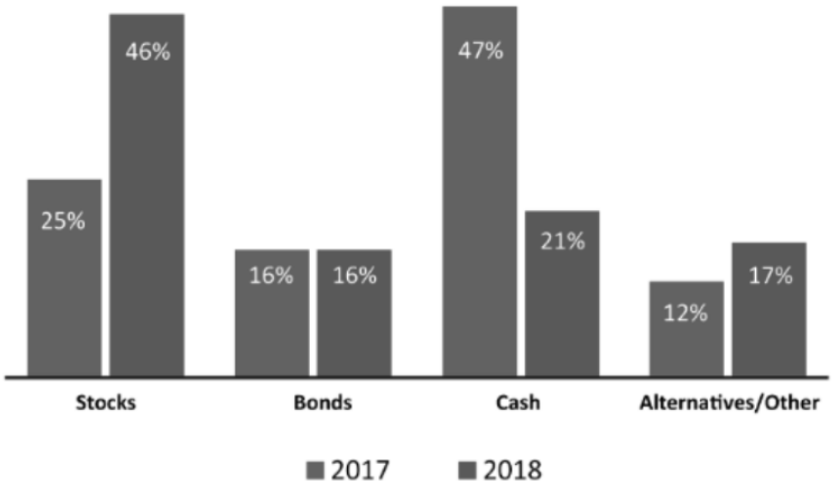
Source: US Trust (2018)

Though there is a general trend across all investors, younger generations are the protagonists as they look for greater alignment to their values and more engagement in society when it comes to allocating their wealth (US Trust, 2018). Nonetheless, it is worth noting that 81% of respondents who already held impact investments expected to obtain market-rate returns (US Trust, 2018).

The survey also found that, between 2017 and 2018, millennials modified the composition of their portfolios moving the majority of their cash holdings into stocks (Figure 20). They still represent the demographic group with the lowest stock allocation (all other groups[10] have more than 50% of their portfolios invested in stocks), but they are more prone to invest in alternatives, particularly private equity (US Trust, 2018).

Figure 20: HNW millennials' asset allocation (%)

Q1 2017 vs Q1 2018



Source: US Trust (2018)

Another important demographic group driving the change is that of women. Many studies document the increasing presence of women in investment decisions and wealth ownership (US Trust, 2018; GIIN, 2018; WEF, 2013); more specifically, women control about a third of the world's wealth, which amounts to 216 USD tn, and they are increasing their share at a rate that outperforms that of the wealth market with a 7.2% expected 2019-2023 CAGR (BCG, 2020). According to the BCG survey (2020), women are particularly attentive in investing with a specific focus, which often entails themes such as the environment, sustainability, new technologies, and social justice.

[10] Percentage of stock allocation of other demographic groups: Gen X 54%, baby boomers 56%, aged 75 or more 61%.

RISKS AND CHALLENGES

Given the ongoing delineation and structuralizing of the industry, impact investing stakeholders have various risks to manage and challenges to face.

According to the work by Barby and Gan (2014), five risks characterize the industry:

- the capital risk, which entails the impossibility of recovering the invested principal;
- the exit risk, linked to the illiquidity of impact investments;
- the transaction cost risk, relative to all those supporting activities that do not directly generate profits, such as the due diligence process and the monitoring;
- the impact risk, concerning the eventuality in which an investment has positive effects on a certain group but detrimental effects for others;
- the unquantifiable risk, which derives from unpredictable events.

Concerning the liquidity issue, Harji and Jackson (2012), highlight how secondary markets could provide some assurances, as in terms of exit options. Though the development of secondary markets has lagged in the impact investing industry, there are some notable steps forward, such as social stock exchanges (Harji and Jackson, 2012). As the market matures, social stock exchanges can be important as they provide a useful mechanism to solve liquidity and exit issues.

There is also a pipeline aspect (WEF, 2013; Harji & Jackson, 2012); indeed, another important challenge for the industry is to have an available pipeline of investment-ready opportunities with the risk/return profile and impact targeted by investors (Clarkin & Cangioni, 2016; Orniston et al., 2015).

In a recent report, the International Finance Corporation (IFC, 2019) has identified four main challenges for the impact investing industry.

First, it is unclear whether impact investing can generate commercial returns that are comparable to financial-return only investments. There is a widespread idea that impact investments imply a compromise between commercial returns and social

impact; however, though research studying the topic has not yet come to a definitive conclusion, there are a growing number of studies confirming that investors can achieve commercial financial returns at scale (IFC, 2019; Lerner, 2020).

Second, due to the lack of transparency on how investments are managed to realize impact, a critical issue is represented by "impact washing". The concept of impact washing, which basically indicates the practice of using the 'impact investment' label even when there is no real impact intent, is strictly related to reputation risk and it discourages potential investors involvement, while also jeopardizing the industry's reputation.

Third, given that impact assessment does not yet have widely accepted approaches, metrics, and conventions, comparability across investments is quite cumbersome and hiders investors' ability to take effective decisions.

Finally, regulatory frameworks often do not support investment managers who seek to create impact alongside financial returns. This aspect goes back to the limited participation of institutional investors, which are subject to several requirements and find it difficult to fit impact investments in their asset allocation framework (WEF, 2013).

Indeed, institutional investors are not nearly involved enough (Calderini et al., 2018) and this seems to be primarily due to the fact that they are highly regulated and are subject to high standards in terms of benchmarking and reporting; therefore, institutional investors typically require a strong track record when allocating financial resources, which often is not available, both due to the young age of enterprises that compose the industry and to issue related to the uniform adoption of measuring tools.

Thus, it emerges that the most pressing priorities for the impact investing industry are the standardization of definitions, metrics, tools and frameworks, the creation of a database of track records, and the involvement of public and private actors to create the necessary infrastructural environment (Calderini et al., 2018).

3. Methodology and Data

As discussed in the literature review, impact investing encompasses multiple geographies – including both developed and developing countries – in achieving its objectives. The review of the literature also highlighted that some countries have developed a more favorable infrastructure for the impact investing industry to evolve; therefore, it is interesting to study whether country-specific factors make a difference.

The scope of work of this thesis is impact investing in private equity and the objective is to better understand which are the country factors that favor its activity. The idea to adopt such geographic perspective derives from the approach used by Huang et al. (2019) in *The geography of initial coin offerings*.

With this intent, a series of indicators and parameters relating to economic, financial, legal, and cultural factors for each country were collected. The indicators database obtained was then matched with another dataset provided by Professor Ughetto, containing data on investment rounds made in social impact companies. Once identified independent and control variables to be used, a linear regression was carried out with the number of financing rounds as the dependent variable.

3.1. Description of the databases

3.1.1. Indicators database

As a preliminary activity aimed at identifying the type of indicators to be used in the present thesis, a series of papers on geographical studies have been analyzed – focusing on the field of private equity and venture capital. The result of this preliminary analysis was a mapping of the various indicators used by the different authors (Appendix 2). Of course, some indicators, such as the GDP and the population of the country, often recur.

Based on the mapping obtained, a first broad selection was done; it mainly implied discarding either those indicators that were specific to the phenomenon studied in the

given paper (e.g., in the case of ICOs, the regulation of ICOs, and so forth) and those indicators clearly contained in proprietary datasets, whose data would therefore not be accessible.

Then, data for the selected indicators was searched and collected from a variety of sources. In Appendix 3, the reader can find an overview of the sources for the various indicators searched. According to their nature, indicators were identified as time-invariant and time-dependent. For time-dependent indicators, the years considered span from 2000 to 2019, although data for not all years were not always available. In addition, data relative to certain indicators were not available and therefore it was not possible to construct the variable (sources marked with an X in Appendix 3).

Ultimately, out of the 156 indicators considered after the first selection, 43 of them were constructed – for 219 countries over a time period from 2000 to 2019, as well as the time invariant indicators.

At this point, the list of 43 indicators was revised to understand, among them, which could have more or less relevance in terms of effect on the number of financing rounds towards companies that received impact investments. In making this selection, the author based its choices on what was learned from the literature and, where appropriate, following the approach of Huang et al. (2019). The list of the final indicators considered is selected as independent variables is listed in Appendix 1, along with a detailed description.

3.1.2. Financing rounds database

The financing rounds database was obtained from Impactbase and Crunchbase data, and it was built in 2018-2019.

Unfortunately, Impactbase is now closed; it collaborated with investors, GPs and the GIIN with the purpose of sharing impact investing knowledge and building a tract

record for impact investments. At the time of construction of the database, Impactbase had over 400 active funds and more than 4000 active subscribers worldwide.

Crunchbase is a database owned by TechCruch, which collaborates with more than 55 million professionals including entrepreneurs, investors, market researchers, and salespeople. Crunchbase provides information with regards to company profiles, funding, and even transaction news and signals.

The original database included 5600 lines corresponding to as many impact investment rounds operated by VC and PE funds. For each investment round, information on the investee company and the investment firm are given. Concerning the investee company, the database indicates the name, industry, active or defunct status, development stage, location, investment date, as well as details on the equity/debt structure of the financing round. With regards to information on the source of financing, the name of the investment firm and the name of the specific fund used are indicated.

Since the database was recently built, the information contained in it was considered up to date and, based on the active/defunct status indicated for the different companies, 151 financing rounds were excluded as they involved such companies.

In terms of years covered by the database, funding rounds in the years from 1992 to 2018 are recorded. The number of financing rounds per year is illustrated in Figure 21.

In addition, when analyzing the composition of the database it was noted that many companies fell into the 'other' category and that important sectors that are typical targets of impact investment, such as financial services (including microfinance), were not indicated. Therefore, the database was reviewed to check whether there could be companies attributable to more specific sectors. To carry out this check, the main tool used was Orbis, a database by Bureau van Dijk, a leading multinational company in the distribution of economic and financial information that covers 300 million

companies worldwide over the past ten years. The category of financial services emerged (Figure 22), consistently with the sectors individuated by the GIIN (2020a).

