

THE WEI FORWARD REPORT II

A radical rethink of the policy framework for investing with impact



Contents

| A note from the editor - Alexander Shadbolt | 5 |
|--|----|
| Contributors | 5 |
| Forewords - Lord Wei of Shoreditch and Douglas Hansen-Luke | 8 |
| Introduction | 10 |
| Executive Summary | 11 |
| Summary recommendations | 17 |
| Chapter 1: The state of impactful investing and venture capital | 23 |
| 1.1 Impact's impressive growth to date | 23 |
| 1.2. A potential market slowdown | 24 |
| 1.3. Removing internal barriers to progress | 25 |
| 1.3.1. Measurement barriers | 25 |
| Case Study: ESG - Addressing aggregate confusion | 28 |
| Case Study: FPC's Impact Framework - Demonstrating value potential to institutions | 31 |
| 1.3.2. A skew in asset allocation | 31 |
| 1.4. Recommendations | 33 |
| Chapter 2: Ecosystem insights - Encouraging institutional investment into impactful VC | 35 |
| 2.1. A deep dive - The UK ecosystem | 36 |
| Case Study: Regulatory risks - Unintended consequences | 38 |
| 2.2. Insurers | 39 |
| 2.2.1. Regulatory barriers | 39 |
| 2.2.2. Risk tolerance | 40 |
| Case Study: Using the Prudent Person Principle | 41 |
| 2.2.3. Asset mix | 42 |
| 2.2.4. Growing awareness | 43 |
| 2.2.5. Lowering risk through impact | 45 |
| Case Study: What does good look like for insurers? | 46 |
| 2.2.6. Role of technology | 46 |
| Case Study: InsurTech as a driving force for impact and ESG for the insurance industry | 47 |
| 2.2.7. Income profile | 48 |
| Case Study: Bermuda - Reshoring for impact | 49 |
| 2.2.8. Ensuring there is sufficient scale | 49 |
| 2.3. Pensions | 50 |
| 2.3.1. Pension regulatory barriers | 51 |
| 2.3.2. Mindsets and upskilling | 52 |
| 2.3.3. Horses for courses | 54 |
| | |

| 2.3.4. Local Government Pension Schemes | 55 |
|---|----|
| 2.3.5. Role for Government | 56 |
| 2.3.6. Consumer choice | 57 |
| 2.3.7. Demographic opportunity | 58 |
| Case Study: Guideline - An example of a targeted pension provider powered by FinTech | 59 |
| 2.4. Sovereign wealth funds | 59 |
| 2.4.1. A unique position | 59 |
| 2.4.2. Leadership opportunity | 60 |
| 2.4.3. Being the catalyst | 61 |
| 2.4.4. Underwriting impact | 62 |
| Case Study: Sustainable Bonds - Impact in a familiar strategy | 63 |
| 2.5. A proposed Compact | 63 |
| 2.6. Recommendations | 64 |
| Chapter 3: ASEAN and Emerging Markets - integrating impact with growth | 67 |
| 3.1. Growth of venture capital in ASEAN and key impactful players | 67 |
| Case Study: The Centre for Impact Investing and Practices | 71 |
| 3.2. The drivers of impact's growth | 71 |
| 3.2.1. Wealth | 72 |
| 3.2.2. Generational shift | 72 |
| 3.2.3. Other factors - Demographics, proof points and digitisation | 73 |
| Case Study: Ruangguru | 74 |
| 3.3. The role of government | 74 |
| 3.3.1. Singapore as a beacon of success for the facilitative role of government in impact | 76 |
| 3.3.2. Progress in the rest of ASEAN | 76 |
| Case Study: Grab - The everything everyday app | 77 |
| 3.4. A learning process | 77 |
| 3.4.1. A lack of clarity and investor awareness of the concept | 77 |
| 3.4.2. Confusion around international measurements and standards for impact | 78 |
| 3.4.3. Limited institutions and regulatory support | 79 |
| 3.4.4. Small initial impact-orientated marketplaces in which business can occur | 79 |
| 3.5. Moving forward: areas for collaboration and partnership | 80 |
| Case Study: SwipeRX | 82 |
| 3.6. Recommendations | 82 |
| Chapter 4: Spotlight - Impactful investment for all | 84 |
| 4.1. Top down vs bottom up | 84 |
| Case Study: Vaccitech - Innovation in healthcare in times of crisis | 85 |
| 4.2. Harnessing innovation | 85 |
| | |

| Case Study: Queen of Raw - Increasing profits and meeting sustainability goals with SaaS | 87 |
|--|----|
| 4.3. Market segmentation | 87 |
| 4.4. Recommendations | 88 |
| In Conclusion | 90 |
| Appendix | 91 |
| Bibliography | 97 |
| | |

A note from the editor - Alexander Shadbolt

It gives me great pleasure to continue co-authoring this increasingly powerful piece of thought leadership. Following the successful reception of our first report, we hope that this next edition provides actionable insights to industry, institutions and governments. For any comments or further engagements related to the content, please contact <u>a.shadbolt@futureplanetcapital.com</u>.

Our thanks go to the following people, without whom the Wei Forward Report would not have been possible. Thank you to Maya Rivera-Rio who helped research this report and, along with Jessica Hill, Rebecca Watson and Nadine Flores, helped pull together key events, roundtables and interviews. Additionally, we extend our gratitude to the wider team at Future Planet for their continued support, and that of our stakeholders. Finally, we thank the many expert and insightful contributors, both anonymous, as well as those publicly listed below, whose knowledge and experience have helped form the foundation of our reports:

Contributors

Adrienne Lawler - Responsible Asset Owners Douglas Hansen-Luke - Future Planet Capital En Lee - LGT Bank AG Prof. Jerome S. Engel - University of California, Berkeley Johnny Chow - Legal and General Justin Wilmott - Bermuda Innovation and Insurtech Matthew Connell - Chartered Insurance Institute (CII) Matthew Hurn - Mubadala Nicholas Sherrat - Conforth Pete Gladwell - Legal and General Sam Evans - Eos Venture Partners Samuel Tufts - Phoenix Group Sarah Gordon - Impact Investing Institute Sima Kanan – Gunnercooke LLP Stephanie Joy Benedetto - Queen of Raw Tom Beagent - PricewaterhouseCoopers Tukeer Hussain - Financial Conduct Authority

Zach Powell - Eos Venture Partners

To all those ecosystem and institutional representatives who attended our House of Lords Chatham House Impact Breakfast.

To those who attended Singapore roundtable

Alan Fowler - Ibis Consulting Chris Addy - The Bridgespan Group Christopher Quek - TRIVE Venture Capital Colin IP - British High Commision Singapore David Heng - abcImpact Dawn Chan - Centre for Impact Investing and Practices (CIIP) En Lee - LGT Bank AG Gwenn Khoo Guan Min - Franklin Medici Harvey Toor - Singapore Management University Maggie Ma - Franklin Medici Michael Fernandes - Leapfrog Capital Peter Ho Hak Ean - Centre for Strategic Futures Rebecca Woo - Tantallon Capital Rohini Bakshi - Everstone Sanjay Gujral - Everstone Wai Chiew Chik - Heritas Capital Yip Hon Weng - Temasek

Roundtable Attendees

Carel van Randwyck - Themis Christopher Elphick - British Venture Capital Association (BVCA) James Derham - University of Oxford Laura Chappell - Brunel Pension Partnership Mark Tennant - Centrica Neave Lloyd - British Venture Capital Association (BVCA) Nicholas Sherrat - Conforth Patrick Sheehan - ETFPartners Pranav Sridhar - 60Decibels Sam Evans - Eos Venture Partners Samuel Tufts - Phoenix Group Sima Kanan - Gunnercooke Songul Arslan - Smart Pension Zach Powell - Eos Venture Partners

Previous Contributors (2021)

Dr Adrien Querbes - University of Manchester Alexander McCracken - Silicon Valley Bank (SVB) Alice Hu Wagner - London & Partners Andy Muir - UKI2S (FPC) Anna Weston - Treedom Arif Wani - University of Oxford Banesh Prabhu - iSEEC

Douglas Hansen-Luke - Future Planet Capital

Ed Phillips - Future Planet Capital

Hannah Leach - Houghton Street Ventures

Dr Henry Li - University College London

James Mawson - GCV

Dr Johannes Lenhard - VentureESG

Laura Mason - Legal and General

Professor Mariana Mazzucato - Institute for Innovation and Public Purpose, UCL

Melissa Kwee - National Volunteer and Philanthropy Centre

Nick Hurd - Former Minister for London

Lord Norman Foster - Baron Foster of Thames Bank

Oliver Sexton - UKI2S (FPC)

FOREWORD

Since the publication of the first Wei Forward report in 2021, the world has changed dramatically yet again. The invasion of Ukraine has caused a geopolitical earthquake with the resulting shockwaves affecting the prices of almost all goods, particularly food and energy. This has, combined with the bullwhip effects of Covid-19, and the domestic political disruptions caused by rocketing high inflation, created an unprecedented 21st-century cost of living crisis. Higher interest rates have resulted as Central Banks respond, which is impacting stock markets and the price of investment assets everywhere. This has inevitably affected LPs and VC fund decision-making, whether those focused on impactful investing or otherwise.

In such times, what happens to past commitments to the United Nations Sustainable Development Goals (SDGs), to net zero targets, and other agreements at a domestic level, when the overriding focus becomes one of survival? Our response in this second report, is to focus on investments that not only lead to significant impact, but also on greater resilience for all - especially those who will be disproportionately affected by this latest set of crises. In this climate, only the most compelling investment strategies will survive, those that can make an impact on millions, if not billions, of lives. This report highlights the work of those engaged therefore in sustainable investment activities that are just that: sustainable for not just the planet, but also people, and able to make a profit whether government support is in place for them in the long term or not. We have surveyed and interviewed VCs and LPs to understand how they are adapting to this new reality.

To reach our ultimate goals in this season, we cannot just rely on VC as an industry alone, especially given the current funding climate. Instead new and existing partnerships will need to be built with large-scale investors to keep the flame of impactful investing burning brightly. To this end, this report will build on the work of our first research programme, to go deeper in understanding the role of other stakeholders who hold the key to ensuring sufficient capital can continue to be directed towards investments that can make the greatest impact. We highlight three sectors that have particular relevance to the times that we are in and provide deeper insights into the challenges, enablers, and opportunities that might come as VC works more closely with the insurance industry, the pensions sector, and sovereign wealth - building on a series of roundtables held to glean their contributions over the course of 2022.

Finally it is also clear that even as war is waged in Europe, for the first time in a generation, we cannot ignore the pivotal role that VC will increasingly play in South East Asia, as it faces its unique set of challenges, but also starts to leapfrog in the area of impact. South East Asian countries represent major sources of current and future carbon, social need, and pollution, but also have an opportunity to innovate beyond legacy approaches we are used to in the West, and build new kinds of infrastructure together with VC and other investors to meet their unique challenges to grow more sustainably. We explore these opportunities and challenges together harnessing local research insights to glean essential pointers for the years ahead.



Lord Wei of Shoreditch Advisory Board, Future Planet Capital

FOREWORD

Future Planet Capital was founded to allow scaleaccess to innovation, to show that profit and purpose can sit in harmony and, above all, to make an impact.

This report records best-practice for existing impact and innovation investing and points the way to a number of forward-thinking programmes which would allow the largest investors - insurance companies, pensions and sovereigns - to scale-up their investments in this rapidly growing area.

Within a year of the covid-pandemic, three vaccines had been produced. A recordachievement in terms of time and scale and one that prevented the deaths of more than 10 million people. We at Future Planet Capital played a very small part in funding one of the companies behind the Oxford vaccine but what we all saw was that an alliance of sovereigns, governments, researchers, and industry experts, could make a huge difference and that with a focus this could be done exceptionally fast.

With this as our example and with hundreds of billions already committed to addressing climate change, I am optimistic that globally the tools are already in our hands to make a better world for future generations. Russia's act of aggression in Ukraine is not only morally wrong but will be ultimately self-defeating as the world scrambles to avoid its dependence on Putin's hydrocarbons.

Future Planet Capital are already witnessing and working with governments from Asia to North America as they seek to translate research and intellectual property into businesses that will make a sustainable and profitable contribution to energy security. Here in Britain, we manage investments in companies driving fusion energy and its associated supply chain. These companies aim to provide pollution-free energy to the grid by 2040. In the near to medium-term, there are practical investments that can be made in renewables (already the cheapest form of energy) or in smallmodular nuclear reactors or nuclear microbatteries. And, right now, there are AI-specialists who can eliminate waste and optimise energy usage.

It is my view that we should invest for the long-term but we should never be complacent. The problems of the world, of billions of individuals, are pressing and there is the science, the technology and the capital to provide solutions. In this report, I very much hope that the solutions advocated by Lord Wei, and many contributing experts, can be quickly studied, evaluated, improved and implemented.

Most importantly, this report is a call to action. Our industry, governments, scientists and savers must and need to act now.



Douglas Hansen-Luke Executive Chairman, Future Planet Capital

Introduction

This report, the product of extensive interviews with relevant academics and industry representatives, will explore four key themes pertaining to impact and impactful investing. It seeks to present findings and insights from sector experts and practitioners, building on previous academic research, to accelerate progress in the impact field and remove obstacles amidst the recent slow down in sector growth.

Chapter 1 centres around the latest developments in the impact investing market, which has evolved from humble beginnings to a rapidly growing and more universally accepted mode of investing across entire portfolios as well as within the venture capital arena.

Chapter 2 explores how best to channel institutional capital into impact. We focus on the UK investment ecosystem in order to provide actionable recommendations and zero in on the crucial existing and potential role played by the insurance, pensions, and sovereign wealth sectors, in driving forward progress in ESG and impactful investing generally and in venture.

Chapter 3 addresses the opportunities for impact investing and impactful allocation in emerging and developing economies. The majority of impact investing organisations are disproportionately based in Western markets, namely the US, Canada and Europe. We look at economies contributing to the growth of the impact industry, with a particular focus on those from the Association of South East Asian Nations (ASEAN). Such countries present enormous untapped potential, learning from our mistakes and successes to date in the West, to leapfrog towards a more sustainable model of investing in growth that integrates the UN Social Development Goals.

Chapter 4 shines a spotlight on how the world of VC and impactful investing is responding to the cost of living crisis in both developed and developing countries, and how it can help find opportunities for investment that address both wider SDGs¹ and those that contribute to day to day resilience and affordability.

Whilst this report sets out to be a broad study, there is particular focus on the evolving needs of practitioners and not just merely on matters of academic interest, as the landscape for measurement continues to evolve and in the midst of increasing global geopolitical and economic volatility. The previous Wei Report explored impact measurement at some length and so in this edition we touch only lightly upon it, with the focus primarily given to investigating what mechanisms and catalysts can be leveraged to encourage institutional impact investment, providing incentives to allocation in a volatile market.

Recommendations are offered at the end of each chapter. Chapter 1's recommendations are grouped by stakeholder. Chapter 2's recommendations are grouped by type of large investor within the venture innovation ecosystem. Chapter 3's recommendations are for South East Asian stakeholders. Chapter 4's recommendations are for stakeholders interested in addressing the cost of living crisis through impactful innovation.

Footnotes in the digital version of this report contain hyperlinks to original sources online, where available. Simply click on the title of the source and the link will take you to the relevant website.

¹ List of UN SDGs in Appendix 1.

Executive Summary

Chapter 1: The state of impactful investing and venture capital

- 1.1. Impact and ESG's impressive growth to date Championed by private market pioneers, such as venture capital, fund managers and private equity, wider impactful investing, and explicit impact investing (as defined by the GIIN), have seen impressive growth in the last 12-18 months. This is due to a greater recent focus on intentionality, as well as emerging evidence of greater returns.
- 1.2. A potential market slowdown... The apparent "polycrisis" of the last few years is causing large suppliers of capital to hold back from the typically illiquid and long-term investments associated with impact investing in VC. Whilst there is uncertainty over the pricing of assets and higher leverage costs, the outlook remains positive over the medium term because VC generally tracks long term tech cycles.
- 1.3. Removing internal barriers to progress It is not only macro events that are the contributing factors to a possible impact slowdown. The remaining two elements of impact investing, varied asset class deployment and impact measurability, have presented obstacles to wider adoption and slowed progress. The external pullback cannot be fully addressed, nor institutional investors encouraged, until these internal industry problems are resolved, with navigable yet practical measurement and more diversity in asset class deployment.
 - 1.3.1. Measurement barriers Whilst frameworks proliferate and increase in sophistication there remain ongoing challenges with false or superficial claims around impact, and a lack of clarity and skills amongst practitioners to enable them to fully grasp and embrace the multiplicity of initiatives now underway
 - 1.3.2. Institutional asset allocation barrier The impact market is still patchy and the distribution of capital to impact is heavily skewed to a few asset classes, and a handful of large private market funds. Whilst these impact pioneers are having an outsized positive effect, much more could be done if institutional investors and asset classes were encouraged to allocate to impactful investments.

Chapter 2: Ecosystem insights - Encouraging institutional investment into impactful VC

- 2.1. A deep dive into the UK ecosystem -The UK possesses a unique ecosystem in which to further foster VC, impact and innovation. The UK is both a global scientific superpower and a world leader in academic research and innovation, laying claim to two of the top five universities globally, including the world's top university, Oxford. In addition, it houses some of the most respected research parks within the Golden Triangle, the Midlands, Scotland and Wales.
- 2.2. Insurance
 - 2.2.1. Regulatory barriers It appears that a critical barrier to increasing investment and allocation to impact and impact-led strategies lie in the insurance

industry's regulatory requirements. We identified one of the largest obstacles to be delayed reforms to Solvency II, which many argue that in its current form is onerous, burdensome and ill-suited to the UK insurance ecosystem, preventing capital from being unlocked.

- 2.2.2. Risk tolerance In a time of volatility and high risk, the insurance sector should generate greater returns and possess extra capital to deploy. However, their risk tolerance for non-traditional allocation is limited, with regulators coming down on them for not holding enough capital to cover any potential losses.
- 2.2.3. Asset mix Insurers are required to hold a mix of assets so as to diversify risk in accordance with regulation. Even with reduced regulatory requirements there is a need for insurers to ensure that they are not taking too much risk. We propose that the government and other sovereign players offer 'first-loss' protection or guarantees to help lower systematic risk for insurers investing in impact and ESG aligned assets.
- 2.2.4. Growing awareness ESG and impact has, however, found itself at the forefront of many insurers minds. Recent natural disasters, such as the catastrophic floods in Pakistan and the devastating effects of Hurricane Ian, have shed light on impact and environmental risk factors. There have been huge subsequent losses for insurers and these will have undoubtedly sharpened focus. Insurers are uniquely positioned to both support investment in ESG and, through commercial application of the underlying technology, drive improvements in conditions (including closing the protection gap, democratising access to healthcare, supply chain optimisation and resilience planning).
- 2.2.5. Lowering risk through impact With the wider negative externalities of climate change, such as mass migration and crop failures, posing material risks to large populations of people in the next decade, insurance should increasingly look to mitigate the potential causes of loss.
- 2.2.6. Role of technology As with pensions, there appears to be a role for FinTech and InsurTech in accelerating and driving the agenda. The emergence of new technology (e.g. IoT, lower cost and better resolution satellites and modelling capability) combined with a surge in available data mean InsurTech companies are ideally placed to lead the insurance industry in impact and ESG, supporting allocation of capital and deployment of new business models.
- 2.2.7. Income profile As a result of insurers' preference for steady predictable income after any initial upfront investment, VC and impactful investments that involve building out of infrastructure and/or licensing of core technology have the most potential to harness capital from the sector.
- 2.2.8. Ensuring there is sufficient scale The scale of insurer balance sheets can
 present a challenge in terms of finding sufficiently large investment opportunities.
 A pooled model would allow insurers to allocate capital to a centralised structure
 (linked to removal of the regulatory barriers) that is responsible for manager
 selection and deployment.

- 2.3. Pensions The UK pensions industry is historically risk averse and reluctant to allocate to illiquid, long-term investments. One of the most powerful drivers behind this appears to be the requirement for pension funds to hold more liquidity. This may be exacerbated by the LDI crisis and the volatility currently found in many of their traditional investment markets.
 - 2.3.1. Pension regulatory barriers An inhibitory regulatory landscape has existed with regard to fees and illiquid assets. The requirement to hold more and more gilts and treasury bonds as pension holders near retirement has, however, been seen recently to have led to the unearthing of unforeseen risks. A more proactive pensions regulator and a move to enhance dividends for those funds that take a long term approach to sustainable impact investment through targeted reliefs in the UK would incentivise increased pension investment into VC, as would clarification of fiduciary duties to better support impactful investing.
 - 2.3.2. Mindsets and upskilling Remedying the risk averse nature of UK pension funds requires a change of mindset and understanding of illiquid long-term risk. Due to the reluctance to diversify allocation, UK local government pension funds are less experienced with regards to illiquid investments, as opposed to, for example, US counterparts; though there are promising signs of moves to upskill the sector for impact
 - 2.3.3. Horses for courses There is a segmentation of pensions in countries like the UK, with the larger ones having both greater regulatory oversight constraining some of their decisions but also having the capacity to build their own inhouse VCrelated teams generally, and with smaller or mid-sized pension funds having theoretically greater freedom, but lacking, at times, the capacity to understand how to invest into VC for impact.
 - 2.3.4. Local Government Pension Schemes are a promising potential source of impact capital and recently there have been effective examples of impactful investments from this sector.
 - 2.3.5. Role for Government States can play a role in encouraging the allocation of illiquid holdings, matching funding into long-term alternative asset classes. This could start with matched funding into Local Government Pension impact investment, generating a significant risk-pool.
 - 2.3.6. Consumer choice There is currently a disconnect between the saver and the decision maker, with pension holders having relatively little choice as to how defined contribution pensions are allocated, be it positively impactful or not. In addition to wider participation through the likes of FinTech, education is key in kick starting this shareholder 'culture shift'.
 - 2.3.7. Demographic opportunity There is an opportunity to be explored in targeting specific demographics within pensions. Whilst allocations from pensions that are close to maturity, especially in historic final salary schemes, will typically be risk averse, those marketed towards younger millennials and 'Generation Z' present an opportunity for more sustainable and impactful investing as part of their

defined contributions.

- 2.4. Sovereign wealth funds
 - 2.4.1. A unique position Sovereign wealth funds find themselves in a unique position with regards to allocation to impactful investing. Of the large investor types, SWFs are somewhat insulated from wider market volatility, able to withstand market pressures in times of crises that would otherwise cripple other structures; and are able to take the longest term, most holistic view.
 - 2.4.2. Leadership opportunity We suggest there is a role to play for SWFs and large global investing groups to drive the impact and ESG agenda within their highly diversified portfolios. Many have already begun to do so, setting both informal and formal impact targets and aligning to ESG best practice. Other SWFs and large global investing groups should follow the example they have set, to generate potentially outsized impact and returns.
 - 2.4.3. Being the catalyst There is an argument to be made for sovereign led decisions, either as a nation or as a sovereign fund, to account for the impacts of investments on its people both at home and peoples generally across the planet, harnessing their unique position to catalyse others to take action.
 - 2.4.4. Underwriting impact In addition to aligning investment strategy to impact and ESG, there is room for SWFs to also provide a first-loss guarantee mechanism to help stimulate more impactful investment by pension and insurance funds. Insurance and pension funds could aggregate large impact portfolios for the sovereigns, receiving a higher return, but leaving the greater upside to SWFs.
- 2.5. A proposed Compact In view of the appetite amongst some pension funds and insurers to hold more impactful investments in their portfolios, there is an opportunity to harness the longer term outlook of sovereign wealth funds. SWFs could provide guarantees to safeguard the income of investments made by insurers and sovereign funds that deliver impact, enabling regulators to relax solvency rules earlier for specific sectors

Chapter 3: ASEAN and Emerging Markets - Integrating impact with growth

- 3.1 Growth of impact investment and venture capital in Asia impactful investing is disproportionately based in developed markets. Currently, South East, South and East Asia only account for 2.5% of impact AUM. The combined GDP of the Association of South East Asian Nations (ASEAN) is on track to become the fourth largest economy by 2030, signifying an enormous untapped potential to increase impact AUM as a ratio of the growing economy.
- 3.2. The drivers of impact's growth Asia's emerging economies have come at a cost, with unprecedented levels of pollution, environmental degradation, congestion and growing social inequality. As the effects of climate change experienced by these nations continue to grow, the demand for ESG and impactful approaches to investing is set to grow

- 3.2.1. Wealth Due to their emerging economies, South East Asian citizens are now in possession of new found wealth. Subsequently, they can begin to focus on issues such as ESG and impact, where they previously may have prioritised growth and industrialisation; the main focus is in areas such as the cost of living, gender equality, and climate
- 3.2.2. Other factors There are multiple causes for the growth of impactful investment and venture capital in Asia including (1) the demographics and rising affluence of countries, (2) the emerging evidence in positive returns of impactful investing, (3) the shift towards digitization and (4) the observed growth in private investments.
- 3.2.3. Generational shift The vast majority of activity right now is within the supply chains of typically family owned conglomerates; the next generation of heirs have the potential to help harness VC-back impact startups to transform such supply chains to enhance livelihoods, reduce pollution, and address the SDGs.
- 3.3. The role of government There is a divide in opinion between those who favour more government support and stimulus such as seen in Singapore, versus those who believe the State should stay out of intervening given issues with corruption and bureaucracy, and the potential for public backlash when government-led interventions backfire, as was recently seen in Sri Lanka's destabilising rush into organic agriculture.
 - 3.3.1. Singapore as a beacon of success Successful public-private investment models and impactful innovation can be seen in Singapore, where the government has had a large presence in impactful investments. Other Asian countries can learn from the policies and incentives placed by the Singaporean government, which helped them develop economically whilst causing a positive long-term impact on society.
 - 3.3.2. Progress in the rest of ASEAN whilst United Nations Conference on Trade and Development (UNCTAD) monitoring indicates that regulations restricting cross-border investments generally are on the rise, ASEAN member states are implementing favourable trade measures, creating a more positive climate generally for impactful investment.
- 3.4. A learning process Asia's impactful investment and venture capital ecosystem faces a number of challenges for growth
 - 3.4.1. A lack of clarity and investor awareness of the concept
 - 3.4.2. Confusion around international measurements and standards for impact
 - 3.4.3. Limited institutions and regulatory support
 - 3.4.4. Small initial marketplaces in which business can occur

- 3.5. Moving forward: Areas for collaboration and partnership - To achieve successful impactful innovation there is a need to create a strong ecosystem using public/ private investment models, comprising governments, startups, medium and large companies and civil society.