Figure 21: Number of total financing rounds per year

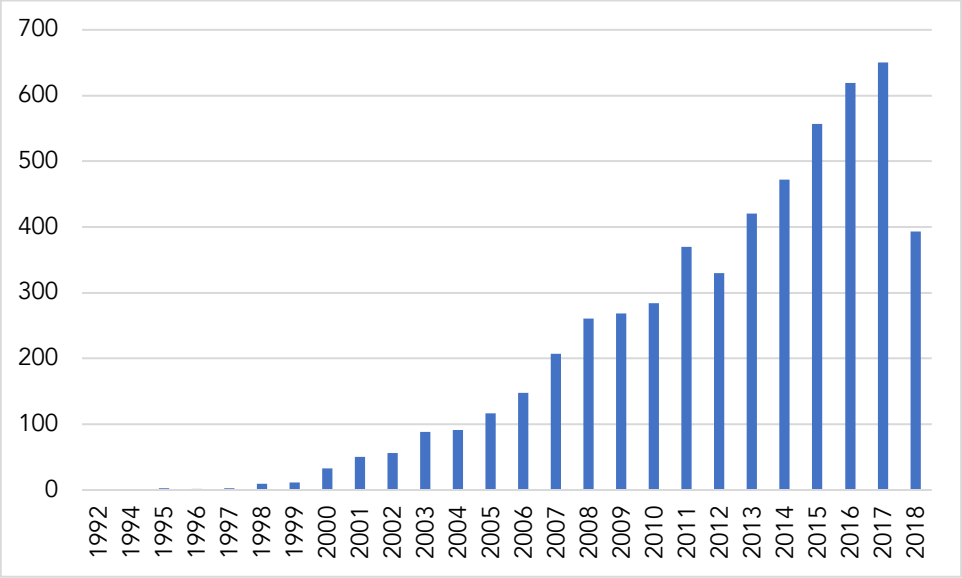
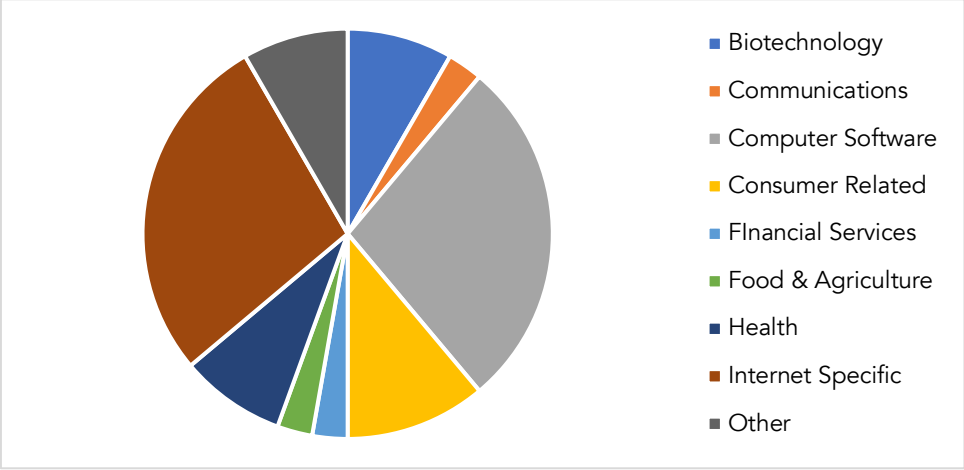


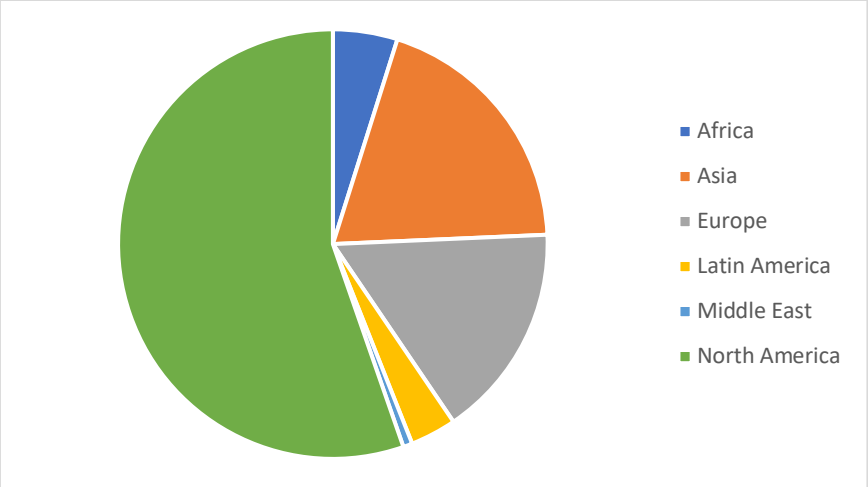
Figure 22: Sectors representation in the database (% no. of firms)



Total firms = 432

The financing round database thus resulted composed of 5446 financing rounds, 432 companies, and comprised 71 countries (Figure 23).

Figure 23: Geographies representation in the database (% no. of firms)



Total firms = 432

3.3.3. Matching the databases

A choice was operated on the indicators database with regards to the reference year to take into account: 2017 was the year chosen as it had the highest numerosity of data for the indicators selected (Appendix 1). Moreover, from the financing rounds database, the cumulated number of rounds up to 2017 was calculated, so to reflect the activity of impact investing in the different countries. Then, the two databases where matched by country. The resulting database comprises 71 countries.

3.2. Description of the model

The model consists in a linear regression comprising 24 variables (21 explanatory and 3 controls):

$$No.\,of\ financing\ rounds = \alpha + \beta_i \times explanatory\ variable_i + \gamma \times controls + \varepsilon$$

The regression was performed via the software Stata 14.

As previously explained, the variables where chosen based on the evaluation of methods already applied in literature and critically thinking on whether they could have an effect on impact investment activity, expressed in terms of financing rounds.

The chosen variables encompass different spheres that can characterize one country with respect to another: financial markets, culture, innovation potential, legal system and regulation, as well as the political environment.

In Appendix 1, the reader can find a more detailed explanation of the indicators used as variables.

EXPLANATORY VARIABLES

As in Huang et al. (2019), the development of financial markets is considered. Indeed, innovative sectors that seek external capital tend to grow at a higher rate in countries where the financing infrastructure is well developed. In order to apprehend this aspect, the Financial Development Index elaborated by the IMF, which captures the development of both financial markets and institutions, was included in the model.

A banking index, accounting for the levels of deposits in banks, is included too. Indeed, the banking system enables firms to have access to forms of short- to long-term financing, which is often employed by young business and startups (as are many young impact-oriented enterprises).

However, obtaining debt financing from banks can be complicated in the absence strong assurances in terms of creditworthiness; thus, there is also an equity index,

indicating the market capitalization relative to GDP. As a matter of fact, it is relevant to account for the role of public equity markets because the constitute an exit option for private equity-backed enterprises and represent a greater assurance of liquidity, thus attracting more investment opportunities.

Based on the work of Cumming and Zhang (2018), it was decided to incorporate cultural elements the model, as it is documented by a vast body of literature that they may have an effect on the behaviors and the decision-making processes of individuals and organizations – thus also investment decisions. The different cultural zone variables are based on Ronen and Shenkar's (2013) mapping of world's cultures.

Moreover, the innovation potential of the different countries is captured by the Patents per capita variable, as it attracts financing.

Variables capturing the relationship between financial, investment, and labor activities with policy and institutional framework are integrated to account for the level of government presence in such activities. Indeed, though regulation is fundamental, enhanced freedom also increases the probability of a successful exit for firms (Cumming et al., 2016). Therefore, variables such as Financial Freedom, Investment Freedom, Regulatory quality, and Protecting minority investors were included. Moreover, following the work of Gulen and Guillen (2010), the variable English legal origin was included as it appears that common law tends to provide stronger protection of investors' rights than the civil law tradition against potential agency problems with management.

Finally, it was inserted a variable related to overall Political Stability, as political risk can affect investments, especially from foreign sources (Cumming et al., 2016).

CONTROL VARIABLES

Among the control variables, it was decided to use GDO and the Population total to account for macro-level country characteristics; an additional control, based on by

Huang et al.'s (2019) approach, regards taxation, so to check whether the overall tax burden on enterprises may have an effect on the number of financing rounds.

4. Results analysis

Regression results are reported in Figures 24. Moreover, statistical significances, which can be concluded from the p-value of the different variables, are indicated with asterisks in Figure 25. Descriptive statistics are provided in Appendix 4.

Figure 24: Regression output

Linear regression	Number of obs.	=	55
	F(23,30)	=	1,32
	Prob > F	=	0,2354
	R-squared	=	0,904
	Root MSE	=	191,35

Nrounds	Coef.	Robust Std. Err.	t	P> |t|	[95% Conf.	Interval]
FinDevindex	-838,39	316,60	-2,65	0,013	-1.484,98	-191,81
Bankingindex	0,72	1,27	0,56	0,577	-1,87	3,30
Equityindex	0,93	0,47	1,99	0,055	-0,02	1,88
Financialfreedom	4,49	4,40	1,02	0,316	-4,50	13,47
Investmentfreedom	3,77	2,84	1,33	0,194	-2,03	9,57
Laborfreedom	0,23	2,02	0,12	0,909	-3,88	4,35
Regulatoryquality	-283,55	124,19	-2,28	0,030	-537,17	-29,93
Protectingminorityinvestors	7,94	3,67	2,16	0,039	0,44	15,44
Englishlegalorigin	72,00	121,50	0,59	0,558	-176,13	320,13
Patentspercapita	0,44	0,26	1,67	0,105	-0,10	0,97
Arabculturezone	-2,12	158,76	-0,01	0,989	-326,35	322,12
NearEastculturezone	174,97	87,44	2,00	0,055	-3,60	353,55
LatinAmculturezone	-80,31	147,72	-0,54	0,591	-382,00	221,38
EastEuropeculturezone	-41,98	121,08	-0,35	0,731	-289,26	205,29
Nordicculturezone	9,23	128,64	0,07	0,943	-253,49	271,94
Germanicculturezone	-150,51	127,14	-1,18	0,246	-410,17	109,14
Africanculturezone	-226,18	244,30	-0,93	0,362	-725,10	272,75
Confucianculturezone	-694,65	425,28	-1,63	0,113	-1.563,19	173,89
Angloculturezone	28,65	155,75	0,18	0,855	-289,44	346,73
FarEastculturezone	26,93	181,51	0,15	0,883	-343,77	397,63
Politicalstability	115,38	64,18	1,80	0,082	-15,70	246,46
GDP	1,47E-10	2,85E-11	5,16	0,000	8,88E-11	2,05E-10
Populationtotal	-2,54E-07	4,32E-07	-0,59	0,561	-1,14E-06	6,28E-07
Taxburden	1,67	2,40	0,69	0,493	-3,24	6,57
_cons	-780,61	380,57	-2,05	0,049	-1.557,83	-3,39

Based on the regression output, the development of financial markets results statistically significant with a p-value of 0,013; however, its coefficient is negative, indicating an inverse relationship with the number of financing rounds.

Figure 25: Coefficient, Standard error, Significance

	Nrounds	
FinDev index	-838,4	**
	(316,6)	
Banking index	0,715	
	-1.268	
Equity index	0,931	*
	(0,467)	
Financial freedom	4,485	
	(4,398)	
Investment freedom	3,771	
	(-2,840)	
Labor freedom	0,233	
	(2,015)	
Regulatory quality	-283,6	**
	(124,2)	
Protecting minority investors	7,943	**
	(3,673)	
English legal origin	72	
	(121,5)	
Patents per capita	0,438	
	(0,263)	
Arab culture zone	-2,118	
	(158,8)	
Near East culture zone	175	*
	(87,44)	
Latin Am culture zone	-80,31	
	(147,7)	
East Europe culture zone	-41,98	
	(121,1)	
Nordic culture zone	9,226	
	(128,6)	
Germanic culture zone	-150,5	
	(127,1)	
African culture zone	-226,2	
	(244,3)	
Confucian culture zone	-694,7	
	(425,3)	
Anglo culture zone	28,65	
	(155,7)	
Far East culture zone	26,93	
	(181,5)	
Political stability	115,4	*
	(64,18)	
GDP	1,47E-10	****
	(2,85E-11)	
Population total	-2,54E-07	
	(4,32E-07)	
Tax burden	1,669	
	(2,402)	
Observations	55	
Standard errors in parentheses		
* p<0.1, ** p<0.05, *** p<0.01, **** p<0.001		

This can be explained by the fact that impact investors aim at improving access to finance for disadvantaged communities and, therefore, they intervene where it is more needed. Nonetheless, to a certain degree, the result seems in contrast with the present literature, which documents that impact investing is able to scale where there is an enabling financial environment. Thus, another consideration that can be made, in this regard, is that the sample analyzed is quite limited, so it is possible that with a larger number of observations we would see different results.

The equity index is slightly significant, with a p-value of 0,055 and a coefficient of 0,93. Thus, the presence of developed public equity markets seems to have a modest effect on the impact investing activity of private equity and venture capital funds. As mentioned earlier (cf. Cumming et al., 2016), private and public equity markets are linked in the sense that the latter constitutes an exit option to the former, which is an asset class characterized by low liquidity by definition, even more so in the case of impact investments.

Concerning the significance of variables used to account for the extent of government intervention in economic activities and its operation: those linked to government interventions are not significant; while regulatory quality and protecting minority investors are both statistically significant, with p-values of 0,03 and 0,039 respectively. Therefore, it is confirmed that regulation plays an important role in driving investments both in terms of perceived government's ability in devising and enacting policies to foster the private sector increases the activity of PE and VC impact investors and more practically with the presence of adequate investor protection regulation. On the other hand, the English legal origins variable accounting for common law tradition is not significant at all.

With regards to the cultural aspects of the investee country, none of the cultural variables were significant, except for the Near East one – which, however, was only slightly significant, with a p-value of 0,55. One could argue that the culture of the investee country does not have a significant effect on private equity investors' activity, though such a conclusion would be better drawn by testing a larger sample.

Political stability shows a p-value of 0,082; thus, also in this case we conclude that its effect is quite moderate on the impact investing activity of PE and VC funds.

Finally, the GDP control variable is the only one that is strongly significant, with a p-value inferior to 0,001. The coefficient is extremely small and the reasons for this can be found in the fact that GDP captures macro-economic characteristics of the country, while here the variable considered refers to a much smaller phenomenon in size. Nonetheless, GDP increases private equity impact investors activity.

5. Conclusions

This present thesis work served to analyze the existence of country specific factors as drivers of impact investing, by adopting a geographical perspective.

To this end, a considerable effort in terms of research and analysis of the extant literature was made, so to understand which geographical criteria academics use when conducting this kind of geographical study.

First of all, the mapping of the relevant literature was performed; from there, successive selections on the candidate independent variables have been made, guided both by the relevance of the indicator in question and by the availability of data. As a result, 43 indicators have been constructed, drawing on different sources, for the years 2000 to 2019, for 219 countries.

Finally, through the analysis of the composition of the database related to financing rounds and thanks to the knowledge – developed in collecting sources for the writing the thesis, it was possible to identify an important non-categorized sector, as that of financial services, which is particularly important for microfinance initiatives in the impact investing panorama.

Finally, by choosing the year 2017 and matching the two databases, the dataset on which to conduct the regression analysis was identified.

With the sole exception of the GDP, modest significance of variable has emerged from the regression analysis. On the one hand, results regarding regulatory variables align a more general discourse supported by the literature that urges governments for the creation of an enabling environment for impact investing. On the other hand, it also prompts reflection in terms of reliability of certain results, as that of financial development, due to the limited sample analyzed.

Indeed, further developments certainly involve conducting a study with a larger sample, which could bring interesting insights with regards to the effect that the development of financial markets has in relation to impact investing activities.

Moreover, since many of the analyzed papers use measures of geographical and cultural distance, a further development of this work does not only entail the expansion of the database in terms of numerosity of observations, but also in terms of adiitional information. For instance, geographical distance indicators could be derived once having the geographical location of the private equity and venture capital firms involved; from there, other more subtle dimensions can be accounted for, such as difference in regulation and culture.

References

Addis, R., McLeod, J., & Raine, A. (2013). Impact Australia: Investment for social and economic benefit. https://www.jbwere.com.au/content/dam/jbwere/documents/ IMPACT_Australia.pdf

Afful-Dadzie, E., & Afful-Dadzie, A. (2016). A decision making model for selecting start-up businesses in a government venture capital scheme. Management Decision, 54(3), 714–734. https://doi.org/10.1108/md-06-2015-0226

Agrawal, A., & Hockerts, K. (2019). Impact investing: review and research agenda. Journal of Small Business & Entrepreneurship, 1–29. https://doi.org/10.1080/08276331.2018.1551457

Alperovych, Y., Hübner, G., & Lobet, F. (2015). How does governmental versus private venture capital backing affect a firm's efficiency? Evidence from Belgium. Journal of Business Venturing, 30(4), 508–525. https://doi.org/10.1016/j.jbusvent.2014.11.001

Ayayi, A. (2004). Public Policy and Venture Capital: The Canadian Labor-Sponsored Venture Capital Funds. Journal of Small Business Management, 42(3), 335–345. https://doi.org/10.1111/j.1540-627x.2004.00115.x

Bain & Company. (2020). Global private equity report 2020. https://www.bain.com/globalassets/noindex/2020/bain_report_private_equity_report_2020.pdf

Barber, B. M., Morse, A., & Yasuda, A. (in press). Impact investing. Journal of Financial Economics.

Barby, C., & Gan, J. (2014). Shifting the lens: A de-risking toolkit for impact investment. Bridges Ventures. https://www.bridgesfundmanagement.com/wp-

content/uploads/2017/08/Shifting-the-Lens-A-De-risking-Toolkit-for-Impact-Investment.pdf

BCG Boston Consulting Group. (2020). Managing the next decade of women's wealth. https://www.bcg.com/publications/2020/managing-next-decade-women-wealth

Berry, T. C., & Junkus, J. C. (2012). Socially responsible investing: An investor perspective. Journal of Business Ethics, 112(4), 707–720. https://doi.org/10.1007/s10551-012-1567-0

Bertoni, F., Colombo, M. G., & Quas, A. (2015). The patterns of venture capital investment in Europe. Small Business Economics, 45(3), 543–560. https://doi.org/10.1007/s11187-015-9662-0

Bertoni, F., D'Adda, D., & Grilli, L. (2015). Cherry-picking or frog-kissing? A theoretical analysis of how investors select entrepreneurial ventures in thin venture capital markets. Small Business Economics, 46(3), 391–405. https://doi.org/10.1007/s11187-015-9690-9

Bertoni, F., & Tykvová, T. (2015). Does governmental venture capital spur invention and innovation? Evidence from young European biotech companies. Research Policy, 44(4), 925–935. https://doi.org/10.1016/j.respol.2015.02.002

Block, J., Fisch, C., Vismara, S., & Andres, R. (2019). Private equity investment criteria: An experimental conjoint analysis of venture capital, business angels, and family offices. Journal of Corporate Finance, 58, 329–352. https://doi.org/10.1016/j.jcorpfin.2019.05.009

Brander, J. A., Du, Q., & Hellmann, T. (2014). The Effects of Government-Sponsored Venture Capital: International Evidence*. Review of Finance, 19(2), 571–618. https://doi.org/10.1093/rof/rfu009

Buzzacchi, L., Scellato, G., & Ughetto, E. (2013). The investment strategies of publicly sponsored venture capital funds. Journal of Banking & Finance, 37(3), 707–716. https://doi.org/10.1016/j.jbankfin.2012.10.018

Buzzacchi, L., Scellato, G., & Ughetto, E. (2015). Investment stage drifts and venture capital managerial incentives. Journal of Corporate Finance, 33, 118–128. https://doi.org/10.1016/j.jcorpfin.2015.05.006

BVCA British Private Equity and Venture Capital Association. (2002). Limited partnership agreement: Explanatory notes. https://www.bvca.co.uk/Portals/0/library/Files/StandardIndustryDocuments/LPAgreement.pdf?ver=2013-06-14-113435-360

Caceis. (2010). A thorough understanding of private equity. https://caceis.cld.bz/a-thorough-understanding-of-private-equity

Calderini, M., Chiodo, V., & Michelucci, F. V. (2018). The social impact investment race: toward an interpretative framework. European Business Review, 30(1), 66–81. https://doi.org/10.1108/ebr-10-2016-0134

Cambridge Associates. (2013, December 9). Institutional investors may benefit from considering impact investing opportunistically, as opposed to viewing it as an asset class with a specific target allocation [Press release]. https://www.cambridgeassociates.com/press-releases/institutional-investors-may-benefit-from-considering-impact-investing-opportunistically-as-opposed-to-viewing-it-as-an-asset-class-with-a-specific-target-allocation/

Cambridge Associates. (2017). Navigating the "alphabet soup" of Mission-Related investing. https://www.cambridgeassociates.com/insight/navigating-the-alphabet-soup-of-mission-related-investing/

Cambridge Dictionary. (n.d.). Assets under management. In Cambridge Dictionary. Retrieved November 3, 2020, from https://dictionary.cambridge.org/dictionary/english/assets-under-management

CB Insights. (2018). Millennials and the future of wealth management. https://www.cbinsights.com/research/report/millennials-and-the-future-of-wealth-management/

CB Insights. (2020, June 26). The top 100 venture capitalists. CB Insights Research. https://www.cbinsights.com/research/top-venture-capital-partners/

CFA Chartered Financial Analyst Institute. (n.d.). ESG investing and analysis. CFA Institute. Retrieved November 27, 2020, from https://www.cfainstitute.org/en/research/esg-investing

CFA Chartered Financial Analyst Institute. (2020). Private equity investments. CFA Institute. https://www.cfainstitute.org/en/membership/professional-development/refresher-readings/private-equity-investments