Chapter 4: Spotlight - Impactful investment for all

- 4.1. Top down vs bottom up The "polycrisis" has brought to light increasing tensions between ESG and impactful investing as an agenda and the cost of living, with many arguing that the focus on the SDGs has stoked inflation and distracted States from addressing the basics of national security, resilience, economic stability and livelihoods.
- 4.2. Harnessing innovation Venture backed impactful investing can help fulfil basic needs better, and support the SDGs, particularly in areas such as AgTech, EdTech, InsurTech, renewables, energy storage and new forms of transportation.
- 4.3. Market segmentation The needs of citizens and businesses in developing versus developed countries vary with regards the cost of living crisis, so investors and stakeholders will need to take a tailored approach in how investments are directed.

Summary recommendations

Below are a list of this years recommendations, with recommendations from last year's report that still are highly relevant for today listed in *italics*

Recommendations for governments

- Provide matched funding alongside larger and institutional investors to help support shifts in their asset allocations towards more impactful ventures in areas that can help unlock innovation in order to deliver supply side reform and growth, and address the cost of living.
- Further refine and encourage the adoption of a proposed Compact concept through a working group, to enable Solvency II rules to be relaxed with the backing of income guarantees from sovereign wealth funds for investments made by insurers and large institutional investors that target sectors that deliver impact.
- Governments and other sovereign actors work with other countries and international agencies to create additional solvency mechanisms that could be a backstop to financial institutions if they are actively working on sustainable investment strategies in their jurisdictions.
- Entice insurer capital back to the UK through the provision of targeted tax breaks, enabling insurers to provide reinsurance favourably.
- Encourage pension funds to require Trustees or individuals with a comprehensive and robust knowledge of impact investment to sit on individual large LP investment committees.
- Governments should carefully consider the relationship between ESG legislation and cost of living considerations, backing initiatives that deliver impact, security, and resilience.
- Governments could issue licences and permits to reward those groups and investors that have proactively sought to integrate impact and ESG into their portfolios and strategies
- Adapt legislation to make it possible for government bodies to procure more easily from start-ups, who may have a short trading history or be seen as higher risk. This may mean setting aside a defined % of procurement budgets in order to trial new entrants.

Recommendations for impactful investors

 Impactful investors to communicate more transparently about how impact and ESG relate to your fund, its investments, and begin to invest more deeply in measurement, especially for portfolio companies and assets that are more mature and less early stage.

- Encourage greater collaboration between VC and PE, and large institutional investors, to create a better, more agile conveyor belt of capital and intellectual property that can drive infrastructure development suited to the long-term cash flow needs of insurers, pension funds, and sovereigns.
- Create collaborative and co-owned units that can conduct outsourced measurement and due diligence work for impactful investments on behalf of LPs and small funds.
- Specifically back baskets of impactful investments that reduce the cost of living and increase security for low income people as a focus area.
- Consider the stage of the investment cycle, choosing the appropriate metric(s) and using different approaches to measurement for different stages of investing.

Recommendations for institutional LPs

- Where pension funds may have over-allocated to gilts, they could diversify and buy impact and innovation related notes as an alternative.
- Insurers could set aside funds from profits that can be put into a joint foundation established to invest into alternatives, such as VC and PE for impact, coordinated with the help of government and regulators, to stimulate scale dealflow.
- Encourage collaboration across the sector and value chain, including with reinsurers, insurers, InsurTechs and strategic funds to back more ESG and impact related investments and deployment of technology across underwriting, product development, resilience initiatives and claims management, both globally and in the UK.
- Encourage industry-wide upskilling and training, building a talent pipeline for impact experts to join institutional teams inhouse, enabling better fund targeting and selection, focusing on impactful investments.
- Sovereign wealth funds could provide guarantees and reinsurance mechanisms to leverage in other large investors to back impact and ESG funds and strategies.
- LPs to consider setting aside a proportion of their profits into evergreen impact funds that can invest in VC, to simplify the main fund portfolio allocation decision-making process.
- Adopt a holistic view of returns. The economics of VC are very well aligned between LPs, asset allocators and VC funds, with each element of the value-chain aligned to ensure that each decision maximises returns. There is room here for LPs, as providers of capital, to demand that they see a return on impact alongside financial return.

Recommendations for consumers

- Get involved in initiatives to facilitate better communication with retail and business end-investors, and institutions, to help guide and steer asset allocation.
- Demand more targeted pension funds, such as demographic-specific funds.
- Back initiatives, technology and organisations that commit to less green- and impact-washing, and greater transparency.
- Agitate for legal action towards those companies and investors that do not fulfil legal requirements to serve society.

Recommendations for regulators

- Create carefully crafted carve outs to solvency requirements in relation to ESG and impact to help support reductions in overall systemic risk.
- Adapt and review the fiduciary duties of large investors, such as pension funds, to remove any perceived conflict between maximising shareholder returns and impact.
- Pensions regulators could look to create a sand-box for products aimed at the younger generation inclined to impact, in order to increase funds' ability to take risk.
- Encourage a degree of cultural change, either within the regulator's staffing or governance, or through allowing challengers, designed to appeal to millennial and younger generations, into markets.
- Develop a Teach First style programme for RegTech trainees from STEM backgrounds who can provide better glue between regulatory bodies and industry, with a particular skill set around integrating impact and ESG considerations into regulations/guidance.
- Regulators should sandbox and provide fast track means of accelerating startups and FinTech ventures, particularly those that could help alleviate the cost of living crisis and future crises.

Recommendations for other stakeholders

 Stakeholders need to work together urgently to provide 'gold standard' ways of measuring and reporting on impact, that truly build public confidence and demonstrate value. This could look like a non-financial, ESG and impact auditing industry that copies methods from financial reporting industries, and could leverage ledger based systems (such solutions could potentially be technological in nature and even retrospective to lighten the burden of monitoring and evaluation).

- Establish centres in Asia to champion growth in research related to both ESG frameworks and processes, and impact investing.
- Educate the next generation of business leaders in Asia to take a more holistic view of impact and investing, moving away from a tick-box mindset.
- Governments could open up their procurement to more players that have technology to help deliver impact, and make their processes more transparent.
- Build stronger partnerships between development banks, large corporations, startups, AID agencies, and governments to reconfigure approaches to international regulation to take into account the unique cultural context of Asian markets.
- Reshape the relationship between agencies such as UNICEF and the private sector, to encourage more impactful innovation in the humanitarian AID sector.
- Get behind initiatives such as the Impact Investing Institute's Just Transition Campaign to drive the sustainability for all agenda forwards.
- Establish a greater media and social media focus on uncovering impact- and greenwashing and by corporates, governments, and financial institutions.

Definitions

Please see below for a list of definitions for terms as we understand them.

ESG: A set of criteria and standards that characterises, and accounts for, the environmental, social and governance implications of businesses' processes and practices, positive and negative, be they intentional or otherwise.

Impact Investing: A concentrated and coordinated investing strategy designed consciously to produce positive impact, whilst achieving a financial return. An important distinction is to be made here between unconscious impact and concerted efforts. Those who create positive impact unknowingly and unintentionally, as many large companies do, must be distinguished from those who consciously seek impact as investors. The Global Impact Investing Network understands impact investing to be an investment, "made into companies, organisations, and funds with the intention to generate social and environmental impact alongside a financial return",² "arguably the most accredited and quoted" definition.³

Impactful: To speak more broadly about investments in this area, we use the term "impactful" as distinct from "impact" in relation to investing, to avoid being caught up in the specific technical definitions and debates around impact investing within academic circles; an impactful investment is therefore one that seeks to produce positive impact, though the way it does that, and how that links to financial returns, may still be in the process of being measured and defined.

² <u>Mudaliar et al.</u>, 2016, p.30

³ De Amicis et al., 2020, p.2 - Appendix 2 for GIIN's Core Characteristics of Impact Investing.

1. The state of impactful investing and venture capital

Chapter 1: The state of impactful investing and venture capital

1.1 Impact's impressive growth to date

Championed by private market pioneers, such as venture capital, fund managers and private equity, wider impactful investing, and explicit impact investing (as defined by the Global Impact Investing Network), have seen impressive growth in the last 12-18 months. This is due to a greater recent focus on intentionality, as well as emerging evidence of greater returns.

Impact investing, as defined by the Global Impact Investing Network (GIIN), consists of four elements: intentionality, financial returns, deployability across asset classes, and impact measurability.⁴ There is also growing allocation to wider impactful, impact-led, or impact-aligned investing, which we understand to be a collection of strategies which satisfy some, but not all, of the GIIN's elements to impact investing.

A decade ago J.P.Morgan, the Rockefeller Foundation and the GIIN released what they deemed to be a "very ambitious forecast" regarding the growth of impact investing.⁵ They estimated that impact investment as an emerging asset class would reach somewhere between US\$400 billion to US\$1 trillion Assets Under Management (AUM) by 2020.⁶

In last year's report, the size of the impact investing market lay at around US\$715 billion AUM, falling almost in the middle of that forecast.⁷ Today, the market has been sized at US\$1.164 trillion AUM;⁸ the last 12 - 18 months have seen the capital allocated to impact investing reach record numbers.

The growth of *impact-led* investing is even more impressive. Investments geared towards intended impact,⁹ totalled around US\$2.3 trillion AUM, 2% of global AUM in 2020.¹⁰ Whilst impact investing may still represent a small market niche, it is attracting growing interest. More broadly, global sustainable investing assets amounted to US\$35 trillion in 2020, accounting for 36% of global AUM (Global Sustainable Investment Alliance, 2020), illustrating the increased shift of investment behaviours towards sustainably aligned allocation.

Impact investing is increasingly a global asset class. Domestically, the impact investing market was sized at £58 billion in the UK, with three out of four investors planning to increase the amount of capital dedicated to impact investing by at least 10% over the next five years.¹¹ In Europe, estimates range from €11.8 billion,¹² to €108.6 billion.¹³

⁴ The Impact Management Project supplements this definition with the need for additionality in the investment, defined as "the extent to which desirable outcomes would not have occurred without intervention".

⁵ Saltuk Lamy et al., 2021

⁶ <u>O'Donohoe et al.</u>, 2010

⁷ Hand et al., 2020

⁸ Impact Investing Institute, 2022

⁹ Intended impact can be understood as an investment that does not explicitly measure impact, but is deployed with the intention of creating positive impact.

¹⁰ <u>Volk</u>, 2021

¹¹ GIIN, 2022

¹² Ibid

¹³ Sakuma-Keck, 2021

There is growth to be found in all corners of the globe, from Africa to Asia. In 2020, impact investing in Sub-Saharan Africa attracted US\$65 billion,¹⁴ and in Japan the impact investing market has roughly doubled every year since 2016, reaching US\$12.4 billion in 2021.¹⁵ Globally, there are over 1,200 organisations listed as impact investors, with an average investment portfolio holding US\$485 million in impact AUM.¹⁶

With increasing attention directed towards impact investing, the financial performance of the asset class is a key consideration. The returns to investors from impact strategies have been apparent. Most market-rate-seeking investors are performing in-line with or exceeding expectations, with approximately 90% of impact investors seeing competitive returns.¹⁷

1.2. A potential market slowdown...

The apparent "polycrisis" of the last few years is causing large suppliers of capital to hold back from the typically illiquid and long-term investments associated with impact investing in VC. Whilst there is uncertainty over the pricing of assets and higher leverage costs, the outlook remains positive over the medium term because VC generally tracks long term tech cycles.

The impact investing market and venture capital market have begun to experience a clear and apparent slowdown. The global economic crisis, a product of the COVID-19 pandemic, a war in Europe, subsequent supply chain disruption, high inflation and rising energy pricings have prompted some institutional actors to retreat from private markets. Several interviewees mentioned a shift back to traditional pre-ESG and impact investing, for example oil and gas in the short term, or hybrid versions that sought to help dirtier industries shift to net zero. Some of those also outlined how the present uncertainty combined with the ongoing lack of maturity on the measurement side meant that investing in the ESG and impact space could become challenging in the very near term.

The impactful investing asset class in essence is still in a learning phase, with regulations coming out from the US, EU, and the UK to address the need for clarity in labelling of products and funds reflecting this process. Several initiatives were mentioned by interviewees as seeking to bridge this period before markets, regulation and measurement settle (as financial accounting itself did over many decades). For example, Rewired Earth seeks to help institutions understand what their end pension or life holders want to prioritise, which can help provide guidance to asset managers as to where their impact investments should be made on stakeholder demand.

This mapping of end-user demand, combined with similar corporate initiatives to highlight corporate demand for both ESG, and impact products and services, can provide a way to bolster the market for responsible investing. Consumers and stakeholders would do well to get behind such initiatives to help create greater demand and support LPs and investors in overcoming the hiatus of the current "learning phase". In addition, a number of interviewees called for greater consumer action and media activity to highlight and uncover malpractice

¹⁴ Nyangoro and Njenga, 2022

¹⁵ Social Innovation and Investment Foundation, 2021

¹⁶ GIIN, 2022

¹⁷ In-line or outperforming. (<u>CFA Institute</u>, 2021)

such as green- and impact-washing. There should be moves to enforce greater accountability while we wait for more formal methods of measurement and reporting to emerge.

With the macroeconomic environment remaining volatile, and with present socio-economic and geo-political factors constraining financial operation, navigating this turbulent landscape will be tricky for all investors across all asset classes. However, within impact investing there are additional hazards and barriers to progress from within that the industry must look to remove to accelerate adoption.

1.3. Removing internal barriers to progress

It is not only macro events that are the contributing factors to a possible impact slowdown. The remaining two elements of impact investing, varied asset class deployment and impact measurability, have presented obstacles to wider adoption and slowed progress. The external pullback cannot be fully addressed, nor institutional investors encouraged, until these internal industry problems are resolved, with navigable and practical measurement and more diversity in asset class deployment.

We have asserted previously that impact investing can be characterised by the intentionality of the process, its generation of financial returns, its ability to deploy over numerous traditional asset classes and by its measurability. The first two of these properties have seen progress, with increasing adoption of impact investing by organisations demonstrating industry intent and emerging evidence of financial performance indicating the competitive returns to be found in this alternative asset class.

In the cases of impact measurement and diversity in asset class deployment from different capital sources, there has been some industry engagement, but there are still areas in which definitive action is needed. The first edition of the Wei Forward Report explored practitioners' approaches to impact measurement.¹⁸ As such, this next report will now provide only a brief update on progress in the areas of measurement and management, touching on ESG, before delving into how best to direct institutional investment from the likes of pensions, insurance and sovereign wealth funds into impact by removing obstacles to allocation.

1.3.1. Measurement barriers

Whilst frameworks proliferate and increase in sophistication, there remain ongoing challenges with false or superficial claims around impact, and a lack of clarity and skills amongst practitioners to enable them to fully grasp and embrace the multiplicity of initiatives now underway.

Impact requires a commitment to measurement both before and after capital has been committed. Ways of quantifying impact at the pre-investment stage are varied and we have previously explored numerous methodologies, both externally published and in-house. It is in the measurement of impact for the purposes of reporting where this divergence of method causes most concern.

¹⁸ Wei and Shadbolt, 2021

Whilst the SDGs are a robust and commendable framework that have broad application, there is concern that with increasing regulatory pressures, they are open to manipulation. In a report on the UK impact investing market, more than 75% of those surveyed noted "sophistication of measurement processes" and the existence of appropriate data as moderate or significant challenges.¹⁹

Equally, as regulation increases and pressures to measure impact mount, practitioners are also starting to push back given the increased effort required to fulfil requirements. A number of investors already committed to impact and convinced by the strategy have cited measurement and subsequent reporting as a significant concern, representing a real challenge for wider participation. This has been demonstrated in the last few months, with two pension funds quitting Mark Carney's green alliance, Gfanz, citing the internal resourcing needed to meet data reporting requirements as being too great,²⁰ and more recently, Vanguard, the second-largest global money manager, bowing out of both Gfanz, and the Net Zero Asset Managers alliance.²¹

A senior executive in the pensions industry warned that the impact asset class was in some instances "crippling [itself] with data" and "tying ourselves in knots" with divergent frameworks. They made the argument that investors should not "need a spreadsheet to tell [them] how to do the right thing," and that they have to "get better about just measuring risk and then taking that risk."

We should expect to see regulators seeking to tackle issues such as greenwashing in the coming months as they consult on how to take action,²² in ways that deal with the worst excesses of false advertising and promotion, but which also do not add to the bureaucratic requirements that are already in place for investing generally. The UK Government has announced, in its Edinburgh reforms to the financial sector, plans to bring ESG ratings providers into the regulatory orbit. Whilst this is likely a positive development to protect investors from false claims, it equally could add layers further layers of bureaucracy into the investing dynamic.²³

One interviewee said that measurement initiatives have historically been focussed on outputs,²⁴ and that the next few years will see a greater focus on outcomes and more systemic approaches to understanding the impact of investments. This represents a "rapid move to greater standardisation," moving from 'Generation One' output-heavy data, towards 'Generation Two' outcomes-based insights, answering the 'So What?' question. What's the consequence, the impact, on society, on the environment… Understanding the consequences of the actions of businesses on society, allowing investors to understand which businesses are truly solving problems versus those causing them."

Ultimately as the accounting world starts to provide more standardised measures, and as markets adopt these, as they have embraced Generally Accepted Accounting Principles (GAAP), governments and regional regulators may move towards a more harmonised

¹⁹ <u>GIIN</u>, 2022

²⁰ <u>Hodgson</u>, 2022

²¹ Masters and Temple-West, 2022

²² <u>FCA</u>, 2022

²³ HM Treasury, 2022a

²⁴ Led by the likes of the International Sustainability Standards Board, the Corporate Sustainability Reporting Directive and by the Security Exchange Commission

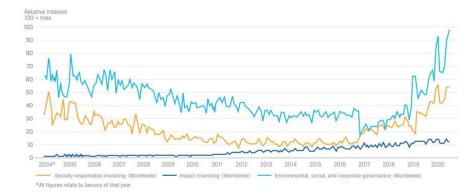
position. In the meantime, the proliferation of approaches around measurement presents a challenge to practitioners, given the specialist skills required to navigate the current landscape and plethora of toolkits, many of which are manual and not yet turn-key.

More research is also needed into longer term, verifiable technologies, with the potential to reduce manual burden and increase 'self-servability' of impact measurement. This could take the form of allocation through ledger based "gold standard" social outcome measurement initiatives, which in turn could reduce the future regulatory and skills burden on startups and funds, especially as rules start to proliferate.

As databases and platforms emerge to automate and make it easier for organisations to satisfy all formal and informal measurement requirements, the long term prospect is for greater liquidity to flow into the impactful investing space as private individuals, foundations, large investors and governments start to buy individual historic and forward impact outcomes. Future research will focus on this domain to better understand and stimulate it.

Case Study: ESG - Addressing aggregate confusion

Where impact investing can be defined as the intentional provision of capital to companies with the purpose of contributing to solutions that create evidenced positive change,²⁵ impact performance and financial returns, ESG is instead the processes and frameworks²⁶ by which investors and business owners manage associated environmental, social and governance risk factors associated with operations.²⁷



ESG has recently seen itself thrust back into the centre of both public and private market strategy. At their current growth rate, ESG-mandated assets²⁸ are on track to represent half of all professionally managed assets globally by 2024.²⁹

There are a growing number of reasons as to why ESG is at the forefront of the minds of venture investors. The World Economic Forum recently called for ventures to adopt ESG within their decision-making, stating that VCs' "must implement robust ESG due diligence to help them create long-term, multi-stakeholder value."³⁰

VC, and the private markets more widely, can learn some lessons from the public markets with respect to ESG practice. For most S&P 500 companies, publishing corporate ESG reports is now the norm, with 90% doing so in 2020, up from only 20% in the 2000s.³¹ ESG is, therefore, a key consideration for later-stage investors and should be similarly for VCs looking for portfolio company IPOs. A recent publication from PwC's Global IPO Centre Lead,³² <u>You Can't Spell IPO</u> <u>Without ESG</u>, points clearly to this, whilst EY's IPO leader for EMEIA, Martin Steinbach, warned that pre-IPO companies that fail to meet ESG standards risk being locked out of capital.³³

Increasingly, with the introduction of the SFDR in Europe and imminent SDR in the UK, LP requirements for ESG incorporation by VCs will determine funds' abilities to raise.³⁴ Investec's 12th annual GP Trends Survey reported this year that out of more than 150 GPs, 90% believe that their ESG credentials will influence the likelihood of LPs committing capital to their funds.³⁵ One of the findings from a forthcoming paper by Lenhard and Shadbolt finds that ESG increasingly permeates communicative field models within the VC firm.³⁶

There are still challenges to those funds accounting for ESG. Some recent reports show that, overall, many seem to be performing less well compared to the main market over the last 5 years, with apparent underperformance in sectors seen as more ESG-friendly in the face of current market instability.³⁷ However, ESG-aligned funds have also been seen to be more resilient and less volatile,³⁸ a theme picked out in last year's Wei Report; "Companies are likely

to be more resilient in the face of unexpected shocks and hardships if they are managed for the long term and in line with societal megatrends, such as inclusion and climate change."³⁹

Whilst ESG adoption has seen marked growth in the last 12-16 months, there have also been notable challenges and obstacles to its uptake. The clampdown on greenwashing, a phenomenon discussed in last year's report, has been apparent. Whether intentional, or otherwise, firms have come under fire, by the likes of the SEC,⁴⁰ SFDR and FCA.

It is well documented that ESG reporting and the widespread adoption of different frameworks have faced teething problems. There remains, as with impact investing, fragmented and non-standardised measurement and reporting frameworks. The term 'aggregate confusion' has been used to describe this situation: that with the mass adoption and mainstreaming of ESG comes a plethora of similar terms, frameworks, ratings and reports which risk convolution and confusion with one another. Observations made in our first report, surrounding the need for standardisation, remain extremely relevant.

Aside from standardisation, there are also concerns from investors as to the suitability of ESG reporting frameworks, such as the SFDR, to certain asset classes. Some investors claim that they are not yet able to meet reporting requirements due to lacking critical information, currently not consistently published by companies that they invest in.⁴¹ Gaps in reporting present a material risk for funds aligned to the likes of Article 8 and 9 of the SFDR, opening companies up to allegations of potential greenwashing.

The lack of a shared *gold standard* for ESG reporting has given rise to anti-ESG sentiment, particularly in the US; "opposed to so-called 'woke' ideas and any curbs on the fossil fuel industry."⁴²

There are groups, such as MIT Sloan's Sustainability Initiative, pulling together practitioners to work at combating the fragmentation within the industry, through the likes of the 'The Aggregate Confusion Project'. Communities, such as VentureESG and ESG_VC, are also producing

²⁵ Andreou, 2022

²⁶ Lenhard and Fulford-Smith, 2022

²⁷ The first Wei Forward report characterised ESG as: A set of criteria and standards that characterises, and accounts for, the environmental, social and governance implications of businesses' processes and practices, positive and negative, be they intentional or otherwise (CFA Institute, *Certificate in ESG Investing*).

²⁸ Defined here as professionally managed assets in which ESG issues are considered in selecting investments or shareholder resolutions are filed on ESG issues at publicly traded companies (<u>Deloitte</u>, 2022)

²⁹ Taylor and Collins, 2022

³⁰ Madzou, De Jesus and Taylor, 2022

³¹ <u>Volk</u>, 2021

³² Newman and Picard, 2022

³³ <u>Human</u>, 2022

³⁴ Lenhard and Fulford-Smith, 2022

³⁵ Private Equity Wire, 2022

³⁶ Lenhard and Shadbolt, (Forthcoming)

³⁷ <u>Hickey</u>, 2022

³⁸ White and Pham, 2022

³⁹ Serafeim, 2020 in Wei and Shadbolt, 2021

⁴⁰ <u>SEC</u>, 2022

⁴¹ For example, data on companies' hazardous waste production, the proximity of their assets to biodiversity hotspots, or even the proportion of assets aligned with the EU's green taxonomy.

⁴² <u>Tett</u>, 2022

materials to address uncertainty surrounding measurement, as well as the likes of the GIIN and Impact Investing Institute. One notable recent initiative is Harvard Business School's Impact-Weighted Accounts Initiative (IWAI) which seeks to "drive the creation of financial accounts that reflect a company's financial, social, and environmental performance."⁴³

The Harvard IWAI recently spun out the International Foundation for Valuing Impacts (IFVI). The IFVI aims to "drive the global integration of impacts in financial analysis to promote effective resource allocation and achieve long-term financial stability,"⁴⁴ whilst fulfilling the call to action of the G7 Impact Taskforce for comprehensive impact transparency.⁴⁵ In its work to standardise methodologies, the IFVI will look to provide more decisive answers to unreliable self-reported ESG measurement, "pav[ing] the way for a significant improvement of accounting practice and the creation of an information environment that allows people to access and act upon impact considerations."⁴⁶

The work of the IFVI will not focus explicitly on the development of nonfinancial metrics,⁴⁷ rather the monetary valuation of impacts and the creation of relevant, reliable, concise, and comparable accounting Impact Statements that show the revenues, costs and impacts created by companies.⁴⁸

Only time will tell which of these initiatives will take within markets and endure.

As one interviewee from the regulatory space explained: "In some ways, the introduction of the SFDR and its Article 8 and 9 definitions helped because for the first time ever it tried to bring some clarity to this area. But actually, it seems to have sufficient uncertainty in it - it's not necessarily helping as much as it could do. And you've seen a lot of funds reclassifying from Article 9 to Article 8 recently. You're also seeing more and more accusations of greenwashing associated with investing. Now, whether that's real or perceived, it is undermining confidence in the industry. So I see a slight disconnect between the macro perspective, lots of people with money wanting to put money into ESG and impact, and the market not necessarily being mature enough yet to match that demand."

⁴³ Harvard Business School, 2019

⁴⁴ Harvard Business School, 2022

⁴⁵ Zochowski and Rosehill, 2022

⁴⁶ Zochowski and Rosehill, 2022

⁴⁷ Work that has been well advanced by The Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the International Sustainability Standards Board (ISSB).

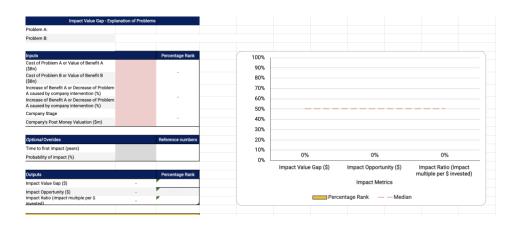
⁴⁸ 'Notes to Editors' - Zochowski and Rosehill, 2022

Case Study: FPC's Impact Framework - Demonstrating value potential to institutions

Future Planet Capital's Impact Value Gap⁴⁹ is just one example of a VC industry tool which could be used to effectively direct capital to innovative solutions and communicate impact potential to prospective investors.

FPC's Impact Framework is a process which can help frame how large a solution's potential added benefit, or reduction of cost, could be:

- 1. The Impact Value Gap (IVG) the value of the benefit or cost that could be increased or reduced by a company upon realising its impact potential, but which is currently unaddressed.
- 2. The Impact Opportunity the expected "return to society" (\$) of a company's expected future benefit given numerous variables and discounts.
- 3. Impact Efficiency the societal value of the investment as a ratio of impact to financial value.



The Impact Value Gap could also be harnessed to help determine the cost to an economy, such as that of the UK, of not having a sector-based issue solved, whether in terms of loss of tax income, economic output, or even cost to the Exchequer. The cost of any measures backed by a country to address the challenge can then be compared to the cost of not solving it to give a measure of how much one should bet on scaling up potential solutions.

In this way a Sovereign Impact Value Gap could serve as a useful incentive to invest and act as a guarantee of value and impact potential, whilst supporting communication with citizens and stakeholders as to the necessity and urgency of action.

1.3.2. A skew in asset allocation

The impact market is still patchy and the distribution of capital to impact is heavily skewed to a few asset classes and a handful of large private market funds. Whilst these impact pioneers

⁴⁹ Shadbolt, 2022

are having an outsized positive effect, much more could be done if institutional investors and asset classes were encouraged to allocate to impactful investments.

Venture capital continues to be a key actor within the impact investing ecosystem. Following a bumper 2021, impact startups raised US\$12.9B globally in Q1 2022, double the total from Q1 2020.⁵⁰ The volatility found in the public markets has unsurprisingly affected the value of the impact startup ecosystem in 2022, but it remains up by more than 70% on 2020 figures.⁵¹ The last 15 months saw over 70 impact unicorns created, with 179 currently in existence globally and roughly double the amount of VC investment into global impact startups for each region,⁵² compared to the levels of 2020.⁵³

A survey issued by the GIIN documented that whilst the average investment portfolio held US\$485 million in impact AUM in 2022, the median portfolio held only US\$62.5 million, indicating that a few large players skew the sample.⁵⁴ Indeed, the GIIN notes that when 34 'impact whale' outliers are excluded from the above sample (US\$343 billion - 55% of total impact AUM), the rest of the 1,250 companies held only an average AUM of US\$224.7 million.⁵⁵ This suggests that the average organisation's allocation to impact investing remains small. With unprecedented commitments needed from asset owners and managers to achieve the United Nations' Sustainable Development Goals (UN SDGs) by 2030, more capital must be allocated toward the US\$4.2 trillion funding gap.⁵⁶

Not only does the average allocation to impact remain smaller than desirable, it is heavily concentrated in one organisation type. Fund managers represented 63% of impact investors, whilst pension funds held only 2% of impact AUM.⁵⁷ It is clear that traditional institutional asset classes can play a greater role in allocating to impact. Collectively, US company cash reserves currently stand at US\$5.8 trillion.⁵⁸ This could potentially be transformed into impact dry powder. As shareholder pressure, coupled with stakeholder demands for corporations to address climate change and social inequity grows, ⁵⁹ desires for dormant reserves, which could increasingly be eroded with rising inflation, may dwindle.

A number of interviewees talked about the challenges around market making. At a discussionary roundtable on the topic, larger institutional investors called for greater aggregation of dealflow so that investments could help them shift the dial, especially given the heavier due diligence and monitoring workload that impactful and ESG investments bring. Beyond this was the wider challenge of how to categorise investments such as venture for impact.

One approach taken by the Church Commissioners, which manages the assets for the Church of England, has been to take a portion of profits to capitalise an evergreen fund. This fund, earmarked for impact investing, bypasses the need to fit it within the conventional portfolio,

⁵⁴ GIIN, 2022

⁵⁷ <u>GIIN</u>, 2022

⁵⁰ Danske Bank et al., 2022

⁵¹ Ibid

⁵² North America, Europe, Asia, South America and Africa.

⁵³ Danske Bank et al., 2022

⁵⁵ Ibid

⁵⁶ Ibid; <u>OECD</u>, 2020

⁵⁸ Faulkender, Hankins and Peterson, 2022

⁵⁹ Miller and Hewitt, 2021

whilst enabling greater risk to be taken over a longer period of time. This novel approach may find applicability in a number of sectors where large investors struggle to fit alternatives and impact for venture in their current categories of investment.

The insurance industry, for example, has called for a similar industry wide initiative, initiated by a third party, such as the government, industry association or regulator. This was a suggestion also put forward by a number of interviewees. A VC in the insurance and InsurTech space recommended creating a centralised or pooled vehicle/foundation to manage capital on behalf of the sector to solve the problem of scale. Such foundations have the potential to supply larger deals to institutional investors who might otherwise struggle to cultivate their own pipelines in house, overcoming any "tragedy of commons" type failures that can come from depending on any one player to take the lead; "it needs to be sort of leadership from the top...You need an independent person running it." Such a foundation could be structured as a nonprofit, or harness structures such as the Long-Term Asset Fund regime which the UK government is pioneering to help enable illiquid long-term assets to be invested in on a more open-ended basis.⁶⁰ This is explored further in Section 2.2.8.

Ultimately, there will always be a need to do more to encourage the adoption of impact investing within different investment domains and geographies. Whilst VC and PE deploy impressive amounts of impact aligned capital in the private markets, allocation from wider markets and ecosystems must keep pace. This report aims to present the case for considering increased allocation to impactful investing, as a proportion of total institutional investment, in spite of challenging macro environments. Longer-term investments geared towards solving pressing global issues are needed now more than ever. Venture may offer an alternative capital pathway, directing investment towards innovative and impactful solutions.

1.4. Recommendations

- Impactful investors to communicate more transparently about how impact and ESG relate to your fund, its investments, and begin to invest more deeply in measurement, especially for portfolio companies and assets that are more mature and less early stage.
- LPs to consider setting aside a proportion of their profits into evergreen impact funds that can invest in VC, to simplify the main fund portfolio allocation decision-making process.
- Stakeholders need to work together urgently to provide 'gold standard' ways of measuring and reporting on impact, that truly build public confidence and demonstrate value. This could look like a non-financial, ESG and impact auditing industry that copies methods from financial reporting industries, and could leverage ledger based systems (such solutions could potentially be technological in nature and even retrospective to lighten the burden of monitoring and evaluation).
- Establish a greater media and social media focus on uncovering impact- and greenwashing by corporates, governments, and financial institutions.
- Adapt legislation to make it possible for government bodies to procure more easily from start-ups, who may have a short trading history or be seen as higher risk. This may mean setting aside a defined % of procurement budgets in order to trial new entrants

2. Ecosystem insights - Encouraging institutional investment into impactful VC

Chapter 2: Ecosystem insights - Encouraging institutional investment into impactful VC

This chapter explores how best to channel institutional capital into impact. We focus on the UK investment ecosystem in order to provide actionable recommendations. We zero in on the crucial existing and potential role played by the insurance, pensions, and sovereign wealth sectors, in driving forward progress in ESG and impactful investing generally, and in venture. We will explore how to encourage institutional investment into impact investing, through established actors, such as VCs and fund managers. We will suggest ways to improve impact allocation across a range of institutional asset classes, in a period of capital pull back, but during a time in which investment into innovative and impactful solutions is needed more than ever.

Institutional investors have a significant appetite for impactful investing. A recent Schroders' survey of 770 institutional investors, collectively responsible for US\$27.5 trillion in assets from 28 locations around the world, revealed that almost half (48%) of professional investors have a preference for investments focused on impact.⁶¹ This represents a 10% increase from the year previous (2021). Investors from the UK and Europe, and Asia Pacific demonstrated the greatest adoption of an impact approach - the two focus geographies found within this report.⁶²

The pensions sector is a strong candidate for impact allocation. With long investment cycles into illiquid asset classes, the industry is already often well invested in the likes of mainstream VC and PE. There is also clear intent to invest in impact from funds. Almost a quarter of the 50 largest pension funds across the world, managing assets of US\$3.3 trillion, have implemented impact investing,⁶³ with over half of the sample believing that the growing interest in thematic funds will develop into focused impact investing over time.

The implications of the Russian invasion of Ukraine and the economic downturn is likely to cause a delay to deployment however, as the pensions sector works out how best to allocate funds in the coming cycle. There is also likely to be a general feeling surrounding the need to keep funds aside to pay out annuities and claims, limiting how much they can risk over longer time periods.

The recent Liability Driven Investment (LDI) crisis in the UK, and the wider volatility found in investment markets, have placed traditional risk-averse illiquid investment strategies under scrutiny.⁶⁴ Nonetheless, the unique opportunity for alternative long-term and illiquid asset classes, such as impactful VC, to evidence competitive returns remains, generating higher yields than government bonds⁶⁵ whilst fuelling innovation.

The impact of the situation in Ukraine and rising levels of risk across the board are likely to also affect how insurers allocate large amounts of capital, which have been accumulated through higher margins on premiums. It will be critical to present a compelling impact investment case to insurers and to encourage these significant pools into impact and VC in an efficient and pain-free manner.

⁶¹ <u>Owen</u>, 2022

⁶² Ibid

⁶³ Bhattacharya, 2022

⁶⁴ McCulloch and Saunders, 2022

⁶⁵ <u>Gridline</u>, 2022

Despite the volatile situation globally, sovereign wealth funds for their part continue to move significantly into the ESG and impact space. As Rod Ringrow, Head of Official Institutions at Invesco, commented recently: "Sovereign wealth funds are increasingly putting ESG at the heart of their investment strategy. While challenges remain, including concerns about data quality and greenwashing, it is clear that sovereign investors believe that they can develop strategies to overcome these issues. This includes greater use of active management, impact investing, measurable carbon targets and coordinated voting/engagement."⁶⁶

2.1. A deep dive - The UK ecosystem

The UK possesses a unique ecosystem in which to further foster VC, impact and innovation. It is both a global scientific superpower and a world leader in academic research and innovation, laying claim to two of the top five universities globally, including the world's top university, Oxford.⁶⁷ In addition, it houses some of the most respected research parks within the Golden Triangle, the Midlands, Scotland and Wales.

There is currently over £100 billion of combined explicit impact investment and impact-aligned investment in the UK. Of the roughly £50 billion of that which is labelled explicitly as impact investments, 39% comes from 'investment/fund managers' and 14% from 'PE/VC'. Insurance and pensions combined account for only 17% of holdings.⁶⁸ Several interviewees acknowledged this shortfall from institutions, "there is still not enough liquidity being put to work in this space... institutions still invest thematically on hard assets of real estate and infrastructure, rather than in ventures and growth."

Whilst PE and VC may well be the current leading impact investors, many see the unmet potential of institutional investors to allocate to impact as an opportunity; the Impact Investing Institute determined that it will be the likes of insurance, pensions and sovereign wealth funds and collectives, that will be primary drivers of future growth in the UK, but also globally.⁶⁹

The UK is uniquely positioned to seize this opportunity. The connection between R&D and innovative and impactful startups is well documented. Historically, the venture capital (VC) industry has had much success in harnessing the potential of innovative research hubs, in order to build and scale profitable and impactful businesses. Future Planet Capital's University Network alone is responsible for raising over US\$200 billion of capital, over £5 billion of R&D spend and producing more than 50 unicorns.⁷⁰ The UK possesses some of the premier research institutions to be found anywhere.

The UK also boasts the fourth largest insurance market in the world, in addition to one of the largest pension schemes globally, collectively managing assets valued over £4 trillion.⁷¹ The UK, therefore, has unique potential to direct considerable amounts of institutional capital towards the most impactful research and resulting startups, spinouts and scaleups. By

⁶⁶ ESG Investing, 2022

⁶⁷ THE, 2022

⁶⁸ Impact Investing Institute, 2022

⁶⁹ Ibid (Appendix 3) and <u>Cheung</u>, 2022

⁷⁰ Based on Pitchbook data (2017) relating to Harvard University, University of California, Massachusetts Institute of Technology, Stanford University, University of Oxford, University of Cambridge and Tsinghua University.

⁷¹ Insurance and long-term savings industry - £1.6tn (<u>ABI</u>, 2022a). UK-funded occupational pension schemes had assets of £2.5 trillion (<u>ONS</u>, 2022)

connecting the brightest minds and most innovative research with significant sources of capital, the UK VC industry can move the needle on pressing problems and generate long-term, sustainable growth.

It must be recognised that significant progress has been made to encourage wider, long-term investment from the likes of insurance and pensions, into "the UK's most productive assets such as venture capital".⁷² The passage of the Financial Markets and Services Bill through the House of Commons, for example, illustrates significant government appetite to facilitate capital flows into innovative, venture-led industry.

Governments can use two mechanisms to influence behaviours surrounding impact investing: incentives and regulation. To the extent that an active government can champion impact, we encourage them to incentivise companies to invest impactfully. One interviewee remarked how there are limits to how much government can do consistently and over a sustained period of time, with the level of nuance needed. As such incentives may be less disruptive to longer-term investment strategies than regulation, which is subject to greater political turbulence and runs the risk of punitive unintended consequences.

"Regulatory imposition of fiat can either have unintended consequences, or it can be so inconsistent. Incentives can also be inconsistent, but I think since they're not punitive, but they're 'incentivising', they're more stable." Jerry Engel

Case Study: Regulatory risks - Unintended consequences

In 1990, the California Air Resources Board (CARB) created the ZeroEmission Vehicle (ZEV) programme, aiming to achieve significant emission reductions from the State's passenger vehicles. The CARB put in place an imposition to drive the ZEV scheme forward, mandating that sales of ZEVs would constitute two percent of new vehicles sold annually by 2000, five percent of new vehicles by 2002, and ten percent past 2003.⁷³

Following multiple delays to deadlines, as a result of manufacturers inability to meet the ZEV requirements imposed upon them, the CARB looked to relax rules on regulation. CARB allowed for partial zero-emission vehicles to come under the mandate. Both industry, and the opposing Administration, used this relaxation to contest the ZEV programme. A preliminary injunction was secured against the CARB and it was ruled unconstitutional. Further implementation of CARB's 2001 partial-ZEV amendments was subsequently prevented.⁷⁴

Whilst there remains controversy as to the incentives of the different groups championing or protesting the ZEV programme, the result was that in November 2003, General Motors began reclaiming their EV-1 cars, supposedly with the backing of the government. The majority of the reclaimed fleet were sent to car crushers to be destroyed, at huge environmental and monetary cost. The programme was framed as a huge failure in both politics and in the media (Who Killed the Electric Car, 2006), and clearly outlines the dangerous implications surrounding the unintended consequences of regulation.

One interviewee commenting on this case summed it up thus: "Now the problem with regulation: One is an unintended consequence. But, two, it's that the law can change. And that's what they did. They didn't have the political will to keep that in place."

There is still a large role for the government to play in facilitating capital inflows to impact. Incentives should look to compliment any regulations enforced, and be worked through with industry so as to minimise the risk of unintended punitive consequences. The UK's Digital Growth Strategy documents efforts by the Department of Work and Pensions⁷⁵ and the Bank of England's Productive Finance Working Group,⁷⁶ to direct investment into illiquid and long-term assets.

With its Edinburgh reforms announced in December 2022,⁷⁷ the UK government has signalled that it intends to shift regulations to remove inconsistencies and create more of a level playing field for ESG and impactful investment. The reforms will harness new theoretical freedoms from the EU regulatory framework, removing barriers such as fee caps and actively helping to create sandboxes, pooling, and fund and market templates, that can help grow the market for these kinds of more illiquid and long-term alternative assets.

⁷⁵ <u>GOV UK</u>, 2022

⁷³ Bedsworth and Taylor, 2007

⁷⁴ EV News, 2010

⁷⁶ Bank of England, 2021

⁷⁷ HM Treasury, 2022

Still more can be done to accelerate progress and pursue growth. It is critical that we remove regulatory obstacles to making long-term, illiquid investments in the UK and incentivise and encourage investors. In our previous report, we focused on what the UK government could do to champion impact investing. There still exists a role, not yet filled, for the government to play as a procurer of innovative British solutions, including many backed by venture capital; to fulfil the anchor customer role similar, to that adopted by the US government in the early days of Silicon Valley. Strategic procurement could accelerate the most impactful early stage UK companies and would signal to the market an intent to keep these companies in the country and retain talent. This could take the form of a percentage procurement minimum; each department has to procure a certain amount from UK startups and scale ups to address supply side transformation and reduce the cost of government over the next ten years.

We continue to advocate for the government's role in advancing investment into impact innovation, as laid out in the first edition of The Wei Forward report. We now turn our focus in the rest of this chapter more squarely to institutional channels of investment and present the case for impact investment vehicles that can partner with institutions to deliver scaled up impact, such as that found in VC.

2.2. Insurers

The recent geo-political instability and wider market volatility will undoubtedly impact how insurers allocate capital generated from higher margins on premiums. ESG and impact has found itself at the forefront of many insurers minds. Recent natural disasters, such as the catastrophic floods in Pakistan, the devastating effects of Hurricane Ian and the disastrous impact on biodiversity resulting from wildfires in Australia and California, have shed light on impact and environmental risk factors. Insured losses from natural catastrophes have increased 250% in the last 30 years.⁷⁸ With the wider negative externalities of climate change, such as mass migration and crop failures, posing material risks to large populations of people in the next decade, insurance will increasingly look to mitigate the potential causes of cost.

Whilst the investment side of insurance is heavily regulated, interviewees see potential in exploring solutions within underwriting, product development, claims management and resilience planning, which may enable liquidity to be released more efficiently for impact and ESG-aligned funds.

2.2.1. Regulatory barriers

It appears that the main barrier to increasing investment and allocation to impact and impactled strategies lie in the insurance industry's regulatory requirements. We identified one of the largest obstacles to be delayed reforms to Solvency II, which many argue that in its current form is onerous, burdensome and ill-suited to the UK insurance ecosystem, preventing capital from being unlocked.

There is an appetite for longer-term and illiquid investment into impact from insurance. One interviewee, a CIO at a major UK pensions and insurance firm, noted, "The intentions are there... But at the same time... insurance regulations are probably giving us more challenges to actually put more money into this area." It appears that the main blocker to increasing

investment and allocation to impact and impact-led strategies lie in the insurance industry's regulatory requirements, "Most of the Solvency II we find very hard for us to invest into."

Solvency II, an EU legislative programme implemented on 1 January, 2016, by all 28 Member States, including the UK (a member at the time) sets out regulatory requirements for insurance firms and groups.⁷⁹ It introduced a harmonised EU-wide insurance regulatory regime, replacing 14 EU insurance directives,⁸⁰ and covers financial resources, governance and accountability, risk assessment and management, supervision, reporting and public disclosure.⁸¹ Its reach extends beyond the EU and UK into offshore jurisdictions.

With the UK having left the European Union, there is an opportunity to reassess how relevant Solvency II remains to the UK insurance sector. Many argue that Solvency II was not designed with UK-specific needs in mind, as was made clear by Bank of England Governor, Andrew Bailey, "I do not for a moment consider that the Solvency II we transposed from EU law and regulation is best suited to the UK. Why would it be, since it was designed to cover 27 countries? The case for reform is clear."⁸² The areas of focus for reform, as laid out by John Glen, then Economic Secretary to the Treasury & City Minister, in a speech to the Association of British Insurers (ABI) in February 2022,⁸³ centre around risk margins, matching adjustment and reporting and administrative efforts.

2.2.2. Risk tolerance

In a time of volatility and high risk, the insurance sector should generate greater returns and possess extra capital to deploy. However, their risk tolerance for non-traditional allocation is limited, with regulators coming down on them for not holding enough capital to cover any potential losses.

In facilitating investment from insurers into longer-term assets, a key consideration is to free up capital for insurers to invest, rather than hold. The risk margin in Solvency II currently requires insurers to hold assets, in addition to those held against their liabilities and to meet their capital requirement⁸⁴. Intended as a protective measure and buffer to ensure liabilities could meet with assets, the method of calculation has faced criticism for the capital burden placed on insurers, which is ultimately heavily subject to interest rates. In the current market, with climbing interest rates, this is an unattractive prospect for insurers, with many arguing that the margin "ties up financial resources unprofitably"⁸⁵, which could otherwise be allocated to impact.

There are also inefficiencies to be resolved in Solvency II with regard to measures surrounding what assets, which otherwise may represent a liquidity risk, are deemed to be risk free as a result of the 'matching adjustment'.⁸⁶ The process to qualify as eligible and ensure assets and liabilities are properly matched is seen by many as inhibitory and lacking in flexibility; longer-

⁷⁹ Appendix 4.

⁸⁰ <u>Lloyd's</u>, 2016

⁸¹ Bank of England, 2022

⁸² Graham, 2022; Bartonand and Cibulskis, 2022

⁸³ PricewaterhouseCooper, 2022

⁸⁴ Barton and Cibulskis, 2022

⁸⁵ Ibid

⁸⁶ Appendix 5.

term and illiquid assets have to be matched in a capital restrictive and resource intensive exercise. As one interviewee noted, "under the current regulatory regime it is not easy to put [impactful investments] into the balance sheet, even though we actually want to." Match adjusting assets and liabilities requires many organisations to restructure their assets in order for their investment to be deemed eligible, a process another interviewee described as "onerous and burdensome".

Case Study: Using the Prudent Person Principle

An impressive report, *Unleashing Capital*, puts forward a compelling recommendation for the government to work with regulators to develop a "transparent, holistic and applicable test for Prudent Person Principle (PPP), which could enable investment in alternative assets."⁸⁷

MacDonald argues that, in the PRA's efforts to lighten bureaucratic loads, they could move to a framework which monitors insurance firms on their internal procedures, as opposed to the nature of each asset class. Rather than enforcing insurers to individually test innovative assets for matching adjustment, we echo MacDonald's call to instead focus on firms having the correct frameworks and processes to effectively invest in innovation from the outset. This would, as MacDonald asserts, "allow firms to internally rate assets and therefore more expeditiously invest in alternative assets."

When looking for best practice examples, the Danish FSA's guidance on alternative investments in light of the Prudent Person Principle should be examined.⁸⁹ The extremely comprehensive guidance includes specific examples of how the PPP may apply to alternative asset classes, including a 'structured process' exemplar which firms can use to manage alternative investments through the investment lifecycle. Macdonald makes the point that it should not be surprising that Denmark has the highest proportion of assets invested in alternatives, of any country in Europe.⁹⁰

Restrictive regulation, such as Solvency II, has, to some extent, contributed to both a real and perceived risk-averse mentality within the industry; "there is a culture of risk aversion in certain areas, but it's getting better." One interviewee within the regulatory space explained that whilst they believed that there was little substance to quantify whether the UK was more or less risk averse than competitors, it was the perception that was the "bigger issue." The UK remains a progressive and forward looking finance hub - "the hard and fast stuff that you need to grow is actually done in the UK" - and as such this should be recognised; "espousing the narrative that actually, being a FinTech in London is probably one of the best places to do it. There's access to capital, there's access to information and there's an ecosystem."