Clarkin, J. E., & L. Cangioni, C. (2016). Impact investing: A primer and review of the literature. Entrepreneurship Research Journal, 6(2), 135–173. https://doi.org/10.1515/erj-2014-0011

Climate Bonds Initiative. (2020). 2019 green bond market summary. https://www.climatebonds.net/files/reports/2019_annual_highlights-final.pdf

Colombo, M. G., Cumming, D. J., & Vismara, S. (2014). Governmental venture capital for innovative young firms. The Journal of Technology Transfer, 41(1), 10–24. https://doi.org/10.1007/s10961-014-9380-9

Colombo, M. G., & Murtinu, S. (2016). Venture Capital Investments in Europe and Portfolio Firms' Economic Performance: Independent Versus Corporate Investors. Journal of Economics & Management Strategy, 26(1), 35–66. https://doi.org/10.1111/jems.12170

Common EU list of third country jurisdictions for tax purposes. (2020, October 6). Taxation and Customs Union - European Commission. https://ec.europa.eu/taxation_customs/tax-common-eu-list_en#heading_3

Credit Suisse. (2020, October 28). Private markets explained. https://www.credit-suisse.com/about-us-news/en/articles/news-and-expertise/private-market-investing-explained-202010.html

Cumming, D. (2007). Government policy towards entrepreneurial finance: Innovation investment funds. Journal of Business Venturing, 22(2), 193–235. https://doi.org/10.1016/j.jbusvent.2005.12.002

Cumming, D. J., Grilli, L., & Murtinu, S. (2017). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. Journal of Corporate Finance, 42, 439–459. https://doi.org/10.1016/j.jcorpfin.2014.10.016

Cumming, D. J., & MacIntosh, J. G. (2006). Crowding out private equity: Canadian evidence. Journal of Business Venturing, 21(5), 569–609. https://doi.org/10.1016/j.jbusvent.2005.06.002

Cumming, D. J., & MacIntosh, J. G. (2007). Mutual funds that invest in private equity? An analysis of labour-sponsored investment funds. Cambridge Journal of Economics, 31(3), 445–487. https://doi.org/10.1093/cje/bel041

Cumming, D., & Johan, S. (2010). Venture Capital Investment Duration. Journal of Small Business Management, 48(2), 228–257. https://doi.org/10.1111/j.1540-627x.2010.00293.x

Da Rin, M., Nicodano, G., & Sembenelli, A. (2006). Public policy and the creation of active venture capital markets. Journal of Public Economics, 90(8–9), 1699–1723. https://doi.org/10.1016/j.jpubeco.2005.09.013

del-Palacio, I., Zhang, X. T., & Sole, F. (2010). The capital gap for small technology companies: public venture capital to the rescue? Small Business Economics, 38(3), 283–301. https://doi.org/10.1007/s11187-010-9275-6

Devenow, A., & Welch, I. (1996). Rational herding in financial economics. European Economic Review, 40(3–5), 603–615. https://doi.org/10.1016/0014-2921(95)00073-9

Driving real impact. (n.d.). Global Steering Group for Impact Investment. https://gsgii.org/about-us/

Fitch Connect. (2020). Sovereign Ratings [Dataset]. https://app.fitchconnect.com/ratings/sovereign

Geobey, S., & Callahan, J. (2017). Managing impact portfolios: A conceptual view of scale. ACRN Oxford Journal of Finance and Risk Perspectives, 6(4), 17–36. http://www.acrn-journals.eu/resources/jofrp0604b.pdf

GIIN Global Impact Investing Network. (n.d.). What you need to know about impact investing. The GIIN. https://thegiin.org/impact-investing/need-to-know/

GIIN Global Impact Investing Network. (2018). Roadmap for the future of impact investing: Reshaping financial markets.

https://thegiin.org/assets/GIIN_Roadmap%20for%20the%20Future%20of%20Impact%20Investing.pdf

GIIN Global Impact Investing Network. (2019a). Core characteristics of impact investing. https://thegiin.org/assets/Core%20Characteristics_webfile.pdf

GIIN Global Impact Investing Network. (2019b). Sizing the impact investing market. https://thegiin.org/assets/Sizing%20the%20Impact%20Investing%20Market_webfile.pdf

GIIN Global Impact Investing Network. (2020a). Annual impact investor survey 2020. https://thegiin.org/assets/GIIN%20Annual%20Impact%20Investor%20Survey%202020.pdf

GIIN Global Impact Investing Network. (2020b). IRIS 5.1 taxonomy. IRIS+. https://iris.thegiin.org/catalog/download/

GIIN Global Impact Investing Network. (2020c). The state of impact measurement and management practice. https://thegiin.org/assets/GIIN_State%20of%20Impact%20Measurement%20and%20Management%20Practice_Second%20Edition.pdf

Governance & Accountability Institute. (2020, November 18). Big news: US SIF report on US sustainable and impact investing trends 2020 released [Press release]. https://www.ga-institute.com/newsletter/press-release/article/big-news-us-sif-report-on-us-sustainable-and-impact-investing-trends-2020-released.html

Grabenwarter, U., & Liechtenstein, H. (2011). In search of gamma: An unconventional perspective on impact investing. SSRN Electronic Journal, 0. https://doi.org/10.2139/ssrn.2120040

Gray, J., Ashburn, N., Douglas, H. V., Jeffers, J. S., Musto, D. K., & Geczy, C. (2015). Great expectations: Mission preservation and financial performance in impact investing. SSRN Electronic Journal, 0. https://doi.org/10.2139/ssrn.2694620

Grilli, L., & Murtinu, S. (2014). Government, venture capital and the growth of European high-tech entrepreneurial firms. Research Policy, 43(9), 1523–1543. https://doi.org/10.1016/j.respol.2014.04.002

Grinblatt, M., Titman, S., & Wermers, R. (1995). Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior. The American Economic Review, 85(5), 1088–1105. https://www.jstor.org/stable/2950976?casa_token=TWKfHVNxvvIAAAAA%3Ahp8s15KeQkTAbuJTg6ByWeP6QF1AFkvXDjQG-zXJYXnLh7qzWwt3Pb6woznB2IUL8MjO3lOwCtYQ-sNwONeGZNdZs1BThPh44ZeWQjbkwv96EY7ZQ&seq=1#metadata_info_tab_contents

Guerini, M., & Quas, A. (2016). Governmental venture capital in Europe: Screening and certification. Journal of Business Venturing, 31(2), 175–195. https://doi.org/10.1016/j.jbusvent.2015.10.001

Harji, K., & Jackson, E. T. (2012). Accelerating impact: Achievements, challenges and what's next in building the impact investing industry. https://www.rockefellerfoundation.org/wp-content/uploads/Accelerating-Impact-Full-Summary.pdf

Höchstädter, A. K., & Scheck, B. (2014). What's in a Name: An Analysis of Impact Investing Understandings by Academics and Practitioners. Journal of Business Ethics, 132(2), 449–475. https://doi.org/10.1007/s10551-014-2327-0

Hofstede Insights. (n.d.). National Culture. https://hi.hofstede-insights.com/national-culture

IFC International Finance Corporation. (2019). Creating impact: The promise of impact investing. https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/promise-of-impact-investing

Irene, B., Marika, A., Giovanni, A., & Mario, C. (2015). Indicators and metrics for social business: a review of current approaches. Journal of Social Entrepreneurship, 7(1), 1–24. https://doi.org/10.1080/19420676.2015.1049286

Jääskeläinen, M., Maula, M., & Murray, G. (2007). Profit distribution and compensation structures in publicly and privately funded hybrid venture capital funds. Research Policy, 36(7), 913–929. https://doi.org/10.1016/j.respol.2007.02.021

Jeddy, A., & Portner, M. (2020, September 16). Dry powder in private equity. McKinsey & Company. https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/dry-powder-in-private-equity

Kovner, A., & Lerner, J. (2015). Doing Well by Doing Good? Community Development Venture Capital. Journal of Economics & Management Strategy, 24(3), 643–663. https://doi.org/10.1111/jems.12100

La Porta R., Lopex-de-Silanes, F. Shleifer, A., & Vishny, R. W. (1998). Law and finance. Journal of Political Economy, 106(6): 113-155.

Leleux, B., & Surlemont, B. (2003). Public versus private venture capital: seeding or crowding out? A pan-European analysis. Journal of Business Venturing, 18(1), 81–104. https://doi.org/10.1016/s0883-9026(01)00078-7

Lerner, J. (1999). The Government as Venture Capitalist: The Long-Run Impact of the SBIR Program. The Journal of Business, 72(3), 285–318. https://doi.org/10.1086/209616

Lerner, J. (2002). When Bureaucrats Meet Entrepreneurs: The Design of Effective `Public Venture Capital' Programmes. The Economic Journal, 112(477), F73–F84. https://doi.org/10.1111/1468-0297.00684

Lerner, J., Cole, S., Burton, D. M., Dev, A., Jarymowycz, C., Jeng, L., Mashwama, F., Xu, Y., & Zochowski, R. T. (in press). The project on impact investments' impact investment database. Harvard Business School Working Paper, No. 20-117, May 2020. (Revised October 2020.).