The interviewee went on to note the need for regulators to innovate, "we need to be able to regulate, but we also need to be able to understand what's going on and listen to the people on the ground." Positive steps have been taken, with the FCA hiring its executive board of directors from industry, advances in ESG-related regulation, as well as regulatory sandboxes and the new Consumer Duty, that requires firms to act to deliver good outcomes for retail customers. These are encouraging advances, and the regulator can continue to do more to fill the role of "a central driver of outcomes, that brings industry together" - a role deemed critical by a senior insurance executive. Whilst there are clear developments surrounding regulators

⁸⁷ MacDonald, 2022

⁸⁸ Ibid

⁸⁹ Brogaard, 2018

⁹⁰ MacDonald, 2022

opening up dialogue with industries like insurance and pensions, we encourage this to go further, such that perceptions may reflect reality.

2.2.3. Asset mix

Insurers are required to hold a mix of assets so as to diversify risk in accordance with regulation. Even with reduced regulatory requirements there is a need for insurers to ensure that they are not taking too much risk. We propose that the government and other sovereign players offer 'first-loss' protection or guarantees to help lower systematic risk for insurers investing in impact and ESG aligned assets.

The inadequacy of Solvency II in allowing for efficient and timely capital allocation to varied asset classes has been recognised by the UK government. The intention to restructure fundamental spread to more accurately reflect credit risk and to widen eligibility criteria for assets and liabilities, fulfilling insurers appetites for longer-term asset investment, was made clear by the then Economic Secretary to the UK Treasury, John Glen. Earlier this year, Glen stated that the implementation of Solvency II's reforms could release "tens of billions of pounds into long-term productive assets."⁹¹

Suggestions for reforms were recently heeded by the government and plans laid out in the Autumn Statement,⁹² issued November 2022, touching on the key bottlenecks identified by industry. The Treasury's proposed reduction to the Risk Margin (65% for life insurance and 30% for non-life insurance) and proposals to broaden asset and liability eligibility criteria for the Matching Adjustment, allow for allocation to a wider array of assets, specifically those geared towards impact.

These proposed Solvency II reforms were 'strongly welcomed' by the Association of British Insurers (ABI). The ABI praised the proposed reforms for enabling the UK insurance and long-term savings sector to play a greater role in the transition to Net Zero and meeting climate goals, as well as supporting the UK's levelling up agenda.⁹³ One interviewee echoed the sentiment, believing that a reformed risk margin would "unlock some of those kinds of capital gains to go into...impactful investment." This relaxation of Solvency II requirements could potentially equate to over £100 billion of investable assets into productive finance over the next ten years.⁹⁴

However, following the Autumn Statement, the Prudential Regulation Authority has endured somewhat of a backlash, upon revealing that Solvency II would not be relaxed until, at least, 2025.⁹⁵ In times of rising need, both environmentally and socially, with the cost-of-living crisis threatening much of the UK population, we call for immediate relief mechanisms, and will explore, at the end of this chapter, ways in which capital can be freed up for impactful, place-based investing.

Currently, the UK government lacks the funding to necessarily fund this relief in full. Given that other sovereign actors often have a lower cost of capital and rising demand for impactful investments, especially that involve infrastructure, there is an opportunity for government to

⁹¹ Baxter, 2022

⁹² <u>HM Treasury</u>, 2022c

⁹³ <u>Cutler</u>, 2022

⁹⁴ ABI, 2022b

⁹⁵ Foy, 2022

work with sovereigns and other large investors to help provide pooled first loss and guarantee mechanisms to help create carve outs in Solvency II earlier, targeting impact sectors.

2.2.3. Industry attitudes

Inhibitory regulation has contributed to a risk-averse culture within the sector. Large insurers typically have little exposure to the likes of impactful venture, with one interviewee putting this down to not only regulation, but an 'institutional arrogance' of direct investments in favour of allocation to the likes of VC and PE; this inevitably leads to a greater focus on InsurTech, housing and climate change which draw on skill-sets and knowledge that are closest to what insurers use in their underwriting business most

Inhibitory regulation, like that of Solvency II, has bred a risk-averse culture within the sector, as previously discussed. The terms of Solvency II have, as Matthew Connell (CII) noted, created "demand for a very predictable sort of assets." Whilst this may be the case, this "does not necessarily mean that there's no room for innovation."

The efforts by insurers to restructure assets, in order to make them more Solvency II-friendly, have seen appetites for innovation channelled more into investments in impact-enabling infrastructure. There is room, it would seem, to allocate to innovative assets, albeit in a more traditional manner that is more easily understood by the industry:

"I think there's been a desire amongst insurers... often they haven't been against innovation, provided that innovation can be served up as a product in a Solvency II compliant way... if that can be translated into products that kind of fit the template... [the] right amount of liquidity and not too much volatility then, then I think insurers are open to that."

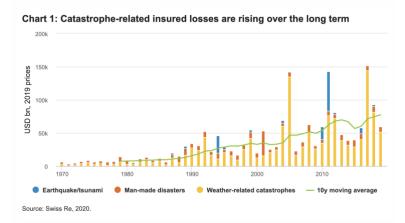
One interviewee spoke of how despite having greater profits recently from increased premiums, it was much easier for insurance to embrace ESG and impactful investing in novel ways. These, they believed, would predominantly be found on the underwriting side, including backing new methods of widening access to insurance through InsurTech plays, or by targeting specific security risks that impactful innovation could help reduce.

Whilst there are clearly channels through which insurance can allocate indirectly to the wider impact and innovation ecosystem, direct capital inflow into startups and scaleups is still minimal. Large insurers typically have little exposure to the likes of impactful VC, with one interviewee deeming insurer appetites to increase this exposure as being minimal, pointing to not only regulation, but an 'institutional arrogance'. Another labelled it as more akin to, "complacency than kind of deliberate risk aversion... 'we've always just done it that way'."

2.2.4. Growing awareness

ESG and impact has found itself at the forefront of many insurers minds. Recent natural disasters, such as the catastrophic floods in Pakistan and the devastating effects of Hurricane lan, have shed light on impact and environmental risk factors. There have been huge subsequent losses for insurers and will have undoubtedly sharpened focus.

In recent years, the very real consequences of ignoring risks posed by material ESG and impact themes have been felt. In 2020, Swiss Re modelled the long-term rise in catastrophe-related losses to insurers.⁹⁶



This upward trend has not abated, but rather accelerated. Swiss Re reports that the estimated insured losses from global natural catastrophes totalled US\$35 billion, in the first half of 2022.⁹⁷ This figure is more than 20% above the average of the past ten years and does not account for the devastating impact of Hurricane Ian, which occurred in September this year. RMS, a Moody's Analytics company, estimates total private market insured losses from Hurricane Ian to be between US\$53 billion and US\$74 billion, with the best estimate of US\$67 billion.⁹⁸

Where hurricanes and earthquakes, classed as primary perils, pose a threat to insurers' financial holdings, it is secondary perils,⁹⁹ such as hail storms and flooding, that continue to drive insurance losses globally. On this, Martin Bertogg, Head of Catastrophe Perils at Swiss Re, said, "Unlike hurricanes or earthquakes, these perils are ubiquitous and exacerbated by rapid urbanisation in particularly vulnerable areas."¹⁰⁰ Growth, particularly in developing countries, has seen levels of industrialisation and wealth accumulation in disaster-prone areas, without the appropriate management of ESG risks or considerations of impacts on both place and people.

The risks of not taking into consideration ESG factors or reliable impact measurement are not solely limited to negative environmental externalities. The mismanagement of social and governance themes, and a failure of insurers to conduct investments through robust ESG process and procedures, have seen many memorable scandals emerge. From Enron to Madoff; Theranos to FTX; all have occurred in spite of countless red flags and should continue to be lessons to others.

The underwriters' role is described as "to be cynical and ask tough questions".¹⁰¹ ESG should, therefore, represent a key lens through which deep due diligence should be carried out. Unfounded claims surrounding impact, such as those of Theranos' founder Elizabeth Holmes,

⁹⁶ Swiss Re, 2020

⁹⁷ Swiss Re, 2022

⁹⁸ <u>RMS</u>, 2022

⁹⁹ Catastrophes with the highest loss potential, which are well monitored and usually covered by catastrophe models. Secondary perils generate small-to-medium losses, such as those caused by hail, storms and bushfires, and often have less mature modelling capabilities. (<u>Muir</u>, 2022).

¹⁰⁰ <u>Swiss Re</u>, 2022

¹⁰¹ Shelly, 2018

should be interrogated. Had the insurance industry, along with countless other institutional investors, used an ESG framework to conduct governance DD, they may have uncovered that board members had only very rudimentary, if any, knowledge of blood science;¹⁰² "The story of Theranos represents a story of greed and blind hope and should be a cautionary tale for risk managers and insurers."¹⁰³

2.2.5. Lowering risk through impact

With the wider negative externalities of climate change, such as mass migration and crop failures, posing material risks to large populations of people in the next decade, insurance should increasingly look to mitigate the potential causes of cost.

In March last year, three of the largest institutional investors, California's State Teachers Retirement System, Japan's Government Pension Investment Fund and Universities Superannuation Scheme Investment Management, issued a joint statement warning that focusing solely on short-term returns, without wider consideration of stakeholders, would be to ignore a "potentially catastrophic systemic risk."¹⁰⁴

The insurance industry finds itself subject to the negative impacts associated with humanmade climate change, forced to underwrite natural disasters, which are "growing in magnitude, frequency and unpredictability," at an unsustainable and alarming rate.¹⁰⁵ Second-order implications, which are already beginning to be seen, such as crop failure and mass migration, will undoubtedly have further impacts on the life insurance market, a point raised by two interviewees in the sector.

Investing in innovative technologies and solutions, such as climate-tech, to mitigate the potential causes of cost and reduce the severity of human-made climate crises should be a focus going forward for underwriters. Investments, where possible, into funds fuelling green and climate startups and scaleups, such as Future Planet Capital's Challenge Response and Blue Ocean funds, can go some way to do so.

There has been some progress in the move towards insurers' managing risk and avoiding investment decisions associated with negative externalities. This has primarily been driven by insurers' desires to manage reputations. Interviewees noted that few insurers want to be left behind: "I think all insurance companies understand the impact of their investment footprint and the reputational issues around acknowledging the importance of environmental and social issues and becoming more active corporate citizens. So I don't think there are any insurance companies that don't acknowledge that... [they] want to take it seriously."

A push from regulators, towards more responsible and ESG compliant investing, has brought with it reputational pressures and risk. Whilst restrictive regulation, such as Solvency II, has slowed progress in some industries looking to make more impactful investments, one interviewee explained that the message from the Bank of England, PRA and FCA has been clearly aligned to moving towards net zero and combating climate change. UK insurers, be they explicitly impact driven or not, will look to align to best practice, or risk becoming the "outlier". The detail of letters from the UK Chancellor, announced as part of the Edinburgh

¹⁰² <u>Wilson</u>, 2020

¹⁰³ <u>Shelly</u>, 2018

¹⁰⁴ Mendoza, 2021

¹⁰⁵ <u>Romano</u>, 2020

reforms of December 2022, to both regulators will be key to see how far the UK can go with the right support to unfetter the sector. The guidance letters issued by the Chancellor, quoted below, encouraging regulators to have more regard to medium to long-term growth, and to be more supportive of both VC and net zero goals, are to be welcomed:

"The [FCA and PRA] should therefore have regard to supporting the government's ambition to encourage economic growth in the interests of consumers and businesses including:

- the government's desire to facilitate investment in productive assets, particularly venture and growth capital to support UK scale-up companies that face a particular finance gap.
- the government's ambitions for the provision of sustainable finance and the supply of long-term investment to support UK economic growth, including the supply of finance for infrastructure projects." [...]
- the government's support of innovation and new developments in financial markets and active embracing of the use of new technology in financial services, such as crypto technologies, artificial intelligence and machine learning.¹⁰⁶

Case Study: What does good look like for insurers?

The Green Finance Institute's Green Finance Education Charter looks to provide finance professionals with the relevant knowledge, skills and attitudes needed to accurately assess climate-related risk and opportunities. As part of this, the Chartered Insurance Institute is launching an updated Certificate in Climate Risk to support finance and risk professionals globally, to develop their expertise in climate risk. Many interviewees highlighted the importance of education in the transition towards more impactful, ESG-aligned investing strategies.

As for all institutional investors, the United Nations' Principles for Responsible Investment (UN PRI) embodies a set of commitments that investors should increasingly look to align to. In doing so, insurance providers, pension funds, endowments, sovereign wealth funds, and asset managers acknowledge their "duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we [they] believe that environmental, social, and corporate governance (ESG) issues can affect the performance of investment portfolios."¹⁰⁷ With community events, resources for reporting, best practice guides and case studies, tailored support and a collaboration platform, the UN PRI provides actionable instances of best practice. Similarly, alignment to the GIIN and GRI provide a guide as to what good looks like for institutional investors.

2.2.6. Role of technology

As with pensions, there appears to be a role for FinTech and InsurTech in accelerating and driving the agenda. The emergence of new technology (e.g. Internet of Things, lower cost and better resolution satellites and modelling capability) combined with a surge in available data

mean InsurTech companies are ideally placed to lead the insurance industry in impact and ESG, supporting allocation of capital and deployment of new business models.

Mid-market insurance is one area primed for exploring the opportunity given their greater incentive to grow their underwriting businesses. We found there to be more strategic ambition for innovative early stage illiquid investment, with two interviewees noting this shift: "Investors in middle market direct lending can realise incremental yield versus public corporate credit markets by making a longer-term commitment to the asset class. In our view, this yield advantage is compensation for illiquidity—a premium that has lasted year after year and across cycles."

Case Study: InsurTech as a driving force for impact and ESG for the insurance industry Sam Evans, Eos Venture Partners.

Insurance offers protection in the event of natural catastrophes, increases economic resilience, provides a safety net in the event of injury or death, and improves health and wellbeing.

Whether it's closing the protection gap, democratising access to healthcare, engaging with under-served populations, offering parametric solutions or leveraging geospatial imagery and big data sets, InsurTech can play a key part in driving forward the industry.

The global protection gap (the difference between the amount of insurance that is economically beneficial and the amount of coverage actually purchased) was estimated to be US\$1.24 trillion in 2020.¹⁰⁸ The problem is prevalent in many developing economies but also exists in developed countries, leaving large parts of the population vulnerable. InsurTech provides emerging technology solutions to these problems, allowing real-time monitoring and development of risk mitigation, prevention strategies and disaster recovery plans. Technology also allows insurers to reach underserved populations via affordable, tailored and usage-based products leveraging digital and embedded solutions.

InsurTech also supports improved product design, including parametric solutions, that enable an integrated process, increase coverage, lower costs and increase efficiency including efficient claims settlement. For example, parametric insurance increases the robustness of agriculture supply chains, guaranteeing pay-outs in the event of a supply chain failure or weather event that causes damage.

Research by Allianz indicates that ESG data can also be used to enhance underwriting, through the identification and application of specific predictive ESG indicators.¹⁰⁹ For example, the research found that higher rated ESG firms were less likely to suffer incidents such as workplace-related accidents, reputational damage, or fines.

There are also a growing number of InsurTech ventures targeting environmental issues, green innovation and carbon emissions. Geospatial analytics can assess the impact of natural catastrophes, enhance resilience, and help develop mitigation and disaster recovery plans.

Geospatial data can also monitor and track carbon emissions across a supply chain. InsurTech is supporting green innovation through credit insurance for renewable energy and insurance for carbon credits.

Finally, we are now experiencing rapid developments in medical technology, including precision diagnostics that allow a transition to prevention based healthcare (improving life spans and lowering treatment costs). However, it can take many years for these advancements to become mainstream and high initial costs can restrict access to the wealthy, InsurTech can play a key role in democratising access and accelerating rollout.

2.2.7. Income profile

Because of the profile of investments favoured by insurers, with steady predictable income preferred after any initial upfront investment, VC and impactful investments that involve building out of infrastructure and/or licensing of core technology have the most potential to harness capital from the sector versus pure consumer orientated and software plays.

Whilst mega-insurance funds may look to aggregate portfolios and deploy at a larger scale, the origination of dealflow will still represent a key component of the process. Where historically this has not been the case, with one interviewee in reinsurance stating, "a lot of deals being brought to underwriters are poorly originated," the tried and tested model of VC for innovation, impact and market rate returns should be looked to for best practice. This must, however, be combined with an approach to provide the kinds of deals with cash flow characteristics that long-term that insurers require.

Venture capital firms with proven impact track records have a key role to play in pulling exceptional deal flow through to institutional investors. VCs are key parts of both the innovation and investment landscape. Future Planet Capital's model, backing spin outs from the world's premier universities, naturally centres around the deep science, tech and R&D hubs associated with those institutions, like those in Culham (Oxford), Cambridge, London, the Midlands and Scotland. One interviewee, from the insurance industry characterised the model as first, second and third order investing - "you invest in the startup and then you invest in their capacity to grow their footprint in areas that you want, build research parks, pulling in other small businesses into the space. All of this is investable."

We recommend that VCs can increasingly play a role in the origination of startups and scaleups operating in investable sectors; "there's not enough supply of deal flow or it's not packaged in the right way so that they [institutions] can actually invest." Institutional investors, such as insurers, could look to develop inhouse capacity in collaboration with industry experts. Insurers could act as leading LPs in impact funds or aggregated fund of funds, if the UK government and the regulator relaxed requirements for investment into portfolios with proven impact potential.

This classification could look to utilise Future Planet Capital's Impact Value Gap, as previously discussed. Larger allocations into more traditional asset classes, such as real estate and infrastructure, or third order investing, could still be channelled into impact, if the insurance industry were to invest sustainably in the sector's material capacity.

Case Study: Bermuda - Reshoring for impact

On the topic of tax reliefs for impactful sectors, there may be an opportunity to mimic the tax break that the United States currently gives to Bermudan offshore underwriters and reinsurers - if tax breaks or reliefs were implemented based on certain impact related conditions, such as Bermudan outfits onshoring money in the UK for green, growth and impactful purposes, which would not gravely reduce the domestic tax take.

One interview described a study by the Trade Association for London and international brokers, conducted earlier this year, which showed that advising and delivering risk premiums on the green transition alone would create a multi- billion dollar opportunity for UK insurers. Working closely with offshore reinsurers to design such a programme to maximise the benefit for impact would be a worthy objective of government and other interested parties in countries such as the UK.

2.2.8. Ensuring there is sufficient scale

The scale of insurer balance sheets can present a challenge in terms of finding sufficiently large investment opportunities. A pooled model would allow insurers to allocate capital to a centralised structure (linked to removal of the regulatory barriers) that is responsible for manager selection and deployment.

In many instances the scale at which large institutional investors are looking to deploy capital is simply too great for the likes of VC and PE to hold. We suggest that there are novel mechanisms through which insurance could diversify into direct startup investment. Instead of 'complacency' and sticking to traditional asset classes, we encourage explorations into innovative strategies, potentially deploying to aggregated portfolios or into VC's that may look to index early-stage companies in future.

As one interviewee noted, insurers are not natural investors in early stage businesses. This, combined with the size of investment portfolios, means that they need to deploy significant amounts of capital. To remedy this need, we recommend the creation of a pooled or centralised structure, "some sort of industry wide institutional fund that enables us to invest on scale... Otherwise, you end up with each company going away and solving their own problem and coming up with their own tilt on it." This would allow the industry to deploy meaningful amounts of capital into a dedicated structure, with professional management and allocation; "If we want to get insurance companies and pension funds investing more in the UK, then we need to help with providing a pipeline and clear kind of platforms where they can go and do that [illiquid and longer-term impactful investing]."

To support this, there is a need for greater collaboration between VC and PE, and large institutional investors to create the right conveyor belt of capital and intellectual property to drive the infrastructure development suited to the long term needs of large investors. One interviewee mentioned that historically, fora such as Gleneagles Pensions and Savings

conference run by JP Morgan, would often provide helpful Chatham House rules only environments, in which issues could be ironed out and new initiatives for the benefit of consumers and citizens could be road-tested. It would be useful for similar high level fora around ESG and impact to be promoted in countries like the UK, to enable plain speaking and coordination around action, which government, regulators and leaders could harness to speed up learning, decision-making, and progress.

"The irony of it is everybody wants to do something in this space [impact]... but the wants and needs of individuals and investors are not matched with the ability then to actually go ahead and execute. You've kind of got this dichotomy where the two don't quite work. And I think that's probably going to be the one of the biggest areas that needs to be improved going forward."

2.3. Pensions

The UK pensions industry is historically risk averse and reluctant to allocate to illiquid, longterm investments. One of the most powerful drivers behind this appears to be the requirement for pension funds to hold more liquidity. This may be exacerbated by the LDI crisis and the volatility currently found in many of their traditional investment markets.

More needs to be done to build on the growing appetite for impact from pension funds, in the face of a volatile macro environment. Within the UK, initiatives must be kickstarted to tackle traditional risk aversion and an overly dividend-centric model at the institutional investor level. This could potentially begin with the help of an impact-empowered pensions regulator and by boosting dividends for those funds that take a long term approach to investing in sustainable impact in the UK. In doing so, one interviewee argued that the pension funds would then be able to invest "with purpose in VC and private equity and move away from the very kind of draconian measures," such as index funds and fixed income bonds. They went on to make the point that the financial returns that come with longer-term illiquid investments are "generally far superior than the fixed income market" and that greater investment could create a pool of liquidity for impact.

The recent liability driven investments (LDI) crisis has illustrated the risk of overreliance on certain assets traditionally deemed to be safe. Misaligned incentives within UK pension funds prevent further exploration concerning allocation to illiquid assets. The Bank of England, CRA and pensions regulators are all involved in the allocation process and careful coordination will be needed to help encourage more allocations whilst maintaining sustainability. One interviewee in the regulatory space said that there was a shift underway, but it would take time to work its way through into wider consciousness. Currently, according to one interviewee, the Pensions Regulator is caught up in combating competition in a market of 5,500 pension schemes. Some believe these schemes should be encouraged to merge, reducing fragmentation and providing the scale necessary to allocate more to alternatives and impactful investments.

Remedying the risk averse nature of UK pension will also require a change of mindset and understanding of illiquid long-term risk. The possibility of a change of government in the run up to 2025 was also a factor in determining how quickly regulators could move, according to one interviewee with an insight into the thought processes of regulators, who noted a reluctance to

be seen to be bowing to short-term political pressure. To many, the current Pensions Regulator default preference despite having the powers to encourage and authorise the creation of more superfunds and Master Trusts, has been to let pension funds close and sell their portfolios to insurers. Ultimately, in light of the sizeable quantitative easing over the last decade or so since the Financial Crisis, this could prove to be value-destroying as the market rejects gilts, leaving many pensioners struggling to fund their retirement.

2.3.1. Pension regulatory barriers

An inhibitory regulatory landscape has existed with regard to fees and illiquid assets, such as the requirement to hold more and more gilts and treasury bonds as their pension holders near retirement, which has been seen recently to have led to the unearthing of unforeseen risks. A more proactive pensions regulator and a move to enhance dividends for those funds that take a long term approach to investing in sustainable impact through targeted reliefs in the UK would incentivise increased pension investment into VC, as would clarification of fiduciary duties to better support impactful investing.

Risk averse regulation has seen many UK pension funds seek to hold gilts and treasury bonds, so as to meet collateral requirements as the population ages. This has been shown, in some instances, to be highly risky. The recent UK turmoil surrounding liability driven investment strategies, or 'LDIs', has seen pension funds that typically invest money into seemingly low-risk gilts, pull away from the strategy. Following the 'mini' Budget of Liz Truss and Kwasi Kwarteng, some pension funds were forced to sell assets in order to meet margin calls on LDI hedges, as gilt yields rose sharply in response to the poorly positioned announcement. As an "artificially gilt-hungry pension system"¹¹⁰ looks to other asset classes to which they may allocate, there should be a case made for longer-term allocations into impact and innovation, through mechanisms such as VC, as opposed to just into assets such as bonds and gilts.

Communicating this opportunity will not be easy. One of the most powerful drivers behind the risk-averse nature of pensions appears to be the requirement for pension funds to hold more liquidity, following recent concerns around LDIs, and the volatility currently found in many traditional investment markets. Regulators' should look to reform requirements imposed on pensions, following the Financial Policy Committee Remit and Recommendations¹¹¹ and learning from the recent dysfunction in the gilt markets. In addition, regulators in this space should look to learn from best-practice around regulatory sandboxes, which already exist in the wider FinTech space for example. These sandboxes should be specifically created for innovation and investment focussed on impact and ESG, relaxing rules for investments up to a certain size or stage of development, in order to learn early what regulation is needed and how to implement it.