Lerner, J., & Watson, B. (2008). The public venture capital challenge: the Australian case. Venture Capital, 10(1), 1–20. https://doi.org/10.1080/13691060701605538

Li, Y. (2008). Duration analysis of venture capital staging: A real options perspective. Journal of Business Venturing, 23(5), 497–512. https://doi.org/10.1016/j.jbusvent.2007.10.004

Longitude. (2019). The individual imperative: Retail impact investing uncovered. https://www.rockefellerfoundation.org/wp-content/uploads/FT_Focus-IMPACT_V10.pdf

McKinsey & Company. (2020). Global private markets review 2020: A new decade for private markets. https://www.mckinsey.com/~/media/McKinsey/Industries/Private%20Equity%20and%20Principal%20Investors/Our%20Insights/McKinseys%20Private%20Markets%20Annual%20Review/McKinsey-Global-Private-Markets-Review-2020-v4.pdf

Minniti, M. (2008). The Role of Government Policy on Entrepreneurial Activity: Productive, Unproductive, or Destructive? Entrepreneurship Theory and Practice, 32(5), 779–790. https://doi.org/10.1111/j.1540-6520.2008.00255.x

Monitor Institute. (2009). Investing for social & environmental impact: A design for catalyzing an emerging industry. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Financial-Services/gx-fsi-monitor-Investing-for-Social-and-Environmental-Impact-2009.pdf

MSCI. (2018). Introducing ESG investing. https://www.msci.com/documents/1296102/7943776/ESG+Investing+brochure.pdf/bcac11cb-872b-fe75-34b3-2eaca4526237

Munari, F., & Toschi, L. (2015). Assessing the impact of public venture capital programmes in the United Kingdom: Do regional characteristics matter? Journal of Business Venturing, 30(2), 205–226. https://doi.org/10.1016/j.jbusvent.2014.07.009

Nicholls, A. (2010). The Institutionalization of Social Investment: The Interplay of Investment Logics and Investor Rationalities. Journal of Social Entrepreneurship, 1(1), 70–100. https://doi.org/10.1080/19420671003701257

Niculescu, M. (2017, July 13). Impact investment to close the SDG funding gap. UNDP United Nations Development Programme. https://www.undp.org/content/undp/en/home/blog/2017/7/13/What-kind-of-blender-do-we-need-to-finance-the-SDGs-.html

OECD Organisation for Economic Co-operation and Development. (2019). Social impact investment 2019: The impact imperative for sustainable development. https://doi.org/10.1787/9789264311299-en

Ormiston, J., Charlton, K., Donald, M. S., & Seymour, R. G. (2015). Overcoming the challenges of impact investing: Insights from leading investors. Journal of Social Entrepreneurship, 6(3), 352–378. https://doi.org/10.1080/19420676.2015.1049285

PitchBook. (2020). What is dry powder? https://pitchbook.com/blog/what-is-dry-powder

Preqin. (2017). Preqin special report: The private equity top 100. https://docs.preqin.com/reports/Preqin-Special-Report-The-Private-Equity-Top-100-February-2017.pdf

Preqin. (2020). Global private equity and venture capital report. https://docs.preqin.com/samples/2020-Preqin-Global-Private-Equity-Venture-Capital-Report-Sample-Pages.pdf

PRI Principles for Responsible Investment. (2020). PRI update: Q4 2020. https://www.unpri.org/download?ac=11599

PwC PricewaterhouseCoopers. (2020). Private equity trend report 2020: Bull or bear?https://www.pwc.de/de/kapitalmarktorientierte-unternehmen/private-equity-trend-report-2020.pdf

PwC PricewaterhouseCoopers & CB Insights. (2020). MoneyTree report Q4 2019. https://www.pwc.com/us/en/industries/technology/assets/pwc-moneytree-2019-q4-final.pdf

Rago, S., & Venturi, P. (2015). Hybridization as Systemic Innovation: Italian Social Enterprise on the Move. EMES International Conference on Social Enterprise, Helsinki, Finland.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008). Socially responsible investments: Institutional aspects, performance, and investor behavior. Journal of Banking & Finance, 32(9), 1723–1742. https://doi.org/10.1016/j.jbankfin.2007.12.039

Robeco Asset Management. (2020, July 17). Socially responsible investing (SRI). Robeco. https://www.robeco.com/it/punti-di-forza/investimenti-sostenibili/glossario/socially-responsible-investing.html

Ronen, S., & Shenkar, O. (2013). Mapping world cultures: Cluster formation, sources and implications. Journal of International Business Studies, 44(9), 867–897. https://doi.org/10.1057/jibs.2013.42

Saltuk, Y. (2013). Perspectives on progress: The impact investor survey. JP Morgan. https://thegiin.org/assets/documents/Perspectives%20on%20Progress2.pdf

Snider, A. (2016). Impact investing: The performance realities. Bank of America Merrill Lynch. https://olui2.fs.ml.com/Publish/Content/application/pdf/GWMOL/ME-impact-investing-white-paper.pdf

Social Impact Investment Taskforce. (2014). Impact investment: The invisible heart of markets. http://mustardseed.vc/wp-content/uploads/2015/07/G8_Impact-Investment-Report.pdf

Statista. (2019). Private equity: Statistics & facts. https://www.statista.com/study/14775/private-equity-statista-dossier/

Tekula, R., & Andersen, K. (2018). The Role of Government, Nonprofit, and Private Facilitation of the Impact Investing Marketplace. Public Performance & Management Review, 42(1), 142–161. https://doi.org/10.1080/15309576.2018.1495656

US SIF The Forum for Sustainable and Responsible Investment. (2018). Report on US sustainable, responsible and impact investing trends 2018 (Executive Summary). https://www.ussif.org/files/Trends/Trends%202018%20executive%20summary%20FINAL.pdf

US Small Business Administration. (n.d.). Small business investment act. https://www.sba.gov/document/policy-guidance--small-business-investment-act

US Trust. (2018). Insights on wealth and worth. Bank of America Private Wealth Management. https://docplayer.net/98149463-2018-u-s-trust-insights-on-wealth-and-worth.html

WEF World Economic Forum. (2013). From the margins to the mainstream assessment of the impact investment sector and opportunities to engage mainstream investors. http://www3.weforum.org/docs/WEF_II_FromMarginsMainstream_Report_2013.pdf

Wilcox, J. W., & Fabozzi, F. J. (2013). Appendix A: Traditional asset classes and alternative asset classes. In Financial advice and investment decisions: A manifesto for a change (p. 276). John Wiley & Sons, Inc.

Wood, D., Thornley, B., & Grace, K. (2013). Institutional impact investing: Practice and policy. Journal of Sustainable Finance & Investment, 3(2), 75–94. https://doi.org/10.1080/20430795.2013.776256

World Bank. (2018, October 15). Global Financial Inclusion (Global Findex) Database [Dataset]. https://datacatalog.worldbank.org/dataset/global-financial-inclusion-global-findex-database

World Bank. (2019a, October 30). Global Financial Development (GFDD) [Dataset]. https://datacatalog.worldbank.org/dataset/global-financial-development

World Bank. (2019b, November 22). Doing Business (DB) [Dataset]. https://datacatalog. worldbank.org/dataset/doing-business

World Bank. (2020a, September 28). Worldwide Governance Indicators (WGI) [Dataset]. https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators

World Bank. (2020b, October 14). World Development Indicators (WDI) [Dataset]. https://datacatalog.worldbank.org/dataset/world-development-indicators

Z/Yen Group, Morris, H., Mainelli, M., & Wardle, M. (2020, August). The Global Finance Centres Index 27. https://ssrn.com/abstract=3652276

Appendix 1: Variables

Financial development index

Financial development is an aggregate index which represents the development of both financial markets and institutions by taking into account three aspects:

- Depth – in terms of market size and liquidity;
- Access – in terms of accessibility to financial services by individuals and firms;
- Efficiency – in terms of institutions capabilities in providing low-cost financial services guaranteeing sustainable revenues and capital markets activity level.

The index is constructed employing a three-step approach frequently found in literature to condense multiple dimensions into one: normalization of variables; aggregation of normalized variables into sub-indices representing a particular functional dimension; and aggregation of the sub-indices into the final index.

Source(s): International Monetary Fund, Financial Development Index Database.

Banking index

The banking index is the ratio of bank deposits, measured as aggregate value of demand, time, and saving deposits in banks, to GDP.

Source(s): World Bank, Global Financial Development Database.

Equity index

The Equity index consists in the listed domestic companies' market capitalization relative to GDP. Market capitalization is given by listed domestic companies' share price times the number of their shares outstanding.

Source(s): World Bank, World Development Indicators.

Financial freedom

Financial freedom is both a metric of banking performance and a predictor of independence from government regulation and financial sector intervention. State regulation of banks and other financial institutions, such as insurance firms and capital markets, lowers competition and limits the amount of access to credit in general. Financial freedom is measured by considering five broad areas:

- Extent of government regulation of financial services;
- Degree of state intervention in banks and other financial firms through direct and indirect ownership;
- Government influence on the allocation of credit;
- Extent of financial and capital market development;
- Openness to foreign competition.

The financial freedom overall score of an economy is given on a 0-100 scale deducting points (by intervals of 10) from the perfect score of 100.

Source(s): The Heritage Foundations, Economic Freedom index.

Investment freedom

Investment freedom is based on the evaluation of different regulatory restrictions on investments. It is constructed by subtracting points, from the ideal score of 100, for each of the restrictions found in a country's investment rules. The areas considered are: National treatment of foreign investment, Foreign investment code, Restrictions on land ownership, Sectoral investment restrictions, Expropriation of investments without fair compensation, Foreign exchange controls, and Capital controls. Moreover, up to an extra 20 points can be subtracted for security issues, a shortage of basic facilities for investment or other government measures that implicitly undermine the investment mechanism and inhibit the freedom of investment.

Source(s): The Heritage Foundation, Economic Freedom index.

Labor freedom

The labor freedom variable is a quantitative indicator that equally weights seven different factors of a country's labor market's legal and regulatory system:

- Ratio of minimum wage to the average value added per worker;
- Hindrance to hiring additional workers;
- Rigidity of hours;
- Difficulty of firing redundant employees;
- Legally mandated notice period;
- Mandatory severance pay;
- Labor force participation rate.

In the construction of the overall labor freedom score for each country, the seven factors are transformed into a score on a 0-100 scale and then averaged.

Source(s): The Heritage Foundation, Economic Freedom index.

Regulatory quality

It represents expectations regarding government's capacity to devise and enact policies and regulations that facilitate and enable the growth of the private sector. Regulatory quality is one of the six qualitative governance indicators, elaborated by World Bank, which draw on more than 30 data sources reporting the surveys respondents' perceptions of governance, as well as expert assessments worldwide.

Source(s): World Bank, Worldwide Governance Indicators.

Protecting minority investors

Minority investors' protection from conflicts of interest is captured through a set of sub-indexes regarding regulation and governance. Data is obtained from questionnaire responses of corporate and securities lawyers and takes into account securities regulations, company laws, civil procedure codes and court rules of

evidence. The overall Protecting minority investors score is the sum of the scores of its sub-indexes.

- Extent of conflict of interest regulation, which includes the sub-indexes:
    - extent of disclosure;
    - extent of director liability;
    - extent of shareholder suits;
- Extent of shareholder governance, which includes the sub-indexes:
    - extent of shareholder rights;
    - extent of ownership and control structures;
    - extent of corporate transparency.

Source(s): World Bank, Doing Business.

English legal system (dummy)

Legal system dummy is based on the legal origin identified by La Porta et al.'s in their analysis about countries different legal origins (i.e. English, French, German, Scandinavian, Socialist). English legal origin countries are characterized by a common law system (either pure or hybridized with other systems), which is more favorable for investing activities. Thus, the dummy is obtained assigning 1 to English legal origin countries and 0 otherwise.

Source(s): Guler & Guillén (2010); La Porta, et al. (1998).

Patents per capita

Patents per capita suggest the innovation potential of a country; it indicates its level of inventive activity, as well as its ability to transform knowledge into profits. For each country, patents per capita is constructed by aggregating data on patents granted by the EPO (European Patent Office), the NPO (National Patent Office), and the USPTO (United States Patent and Trademark Office); divided by total population.