As with insurance, Solvency II is a central pillar of current regulation, which many in the industry deem to be constraining capital flows into longer-term impact strategies. Where Solvency II is likely to directly impact insurers, the second order effects of a loosening of regulation may well bolster pensions ability to allocate to alternative asset classes. Lane, Clark and Peacock LLP, commenting on proposed Solvency II relaxations, expect a number of the

¹¹⁰ Jenkins, 2022

¹¹¹ Chancellor of the Exchequer, 2022

changes, such as wider asset eligibility, will be useful in increasing insurers' capacity to meet increasing defined benefit pension demand and help more reach buy-out stage.¹¹²

Changes to regulation will take time to materialise, although we are hopeful that these reforms may be expedited. In the meantime, we suggest short-term action in our Compact for a UK Impact Development Programme (see Section 2.5). Alternative asset classes, such as those represented by VC and PE funds, should similarly look to play a more active role in making the case for investment. One interviewee, with extensive pensions experience, noted that regulation is not necessarily the greatest blocker to investment, rather that more should be done by funds to demonstrate their impact to pension funds. The internal barriers to progress within impactful investing, as mentioned in Chapter 1, remain important obstacles to be addressed. According to the interviewee "the market needs to respond more heavily and really, really demonstrate how they are impacting innovation in their offering rather than just, 'Here is another private equity fund that's got all the right framing around it,' but actually, in reality, is no different." An area in which another interviewee felt was important to see "tweaks" made was around the fiduciary duties imposed in the UK by the Department for Work and Pensions and the Pensions Regulatory on pension Trustees. These duties, at times, have led to the perception that Trustees could ignore, or not prioritise, impact in their investments because it conflicts with the duty to maximise shareholder value. Changes to guidance to explicitly support impactful investing and defuse any perception of a conflict would, the interviewee felt, massively shift the dial.

2.3.2. Mindsets and upskilling

Remedying the risk averse nature of UK pension funds requires a change of mindset and understanding of illiquid long-term risk. Due to a reluctance to diversify allocation, UK Local Government Pension Funds may, in some instances, be less experienced with regards to illiquid investments, as opposed to, for example, US counterparts; though there are promising signs of moves to upskill the sector for impact.

Whilst there is a clear need to provide for pensioners, there is a responsibility to look after younger investors with longer term horizons. This responsibility is both financial, with stable, risk-adjusted returns, and with regards to environmental and social factors. For UK pension funds to cater for younger stakeholders' appetite for impact, there is a need to inform, educate and upskill the industry which for a long time has served primarily an older demographic. Such a process to change the culture will likely require changes to staffing and governance.

For UK pension funds looking to diversify allocation and make the transition towards impactful investment strategies, typically found in VC, the American market presents a case of best-practice. American pension funds have been investing in illiquid assets for decades and should inform UK approaches. The Texas Teachers Pension Funds (TTPF) channels more money into UK VC than any British pension fund. Unsurprisingly, the TTPF has developed the expertise necessary to leverage the VC market, a skill-set that the UK increasingly should look to emulate. UK pension funds could either invest in VC funds or implement their own in-house screening processes to maximise financial and impact returns.¹¹³

¹¹² <u>Finch</u>, 2022

¹¹³ British Venture Capital Association, 2017

Education will be critical in addressing the risk-averse mindsets of institutional investors. In the first edition of the Wei Forward Report, we alluded to the drawbacks of risk-averse pension allocation: "High levels of institutionalisation has, in the past, resulted in trustees inhibiting change in favour of low impact, 'safe' investments. As one Executive Committee member of a leading UK pension fund stated, this sort of landscape 'doesn't always lend itself well to...innovation.' Emphasis is put on low-cost pensions rather than high returns. As a result of this safe, risk-averse mindset, the regulatory landscape around pensions has become incredibly restrictive." There looks to be encouraging first signs of the landscape changing.

The Impact Investing Institute's Impact Investing Principles for Pensions comprises 17 pension funds, investment consultants and fiduciary duty managers, with over £16.8 billion in assets, that have signed up. The initiative aims to help reduce negative impacts and risks of investments, making it easier for pension schemes to invest with impact, whilst demonstrating that "an impact approach is entirely compatible with pension trustees' and advisors' fiduciary duties."¹¹⁴

One interviewee argued that the asset class is not intrinsically too risky for pensions, rather risk and expense is borne out of a lack of capability and experience. A proposed solution to this is for the government and the regulator to encourage pension funds to place those with a comprehensive and robust knowledge of impact investment on individual investment committees, perhaps giving more freedoms to those Trustees with trained sustainability background, who could act as Prudent Persons on behalf of the fund they oversee.

Institutional investors could be recipients of impact RegTech professionals, trained either through a Teach First style programme, or through government apprenticeship schemes, allowing for modules or placements in areas such as ESG and impact in private credit, fixed income and equities. This would require action from the UK government to, "actually put money... to train young civil servants up specifically in that arena... to one day become your subject matter experts." Another interviewee remarked that a scheme which would rotate individuals between departments, "to hop from the Bank of England to the FCA to the Treasury to BEIS... would be an incredibly interesting way to tackle upskilling." A particular need is for those with STEM backgrounds given the reliance of a lot of impact related innovation on deep science and engineering to drive them forwards. A regulator we spoke to said, with regards to a RegTech programme, "What I would do, is I would hire computer scientists and people who actually know tech fundamentally, and then teach them about financial services."

Such a scheme would fulfil two purposes. The first to build up talent capable of making educated and informed decisions. The second to encourage the culture change that's needed, away from risk-averse short-termism, that has seen many promising ventures relocate to America, "lured abroad". As one interviewee said, there exists "a level of complacency... If it ain't broke, why fix it? The dollars are rolling in and you've got high performing funds. And so then why rock that boat?" There is a common misperception by pension trustees that their fiduciary duties are incompatible with impact investing, with an exclusive focus instead on optimising financial return at the lowest possible cost. Five major city law firms have argued against this stance.¹¹⁵

¹¹⁴ Impact Investing Institute, n.d.

¹¹⁵ Impact Investing Institute, 2020b. The five law firms are Bates Wells, Herbert Smith Freehills, Norton Rose Fulbright, Sackers and Travers Smith

In our last report we argued that LPs have a commitment to fiduciary duty which must be reworked to accommodate an impact conscious view of returns. Our observations remain largely unchanged:

"Currently, many LPs believe that they are unable to steer general partners (GPs) towards impact, for fear of detracting from current practice. A key contributing factor to LP hesitancy towards sustainable and impact investments surrounds the concern that, in pursuing sustainable investment, LP's may face stakeholder anxiety about fiduciary responsibility. This was cited as the biggest challenge to LPs' adoption of impact investment practices in a recent 'Sustainable Investor Survey'¹¹⁶"

We support the Impact Investing Institutes calls to debunk the myth, "that impact investing means sacrificing financial returns" and reissue a call for a change in mindset to be answered. The economics of VC are well aligned between LPs, asset allocators and VC funds, with each element of the value-chain aligned to ensure that each decision maximises returns. Forgoing fiduciary duty should not be a result of impact investing.

This focus on low-cost, high-yield returns somewhat explains the stance against illiquid investment in the UK press; that the government is trying to raid pensioners' pockets and make them pay more to VC fund managers with high take home fees. The industry looks for the lowest asset management fees, which is unlikely to be found in impact investing or VC. In the previous Wei Report, a number of our interviewees stated that this commitment needs to be reoriented around impactful returns.

2.3.3. Horses for courses

There is a segmentation of pension funds in countries like the UK, with the larger ones generally having both greater regulatory oversight constraining some of their decisions, but also having the capacity to build their own inhouse VC-related teams. In comparison, smaller or mid-sized pension funds theoretically have greater freedom but might lack the capacity at times to understand how to invest into VC for impact.

For larger pension funds, it is more common for impact investing strategies to be brought in house. As a senior pension expert explained, they need to, "set up their own team because you almost need that kind of focus... to actually start thinking how to invest." Not only this, but larger pension funds will also view longer-term, illiquid allocation as strategic; "It's creating deal flow, it's collecting intelligence, it's enhancing other other kinds of investments or they're trying to find a larger future follow-on investment... scaling up something successful."

Within mid-sized pension funds, many theoretically have greater autonomy, and less internal regulation. There is at times, however, a lack of capacity to understand how to invest into VC for impact. One contributor described how a theory of change can function as a useful mechanism to socialise impact investments and provide an auditable trail of impact accountability for those new to the practice.

There is a lot to be learnt by large and middle market pension funds from those in the existing ecosystem. One leading pensions executive revealed that whilst many institutions have some

¹¹⁶ Wiek, 2021, p.21

understanding of impact and ESG-aligned investments, many should move to engage the "wider and broader impact investment circle." With growing place-based impactful investing strategies, UK-based global pension funds would do well to leverage the knowhow and reach of regional networks, like those found within the Midlands Engine Investment Fund and the UK Innovation Science Seed Fund (UKI2S).

2.3.4. Local Government Pension Schemes

Local Government Pension Schemes are a powerful potential source of impact capital and there have been effective recent examples of impactful investments from this sector

Local Government Pension Schemes represent a potentially transformative source of impact capital. The 2021 Wei Forward Report called for UK and other national pension funds to allocate a small portion, less than 5%, to venture, and accept higher management fees, where returns justify doing so for this asset allocation - "This would be transformational for ventures in Britain and solve the current growth stage shortage of capital."¹¹⁷ This echoed the conclusion reached by the Place-Based Impact Investing Project, launched by impact investment organisations The Good Economy, the Impact Investing Institute and Pensions for Purpose. The Scaling Up Institutional Investment for Place-based Impact report found that whilst impact investments, specifically in this case place-based investments, had proven potential to generate "stable, risk-adjusted returns" while creating positive social impact, most LGPS allocated only around 1% to this strategy.¹¹⁸

Earlier this year, the UK government unveiled plans to mobilise more than £16bn of LGPS capital to place-based impact projects.¹¹⁹ With government backing and clear proof points, such as the South Yorkshire Pensions Authority alignment to UN SDGs¹²⁰ and Essex Pension Fund's recent pledge to invest 10% of assets in enterprises that generate positive social and environmental benefits.¹²¹ Borders to Coast Pensions have opened up an impact innovation investment fund. The opposition party in the UK, Labour, have also announced they will be mandating the British Business bank to support venture capital firms to do more to support startups generally, learning from the French "tibi" model to bring together private institutional investors and ventures in need of financing.¹²² More details on how much this investment will be encouraged to have a positive impact are yet to be outlined.

This commitment should be mirrored and coordinated throughout the LGPS initiatives. The government can play a role in encouraging the allocation of illiquid holdings, matching funding into long-term alternative asset classes. This could start with matched funding into Local Government Pension impact investment, generating a significant risk-pool. As Jamie Broderick noted, if the entire Scheme matched Essex's 10% impact pledge, "that would be £35 billion generating positive impact."¹²³

One interviewee, who had previously worked with the LGPS, informed us that whilst many of the local pensions were willing, most were not ready to pursue impact investing in a

¹¹⁷ Wei and Shadbolt, 2021

¹¹⁸ Pensions for Purpose, 2021

¹¹⁹ Lowe, 2022

¹²⁰ Impact Investing Institute, 2020b

¹²¹ <u>Roach</u>, 2022

¹²² Partington and Stacey, 2022

¹²³ In March 2021, the market value of the LGPS was £342 billion. Broderick, 2022

coordinated and concentrated manner, "They're willing and able. And the question now is, are they ready to commit?" The lack of coordination was seen by many of those that we interviewed as a key blocker to progress: "There's loads of hubs up and down the country... accelerators, FinTech hubs... parts of governments and executive agencies... But it's not very joined up." One interviewee described the ecosystem as a "a collaboration of mediaeval chiefdoms... as opposed to a single strategy" with government, treasury, investors and LGPS working in silos:

"The problem is that there are too many different mechanisms and there's no coordination between them. ... Having some kind of coordination and perhaps a fund...with coordination which would allow the transparency of risk of return? That's what we need at the end of the day."

It may well be a question of timing - we were informed that many funds have only been opened in the last year or so -

"It's very early days. The investment committees have opened the doors for that and have acknowledged that this is a niche area for investments and that they want to allocate to it and the allocations will be fairly substantial. But what I haven't seen just yet is them pressing the go button."

With new waves of impact focus, VCs and PEs could focus on renewing efforts to engage local pensions. This is equally important for both those impact investing funds launched recently, and more established ones. Whilst ex-industry experts see funds like those within Future Planet Capital as "easy wins.. that make the most sense [for allocation]," they also recognised the importance of those older, more experienced funds remarketing themselves in the face of growing LGPS interest.

Whilst the efforts of several of the LGPS groups have been impressive, in order to generate significant risk pools, more schemes could align with that of the likes of Greater Manchester and Brunel Pension Partnerships, with one participant admitting, "their mindsets in that sector are still a little bit off and it hasn't really landed with them exactly what you can achieve." For many, "it's still a kind of marginalised activity for them and they still see it... as 'We aren't going to make as much money on this, but it's the right thing we do'...rather than realising that if you do this right, you'll get better long term returns because you're meeting the social need for investment." Whilst VCs, GEs and PEs can remarket impact funds and educate institutions as to the triple bottom line returns of their strategies, there could also be more cohesion within the LGPS and sharing of best-practice in concentrated impact partnerships between local authorities. As one interviewee concluded -

"It all comes back to, 'What is our strategy in the UK for growth?' Because without that coordinated strategy, we're all just... doing our own thing. And actually, that's what we really could do better, I think."

2.3.5. Role for Government

States can play a role in encouraging the allocation of illiquid holdings, matching funding into long-term alternative asset classes. This could start with matched funding into Local Government Pension impact investment, generating a significant risk-pool.

In our last report we commented on Defined Contributions (DC) pensions reluctance, and in many cases refusal, to invest more than 1% into VC/Growth Equity funds, forgoing an asset class that typically returns higher per annum rates than other PE markets.¹²⁴

We welcome the progress that has been made towards increasing allocation, which need not be extensive. In fact, allocation does not have to be higher than 5% in order to have a transformational effect on the country.¹²⁵ Steps have been taken by the Productive Finance Working Group to advocate for performance-based fees to be classed as exempt from existing charge caps and "get the best overall deal for members when investing in private equity and venture capital."¹²⁶

Of the industry representatives surveyed by the Working Group, several said they believed a charge exemption had the potential to eliminate trustee uncertainty surrounding whether they can invest in certain illiquid assets that come with performance fees, for the fear of breaching charge cap rules in DC schemes.¹²⁷ Many respondents saw the proposed reforms, as having a positive effect over time on increasing DC schemes' appetite to invest more in illiquid assets. BCF Pensions stated that "We are not currently investing in these types of assets, but this change would certainly encourage the trustees to do so – potentially as much as 15-20% subject to satisfying liquidity and diversity requirements." BCF Pensions, and similarly Simmons and Simmons, were quoted as saying that "Our DC pension trustee clients are more likely to invest in productive assets if performance fees are taken out of the charge cap."¹²⁸

With the Edinburgh reforms announced in December 2022, progress will likely accelerate as the fee charge cap is removed, and pension asset pooling guidance is provided, together with a push to consolidate DC pension schemes more rapidly - there is significant potential for the government to significantly enlarge the impactful investing space.¹²⁹

2.3.6. Consumer choice

There is currently a disconnect between the saver and the decision maker, with pension holders having relatively little choice as to how defined contribution pensions are allocated, be it positively impactful or not. In addition to wider participation through the likes of FinTech, education is key in kick starting this shareholder 'culture shift'.

It has become apparent that there currently exists a disconnect between the saver and the decision maker, with pension holders having very little choice as to where defined contributions pensions are placed, be they positively impactful or not. Whilst there are transitions underway by the institutions, there should equally be a bottom up movement by shareholders. Financial Technology (FinTech) may provide the means through which those with pensions can allocate their contributions to designated impact strategies, with potential tax breaks or upsides granted to those above a benchmark allocation. Instead of pension funds and platforms just allocating assets overwhelmingly to gilts, they could buy impact and

¹²⁵ Ibid.

¹²⁴ BBB and Oliver Wyman, 2019

¹²⁶ <u>GOV.UK</u>, 2022

¹²⁷ Ibid.

¹²⁸ Ibid.

¹²⁹ <u>HM Treasury</u>, 2022a

innovation notes as an alternative, or invest directly in impact, green or sustainable aggregated portfolios, created by industry experts and VCs.

One interviewee suggested that the UK learned from the Australian model that enables consolidation of historic employee pensions into one platform within 24 hours. This would enable savers to have a better view of where their investments were distributed, and as a result ultimately allocate more to impactful investment funds. The current wait to consolidate in the UK was about 3 months. This is too long and likely to lead to the continuing inertia in pension schemes. Ultimately savers of all ages suffer by not having convenient platforms to use to plan their saving, with many not engaging as a result and leaving decisions often until far too late.

2.3.7. Demographic opportunity

There is an opportunity to be explored in targeting specific demographics within pensions. Whilst allocations from pensions that are close to maturity, especially in historic final salary schemes, will typically be risk averse, those marketed towards younger millennials and 'Generation Z' present an opportunity for more sustainable and impactful investing as part of their defined contributions.

In addition to wider participation through the likes of FinTech, education is key in kick-starting this shareholder 'culture shift'. Education would ensure, as one interviewee suggested, that pension fund beneficiaries are able to "articulate where they want their money to go."

Where much of this could come from interested individuals, there is exploration to be done into targeting specific demographics within pensions, in order to inform them of the dual benefit of impactful allocation. Whilst allocations from pensions that are close to maturity will typically be risk averse, those marketed towards younger millennials and 'Generation Z' present an opportunity for more sustainable and impactful investing as part of their defined contributions. One pension executive questioned whether, "there is scope to auto-enrol millennials into pension funds that only serve millennials and which target impact and profit." Certainly based on LGIM research, younger generations are more willing to divest from funds that do not meet ESG standards and are looking for more impact-oriented products. Nearly 60% of Gen Z (59%) and Millennials (57%) say they are more likely to want to divest, rather than engage, because of the things they have seen in the media, compared to just over four in ten Boomers (43%). 81% of Gen Z savers said they were willing to pay more for a pension with net-zero carbon emissions.¹³⁰

Some interviewees noted that there is a lack of institutional understanding as to how to allocate to impact and a reluctance to stray too far from traditional asset classes as a result of risk-averse cultures and regulatory pressures. Institutional investors, such as pensions, typically invest mainly in public equity and bond markets. Where they may be uncomfortable allocating directly to VC or PE, there is room to embed impact in bonds targeted at the young.

Case Study: Guideline - An example of a targeted pension provider powered by FinTech

Guideline was founded with a mission to help the underserved access pensions. Kevin Busque, its founder, noticed that young employees in the US were not participating in his company's 401(k). To find out why, he did some digging and found an industry full of complicated fees that lacked transparency. Kevin then searched for a new provider with the right structure and features—one that would help, not hinder, participants achieve positive outcomes. That 401(k) provider didn't exist. So Kevin, along with his co-founders, built one—an easy, affordable retirement platform that prioritised the needs of small business owners and their employees. And in this way, and with funding from the likes of longer term investors, such as VC (FPC), Guideline was born.

2.4. Sovereign wealth funds

IMF's First Deputy Managing Director John Lipsky explained over a decade ago that in times of global financial stress, SWFs are able to "facilitate a more efficient allocation of revenues from commodity surpluses".¹³¹ Where pensions and insurance may immediately struggle to allocate sufficient sums to impact, SWFs and large long-term investment groups are well aligned to illiquid allocation, as they themselves operate on a long-term investment model. Sovereigns have limited withdrawal needs, a point also made by Lipsky. This enables them to "withstand market pressures in times of crisis and dampen volatility."¹³²

2.4.1. A unique position

Sovereign wealth funds find themselves in a unique position with regards to allocation to impactful investing. Of the large investor types, SWFs are somewhat insulated from wider market volatility, able to withstand market pressures in times of crises that would otherwise cripple other structures; they are able to take the longest term, most holistic view.

Sovereign wealth funds (SWFs) find themselves in a unique position to channel capital into longterm, illiquid impact investment. Of the large investor types, sovereign wealth is somewhat insulated from wider market volatility, able to withstand market pressures in times of crises that would otherwise severely impact other structures. This has been demonstrated by Norway's sovereign wealth fund Norges Bank Investment Management (NBIM), confirming that despite a 14.4% negative return in the first half of 2022 NBIM "is likely to weather this storm," as a result of its diversification of assets and "longer-term investment strategy."¹³³

SWFs have a responsibility for ensuring that their investments take a long-term outlook. With sovereigns investing on behalf of their people and citizenry, there is an eye to sustainable, non-volatile returns over the long run. Prominent VC practitioner and academic, Jerry Engel, explained that, "this is a major opportunity set for sovereign wealth because of the timeframe."

Indeed, a representative from a major sovereign wealth fund explained, "We are long term investors. We are patient investors. We try to look thematically about generations going forward."

It is traditionally understood and accepted that venture operates on a ten year fund lifecycle. This, Engel reports, has "nothing to do with the ventures, but it has to do with the tolerance of LPs for the level of uncertainty." However, from Engel's experience, "funds are now 15 year funds, but nobody admits it. It's just the fee structure is 2:20 for five or seven years, then decreasing down to one percent by year ten. And then zero essentially for the next five years with follow on funds." 15 year, long-term, illiquid timelines align strongly to forward-looking SWFs, and such there exists an opportunity for the more tolerant SWFs to invest in these synergies, both generally and through an impactful investing lens.

2.4.2. Leadership opportunity

We suggest, as a result, there is a role to play for SWFs and large global investing groups to drive the impact and ESG agenda within their highly diversified portfolios. Many have already begun to do so, seeking to set both informal and formal impact targets and aligning to ESG best practice across all of their holdings. Other SWFs and large investing groups should follow the example they have set, to generate potentially outsized impact and returns.

Key SWFs of note who are leading the way into greater impactful investing include:

- Monaco's sovereign bodies' focus on impact is also an example for other SWFs to follow. The Monaco Government has a keen eye for the ocean economy and ocean health aligned investment strategies. The Monaco Constitutional Reserve Fund committed €10 million in September 2022 to a blue ocean fund focused on improving ocean health and investing into the sustainable blue economy.¹³⁴ Future Planet Capital recently received €20 million to launch their Blue Ocean mandate, partnered with the Prince Albert II of Monaco Foundation and the Monaco Government in the context of the Monaco Blue Initiative (MBI), aimed at tackling key issues affecting the world's oceans.¹³⁵ This targeted investment strategy will focus on three areas within the Blue Economy: preventing pollution, preservation of marine environments and ecosystems and sustainable marine productivity.
- Mubadala, Abu Dhabi's SWF, currently with US\$284 billion in assets under management, is equally committed to impact and responsible investing. Masdar, the Abu Dhabi Future Energy Company and one of the world's pioneers in renewable energy, is a subsidiary of Mubadala. Mubadala identifies as a responsible investor, inspiring businesses to "make positive contributions in the communities where they operate."¹³⁶ Mubadala Capital Ventures centres its portfolio on technology companies, generating lasting social impact with investments into tech-enabled healthcare and financial representation.
- Norway's Sovereign Wealth Fund, NBIM, is another leading example. The Government Pension Fund Global, managed by NBIM, in its 2021 annual report defined its goal as identifying, "long-term investment opportunities," and assessing how "companies impact on the environment and society."¹³⁷ The fund invests more in companies aligned to

¹³⁴ <u>Private Equity Wire</u>, 2022

¹³⁵ Foglia, 2022

¹³⁶ Mubadala, 2022

¹³⁷ Norges Bank Investment Management, 2021

positive environmental impacts, re-allocating funding away from those that are not. NBIM and the Government Pension Fund Global actively invest in three environmental buckets, low-carbon energy and alternative fuels, clean energy and energy efficiency, and natural resource management, in line with the UN Sustainable Development Goals for climate, clean energy and resource management. It also actively divests from companies which represent a serious ESG risk within climate change, water management, biodiversity, ocean sustainability, anti-corruption, tax transparency and human rights,¹³⁸ and recently announced that it will require companies it invests in to reach net-zero emissions by 2050 at the latest,¹³⁹ and use its board votes to veto companies without net zero targets.¹⁴⁰

As we encourage others to replicate best practice, we also recognise the potential for the UK to do the same. A British sovereign wealth fund would be a powerful mechanism for impactful investment, the potential of which has been recognised by both the incoming Lord Mayor of London¹⁴¹ and the Labour Party.¹⁴²

2.4.3. Being the catalyst

There is an argument to be made for sovereign led decisions, either as a nation or as a sovereign fund, to account for the impacts of investments on its people, both at home and peoples generally across the planet, harnessing their unique position to catalyse others to take action.

Sovereign wealth funds often need to take account of long term impacts around their investments, their origins requiring them to align with the interests of the nations from which they have originated. At the same time, many of them have been born out of wealth generated from extractive industries, typically petro-chemicals. As such, they feel a responsibility to improve the planet, giving back, and harnessing their collective wealth to help create a better future, in an age in which oil and gas will be less the driver of our energy mix. 75% of SWFs have an ESG policy, up from 46% in 2017, and 30% have set a carbon emissions target, with many increasingly interested in backing impactful investments.¹⁴³

A notable example of how sovereigns have been working together to bring in and catalyse other institutional investors to address common impact goals is the One Planet SWF Network, championed by President Macron and launched in Paris in 2017. One Planet brings together many of the leading SWFs to address climate change and sign up to various sustainability principles. The membership now comprises 46 institutions in total, with 18 leading SWFs on board. A further 28 private sector asset managers and investors have been attracted to One Planet since its inception, including some of the largest and most well-known brands, such as Blackrock and Fidelity.¹⁴⁴

Such multilateral initiatives are to be welcomed, but it is important to align all staff and partners within Sovereign wealth funds and large global investing groups to back the impact and ESG agenda, to avoid institutional inertia. In this regard sovereign wealth funds could benefit from

¹³⁸ Ibid.

¹³⁹ Lundgren and Treloar, 2022

¹⁴⁰ <u>Milne</u>, 2022

¹⁴¹ <u>Thomas</u>, 2022

¹⁴² <u>Boscia</u>, 2022

¹⁴³ <u>Invesco</u>, 2022

¹⁴⁴ One Planet SWF Network, 2022

learning from leading large investment groups, who have instituted bonus pools for delivering impact to reward their staff over and above the day to day roles to help generate momentum.

2.4.4. Underwriting impact

In addition to aligning investment strategy to impact and ESG, there is room for SWFs to also provide a first-loss guarantee mechanism to help stimulate more impactful investment by pension and insurance funds. Insurance and pension funds could aggregate large impact portfolios for the sovereigns, receiving a higher return, but leaving the greater upside to SWFs.

With sovereign led decisions increasingly accounting for the impacts of investments on its people, it is clear that intent and appetite exist in the space; "It is a place where sovereigns can take a national strategic interest and marry it to impact." However, we believe that SWFs can play an even greater role, in galvanising other institutional investors. In addition to aligning investment strategy to impact and ESG, there is room for SWFs to also provide a first-loss mechanism and stake pension and insurance funds.

Such programmes could be paralleled and work in collaboration with initiatives jointly coordinated by governments and their aid agencies to provide similar underwriting for impact-related bonds and investments that can help countries kick-start their rebuilding processes after the hits they have taken from Covid, the war in Ukraine, and deglobalisation. A lot can be learned from the US, whose government has recently harnessed the moment to stimulate green and impactful growth, but which has also provided guarantees abroad to support development in lower income parts of the world, enabling much needed finance to be raised for infrastructure. Such multi-level guarantees and underwriting, in the same spirit as that agreed to support countries suffering from climate disasters in Bali in 2022, has the potential to enable all countries to play a sovereign role in supporting the transition of institutional investors into impactful alternatives, creating jobs and securing livelihoods, as well as public goods and the climate in the process.

Case Study: Sustainable Bonds - Impact in a familiar strategy

There has been a recent rise in investment into Green, Social, and Sustainability Bonds (GSS), use-of-proceeds bonds that identify the types of spending that are eligible to be financed with the bond proceeds. Categories of GSS bonds tend to be within infrastructure and include clean energy and transportation, green buildings and climate change adaptation.¹⁴⁵ Allocation to GSS bonds almost doubled from 2019 to 2020, with over US\$600bn currently in the asset class,¹⁴⁶ signalling market demand. GSS bonds can be classed as impact investments, as understood under the GIIN's definition, if intent for positive externalities and impact measurement are part of the bond's issuance. Sustainability-linked bonds (SLBs), issued by corporates, do just this, embedding key ESG performance indicators (KPI) into the term, which trigger either a financial penalty or reward if achieved. Unlike GSS bonds, the funds raised with this instrument are not tagged to a specific use of proceeds.

Pension funds' and, to some extent, insurers' appetite for GSS and SLB bonds presents venture capital with the unique opportunity to build an investment ecosystem around this impact-aligned asset class. With pensions more at ease investing in bonds and green gilts - the first rounds of £10bn and £5bn issuances of the UK's green gilts with reported social co-benefits were ten times and twelve times oversubscribed respectively in 2021¹⁴⁷ - venture should look to these bonds to help strengthen the centres of innovation and R&D hubs built around portfolio companies, especially those that are university spinouts or are founded on the back of the UK's scientific strengths. Whilst increased levels of direct investment into VC, from the likes of pensions, may take longer to materialise, channelling institutional capital into fixed income elements of innovation, such as the physical infrastructure, like clean energy plants, may be more immediately appealing.

Could there be a role for sovereign wealth funds to help support such bonds and leverage the capital sitting in insurer and pension fund portfolios, if a way can be found to help secure them to satisfy regulatory risk requirements?

2.5. A proposed Compact

In view of the appetite amongst some pension funds and insurers to hold more impactful investments in their portfolios, there is an opportunity to harness the longer term outlook of sovereign wealth funds to provide guarantees to safeguard the income of investments made by insurers and sovereign funds that deliver impact, enabling regulators to relax solvency rules earlier for specific sectors.

To deliver this, and in light of Solvency II rules not being relaxed currently until 2025, we propose that the UK government and regulators work together to create exemptions to the current solvency rules. These exemptions would look to pilot investments into strategic impactful sectors for UK growth, tackling issues such as levelling up, employing structural and supply side reform within areas such as healthcare, education and energy security. Insurers and pension funds would be permitted to allocate greater capital that address innovative solutions sourced by VCs with the potential to scale.

¹⁴⁵ Pacific Investment Management Company LLC, 2022

¹⁴⁶ <u>Volk</u>, 2021

¹⁴⁷ LSEG, 2021

To satisfy regulators around the levels of risk taken, SWFs would be invited to participate through the creation of a blended finance mechanism, answering the calls of interviewees, "I think there is a need for us to be innovative and work on blended financing structures and how the different market participants can come together to create the structures." The SWFs could underwrite guarantees of the income generated by impactful investments made by insurers and pension funds. Such guarantees would be paid for through a combination of fees, and a haircut on returns above an agreed hurdle rate, and secured on the underlying assets in the event of non-payment, which could be bought up at a discount to provide liquidity to funds. To avoid funds taking excessive risk because of the guarantee, one might embed a pain sharing mechanism whereby a small proportion of inhouse managed funds would be required to be put at risk together with the underlying investments as collateral as part of each deal made so that fund managers had "skin in the game". This would ultimately help the UK grow sustainably, and build on regulators' laudable efforts in recent years to address ESG and impact to both reduce long-term systemic risk, ensure stability, and also fill a need to signal what best practice looks like to the marketplace. Mechanisms recently announced in the UK Government's Edinburgh review, such as the creation of an intermittent wholesale trading market, the financial market infrastructure sandbox, and both the Long-Term Asset Fund (LTAF) and Long-Term Investment for Technology and Science (LIFTS) design framework could be both harnessed and road tested to facilitate this kind of a programme.

2.6. Recommendations

- Governments to provide matched funding alongside larger institutional investors to help support shifts in their asset allocations towards more impactful ventures in areas that can help address the cost of living and deliver supply side reform and growth.
- Further refine and encourage the adoption of a proposed Compact concept through a working group, to enable Solvency II rules to be relaxed with the backing of income guarantees from sovereign wealth funds for investments made by insurers and large institutional investors that target sectors delivering impact.
- Adapt and review the fiduciary duties of large investors such as pension funds to remove any perceived conflict between maximising shareholder returns and impact.
- Encourage greater collaboration between VC/PE and large institutional investors to create a better, more agile conveyor belt of capital and IP, which in turn, can drive infrastructure development suited to the long-term cash flow needs of insurers, pension funds, and sovereigns.
- Develop a Teach First style programme for RegTech trainees from STEM backgrounds who can provide better cohesion between regulatory bodies and industry, with a particular skill set around integrating impact and ESG considerations into regulations/guidance.
- Governments and other sovereign actors work with other countries and international agencies to create additional solvency mechanisms that could be a backstop to financial institutions if they are actively working on sustainable investment strategies in their jurisdictions.

- Pensions regulators could look to create a sand-box for products aimed at the younger generation inclined to impact, in order to increase funds' ability to take risk.
- Encourage a degree of cultural change, either within the regulator's staffing or governance, or through allowing challengers, designed to appeal to millennial and younger generations, into markets.
- Entice insurer capital back to the UK through the provision of targeted tax breaks, enabling insurers to provide reinsurance favourably.
- Encourage pension funds to require Trustees, or individuals, with a comprehensive and robust knowledge of impact investment to sit on individual large LP investment committees.
- Provide a clearing house for large investors to liaise with government and other players to resolve issues and coordinate initiatives on a Chatham House basis.

Recommendations for pension funds

- Where pension funds may have over-allocated to gilts, they could diversify and buy impact and innovation related notes as an alternative.
- Encourage industry-wide upskilling and training, building a talent pipeline for impact experts to join institutional teams inhouse, enabling better fund targeting and selection, focusing on impactful investments.

Recommendations for insurers

- Insurers could set aside profits that can be put into a joint foundation established to invest into alternatives such as venture and PE for impact, coordinated with the help of government and regulators, to stimulate dealflow at scale.
- Work with the reinsurers to encourage them to back more ESG and impact related investments both globally and in the UK.

Recommendations for sovereign wealth funds

- Sovereign wealth funds could provide guarantees and reinsurance mechanisms to leverage in other large investors to back impact and ESG funds and strategies.
- Sovereign wealth funds could link bonuses to achievement of SDG goals, drawing on a pool set aside for this purpose.

3. ASEAN and Emerging Markets integrating impact with growth

Chapter 3: ASEAN and Emerging Markets - integrating impact with growth

This chapter addresses the opportunities for impact investing and impactful allocation in emerging and developing economies. The majority of impact investing organisations are disproportionately based in Western markets, namely the US, Canada and Europe. However, there is enormous untapped potential for impact growth to be found in the emergence of the Association of South East Asian Nations (ASEAN). We explore how the region could adapt and learn from our mistakes and successes to date in the West, to leapfrog towards a more sustainable model of investing in growth, that integrates key impact indicators, such as the UN Sustainable Development Goals.

3.1. Growth of venture capital in ASEAN and key impactful players

Impactful investing is disproportionately based in developed markets. Currently, South East, South and East Asia only account for 2.5% of impact AUM. The combined GDP of the Association of South East Asian Nations (ASEAN) is on track to become the fourth largest economy by 2030, signifying an enormous untapped potential to increase impact AUM as a ratio of the growing economy.

There exists a need for wider allocation, not only in asset portfolios, but also in terms of geography. The majority of impact investing organisations are disproportionately based in developed markets, primarily the US and Canada (50%) and Western, Northern, & Southern Europe (31%), with lower representation outside of these regions.¹⁴⁸ Of the US\$4.3 trillion global funding gap identified in achieving the 2030 SDGs, developing countries account for US\$1.7 trillion of the shortfall in financing necessary to remain on track.¹⁴⁹ Currently, South East, South and East Asia only account for 2.5% of impact AUM.¹⁵⁰ With the total combined GDP of the Association of South East Asian Nations (ASEAN), on track to becoming the fourth largest economy collectively in the world by 2030,¹⁵¹ there is enormous untapped potential to increase impact AUM as a proportion with implications for the world at large.¹⁵²

Whilst the proportion of committed measured impact capital in emerging markets compared to developed markets today is small, there is cause for optimism. For measured impact funds' committed capital, there is a greater focus on private equity and venture capital for funds investing in emerging markets only, compared to measured impact funds that invest in developed markets or globally. More than half (52%) of measured impact capital invested in emerging markets is invested in equity, including both PE and VC strategies. This means that innovation and entrepreneurship have potential to drive impact forward in the region at a faster pace than in developed markets where government and multinational corporations have often led efforts harnessing global multi-lateral agreements.

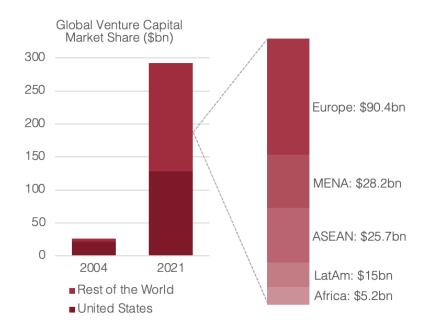
- ¹⁴⁸ Hand et al., 2022
- ¹⁴⁹ OECD, 2020a

¹⁵¹ Hapsoro, 2021

¹⁵⁰ Hand et al., 2022

¹⁵² Lee and Adam, 2022

Over the last decade, there has been immense growth in venture capital in emerging markets. Evidence suggests that emerging and non-US markets are rivalling and sometimes beating US venture markets with regards to returns. This high return potential has led US investors and LPs to become some of the most active backers of venture capital firms in the Asia-Pacific region, according to the S&P Global Market Intelligence.¹⁵³ Forbes reports that ASEAN VC investment grew 5.2x between 2015 and 2020,¹⁵⁴ with South East Asian startups securing a record US\$25.7 billion in funding for 2021. Data pulled from Preqin, Global Impact Platform, IM+PACT, EMPEA, Syminvest, Pitchbook and Crunchbase reveals that over 30% of measured impact capital is committed to emerging market funds, of which over 50% are found in VC and PE.¹⁵⁵ Emerging economies present exciting opportunities to accelerate impactful investment progress globally and must not be overlooked. Indeed, one of our interviewees has concluded that to "build an impact story within your portfolio, [whilst] ignoring emerging markets like Asia, is not smart."



Future Planet Capital, 2022 - Data from (<u>Magnitt</u>¹⁵⁶, 2022); (<u>Reuters</u>¹⁵⁷, 2022); (<u>Crunchbase</u>¹⁵⁸, 2022); (<u>Pitchbook</u>¹⁵⁹, 2022); (<u>Crystal Funds</u>¹⁶⁰; 2022).

Yinglan Tan, Founder & Managing Partner, Insignia Ventures has declared that "This is a defining decade for South East Asia's tech ecosystem. The gold rush into the region from global investors and tech companies combined with the new wave of digitalization brought by the pandemic has presented immediate growth opportunities."¹⁶¹

- ¹⁵⁵ Volk, 2021
- ¹⁵⁶ <u>MENA</u>, 2022
- ¹⁵⁷ Bavier, 2022
- ¹⁵⁸ <u>Teare</u>, 2022
- ¹⁵⁹ <u>Temkin</u>, 2021
- ¹⁶⁰ Crystal Capital Partners, 2022
- ¹⁶¹ Yee, 2022

¹⁵³ Boghani et al., 2022

¹⁵⁴ Karlgaard, 2021

In Asia, private equity and venture capital firms are a major source of foreign and regional investment which supports all manner and size of enterprises.

Some of the most important players in the market are government investment corporations, for example Temasek in Singapore. Temasek has invested in a number of unicorns, such as GoTo in Indonesia and Sea Limited in Singapore. The Singapore Economic Development Board (EDBI), another significant global investor headquartered in Singapore, invested in Bolttech, a notable Singaporean startup. Temasek is a major driver of impactful investing and ESG practice in the region, seeking to integrate these approaches across its portfolio, and EDBI published its inaugural ESG and sustainability report in 2021/22. Through their efforts, and those of others locally, Singapore is becoming a major hub for tech investment in the region, fuelled in part by innovative investments, startups and the venture capital ecosystem. Out of the 50 most prominent venture capital firms in Asia and South East Asian Nations, 34 are based in Singapore. Of the 34, only 12 contain a predominant investment in Asian companies, underlining the international reach of Singaporean venture capital.¹⁶²

Whilst many of the private equity and venture deals closed in recent years in ASEAN countries have impactful dimensions to them, there are a number of notable players engaging more intentionally in impactful VC and PE in the region:

- ABC Impact ABC Impact is an Asia-focused private equity fund dedicated to impact investing. It invests in companies that address the most pressing challenges such as climate change, resource scarcity, and deepening inequality, mapping to the UN SDGs. Its investment themes include financial and digital inclusion, better health and education, climate and water solutions and sustainable food and agriculture Approach: The fund makes investments with a dual objective of generating positive, measurable social and environmental impact alongside a market rate financial return. It leverages evidence-based research and data to assess and quantify the impact of its investments. Post investment, actively engages with its companies on their impact journey to help them scale and achieve the impact goals.¹⁶³
- **East Ventures** A pioneer of venture capital in Indonesia, which has now evolved into a holistic platform that provides multi-stage investment, including Seed and Growth stage funding for over 250 companies in South East Asia, with business operations in Japan. *Approach:* To achieve sustainable development and positive impact for society through its initiatives working with portfolio companies and promotion of ESG-embedded practices.
- Heritas Capital Singapore-based PE and VC investment firm, building a multi-fund impact investment platform that invests across healthcare, education, environment and technology sectors to improve local lives while delivering sustainable returns; "Invest with purpose, impact across generations".

Approach: A three-pronged strategy to achieve purpose and impact. The first encompasses an environmental, social and governance framework to set baseline requirements in the investment process. The second involves setting impact goals and drivers using the UN Sustainable Development Goals in alignment with key actors who drive impactful change, using quantifiable measures to record the impact of the investments. The third prong was created by Heritas Capital, called Heritas Cares: an

¹⁶² Wee and Paulino, 2022

¹⁶³ For more details, refer to <u>ABC Impact website</u> and view their impact performance in their <u>impact report</u>.

impact-in-action platform for impactful collaborations connecting portfolio companies and stakeholders to benefit the wider community.

• Lightrock - A global private equity platform that seeks to achieve financial as well as societal and environmental returns by investing in businesses that contribute positively to humankind and the planet. Since 2009, Lightrock has invested in companies that pursue scalable and tech-driven business models around the key impact themes of people, planet, and productivity/tech for good. Lightrock's portfolio includes more than 80 high-growth companies in 14 countries across Europe, the USA, Latin America, Asia and Africa. Headquartered in London UK, Lightrock currently has over \$3 billion in assets and has successfully raised 3 impact funds to date.

Approach: Anchored by LGT Group and initiated by its Founder and Chairman, Prince Max von Liechtenstein, the organisation aims to leverage its outlook and experience to scale and mainstream impact investing across a range of different asset classes over the next decade.

• **Openspace Ventures** - A venture capital firm operating with a focus on South East Asia, primarily investing in early to mid stage technology companies across the region, with an emphasis in consumer, healthcare, finance, enterprise and frontier technologies, which produce a real impact.

Approach: To invest with active intelligence on the latest cultural trends and technological trends, whilst harnessing a very flat, open approach internally and externally.

Temasek - A key and established player in the impact investing space. The investment company has a net portfolio value of S\$403 billion (US\$297 billion) as at 31 March 2022. Sustainability is at the core of all that Temasek does. It is committed to catalysing solutions to global challenges and activating capital – financial, human, social and natural – to bring about a better and more inclusive world for all.

Approach: Temasek has a dedicated Impact Investing team which focuses on generating impact for underserved communities while delivering sustainable long term returns. The key sectors that the team looks at include financial inclusion, healthcare, education, food & agri and energy access in emerging markets (emerging countries in Asia, Africa and Latin America). ABC Impact and LeapFrog Investments are Temasek's strategic partners for impact investing. ABC Impact and Temasek are also strategic partners of the Centre for Impact Investing and Practices. Beyond its strategic partnerships, Temasek invests in other impact funds and explores co-investment and direct investment opportunities in the impact investing space.

Case Study: The Centre for Impact Investing and Practices

The CIIP was set up in 2022 by Temasek Trust as a non-profit centre based in Singapore to study and foster impact investing practices in Asia and beyond. Temasek Trust is a steward of philanthropic endowments and gifts from Singapore investment company Temasek. To establish impact investing as an effective lever for sustainability, Temasek Trust launched ABC Impact. ABC Impact and Temasek are CIIP's strategic partners and support efforts to share knowledge on impact investing.

This initiative works to help fill the existing knowledge gap and equip regional actors towards impactful investing, providing tools and case studies to help regional actors begin the impact journey and apply portfolio-wide metrics. They have also worked with UNDP on a mapping exercise to better understand the landscape of impact and investors in the SDGs country by country in the region.

3.2. The drivers of impact's growth

Asia's emerging economies have come at a cost, with unprecedented levels of pollution, environmental degradation, congestion and growing social inequality. As the effects of climate change experienced by these nations also continue to grow, so too is the demand for ESG and impactful approaches to investing

The sheer size of Asia and the effects of industrialisation and urbanisation have created tremendous challenges around the provision of infrastructure and environmental management, as well as having fuelled vast economic inequalities. For example, Dhaka, Bangladesh has a population of more than 22 million crowded into a space of around 300 square kilometres, creating one of the highest population densities in the world.¹⁶⁴ Whilst recent growth has been impressive, Bangladesh's economy has not prospered at the same rate as its population increase. Unlike other countries in Asia with greater economic prosperity, such as Singapore and South Korea, its urban infrastructure and living standards have not been able to cope;¹⁶⁵ a problem replicated across many countries continent-wide.

The industrialisation and urban development taking place in Asia involves a land mass much greater than almost every other region in the world. Sadly, not every government has the policies and resources to prosper. In this context, impactful investing can be a powerful solution to help address the problems accompanying rapid population growth and development, with gender inequality, the lack of education and health infrastructure, and climate and environmental degradation - whilst also fuelling economic gains.

Growth in private investing in Asia with discretionary AUM is spurring interest in impactful investing as well as increasing awareness of the effects of widening inequality and runaway

climate change.¹⁶⁶ According to the International Finance Corporation (IFC) in 2020 growth in impact investing grew in East and South East Asia at 23%.¹⁶⁷

A number of drivers for impact's growth in the region are worth noting:

3.2.1. Wealth

Due to their emerging economies, South East Asian citizens are now in possession of new found wealth. Subsequently, they can begin to focus on issues such as ESG and impact, where they previously may have prioritised growth and industrialisation; the main focus is in areas such as the cost of living, gender equality, and addressing negative issues caused by climate change.

Asia has around one billion people living in poverty who spend over US\$2 trillion annually on basic goods and services.¹⁶⁸ Asian countries' emerging economies are pushing people out of poverty and increasing the affluence in the area. Wealth is expected to increase significantly in the coming years signalling huge market opportunities.¹⁶⁹ From 2019 to 2023, Asia is predicted to encounter the largest growth in ultra high-net worth individuals. Some unintended effects will be a widening wealth gap and persisting environmental issues. However, the rising affluence has the power to further encourage angel and individual LP impact investors into the likes of venture capital. In addition, Singapore has relaxed rules, allowing Single Family Offices to set up more easily in the country, which has brought the total number of Family Offices in the country to close to 1,000 by the end of 2022.

3.2.2. Generational shift

The vast majority of current activity is within the supply chains of typically family owned conglomerates; the next generation of heirs have the potential to help harness VC-back impact startups to transform such supply chains to enhance livelihoods, reduce pollution, and address the SDGs.

One interviewee indicated that whilst, in their experience, the typical patriarch or matriarch, normally a first generation wealth creator and holder, tended to prioritise cost and profit over any impactful considerations, the next generation within large family offices and family-owned conglomerates, was typically much more open to ESG and impact as a factor, especially within their supply chains. To convince their parents, typically it was often more successful to describe such initiatives as "entry into new profitable markets", than to describe them as impact-related, since these were erroneously still viewed as charitable activities only.

Over time these heirs will take over their family businesses, which could unleash a significant share of Asia's wealth to be directed towards impactful investment. In one of our roundtables, a leading financial institution working with the largest ultra wealthy families referenced data gathered from their own internal surveys, citing that both young and old wanted to shift up to 50-80% of their portfolios towards investments that met ESG and impactful criteria over the

¹⁶⁶ <u>Yeo et al.</u>, 2019

¹⁶⁷ <u>Mora</u>, 2022

¹⁶⁸ Gifford and Chee, n.d.

¹⁶⁹ Ibid.

coming 5 to 10 years. With about 35% of Asia's wealth soon to be in the hands of millennials in the next five to seven years, the highest rate of change in any global region,¹⁷⁰ there exists a major opportunity for wealthy families to make a difference.

There is a clear opportunity to advise and educate wealthy families and the next generation to move away from what can sometimes be, according to one interviewee, too much of a tickbox, CSR-led approach, to one that is more about holistic impact. Many wealthy Asian families are uniquely positioned to be both long-term asset owners and asset managers, given their ownership often of banking infrastructure in their respective countries. This, theoretically, could allow for alignment, as one interviewee highlighted, that is not always possible in more stratified Western markets, that can at times suffer agency problems due to multiple owners and LPs with competing demands alongside the needs of GPs.

3.2.3. Other factors - Demographics, proof points and digitisation

There are multiple causes for the wider growth of impactful investment and venture capital in Asia including the demographics and rising affluence of countries, the emerging evidence in positive returns of impactful investing and a shift towards digitisation.

Gender has a key role to play in impact growth. Four in five (80%) women are observed to be keen investors in ESG as opposed to 60% of men, and the trend looks set to continue with women's rising financial independence.¹⁷¹ Employees have also started expecting their companies to disclose sustainability initiatives and performance, in addition to incorporating ESG policies into the companies' investment processes.¹⁷²

The emerging evidence of positive returns coming from impact investing and VC is further encouraging the growth of the industry in Asia. According to Nikkei Asia, over the last two years the number of Asian investors with a dedicated ESG function has risen from 21% to 46%.¹⁷³ The proof of profit has started to encourage the evolution of key ecosystem players and infrastructure that is needed to support the growth of the industry. For example, in 2021 Sembcorp, Singapore, inaugurated their first sustainability-linked bond, backed by IFC as an anchor investor. Additionally, pension funds in South Korea, China, India, Hong Kong and Japan are increasingly looking for opportunities in impact investing. The growth of the ecosystem is being fuelled by investments offering both market-rate financial returns and positive impact in helping accomplish the UN SDGs and tackle climate change.

The rapid growth surrounding digitisation in Asia is also contributing to the accelerated development of the venture capital ecosystem, as new technologies and innovation are becoming increasingly sought after, in turn enabling impactful strategies and investments. According to Statista, the use of the Internet in Asia has doubled in the last decade from 25% to 48% and is expected to continue to expand to 62% by 2025.¹⁷⁴ This equates to another 900 million people in Asia who will be online, primarily on mobile phones. Digitisation is driving venture capital firms and companies to invest in digital services in the region. This has highly improved efficiency in existing businesses and supply chains, paving the way for new tech-

¹⁷⁰ <u>Noonan</u>, 2018

¹⁷¹ Morgan Stanley, 2017

¹⁷² Whelan and Fink, 2016

¹⁷³ <u>Mora</u>, 2022

¹⁷⁴ <u>Statista</u>, 2022

enabled business models.¹⁷⁵ VCs can capture value from this shift towards digitisation in many industries, such as healthcare, agriculture, education, transport, food and finance - creating the potential thereby to generate positive impact and widen access.