Source(s): Euromonitor, Statistics – Economies and Consumers Annual Data; World Bank, World Development Indicators.

Culture zones

The cultural zone is identified according to Ronen and Shenkar's cultural clustering of countries, based on similarity and dissimilarity in work-related attitudes. They draw on the ecocultural perspective and other inputs, and take into account aspects such as language, religion, and geography. They also include economic variables in their analysis. As a result, they identify the Anglo, Arab, Confucian Asia, East Europe, Far East, Germanic, Latin America, Latin Europe, Near East, and Nordic cultural zones. Each of these zones is modeled as a binary equal to 1 when countries belong to a given cultural zone (0 otherwise).

Source(s): Ronen, S., & Shenkar, O. (2013).

Political stability

Political stability reflects the perception about the probability of political instability and violence due to political reasons, including terrorism. Political stability is one of the six qualitative governance indicators, elaborated by World Bank, which draw on more than 30 data sources reporting the surveys respondents' perceptions of governance, as well as expert assessments worldwide.

Source(s): World Bank, Worldwide Governance Indicators.

Tax Burden

Tax burden indicates, as a percentage of GDP, marginal tax rates on income and the total level of taxation. Tax burden is obtained by equally weighting three measures:

- top marginal tax rate on individual income;
- top marginal tax rate on corporate income;
- total tax burden as a percentage of GDP.

To consider the declining revenue returns due to high tax rates, tax burden scores are computed using a quadratic cost function; then translated into points on a 0-100 scale.

Source(s): The Heritage Foundation, Economic Freedom index.

GDP

Value added by all producers in the economy is known as Gross Domestic Product (GDP). It corresponds to producers' total output value minus the value of the intermediary goods and services used in production. GDP (in current US dollars) is valued at producer prices, including net taxes on products paid by producers and excluding sales or value added taxes. GDP figures in domestic currencies are converted into US dollars by using official exchange rates (yearly).

Source(s): World Bank, World Development Indicators.

Population

Population stands for total country population and it indicates the de facto population, thus including all residents, regardless of legal status or citizenship. Values are mid-year estimates.

Source(s): World Bank, World Development Indicators.

Appendix 2: Mapping of indicators across relevant literature

Literature reference	Content	Indicators
Alvarez-Garrido E., Guler I. (2018). Status in a strange land? Context-dependent value of status in cross-border venture capital. Strategic Management Journal 29, 1887-1911.	About the macro-structural contingencies that influence the marginal value of firm status as firms expand to new markets. Based on 187 VC-backed biotechnology ventures in 19 countries in 1990-2006. Makes the hypothesis that two conditions influence how valuable home-country status will be in a given host country: the interconnectedness of the home and host countries, and their relative position in the global network. Results are that status is ingrained in context; the performance advantage of partnering with high-status cross-border VC firms depends on the relationship between the country of the VC firm and that of the startup; when the VC industries in the two countries are more connected, the positive effect of cross-border VC firm status on successful exit is amplified. But, when the VC firm comes from a more central country than the startup, benefits of VC firm status are less pronounced and vice versa.	**Common language** **English legal system** **GDP per capita** **Interconnectedness** **Stock market capitalization** **Total population**
Buchner A., Espenlaub S:, Khurshed A., Mohamed A. (2017). Cross-border venture capital investments: The impact of foreignness on returns. Journal of International Business Studies.	Global comparison of the returns generated by individual domestic and cross-border deals. Investments worldwide during 1971–2009. Results: cross-border investments significantly underperform compared with equivalent domestic ones; returns are negatively affected by geographic distances, cultural disparities, and institutional; differences between home and host countries; returns on cross-border and domestic deals decline after the late 1990s; international portfolio diversification and saturation of domestic markets may explain why VC; investors make cross-border investments despite poor expected returns.	**Cultural distance** **Geographic distance** **Legal system difference** **Liquidity** **Political distance** **Regulatory distance**
Chan K., Covrig V., Ng L. (2005). What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide. The Journal of Finance 60:3, 1495-1534.	Considers how mutual funds from 26 developed and developing countries allocate their investment between domestic and foreign equity markets and what factors determine their asset allocations worldwide. Domestic bias = extent to which mutual fund investors overweight the home markets in their mutual fund holdings (domestic investors overweight the local markets) Foreign bias = extent to which investors underweight or overweight foreign markets (foreign investors under or over- weighting the overseas markets). over/under --> less/more foreign bias Results: funds, in aggregate, allocate a disproportionately larger fraction of investment to domestic stocks; the variables stock market development and familiarity have significant, though asymmetric, effects on the domestic bias and foreign bias; the variables economic development, capital controls, and withholding tax have significant effects only on the foreign bias.	**Accounting** **Bilateral trade** **Capital flow restrictions** **Common language dummy (avg)** **Country credit rating** **Distance (avg km)** **Efficiency** **Emerging markets dummy** **Expropriation** **FDI (% of GDP)** **GDP growth (real, %)** **GDP per capita** **Legal system dummy** **Minority** **Rule of law** **Stock market cap. (% of GDP)** **Trade volume (% of GDP)** **Transaction costs**
Chemmanur T. J., Hull T. J., Krishnan K. (2016). Do local and international venture capitalists play well together? The complementarity of local and international venture capitalists. Journal of Business Venturing 31, 573-594.	About synergies of foreign and local VCs. Results are: entrepreneurial firms in emerging nations backed by syndicates composed of international and local VCs have more successful exits & higher post-IPO operating performance than those backed by syndicates of purely international or purely local VCs international VCs face disadvantages in their investments due to the lack of proximity to the entrepreneurial firm; entrepreneurial firms backed by international VCs are more successful if travel becomes easier between the two countries; results indicate that the greater VC expertise of VCs and the superior local knowledge and lower monitoring costs of local VCs are important in obtaining successful investment outcomes.	**Firm country GDP** **Legal distance** **Stock market development**
Chen H., Gompers P., Kovner A., Lerner J. (2010). Buy local? The geography of venture capital. Journal of Urban Economics 67, 90-102.	Studies the geographic concentration of both VC firms and VC-financed companies. Focus on three metropolitan areas: San Francisco, Boston, New York City. Results are: VC firms locate in regions with high success rates of VC-backed investments; geography related to outcomes: VC firms based in VC centers outperform; outperformance from outsized performance outside of the VC firms' office locations.	**GDP per capita** **Income tax rate** **Log number of VC firms in CSA** **Long-term capital gains tax rate** **No. and %share of VC offices** **Patents per capita** **Pop. % with college degree or higher** **Success rate of VCs in CSA over last 5 years**

Colombo M. G., D'Adda D., Quas A. (2019). The geography of venture capital and entrepreneurial ventures' demand for external equity. Research Policy xxx (xxxx) xxx–xxx article in press.	About how the geography of VC and the location of entrepreneurial ventures affect the propensity of the latter to seek external equity financing. 533 European high-tech entrepreneurial ventures and their external equity-seeking behaviour in the 1984–2009 period. Results are: ventures are more likely to seek external equity when the local availability of VC is higher; level of competition of the local VC market plays a negligible role; stimulating effect of the availability of VC on the demand for external equity rapidly decreases with distance and vanishes at approximately 250 km; it also vanishes when national borders are crossed, except for countries at close cultural and institutional distance; the distance decay of the stimulating effect of the availability of VC varies with the characteristics of prospective VC investors, namely, their private or public ownership and governance, and their reputation.	**MSCI national**
Cumming D. J., Schwienbacher A. (2018). Fintech venture capital. Corporate Governance. An Interanational Review 26, 374-389.	The authors ask where are fintech venture capital investments taking place around the world? what is the role of institutional factors on the international allocation of fintech venture capital? Results are: notable change in the pattern of fintech VC investments around the world relative to other types of investments after the global financial crisis; fintech VC investments are relatively more common in countries with weaker regulatory enforcement and without a major financial center after the financial crisis; fintech boom is more pronounced for smaller private limited partnership VC that likely have less experience with prior VC booms and busts. These fintech VC deals are substantially more likely to be liquidated, especially when located in countries without a major financial center.	**Financial centre** **GDP** **GDP per capita** **internet usage**
Cumming D., Dai N. (2010). Local bias in venture capital investments. Journal of Empirical Finance 17, 362-380.	Based on a sample of USA VC investments between 1980 and June 2009. Results: VC exhibit less local bias if: the VC is a reputable one (older, larger, more experienced VCs, with stronger IPO track record); the VC has broader networks. VC exhibit more local bias if: they have staging and specialization in technology industries; when acting as the lead VC; when investing alone Additional result: Distance matters for the eventual performance of VC investments.	**N of IPOs** **N of Local VCs** **N of Outside VCs** **N of Patents** **N of Universities** **N of Ventures**
Cumming D., Knill A., Syvrud K. (2016). Do international investors enhance private firm value? Evidence from venture capital. Journal of International Business Studies, 1-27.	About the impact of international VCs on private firm success. 81 countries over the years 1995–2010. Hp: (1) International VC syndicates are positively associated with the likelihood of PCs exiting via IPO. (2) International VC syndicates are less important for facilitating M&A exits than IPO exits. Results: relative to deals in which the investor base is purely domestic, private firms with an international investor base have a higher probability of exiting via an IPO and higher IPO proceeds; this is consistent with the view that while the benefits of internationalization may be difficult and costly to manage, for those firms that succeed in managing cross-border coordination costs, there is potential value for an IPO firm; the benefits relative to the costs of internationalizing the investor base for private firms sold in acquisitions, by contrast, are much less pronounced (with access to capital being the most important benefit).	**CMLOF** **CMLOF culture** **CMLOF geographic** **CMLOF info asymmetry** **CMLOF legal** **Domestic credit** **Economic freedom** **Enforcement** **GDP per capita** **Ln(Market cap)** **Polity** **Shareholders rights**
Cumming D., Zhang M. (2018). Angel investors around the world. Journal of International Business Studies.	The choice between disintermediated individual angel investments and intermediated private equity and venture capital investments depends on legal, economic, and cultural differences. Used PitchBook's data on more than 5000 angel and 80,000 private equity and venture capital investments in 96 countries from 1977 to 2012. Hp1: Angel investment is more sensitive than PE and VC investment to international differences in legal, economic, and cultural conditions. Hp2: (a) Firms funded by angel inves- tors will have a lower probability of achieving successful exits by IPO or acquisition than firms funded by PE and VC investors, but the difference will be less pronounced in countries with stron- ger minority investor protection. (b) Firms funded by angel investors in the first round will have a relatively higher probability of achieving a successful exit by IPO or acquisition. The data further indicate that investee firms funded by angels are less likely to successfully exit through either an IPO or an acquisition. These findings are robust to propensity score-matching methods, as well as to clustering standard errors, and excluding U.S. observations, among other approaches.	**Anglo cultural zone** **Arab cultural zone** **Confucian Asia cultural zone** **East Europe cultural zone** **Far East cultural zone** **Germanic cultural zone** **Individualism** **Latin America cultural zone** **Latin Europe cultural zone** **Ln(domestic market capitalization)** **Ln(GDP per capita)** **Minority shareholders protection index** **MSCI returns** **Near East cultural zone** **Nordic cultural zone** **Uncertainty avoidance**