Case Study: Ruangguru

Ruangguru (Teacher's Room), is a platform which offers low priced digital education with the aim of increasing the quality of education in Indonesia and reach as many students as possible, particularly those living in rural areas.¹⁷⁶ Ruanggaru began as a private tutoring platform, and then expanded to offer app-based lessons which replicate the Indonesian state curriculum in a "gamified", captivating manner to enhance the learning experience. The success of this company is partly owed to committed VC.

In 2021, Ruangguru recorded more than 22 million users, growing its revenue fourfold, and is an MIT Solve award winner.¹⁷⁷ Ruangguru is an example of how investments in digitalization can increase the access to education, helping decrease inequality and increasing the access to better jobs.

3.3. The role of government

There is a divide in opinion between those who favour more government support and stimulus, such as seen in Singapore, versus those who believe the State should abstain from intervening, given issues with corruption and bureaucracy, and the potential for public backlash when government-led interventions and quotas backfire, as was recently seen in Sri Lanka's destabilising rush into organic agriculture

Those that we interviewed in the region were split on how much government should be involved in stimulating more impactful investment. There have only been isolated examples of governments in South and South East Asia seeking to mandate top-down targets or fines for not implementing ESG and impact strategies in business and investment. Singapore's government has taken an early lead, but interviewees were uncertain as to how much this model could be replicated across the region, given the high levels of corruption and inefficient bureaucracy in other markets.

India's government has been a major instigator of ESG regulations following COP26. The country, soon to be one of the most populous in the world and the third-largest energy consumer globally, urgently needs to find sustainable, long-term alternatives to address its triple challenge of providing enough energy, food and water to meet the growing demands of their population. One of India's most prominent government initiatives includes a large expansion in renewable energy, including the implementation of LED lights in households. Over 370 million LED lights have been distributed, resulting in significant power use savings, reductions in greenhouse gas emissions and decreased household bills.¹⁷⁸ In the financial

¹⁷⁵ <u>Gifford and Chee</u>, n.d.

¹⁷⁶ <u>Cua</u>, 2019

¹⁷⁷ Pratama, 2021

¹⁷⁸ <u>Andersen</u>, 2021

year of 2022-2023, the Securities Exchange Board of India (SEBI) notably introduced its National Guidelines on Responsible Business Conduct (NGRBCs), which mandates compulsory ESG reporting from the top 1,000 listed entities in the country by market capitalization.¹⁷⁹

The new regulation has resulted in a significant increase in ESG funds in India, which have witnessed exponential growth over the last few years. Funds' AUM has increased from US\$283.5 million in 2019 to US\$1.5 billion in March 2022, accelerating India's transition to clean energy by 2030.¹⁸⁰ Though the process of implementation is still in its infancy, India is a primary example in Asia showcasing the benefits of governments thoughtfully implementing ESG regulations and how this can result in economic growth, in the long term successfully ensuring investments, costs savings, risk optimisation, and help address national sustainability commitments.

However, other nations have encountered negative consequences as a result of ESG and impact orientated regulations, falling into the trappings of unintended outcomes, like those of CARBs' ZEV scheme, previously discussed in Chapter 1. Sri Lanka, for example, placed a ban on chemical, non-organic fertilisers to accelerate a shift to more sustainable farming. This policy alone has been claimed to have caused Sri Lanka's economy subsequently to collapse. The President, Rajapakse, outlawed the use of fertilisers, allowing only naturally grown produce into the country's market. There was no sufficient planning in this policy, and the policy did not address other important ESG components such as the fair remuneration of labour.

Whilst 'ESG' has been blamed by some for the Sri Lankan economy collapse and terms such as "Green Terrorist" have surged, the truth of the matter is much more complex. Corruption and previous unresolved governmental problems were considerable contributing factors to Sri Lanka's collapse. The country, weighed down by debt and its war on terrorism, rushed through poorly planned ESG policies. The economic impact of these factors, together with the shutdown of its vitally important tourism sector due to Covid, are arguably what truly led to collapse.¹⁸¹ Sri Lanka exemplifies why care needs to be taken by countries in implementing ESG and impact-orientated regulations, and why it may not always be appropriate for the government to take the lead.

Governments need to take great care in implementing ESG and impact-oriented approaches, tailoring them to their context and culture. Most impact investing interviewees felt that if the government had a role it should be to incentivise and reward, and deregulate where barriers stood in the way of implementing impact, to help make new sustainable markets versus seeking to overly control or mandate them. One proposal put forward by an interviewee was for governments to issue licences to players that sought to take a more impactful approach, mimicking the approach taken by the US government issuing licences for fast-track drug approval when rewarding pharma companies that invest in new R&D. Exploration for natural resources, radio spectrum, and land planning permits might be opportunities governments could harness to these ends. Such a proposal would limit tax loss, but provide valuable rewards for those companies pioneering new impactful innovation.

¹⁷⁹ <u>Kini and Nandeshwar</u>, 2021. NGRBC is noted in Appendix 6.

¹⁸⁰ <u>FTI Consulting</u>, 2022

¹⁸¹ Follet and Cochran, 2022

We survey briefly below the ways in which progress has been facilitated by governments and other key stakeholders in the ASEAN region.

3.3.1. Singapore as a beacon of success for the facilitative role of government in impact

Successful public-private investment models and impactful innovation can be seen in Singapore, where the government has had a large presence in impactful investments. Other Asian countries can learn from the policies and incentives introduced by the Singaporean government, which aided their economic development whilst imparting positive long-term impact on society.

According to Ben Prade, a partner at GP Bullhound "A fundamental advantage of doing business in Singapore is the alignment of all key ecosystem stakeholders to the goal of making Singapore a friendly and successful region to do business from...From a European point of view, Singapore is the gateway to South East Asia – and increasingly the gateway to all of Asia."

A major part of the reason why Singapore's impactful investment ecosystem is successful is the government's support in conducting public/private investment at large. It has proactively adopted policies to support start-up development and attract foreign start-ups, venture capital and entrepreneurial talent, all key for a healthy start-up ecosystem. It has also established various schemes and programmes to attract global entrepreneurs.

Singapore has established a one-stop centre, called Startup SG, which supplies loans, grants, funding and capability-enhancing assistance. Its Financial Sector Technology and Innovation program is creating a vibrant ecosystem for innovation by attracting financial institutions to place innovation labs in Singapore. Finally, the government also provides a range of grants, like the Capabilites Development Grant and the Global Company Partnership Grant, to attract startups and encourage the development of the nation's start-up ecosystem. Impact-oriented investors and startups have benefitted from such measures and the impact-friendly climate that Singapore has helped to foster.

3.3.2. Progress in the rest of ASEAN

Whilst UNCTAD monitoring indicates that regulations restricting cross-border investments generally are on the rise, ASEAN member states are implementing favourable trade measures, creating a more positive climate generally for impactful investment.

Many Asian countries' economies are still emerging, focusing on living costs, tackling energy and inflation challenges. This mostly leaves large corporations and governments in charge of providing an enabling environment by helping encourage a flow of investments into startups that can contribute new technologies and platforms through which impactful services can be delivered. To this end, despite a move globally towards less free trade, many ASEAN countries are opening up their markets for more trade, creating a large potential market for VC-backed impactful investments.¹⁸²

ASEAN countries have increased the ease of investing and reduced the costs of conducting business, thereby increasing overall market efficiency. The investment facilitation measures

undertaken by ASEAN Member States provide foreign investors incentives to invest and correspondingly increase impact investing.

Local politics plays a significant role in ASEAN countries in terms of what impactful themes get the greatest attention. For example, a big focus for many countries has been around financial inclusion, with a major reported increase in FinTech plays linked to microfinance. One interviewee did, however, sound a note of caution around this, saying it was important not to contribute to an increasing issue with over-indebtedness of families. Another area that has huge importance is climate change, given the increased incidences of flooding, rising sea levels, and droughts across the region.

Case Study: Grab - The everything everyday app

Grab is a platform providing consumer, driver, merchant and enterprise services. This ranges from food delivery, package delivery, rides, financial services, hotel access, gift cards and rewards. This Amazon/Uber style app, Asia's "fifth Unicorn" according to Tech In Asia,¹⁸³ has a strong impact angle and claims to seek to create profit whilst generating sustainable and inclusive impact throughout its supply chain. In facilitating access to economic, social and financial activity, Grab contributes to building resilient village communities with prosperous businesses and entrepreneurs across the region.

By integrating impact from the outset into its model, Grab, and other initiatives like it, illustrate the potential for ASEAN and emerging markets generally to leapfrog over more developed parts of the world, harnessing technology to gather the data needed to go beyond traditional impact measurement frameworks alone. Further, Grab is also conscious of their environmental impact and has set a target to become carbon neutral by 2040.¹⁸⁴

3.4. A learning process

Asia's impactful investment and venture capital ecosystem faces a number of challenges for growth

ASEAN countries clearly have the capacity to be a major site for impactful investment globally in the years to come, with or without major government support. It is important however to recognize the challenges to growth of the sector in Asia, including a lack of clarity and investor awareness, confusion around the plethora of international measurements and standards, limited institutions and regulatory frameworks, the absence of an efficient marketplace, and a nascent support ecosystem essential for business to occur.¹⁸⁵ We examine these each briefly in the sections below.

3.4.1. A lack of clarity and investor awareness of the concept

Investors in ASEAN nations lack clarity and some have a limited awareness of impactful investment. The existing lack of clarity lies in the fact that there is not one definition of what impactful investment is. This can lead to accusations of 'impact washing' which undermines the whole impactful investment industry. 'Impact washing' is defined by the ISO as a marketing strategy claiming a positive change in the real economy as a result of a product, but which is not supported by real evidence.¹⁸⁶ In the absence of a common language around impact, companies struggle to actively and verifiably demonstrate their investments are impactful. Accordingly, business leaders in Asia interviewed agreed that a well-defined impact strategy, which sets measurable goals, and demonstrates results is needed to ensure embedded strategic impact and to demonstrate credibility in the impactful venture sector.

Since the ecosystem for impactful investments and venture capital in ASEAN countries is limited, there is a low level of awareness as to what these concepts entail. The lack of awareness creates a reality/perception gap.¹⁸⁷ The reality/perception gap explains the challenge startups encounter while raising capital in emerging economies. Startups are perceived to be the principal drivers and bearers of risk generally, and that lack of understanding of impactful starts can exacerbate this perception.¹⁸⁸ Improving the understanding of systemic risk generally, and the role that impact investment frameworks play in helping reduce it, could decrease the barriers to raising capital and incentivize impactful investments, venture capital, startups, and innovation.

3.4.2. Confusion around international measurements and standards for impact

Interviewees reported frustration with the plethora of different measurement and auditing standards for impact, both within regions and between them, especially relating to those emanating from North America and Europe. There have been some attempts within Asia to develop their own standards and metrics, such as the Japanese government index, the JPX400, but these have not been widely adopted yet. One of the cultural challenges pointed out in an interview was how to navigate the greater transparency afforded by implementing measurement, without causing companies and investors to overly lose face, which might cause them to not pursue impactful investing in light of the greater public scrutiny that it might attract. It may be that longer term, home grown measurement standards are going to be needed and supported by the international community, that take into account the unique cultural context of different Asian markets. One interviewee highlighted how an example of this is how challenging it can be to collect data on employee wellbeing in the region, due to reticence in many Asian cultures to share details of one's private life with strangers, which can include employers or clients. Interviewees highlighted both how some in Asia still equate impactful investing with accepting lower returns and others were effectively practising it in their businesses but did not always use terms such as impactful investing to describe what they were doing.

Despite this there is some evidence of progress. For example, a group of public and private asset managers and owners, led by IFC, developed the Operating Principles for Impact Management, or the Impact Principles, which have become the global market standard, bringing in much-needed transparency, credibility, consistency and discipline to impact investing. Thus far, 152 institutions from 37 nations are managing above US\$420 billion in

 ¹⁸⁶ ISO, 2021
 ¹⁸⁷ Yeo et al., 2019
 ¹⁸⁸ Bartlett and Eastman, 2021

impact assets adopting the Impact Principles. Some of the signatory nations in Asia include India, Japan, South Korea and Singapore. CIIP has been highlighting examples of companies already active in contributing to environmental and social impact to illustrate how such investing can deliver both returns and impact, and develop materials to help train up stakeholders.

3.4.3. Limited institutions and regulatory support

One of the barriers for impactful investment in Asia is the lack of institutions and regulatory support. At present, of the US\$2.3 trillion invested globally for impact,¹⁸⁹ only a quarter had an impact management system in place to oversee them.¹⁹⁰ In ASEAN this proportion is likely to be even lower due to the limited regulatory infrastructure and support in many countries within the region, according to our interviewees. Emerging markets face particular risks due to institutional weaknesses. For example, there tends to be weak contract enforcement and property and investor protection, as well as a lack of efficient financial systems which allow proper exits.¹⁹¹

An important prerequisite to be able to harness startup and VC-backed innovation generally, as well as for impact, are the frameworks that allow a company's intellectual property to be protected. The government's capacity to protect property rights attracts VC funds and encourages returns by creating value in the intellectual property.¹⁹² Institutions are a key part of a healthy impactful investment ecosystem that can support entrepreneurial ventures. When government entities target contract enforcement it removes the risk of young startups suffering from unaccounted taxes and protects them from corruption. Additionally, LPs and institutions themselves do not always have the knowhow and resources to help support the analysis and measurement needed to make and track impactful investments, let alone have clarity on where the funds should come from. It is, therefore, important to foster appropriate regulation and for institutions to acquire the skills and talent needed to be able to make impact-related investments well.

There is, in light of these challenges and according to interviewees, a current preference among what are largely first time impact asset managers for growth stage private equity. A seat on the board allows LPs and fund managers greater ultimate influence on the material impact, which can be harder than publicly listed companies, where influence ends up being more diluted, and where regulatory enforcement can be more patchy depending on the jurisdiction. The belief is that exits could be faster, even after ensuring and implementing impact strategies at the growth stage, than with earlier stage impact ventures, which need to both prove both their impactfulness and financial model in the real world. For similar reasons blended finance, notes, and impact debt vehicles are also being looked at seriously as others ways forward in the region.

3.4.4. Small initial impact-orientated marketplaces in which business can occur

Because markets for impact oriented products and services can often still be nascent in the region, impactful investees in ASEAN countries tend to operate and compete within mainstream markets that often focus primarily on low cost and high volume models compared

¹⁸⁹ <u>Volk</u>, 2021

¹⁹⁰ Mora, 2022

¹⁹¹ Pezeshkan et al., 2020

¹⁹² Olavarrieta and Villena, 2014

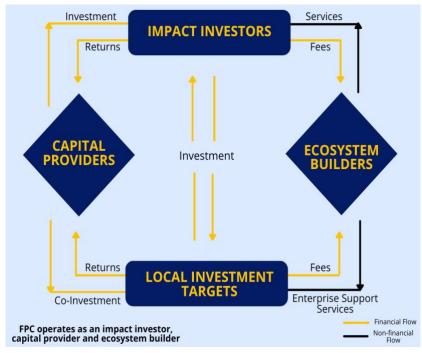
to developed economies where niche markets for impact-oriented products and services have sprung up in recent decades. As a result, there is often a corresponding disconnect between supply and demand for capital.

Educating the mainstream market - its stakeholders, investors and LPs - to bridge this gap will, therefore, be integral to the growth of the industry. Institutions, such as the newly established Centre for Impact Investing Practices in Singapore, will be key to help educate the market both for products and services and for investment into impactful investors. Asian investors we interviewed believe that more capital will be attracted as success stories of impactful investments become more widely shared, through the likes of CIIP and others, to secure buy-in interest from new clients, investors and other stakeholders. A major priority that institutions, such as CIIP, can take a lead in addressing is in helping lower the cost and reduce the effort involved for due diligence and impact measurement. A number of interviewees felt that an industry-wide collaboration to create outsourced capacity to do this would be welcomed, especially for smaller investors and LPs with limited inhouse ability to carry out this work, or attract highly sought after specialists needed to fulfil such tasks.

3.5. Moving forward: areas for collaboration and partnership

To achieve successful impactful innovation there is a need to create a strong ecosystem using public-private investment models, comprising governments, startups, medium and large companies and civil society.

Ultimately stronger ecosystems within Asia are going to be needed to produce the quality deal flow required to build up a vibrant impactful investing sector. To get local ecosystems functioning well, there is a role for all existing players to grow and stimulate the necessary components set out in the framework below, focussing on the gaps from one market to the next.



Adapted from Yeo et al. (2019) and GIIN Annual Impact Investor Survey (2019a).

Governments and sovereign institutions can foster innovation ecosystems and make the market more attractive for startups. By doing this, investment can flow into impactful innovation and help protect and improve public welfare by improving safety conditions and raising living standards for citizens. They can bring all the parties together and help encourage the establishment of key players, from impact investors, local investment targets (or startups), capital providers, and ecosystem builders (e.g. research institutes), harnessing tools such as tax incentives, conferences, grant funding, procurement challenges, and matched funding. Local governments in particular can help attract investment by consolidating their contracting process and simplifying the rules and regulations that must be met, delivering a clearer and more efficient market with fewer time lags. While government and regulators must take care in implementing overly draconian requirements especially on smaller stakeholders, there is room to consider requiring reporting around ESG and impact within the supply chains of larger corporations and conglomerates to stimulate the transition towards impact

Startups are a component of micro, small and medium-size enterprises (MSMEs) which make up the largest pool of enterprises in ASEAN by number (over 97%). Startups account for a total of 67% employment in the region, around 28% gross value added, about 20% export revenues and 45% of GDP.¹⁹³ As such, they are a key component for public-private investment models and impact innovation ecosystems because they have a high-risk tolerance and provide new ideas which spur innovation and efficiency in the industry. They do this by adapting to activities quickly, by reconfiguring layers in deep learning models, therefore making technologies more inclusive and less prone to bias. In Asia, startups should work in alliance with large family owned and publicly listed corporations given their dominance within most marketplaces. More could be done to help raise the awareness of startups that seek to drive impact, and to make it easier for talented founders and the teams to operate well and at low cost, whilst remaining networked to global flows of capital.

Medium and large companies are responsible for providing a vast amount of research and development as well as a network of powerful organisations with access to large investments. As a result, they positively stimulate the market for public-private investing and impactful innovation. They can do so by both acting as ecosystem builders, supporting incubation, acceleration and connectivity within the ecosystem, as well as being LPs themselves, harnessing foundations, their own balance sheets and procurement processes. A key area they could open up markets and opportunities for impact is to be found in their supply chains.

Civil society comprising individuals, charities, universities and other nonprofit institutions seek to advance, monitor, and regulate public-spirited goals. This key ecosystem player primarily contributes to research and development, aids with the influencing of the public and policy makers, and regulates and protests against abuses in existing industries. A key area in which they will be needed more and more in future will be in enabling the underserved to get fair treatment from tech and other platforms, serving as the voice for underrepresented and excluded groups. In Asia there is still work to be done to build up local capacity to engage in the areas of tech ethics, consumer protection, data privacy rules, and to protect consumers from impact-washing.

¹⁹³ Asian Development Bank, 2020

Case Study: SwipeRX

Across many emerging markets, pharmacies are fragmented making it difficult for governments, NGOs and pharmaceutical companies to access pharmacies directly. SwipeRx was born out of the shared mission to connect these fragmented pharmacies on a common platform and place them at the centre of care. From the start, SwipeRX has aimed to digitise aspects of the pharmacy practice in order to help their pharmacies be better informed, educated and managed in order to ultimately improve patient care at scale.¹⁹⁴

The SwipeRx platform has evolved to include B2B commerce capabilities, bringing not only the pharmacy to the centre of care but also connecting them with the entire supply chain in a sustainable way, which promises to help Asian healthcare leapfrog over both its limitations, and ultimately even surpass certain Western models of care which remain hospital-centred.

3.6. Recommendations

- Establish centres in Asia to champion growth in research related to both ESG frameworks and processes, and impact investing.
- Educate the next generation of business leaders in Asia to take a more holistic view of impact and investing, moving away from a tick-box mindset.
- Create collaborative and co-owned units that can conduct outsourced measurement and due diligence work for impactful investments on behalf of LPs and small funds.
- Governments could open up their procurement to more players that have technology to help deliver impact, and make their processes more transparent.
- Governments could issue licences and permits to reward those groups and investors that have proactively sought to integrate impact and ESG into their portfolios and strategies.
- Build stronger partnerships between development banks, large corporations, startups, AID agencies, and governments to reconfigure approaches to international regulation to take into account the unique cultural context of Asian markets.

¹⁹⁴ SwipeRx, n.d.

4. Spotlight - Impactful investment for all

Chapter 4: Spotlight - Impactful investment for all

This chapter shines a spotlight on how the world of VC and impactful investing is responding to the cost of living crisis in both developed and developing countries, and how it can help find opportunities for investment that address both wider UN Social Development Goals whilst also help people be more resilient and afford to live day to day.

4.1. Top down vs bottom up

The "polycrisis" has brought to light increasing tensions between ESG and impactful investing as an agenda, and the cost of living, with many arguing that the focus on the SDGs has stoked inflation and distracted States from addressing basic national security, resilience, economic stability and livelihoods.

With the rise of inflation post-Covid, and the economic and military war being waged by Vladimir Putin after his invasion of Ukraine, many questions are being asked about whether the focus on net zero and the SDGs has left countries exposed to energy shortages¹⁹⁵ and higher costs, as investment has moved away from industries, such as oil and gas, and towards renewables. It is important to recognise that ultimately ESG and impact related spending should be an investment not a cost, though there may be a need to flex to take account of short term turbulence. In particular, there is a need to differentiate between measures that reduce demand by making negative ESG and impact options more expensive, versus those that drive greater efficiency so that impact and ESG options are more attractive, as well as cheaper substitutes. There is validity in arguments that banning certain vehicles and emissions without having planned for affordable replacements for them, in the rush to get to net zero, may have contributed either to higher costs or lower energy and resource security in certain cases. In the UK, for example, the rush to full rainwater recovery as an authorisation requirement for new homes has led to a stalling of much needed house-building, and there are challenges around the lack of baseload power during times of intermittency in energy supply when supply of wind and solar falls.¹⁹⁶ The automotive industry currently also lacks the capacity to build enough affordable electric vehicles to replace those due to be banned by countries in the coming years.¹⁹⁷

Beyond climate change as a focus, the evidence for impactful investing causing higher costs, lower security, or exacerbating the cost of living crisis is more mixed. Arguably innovation in healthcare and education has led to reduced costs with higher efficiency, greater access to care and information, and better and faster treatment.

 ¹⁹⁵ <u>Millard</u>, 2022
 ¹⁹⁶ <u>Policy Connect</u>, 2018
 ¹⁹⁷ <u>Kiai</u>, 2022

Case Study: Vaccitech - Innovation in healthcare in times of crisis

Founded by the vaccinology academics, Professor Dame Sarah Gilbert and Professor Sir Adrian Hill, Vaccitech focuses on developing novel vaccines and immunotherapies to tackle cancer, infectious diseases and other chronic illnesses that impact millions of people around the world. Today the company is best known for being behind the development of the Oxford-AstraZeneca COVID-19 vaccine – sold under the brand names Covishield and Vaxzevria – working alongside the University of Oxford's Jenner Institute. With over 3 billion doses delivered across more than 180 countries, the vaccine saved 6.3 million lives in the first year of its roll out during the pandemic.

Venture capital's role in fuelling innovation, backing companies solving pressing problems in times of crisis, can be seen in the case of Vaccitech. Future Planet Capital initially came in as an investor to Vaccitech in 2020, when the results of the COVID-19 trials were still unknown and the company was in need of fresh funding to fuel its growth. After Future Planet Capital came on board as an investor, they played a key role in reopening the investment round, leading to the issuance of \$43 million in convertible notes.

As is critical in VC, Future Planet understood the company's portfolio and pipeline, the talent in the management team, and how the business compared favourably with international peers working on similar challenges. This allowed FPC to work with its partners at Oxford Science Enterprises and help the company to raise a \$168 million Series B financing round, including convertible notes, alongside other investors such as M&G Investment Management, Tencent, Gilead Sciences, and the Monaco Constitutional Reserve Fund.

In April 2021, Vaccitech successfully listed on the NASDAQ, raising total proceeds of over \$110 million. The company is currently going through clinical trials for new treatments it has developed to address diseases including Hepatitis B, HPV, and prostate cancer.

In agriculture, as we have seen with Sri Lanka, a focus on pure organic methods has led to increased prices, but equally technology-led or informed methods of farming have increased yields where they have been implemented. Investments in energy beyond wind and solar¹⁹⁸ to close the gap on intermittent supply holds the promise of cheaper alternatives to gas supply with greater security and less reliance on pipelines from unreliable state suppliers. Greater use of automation, tracking, and smarter processes have the potential both to produce greater traceability, reduce reliance on costly manual labour where it is not needed, and reduce waste - creating potential to reshore value for communities at either end of supply chains in both the developed and developing world, who have often felt left behind by globalisation.