Dai N., Nahata R. (2016). Cultural differences and cross-border venture capital syndication. Journal of International Business Studies 47, 140-169.	About cross-border syndication in investments led by foreign VCs. Focus on the potential correlation between cultural differences and the formation of VC syndicates. Results are: greater cultural disparity between the countries of investors and their companies is associated with smaller VC syndicates. This is driven largely by lesser local investor representation in foreign VC-led syndicates; however, certain cultural disparity-related syndication strategies, such as the involvement of locally experienced foreign VCs or syndicate members from culturally similar countries, are associated with greater presence of local VCs who provide valuable monitoring services; these culture-linked syndication approaches are significantly correlated with VC financing and monitoring strategies in cross-border investments and their eventual success.	**Cultural distance** **English** **French** **Geographic Distance** **German** **Internetusers** **Ln(GDP)** **Ln(PropertyRights)** **Ln(StockMktCap)** **Openness** **Political Risk** **Shared Border**
Guler I., Guillén M. F. (2010). Institutions and the internationalization of US venture capital firms. Journal of International Business Studies 41, 185-205.	Examination of institutional environment features that influence VC firms' foreign market entry decisions, and how their effect changes as firms acquire experience. 216 American VC firms potentially investing in 95 countries during the 1990-2002 period. Results are: VC firms invest in host countries characterized by technological, legal, financial, and political institutions that create innovative opportunities, protect investors' rights, facilitate exit, and guarantee regulatory stability. As firms gain more international experience, they are more likely to overcome constraints related to these institutions.	**English legal system** **GDP** **Patents/GDP** **Policy stability** **Stock market capitalization (% GDP)**
Hain D., Johan S., Wang D. (2016). Determinants of Cross-Border Venture Capital Investments in Emerging and Developed Economies: The Effects of Relational and Institutional Trust. Journal of Business Ethics 138, 743-764.	About cross-border VC/cross-jurisdiction investments. The vast majority of cross-border investments are carried out in a syndicate of 2+ VCs, indicating the effects of intra-industry networks needing further analysis. Worldwide VC investment flows over the 2000–2012 period. The final dataset contains 30,650 deals, of which 11,665 cross-national borders; 1555 VCs in 8.665 unique portfolio companies located in 37 countries (22 developed, 15 emerging economies) carry out these cross-border deals. - China used as model - framework to explain cross-border VC investments across developed and emerging economies - effects of geographical, cultural, and institutional proximity as well as institutional and relational trust are considered Results are: 'trust' mitigates negative effects of geographical and cultural distance; 'institutional trust' is more relevant for investments in emerging economies; 'relational trust' is more relevant for investments in developed economies"	**Corruption** **Cultural distance** **GDP** **GDP growth** **GDP per capita** **Geographical distance** **Institutional stability** **Institutional trust** **Market capitalization** **Relational trust** **Same language** **Same legal system** **Trade flow (% GDP)**
Huang W., Meoli M., Vismara S. (2019). The geography of initial coin offerings. Small Business Economics.	Used as reference approach for thesis structure: analysis of factors promoting a higher number of ICOs in a given region using a geographic criterion.	**Access to Banking** **Banking Index** **Density** **Equity Index** **Financial Development Index** **Financial Market Development Index** **GDP per capita** **ICT Market Development** **Listed Firms/Population** **Population** **Tax Burden** **Tax Havens** **Taxation** **Tertiary Education** **VC Index** **Venture Capital Availability**

Lerner J., Schoar A., Sokolinski S., Wilson K. (2018). The globalization of angel investments: Evidence across countries. Journal of Financial Economics 127, 1-20.	About the role of investments by angel groups across countries with varying entrepreneurship ecosystems. 21 countries. Results are: exploiting quasi-random assignment of deals around the groups' funding thresholds, there is a find positive impact of funding on firm growth, performance, survival, and follow-on fundraising, which is independent of the level of venture activity and entrepreneur-friendliness in the country. However, the maturity of startups that apply for funding (and are ultimately funded) inversely correlates with the entrepreneurship-friendliness of the country (self-censoring by early-stage firms that do not expect to receive funding in these environments).	**Cost of starting business** **Creditor rights aggregate score** **Distance to frontier score** **GDP per capita** **Index of property rights** **Steps to open business** **VC to GDP ratio**
Li Y., A. Zahra S. A. (2012). Formal institutions, culture, and venture capital activity: A cross-country analysis. Journal of Business Venturing 27, 95–111.	About variation of level of VC activity across countries. Analysis of VC activity for 68 countries during the 1996–2006 period. Results are: the variation can be attributed to the different levels of formal institutional development; proposal for VC to respond differently to the incentives provided by formal institutions depending on different cultural settings; formal institutions have a positive effect on the level of VC activity, but this effect is weaker in more uncertainty-avoiding societies and in more collectivist societies.	**Collectivism** **Early-stage entrepreneurial activity** **Formal institutions** **GDP growth** **Market capitalization/GDP** **N of VC firms** **New firm creation** **Self-employment rate** **Uncertainty avoidance**
Li Y., Vertinsky I. B., Li J. (2014). National distances, international experience, and venture capital investment performance. Journal of Business Venturing 29, 471–489.	About impact of national institutional and cultural distances between the environments of VCs and investees on the performance of cross-border VC investments. The idea is that institutional and cultural differences negatively affect VC activity and exit performance. Results are: initial idea confirmed when controlling for geographical distance; international experience in diverse countries attenuates the deleterious effects of institutional distance in a significant way, but it does not have a similar impact in attenuating the negative effects of cultural distance.	**Cultural distance** **Geographical distance** **Institutional distance** **Venture nation GDP** **Venture nation VC commitment**
Liu Y., Maula M. (2015). Local Partnering in Foreign Ventures: Uncertainty, Experiential Learning, and Syndication in Cross-Border Venture Capital Investments. Academy of Management Journal.	Investigating why organizations do not always partner with local firms, especially in uncertainty. Focus on uncertainty in foreign ventures at the venture and country levels. Global sample of venture capital investments made between 1984 and 2011. Reasoning behind: while both levels increase the need for partnering with local firms in foreign ventures, country-level uncertainty increases the difficulty of partnering with local firms and decreases the likelihood of such partnerships. Experiential learning helps firms manage the two types of uncertainty, and thus reduces the need for partnering; however, experience in the host country makes partnering more feasible and increases the likelihood of such partnerships. Model of this: decision to partner with a local firm in a foreign venture as a multilayered decision. Results support the distinct effects of venture- and country-level uncertainty as well as for corresponding levels of experiential learning.	**Country-level uncertainty** **Cultural distance (ln)** **Geographic distance (ln)** **Host country GDP growth** **N of active local VC firms in host country**
Meuleman M., Wright M. (2011). Cross-border private equity syndication: Institutional context and learning. Journal of Business Venturing 26, 35-48.	About the process by which PE firms invest across borders: role of the institutional context and organizational learning as determinants of cross-border PE syndication. Study on the international expansion by later-stage UK PE investors into continental Europe over the period 1990 to 2006. Result are: Institutional context (no. of PE firms in local environment and presence of IB in local market) and organizational learning (PE firm's experience in host country, multinational experience, and no. of investment managers per portfolio company; but not the presence of local offices) are significantly related to the use of cross-border syndicates.	**Market capitalization/GDP (%)** **No. Local IB** **No. Local PE firms** **Total value buy-outs/GDP (%)**
Moore C. B., Tyge Payne G., Bell G. R., Davis J. L. (2015). Institutional Distance and Cross-Border Venture Capital Investment Flows. Journal of Small Business Management 53:2, 482-500.	About how regulative, normative, and cultural-cognitive institutional differences are related to cross-border VC investment flows. 16 European coun- tries from 1996 to 2005. Hp1: There is a negative relationship between regulative institutional distance and venture capital flows between countries. --> not supported Hp2: There is a negative relationship between normative institutional distance and VC flows between countries. --> supported Hp3: There is a negative relationship between cultural-cognitive institutional distance and VC flows between countries. --> supported Results are: increased normative and cultural-cognitive distance reduce cross-border investments; regulative distance shows no relationship; together, these suggest that institutional dimensions do influence VC investment decisions and that the type of distance can have differing effects.	**Balance of payment (BOP)** **Cultural-cognitive distance (Hofstede's dimensions)** **Foreign direct investment (FDI)** **GDP growth (change)** **Normative distance (Responsiveness to economic challenges, Bureaucratic corruption, Government attitude toward economic realities, Transparency of government to citizens, Political risk, Bureaucratic hindrance to economic development, Independence of local authorities)** **Political regime** **Regulative distance (Antitrust regulation, Intellectual property protection, Judicial system efficiency, Fiscal policy-debt, Fiscal policy-inflation)**

Mueller S. L., Thomas A. S. (2000). Culture and entrepreneurial potential: a nine country study of locus of control and innovativeness. Journal of Business Venturing 16, 51-75.	To assess whether and why entrepreneurial traits vary systematically across cultures. Adopts a geographical perspective to observe cultural traits. Sample of 1,800+ responses to a survey of 3rd- and 4th- year students at universities in 9 countries. Hofstede 4 culture dimensions taken as reference --> only 2 tested in this study: individualistic culture, uncertainty avoidance. Hp1: internal locus of control is more prevalent in individualistic cultures Hp2: innovativeness is more prevalent in low uncertainty avoidance cultures Hp3: individuals with both ILOC and innovativeness orientation (= entrepreneurial orientation) appear more frequently in highly individualistic and low uncertainty avoidance cultures. Results are: Hp1 and Hp3 supported; Hp2 not supported. Innovativeness is more likely among males than females of the sample.	**Entrepreneurial orientation** **Individualism** **Innovativeness** **Locus of control** **Uncertainty avoidance**
Nahata R., Hazarika S., Tandon K. (2014). Success in Global Venture Capital Investing: Do Institutional and Cultural Differences Matter?. Journal of Financial and Quantitative Analysis 49:4, 1039-107.	About impact of institutional and cultural differences on success in global VC investing. VC investments in nearly 10,000 companies across 30 countries. The sample in the regressions consists of VC-backed portfolio companies funded between 1996 and 2002 that received their first round of VC funding beginning in 1996 and for which relevant data are available. Data are from Thomson Financial's SDC VentureXpert and AVCJ databases. Used Cox hazard model. Results are: in both developed and emerging economies, superior legal rights (and enforcement) and better developed stock markets significantly enhance VC performance; cultural distance between countries of the portfolio company and its lead investor positively affects VC success; cultural differences create incentives for rigorous ex ante screening, improving VC performance; local VC participation enhances success and mitigates foreign VCs' liability of foreignness, though only in developed economies.	**Country openness** **Cultural distance** **Legal index** **Ln(GDP per capita)** **Stock market conditions** **Stock market development**
Scalera V. G., Mukherjee D., Piscitello L. (2018). Ownership strategies in knowledge-intensive cross-border acquisitions: Comparing Chinese and Indian MNEs. Asia Pacific Journal of Management.	Comparative analysis of Chinese and Indian multinational enterprises (MNEs)' ownership strategies in knowledge-intensive cross-border acquisitions (CBAs). Dataset of acquisitions undertaken by high and medium-high tech Chinese and Indian MNEs worldwide during the period 2000-14. Claim: due to their lower comparative ownership advantage, and the consequent higher information asymmetry, Chinese MNEs are more cautious (than Indian MNEs) in their ownership strategy. Results: Chinese MNEs prefer lower equity control than their Indian counterparts. However, such a preference for lower equity decreases with higher home-host institutional distance and host country-specific previous experience. These factors do not seem to modify the ownership preference of Indian MNEs in the same way.	**GDP** **Institutional distance** **Uncertainty avoidance distance**

Additional papers consulted:

- O. Shenkar (2001). Cultural Distance Revisited: Towards a More and Conceptualization Measurement of Cultural Differences. Journal of International Business Studies 32, 3, 519-535.
- Bruton G., Ahlstromb D., Yehc K. S. (2004). Understanding venture capital in East Asia: the impact of institutions on the industry today and tomorrow. Journal of World Business 39, 72-88.
- Bruton G. D., Fried V. H., Manigart S. (2005). Institutional Influences on the Worldwide Expansion of Venture Capital. Entrepreneurship Theory and Practice, 737-760.
- Ivkovic Z., Weisbenner S. (2005). Local Does as Local Is: Information Content of the Geography of Individual Investors' Common Stock Investments. The Journal of Finance 60:1, 267-306.
- Mäkelä M. M., Maula M. V. J. (2008). Attracting cross-border venture capital: the role of a local investor. Entrepreneurship and Regional Development 20:3, 237-257.
- Roundy P. T. (2019). Regional differences in impact investment: A theory of impact investing ecosystems. Social Responsibility Journal.

Appendix 3: Result of data search to build variables

Indicator	Result of search	Source
Access to Banking	**V**	World Bank
Accounting	**X**	
Anglo cultural zone	**V**	Ronen & Shankar (2013)
Arab cultural zone	**V**	Ronen & Shankar (2013)
Balance of payment (BOP)	**X**	
Banking Index	**V**	World Bank
Bilateral trade	**X**	
Capital flow restrictions	**X**	
CMLOF	**X**	
CMLOF culture	**X**	
CMLOF geographic	**X**	
CMLOF info asymmetry	**X**	
CMLOF legal	**X**	
Collectivism	**X**	
Common language	**X**	
Common language dummy (avg)	**X**	
Confucian Asia cultural zone	**V**	Ronen & Shankar (2013)
Corruption	**V**	World Bank
Cost of starting business	**V**	World Bank
Country credit rating	**V**	Fitch
Country openness	**X**	
Country-level uncertainty	**X**	
Creditor rights aggregate score	**X**	
Cultural distance	**X**	
Cultural distance (ln)	**X**	
Cultural-cognitive distance: **. Power distance index** **. Individualism vs collectivism** **. Masculinity** **. Uncertainty avoidance index**	**X**	
Density	**V**	World Bank
Distance (avg km)	**X**	
Distance to frontier score	**X**	
Domestic credit	**X**	

Early-stage entrepreneurial activity	**X**	
East Europe cultural zone	**V**	Ronen & Shankar (2013)
Economic freedom	**V**	The Heritage Foundation
Efficiency	**X**	
Emerging markets dummy	**X**	
Enforcement	**X**	
English	**V**	La Porta et al. (1988)
English legal system	**X**	
Entrepreneurial orientation	**X**	
Equity Index	**V**	World Bank
Expropriation	**X**	
Far East cultural zone	**V**	Ronen & Shankar (2013)
FDI (% of GDP)	**V**	World Bank
Financial centre	**V**	Statista
Financial Development Index	**V**	International Monetary Fund
Financial Market Development Index	**X**	
Firm country GDP	**X**	
Foreign direct investment (FDI)	**X**	
Formal institutions	**X**	
French	**X**	
GDP	**V**	World Bank
GDP change	**X**	
GDP growth	**V**	World Bank
GDP per capita	**V**	World Bank
Geographic distance	**X**	
Geographic Distance	**X**	
German	**X**	
Germanic cultural zone	**V**	Ronen & Shankar (2013)
Host country GDP growth	**X**	
ICT Market Development	**V**	International Telecommunication Union
Income tax rate	**X**	
Index of property rights	**X**	
Individualism	**X**	
Individualism	**X**	

Innovativeness	**X**	
Institutional distance	**X**	
Institutional stability	**X**	
Institutional trust	**X**	
Interconnectedness	**X**	
internet usage	**X**	
Internetusers	**V**	World Bank
Latin America cultural zone	**V**	Ronen & Shankar (2013)
Latin Europe cultural zone	**V**	Ronen & Shankar (2013)
Legal distance	**X**	
Legal index	**X**	
Legal system difference	**X**	
Legal system dummy	**X**	
Liquidity	**V**	World Bank
Listed Firms/Population	**V**	World Bank
Ln(domestic market capitalization)	**X**	
Ln(GDP per capita)	**X**	
Ln(GDP per capita)	**X**	
Ln(GDP)	**X**	
Ln(Market cap)	**X**	
Ln(PropertyRights)	**X**	
Ln(StockMktCap)	**X**	
Locus of control	**X**	
Log number of VC firms in CSA	**X**	
Long-term capital gains tax rate	**X**	
Market capitalization	**X**	
Market capitalization/GDP	**X**	
Market capitalization/GDP (%)	**X**	
Minority shareholders protection index	**V**	World Bank
MSCI returns	**X**	
MSCI_national	**X**	
N of active local VC firms in host country	**X**	
N of IPOs	**X**	
N of Local VCs	**X**	
N of Outside VCs	**X**	
N of Patents	**X**	
N of Universities	**V**	Statista

N of VC firms	**X**	
N of Ventures	**X**	
Near East cultural zone	**V**	Ronen & Shankar (2013)
New firm creation	**V**	World Bank
No. and %share of VC offices	**X**	
No. Local IB	**X**	
No. Local PE firms	**X**	
Nordic cultural zone	**V**	Ronen & Shankar (2013)
Normative distance: **. Responsiveness to economic challenges** **. Bureaucratic corruption** **. Government attitude toward economic realities** **. Transparency of government to citizens** **. Political risk** **. Bureaucratic Hindrance to economic development** **. Independence of local authorities**	**X**	
Openness	**X**	
Patents per capita	**V**	Euromonitor
Patents/GDP	**X**	
Policy stability	**X**	
Political distance	**X**	
Political regime	**X**	
Political Risk	**X**	
Polity (Political stability)	**V**	World Bank
Pop. % with college degree or higher	**X**	
Population	**V**	World Bank
Real GDP growth (%)	**X**	
Regulative distance: **. Antitrust regulation** **. Intellectual property protection** **. Judicial system efficiency** **. Fiscal policy (debt)** **. Fiscal policy (inflation)**	**X**	
Regulatory quality	**V**	World Bank

Relational trust	**X**	
Rule of law	**X**	
Same language	**X**	
Same legal system	**X**	
Self-employment rate	**V**	World Bank
Shared Border	**X**	
Shareholders rights	**X**	
Steps to open business	**V**	World Bank
Stock market cap. (% of GDP)	**X**	
Stock market capitalization	**X**	
Stock market capitalization (% GDP)	**X**	
Stock market conditions	**X**	
Stock market development	**X**	
Stock market development	**X**	
Success rate of VCs in CSA over last 5 years	**X**	
Tax Burden	**V**	The Heritage Foundation
Tax Havens	**V**	EU Commission
Taxation	**V**	World Bank
Tertiary Education	**V**	World Bank
Total population	**X**	
Total value buy-outs/GDP (%)	**X**	
Trade flow	**X**	
Trade volume (% of GDP)	**V**	World Bank
Transaction costs	**X**	
Uncertainty avoidance	**X**	
Uncertainty avoidance	**X**	
Uncertainty avoidance	**X**	
Uncertainty avoidance distance	**X**	
VC Index	**X**	
VC to GDP ratio	**X**	
Venture Capital Availability	**X**	
Venture nation GDP	**X**	
Venture nation VC commitment	**X**	

Appendix 4: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Nrounds	71	76,7465	408,6835	1	3380
FinDevindex	67	0,4327	0,2561	0,0511	0,9481
Bankingindex	62	56,4828	28,7921	162.891	140,7570
Equityindex	65	55,1905	66,0694	1,00E-09	352,1564
Financialfreedom	69	55,3623	18,1156	10	90
Investmentfreedom	68	63,3088	20,5994	5	90
Laborfreedom	70	59,5695	13,9588	28,4930	91,0150
Regulatoryquality	70	0,2992	1,016343	-1,56333	2,1150
Protectingminorityinvestors	70	58,5943	18,1013	10	86
Englishlegalorigin	71	0,2113	0,411113	0	1
Patentspercapita	71	188,7731	339,4126	0,00	1546,5330
Arabculturezone	71	0,0704	0,2577	0	1
NearEastculturezone	71	0,0282	0,1666	0	1
LatinAmculturezone	71	0,1831	0,3895	0	1
EastEuropeculturezone	71	0,1268	0,3351	0	1
Nordicculturezone	71	0,0704	0,2577	0	1
Germanicculturezone	71	0,0423	0,2026	0	1
Africanculturezone	71	0,1268	0,3351	0	1
Angloculturezone	71	0,0704	0,2577	0	1
Confucianculturezone	71	0,0423	0,2026	0	1
FarEastculturezone	71	0,1549	0,3644	0	1
Politicalstability	71	-0,0498	0,92006	-2,8006	1,6300
GDP	71	9,03E+11	2,75E+12	6,30E+09	1,95E+13
Populationtotal	71	8,04E-07	2,29E+08	38392	1,39E+09
Taxburden	70	75,8455	12,8174	37,2094	96,3900