4.2. Harnessing innovation

Venture backed impactful investing can help fulfil basic needs better, and support the SDGs, particularly in areas such as AgTech, EdTech, renewables, energy storage and new forms of transportation

This tension has highlighted a real need to focus on products and services that reduce inflation, as well as a focus on those that provide basic resource security, whether of water,

¹⁹⁸ In areas such as fusion, tidal, and small nuclear reactor technology, as well as in hydrogen for certain applications.

energy, food, and even internet access and privacy. The polycrisis will prompt a transition to focussing on the basics of survival, but it is possible over the medium term for such a focus to not have to be at odds with goals such as net zero and achieving the SDGs, as more production and consumption are decentralised. The key is to marry such a dual focus with access and distribution to make profits, which enable the venture backing required. VC and startups tend to target large markets and propositions must also be in high demand.

This will in turn put some sectors in the spotlight: energy, agriculture, transport and manufacturing and waste management will rise up in importance. Indeed there is evidence that these more "social" sectors are of great interest to relatively young investors, with more than half (57%) of under-45s choosing social impact investments as their priority focus area. The preference for social investment was found to be even greater among even younger investors - some 67% of those under 25 chose social impact investments. Commenting on these findings, James Westhead, head of engagement at Big Society Capital, said: "The interest in social impact investing is really encouraging as it has a huge role to play in supporting charities and social enterprises that provide essential services across the country, as well as contributing to the levelling up of the economy."¹⁹⁹

Governments and regulators, according to our interviews on the inside of such institutions, have also woken up to the importance of tackling the cost of living crisis, and reducing the likelihood of future crises. They have sought to orient and adapt net zero, impact and ESG targeting policies accordingly. Governments have an opportunity to back innovation that can help deliver a more affordable life for citizens in domains that can help improve resilience, security, and impact on areas that matter to voters. One of the ways they, and regulators, could support this process would be to create specific sandboxes, such as those that exist already for FinTech generally, but targeted at innovations that address the cost of living crisis.

The humanitarian AID sector has been working in these kinds of challenged contexts for decades, but despite a number of small scale initiatives such as Techfugees, there remains a long way to go to bring together agencies. Both procurement departments and heads of strategy within the AID space, could look to partner more with investors and leverage the innovation-for-impact sector. The benefits of new technologies would be brought to bear in refugee camps, war zones, and post-catastrophe zones. One attendee at our roundtables from a private sector background, currently working in an international AID agency, felt strongly this was a major opportunity that could be tapped, particularly as the world struggles to cope with its "polycrisis", which can often leave political and multilateral sources of solutions stymied.

To speed up this process, initiatives such as the Impact Investing Institute's Just Transition Campaign²⁰⁰ must be welcomed. It seeks to drive the 'sustainability for all' agenda forwards by mobilising institutional capital to deliver a net-zero world where no one is left behind. It focuses on three aims: to advance climate and environmental action, improve socio-economic distribution and equity, whilst also amplifying community voice. It builds on and seeks to help implement the G7's 2021 Impact Task Force's recommendations²⁰¹ on policies and instruments for implementing the SDGs and a Just Transition, and is based on engagement

¹⁹⁹ LaPointe, 2022

²⁰⁰ Impact Investing Institute, 2022

²⁰¹ Spengler et al., 2021

with 170 influential stakeholders representing over 110 organisations based in almost 40 countries.

Case Study: Queen of Raw - Increasing profits and meeting sustainability goals with SaaS

A solution to boost bottom lines while saving water and lowering carbon emissions - Stephanie Joy Benedetto

Unsold goods have been a generations-old problem. Excess inventory reduces available warehouse space, or, worse, is discarded in incinerators and landfills. This results in a huge financial and environmental loss.

Answering the call from companies to seamlessly manage excess inventory from one central location, Queen of Raw released "Materia MX." This SaaS software platform facilitates workflow, stakeholder coordination, and financial and legal reporting throughout the process of reselling and recycling excess inventory globally. Leveraging Materia MX, one Fortune 500 enterprise diverted 95% of its 10 metric tons of liabilities from landfill and incineration. At the same time, the enterprise saved \$10M in otherwise unsellable inventory plus \$4M in holding costs in weeks.

The platform allows clients to lower expenses and cost of goods by 60%, triple their customer conversion rate, and enhance supply chain transparency and integrity, all while keeping excess inventory in circulation. Named a "frontrunner in the circular economy" by Christian Klein, CEO of SAP, the company has the support of the United Nations, World Economic Forum, Barclays, UPS, Amazon, Microsoft, Google, Accenture, U.S. Department of State, NYCEDC, and the European Union.

The platform's comprehensive ESG reporting, developed with the support of MIT Solve, has recorded over a billion gallons of polluted water saved, helping secure safe drinking water across the globe. Queen of Raw is a holding of Future Planet Capital, having been originated through the MIT Solve ecosystem.

4.3. Market segmentation

The needs of citizens and businesses in developing countries vary with regards the cost of living crisis, compared to developed countries, meaning investors and stakeholders will need to take a tailored approach in how investments are directed.

According to McKinsey the manner in which ESG and impact strategies are implemented is critical, with stronger and weaker methods affecting economic growth, businesses and countries differently.²⁰² In the developing world, there is a greater focus on pure survival with access to healthcare, education, food, and water being of critical importance. Interestingly, however, the cost of solar power and wind is now reaching parity with coal in such markets, making environmental considerations more attractive with regards energy usage.²⁰³ Similarly,

the cost of electric mopeds and scooters in many developing markets has reached parity with their petrol counterparts.²⁰⁴ This will need to be taken into account in any impact investing strategy. Food for example in developed countries will tend to make up less than ten percent of household budgets, but in developing countries, for example Nigeria, it can be as much as 55%.²⁰⁵

VCs and startups targeting developing markets, as opposed to developed markets, will need to find ways to reach millions, if not billions, of users with lower margins per user. These markets may nonetheless become more attractive over time, as profitability in more developed markets gets squeezed and competition causes saturation in certain areas. Even within developed countries, there must be a sufficient understanding of the needs of low income households, who tend to spend more on housing, fuel, power, and food and drink. The recent rise in energy bills in the UK, for example, is causing low income households to pay up to a third of their income on energy.²⁰⁶ In both cases there is an opportunity for VCs and impact minded investors to support a just transition to impact, by backing specific baskets of investments that could help alleviate issues such as the cost of living in the future.

Another major area likely to grow both in developed and developing markets during this period is the FinTech sector,²⁰⁷ both to help people analyse and plan their savings better, but also to purchase more intelligently, access finance and deploy their savings in a smarter way. Despite the ongoing ructions in the crypto and Web3 world, as with previous periods, such as the dot com boom and crash, new ventures are likely to emerge in this arena. These companies will harness novel technologies, such as Distributed Ledger Technology (DLT), to become the financial planning and deployment unicorns of tomorrow.

In one of our roundtables a need was highlighted around harnessing FinTech, in both developing and developed markets, to create bridges from the informal to the formal sectors; to enable growth and scale above subsistence levels, rather than being satisfied with rapid growth and increasing reach. Harnessing mobile payments apps to build credit histories, enabling farmers to get critical loans and finance, or using rental payment history to help provide viability for mortgage loans are all examples of how FinTech can help those in need. To enable this, both regulators and citizens would need to be upskilled to enable them to understand consumer rights, best practice, and to break open and supercharge the legacy models of incumbents, such as traditional banks and sources of finance.

4.4. Recommendations

- Governments should carefully consider the relationship between ESG legislation and cost of living considerations, backing initiatives that deliver impact, security, and resilience.
- Reshape the relationship between agencies such as UNICEF and the private sector, to encourage more impactful innovation in the humanitarian AID sector.

²⁰⁴ Khan, 2021

²⁰⁵ National Bureau of Statistics, 2019

²⁰⁶ <u>Savage</u>, 2022

²⁰⁷ Gani, 2022

- Get behind initiatives such as the Impact Investing Institute's Just Transition Campaign to drive the sustainability for all agenda forwards.
- Specifically back baskets of impactful investments that reduce future costs of living and increase security for low income people as a focus area.
- Regulators should sandbox and provide fast track means of accelerating startups and FinTech ventures in particular that could help alleviate the cost of living crisis

In Conclusion

There is no doubt that 2023 will prove to be a challenging environment for investing, and for impact within it. However, our research has shown there remains great promise and opportunity to work together across the entire ecosystem of investment actors, consumers, regulators, government and LPs to continue to transition to a world that is more sustainable both in developed and developing markets. To a world in which more people can benefit - including those affected most by the multiple cost of living, post-pandemic, and geopolitical crises we face. We have in this humble report only begun to scratch the surface of some of these opportunities and highlighted many areas for further work and research, as well as action.

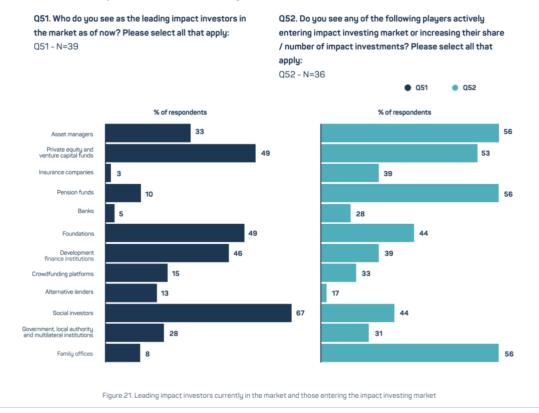
As we move forward and the markets for impactful investment mature, a major area for future research will be around how we can help achieve gold standard measurement. We will look how best to harness technology where necessary, to bring confidence to the process of backing impactful ventures and funds, whilst minimising the manual bureaucracy involved, especially at earlier stages of venture lifecycles. Despite the near-term turbulence we are facing, we end with an uplifting reflection by Jerry Engel, a leading thinker, veteran, and practitioner within the venture investing world, who reminds us that impactful venture investing is a necessarily long-term endeavour, because of the nature of the technology involved and of the process of creating impact itself. For those willing and enabled to stay the course, the promise of long-term impact and financial returns should remain our focus, as we seek to solve global challenges together profitably. Only by maintaining this focus can we overcome both today's crises, but also defeat those of tomorrow.

"I think we haven't had that until now, as a message, that technology investing and investing for impact is a long term business. And so any short term volatility we don't really need to worry about. [And over time even] the greenwashing [challenges we currently see will], with a fair wind, resolve themselves." Jerry Engel

Appendix

- 1. The United Nations Sustainable Development Goals (SDGs):
 - Goal 1: No Poverty
 - Goal 2: Zero Hunger
 - Goal 3: Good Health and Well-being
 - Goal 4: Quality Education
 - Goal 5: Gender Equality
 - Goal 6: Clean Water and Sanitation
 - Goal 7: Affordable and Clean Energy
 - Goal 8: Decent Work and Economic Growth
 - Goal 9: Industry, Innovation and Infrastructure
 - Goal 10: Reduced Inequality
 - Goal 11: Sustainable Cities and Communities
 - Goal 12: Responsible Consumption and Production
 - Goal 13: Climate Action
 - Goal 14: Life Below Water
 - Goal 15: Life on Land
 - Goal 16: Peace and Justice Strong Institutions
 - Goal 17: Partnerships to achieve the Goal
- 2. Four key elements to Impact Investments <u>What You Need to Know about Impact</u> <u>Investing | The GIIN</u>:
- Intentionally Contribute to Positive Social and Environmental Impact through Investment alongside a Financial Return. We intentionally finance solutions and opportunities for social and environmental challenges. This includes:
 - Setting transparent financial and impact goals
 - Articulating an investment thesis that is explicit about these goals and the strategies we will use to realise them.
- Use Evidence and Impact Data in Investment Design. We use the best quantitative or qualitative impact data and evidence that we can to increase our contribution to positive impact. This includes:
 - Identifying a social or environmental need aligned with empirical evidence or wellestablished science as well as one expressed by the population or environmental community the investment seeks to serve
 - Using the best evidence accessible to us to:
 - Set targets about our investment's contribution to improvement of that need
 - Design investment strategies based on solutions effective in addressing the needs we identified and an understanding of potential negative impacts in the context of the investments
 - Identify the qualitative and quantitative indicators we will use to gauge performance against our targets
 - Improving our capacity to conduct impact analytics over time to improve the rigor of our activities.
- Manage Impact Performance. We use impact performance data in decision-making to manage our investments towards achievement of our social and environmental objectives. This includes:
 - Embedding feedback loops through the life of the investment as feasible

- Identifying risks to achieving our stated impact goals and developing mitigation plans
- Seeking to mitigate the negative consequences of our actions
- Disclosing actual impact performance data to investors and investees, in as comparable a manner as possible.
- **Contribute to the Growth of Impact Investing.** We take action to enable more investors to make impact investments effectively. This includes:
 - Being transparent about our degree of use of these impact investing practices
 - Committing to using shared conventions, approaches, and standards for describing our impact goals, strategies, and performance
 - Considering the impact performance and quality of impact management practices of prospective coinvestors and investees in our decision-making
 - Sharing non-proprietary or non-private positive and negative learnings, evidence, or data.



3. Impact Investing Institute, 2022 - Figure 21.

4. Solvency II - Association of British Insurers, n.d.

"Solvency II is a European Union Directive that sets out a single set of prudential and supervisory requirements for almost all European insurance and reinsurance companies (only the very smallest are not in scope). After years in development, and over £3 billion spent by UK firms on implementing it, Solvency II came into force in January 2016, representing the largest change to insurance regulation in the EU for over 30 years. In the UK, the PRA is responsible for its implementation.

Solvency II has three pillars:

Pillar 1 – valuation of assets/liabilities and capital requirements
 This sets out how insurers should value their liabilities (including the money that gets paid to policyholders in the event of a claim) and their assets (such as government bonds, shares,

property, etc.) The rules also cover the amount of funds insurers need to hold in reserve as a buffer to make sure they can pay policyholders' claims.

- Pillar 2 governance and risk management
 This sets out how insurers should be governed, and how insurers identify, measure, monitor,
 manage and report the risks to which they are exposed. This ensures that insurers' businesses
 are managed to a high standard.
- Pillar 3 reporting and disclosure
 This sets out what information insurers report on their business. Some reports are required to
 be publically available, whilst others are privately reported to the national regulator. This
 information allows the public (and the regulator) to understand more about the businesses that
 provide insurance to individuals and institutions.

As a regulatory regime, Solvency II seeks to harmonise regulation for all insurers across Europe. It is intended to give policyholders confidence when buying insurance that they will receive payment when they make a claim. Under the Solvency II regime, policyholders should expect the same level of confidence whether they buy their insurance products from large or small insurers, or from a stand-alone insurer or from an insurer which is part of a group.

Insurers' financial resources, as directed by the Solvency II rules, ensure that the chance of an insurer being unable to pay claims during any one year is no more than 1-in-200 (0.5%). Solvency II provides additional protection through the governance requirements that it puts in place, ensuring that company Boards have a proper understanding of the risks to which they are exposed."

5. The Matching Adjustment - Solvency II - Macfarlanes, Barton and Cibulskis, 2022:

"The "matching adjustment" allows insurers to discount the valuation of their long-term liabilities under Solvency II at a more favourable discount rate than the usual risk free rate where certain eligibility criteria are met, thereby reducing the assets required to be held against those liabilities. The eligibility criteria broadly requires that insurers maintain a separate portfolio comprising liabilities which have a predictable long term cashflow and assets held against those liabilities which have the same predictable long term cashflow profile – such that, in essence, assets mature to meet those liabilities as they fall due."

6. India's Ministry of Corporate Affairs NGRBC Core Elements (2018) are:

Businesses should conduct and govern with integrity, in a way that is ethical, transparent, and accountable

Businesses should provide goods and services in a sustainable and safe manner Businesses should respect and promote the well-being of their employees and those in their value chains

Businesses should respect and be responsive of their stakeholders interests Businesses should respect and promote human rights

Businesses should respect and make efforts to restore the environment Businesses, when influencing policy, do so in a responsible and transparent manner

Businesses should promote inclusive growth and equitable development Businesses should engage and provide value to their consumers responsibly

7. ASEAN ecosystem cont.

Despite a move globally towards less globalisation, many ASEAN countries are opening up their markets for more trade, creating a large potential market for VC-backed impactful investments.

- Investment facilitation measures:
 - Transparency and information ASEAN member states publish and provide information in laws and regulations, industrial plans and investment procedures, as well as guidance on business registration, government assistance (incentives) and investment opportunities.
 - Example: Singapore has established the Singapore Investment Clinic, providing a single location for businesses investing in the country, including visa application information, claiming tax deductions, allowing access to innovation networks and other investment-related services.
 - Streamlining and simplification measures ASEAN member states can undertake measures and actions to improve efficiency through streamlining and simplifying processes and requirements for investors.
 - Example: In Indonesia, the Omnibus Law on Job Creation came into action in 2020. This law encompasses a long regulatory reform process, containing examination of existing laws, articles and regulations in a bid to streamline them.
 - Use of technology and digitisation of service a significant facilitator is the use of digital technologies accelerated by the pandemic, which has increased ease of access to information supporting investment applications.
 - Assistance and advisory services ASEAN member states have established procedures for complaints to address recurrent issues investors face. Investors can raise complaints through particular channels for on-site consultations, with basic to advanced levels of assistance.

The Impact Investing Institute's 'Drivers and Levers' for growth within impact investing in action (Adapted from Impact Investing Institute, 2022)

| Driver | 1. Market Awareness | 2. Government policy & regulations | 3. Data, impact measurement, and reporting frameworks | 4. # impact investors & scale of capital under their control |
|--------|--|--|---|---|
| Levers | Impact Investing Institute examples: - Events that increase consciousness of social, environmental causes e.g. COP26, Grenfell - Media coverage - Public statements by corporates, NGOs, activist groups | Impact Investing Institute examples: - The introduction of enhanced regulations and standard setting - Attractive taxation policies - Participation in blended finance models | Impact Investing Institute examples: - Adoption of consistent definition of impact investing - Measurement frameworks allow for greater effectiveness in impact outcomes - Also promotes accountability and transparency in reporting of impact investments | Impact Investing Institute examples: - # impact-only investors: AUM, capital sourcing capabilities - # institutional investors w/ impact investing appetite / capabilities (e.g. pension, fund managers, PE/VC) - Trustee LP/GP demand. |
| | FPC in action: - COP26 event and Terra Carta Forum - Broadsheet publications and TV appearances (FT, Sky, The Times, South China Morning Post) - The Wei Report I and II | FPC in action: - Lobbying - notes to government on impact, innovation and longer- term, illiquid investments (LTAF/LIFTs) - Wei Report policy recommendations - Convening and thought- leadership (House of Lords roundtables) | FPC in action: - Wei Report - Impact understanding - Impact Value Gap and the Impact Potential Framework - Impact Management Project (Impact Frontier) Five Dimensions of Impact - Sustainable Development Goals, targets and indicator tracking | FPC in action: - The Wei Report II - Chapter 2 - Impact funds with impact focused anchor LPs: - Blue Ocean Fund (Monaco Constitutional Reserve Fund) - Future Planet Fund (LPPI) - Challenge Response Fund (Barclays Private Bank) |
| Driver | 5. % capital allocation to impact | 6. Amount of viable impact investment opportunities | 7. Returns (financials and impact) | 8. Liquidity and exits |
| Levers | Impact Investing Institute examples: - Investment policies and frameworks (risk, return, time horizon) - Commitment to stakeholder capitalism - e.g. shareholders, communities, consumers, society - Demonstrate corporate purpose, ESG strategies | Impact Investing Institute examples: - Targets with clear impact reporting and measurements in place - Availability of financial structures - e.g. equities, conds, structured loans - Access to broad range of private sector funding opportunities (seed → VC) | Impact Investing Institute examples: - Standard and accepted benchmarks against which to measure both impact and financial performance - Track record - risk- adjusted returns - Accepted reporting standards (auditable) | Impact Investing Institute examples: - Clear investment time horizons - A well defined process for value/impact extraction and re-investment |
| | FPC in action: - Stakeholder capitalism: FPC was the first institutional VC firm to open its doors to the crowdfunding platform Seedrs, allocating 10% of the Series A, as part of the Groups long term commitment to democratising venture - FPC's ongoing commitment to ESG with a | FPC in action: - An automated quantitative scoring and screening system, of which impact is one of four sub-scores - Broad funding opportunities range from Pre-Seed to | FPC in action: - Track Record: FPC manages ~\$400M of committed capital, with over 300 team investments, 60 profitable exits, including 8 unicorns as a founding investor, spread over 15 venture funds. - Comprehensive third-party impact analyses (PwC) | FPC in action: - Forensic Exit analysis (PwC) - FPC will target other investors that aim to invest in companies with a clear and obvious impact, or potential to have a clear and obvious impact, on the environment and/or society. |



Impact Investing Institute's (2020) Spectrum of Capital

Source: Bridges Fund Management and Impact Management Project.

Bibliography

Andersen, I. (2021). The business of sustainability: Opportunities for India. [online] *UN Environment Programme*. Available at: <u>https://www.unep.org/news-and-stories/speech/business-sustainability-opportunities-india</u> [Accessed 21 Dec. 2022].

Andreou, N. (2022). What is an impact startup. [online] *Big Society Capital.* Available at: <u>https://bigsocietycapital.com/latest/what-is-an-impact-startup/</u>. [Accessed 18 Dec. 2022].

Asian Development Bank. (2020). Asia Small and Medium-Sized Enterprise Monitor 2020: VOLUME I—COUNTRY AND REGIONAL REVIEWS. [online]. Available at: https://www.adb.org/sites/default/files/publication/646146/asia-sme-monitor-2020-volume-1.pdf [Accessed 19 Dec. 2022].

Association of British Insurers. (2022a). ABI Review. [online] Available at: <u>https://portfolio.cpl.co.uk/ABI-Review/2022/key-facts/</u> [Accessed 18 Dec. 2022].

Association of British Insurers. (2022b). Solvency II reform welcomed by insurance and long-term savings industry. [online]. Available at: <u>https://www.abi.org.uk/news/news-articles/2022/11/solvencyiireform/</u> [Accessed 8 Dec. 2022].

Baird, G. (2022). *The new Long-Term Asset Fund (LTAF): final rules and guidance published*. [online] *www.farrer.co.uk*. Available at: <u>https://www.farrer.co.uk/news-and-insights/the-new-long-term-asset-fund-ltaf-final-rules-and-guidance-published/</u> [Accessed 13 Dec. 2022].

Bank of England. (2021). Productive finance working group publishes recommendations addressing the barriers to investment in less liquid assets. [online] Available at: https://www.bankofengland.co.uk/news/2021/september/productive-finance-working-group-recommendations-addressing-barriers-to-investment [Accessed 12 Dec. 2022]

Bank of England. (2022). Solvency II. [online] Available at: <u>https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii</u>. [Accessed 16 Dec. 2022].

Bartlett, C. and Eastman, M. (2021). How Perceptions of Risk May Be Creating The "Missing-Middle" Funding Gap. [online] *Next Billion*. Available at: <u>https://nextbillion.net/risk-perception-funding-gap/</u> [Accessed 4 Dec. 2022].

Barton, A. and Cibulskis, A. (2022). Solvency II reform: an overview - Macfarlanes. [online] *www.macfarlanes.com.* Available at: <u>https://www.macfarlanes.com/what-we-think/in-</u> <u>depth/2022/solvency-ii-reform-an-overview/#:~:text=As%20a%20regime%20intended%20to</u> [Accessed 12 Dec. 2022].

Bavier, J. (2022). African startups drew record \$5.2 billion in venture capital last year, industry group says. [online] *Reuters*. Available at: <u>https://www.reuters.com/world/africa/african-startups-drew-record-52-billion-venture-capital-last-year-industry-group-2022-04-19/</u> [Accessed 19 Dec. 2022].

Baxter, S. (2022). Solvency II reforms 'could unlock £100bn in productive finance'. [online] *Pensions Expert*. Available at: <u>https://www.pensions-expert.com/Investment/Solvency-II-reforms-could-unlock-100bn-in-productive-finance?ct=true</u> [Accessed 3 Dec. 2022].

Bedsworth, L. and Taylor, M. (2007). Learning from California's Zero-Emission Vehicle Program Learning from California's Zero-Emission Vehicle Program. [online] *California Economic Policy*. Available at: <u>https://www.ppic.org/wp-content/uploads/content/pubs/cep/EP_907LBEP.pdf</u> [Accessed 19 Dec. 2022].

Bhattacharya, A. (2022). Audience Selection. [online] *etf.dws.com.* Available at: <u>https://etf.dws.com/en-gb/information/order-documents/passive-investing-2022/</u> [Accessed 11 Dec. 2022].

Boghani, P., Isjwara, R. and Ahmad, R. (2022). US venture capital firms keep their faith in Asia-Pacific's fintech sector. [online] *www.spglobal.com.* Available at: <u>https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-venture-capital-firms-keep-their-faith-in-asia-pacific-s-fintech-sector-71525664</u> [Accessed 19 Dec. 2022].

Boscia, S. (2022). Labour will spend £8bn on UK sovereign wealth fund if it forms government. [online] *CityAM.* Available at: <u>https://www.cityam.com/labour-will-spend-8bn-on-uk-sovereign-wealth-fund-if-it-forms-government/</u> [Accessed 19 Dec. 2022].

British Business Bank and Oliver Wyman. (2019). The Future of Defined Contribution Pensions: Enabling Access to Venture Capital and Growth Equity. [online] Available at: <u>https://www.british-business-bank.co.uk/wp-content/uploads/2019/09/Oliver-Wyman-BritishBusiness-Bank-The-Future-of-Defined-Contribution-Pensions.pdf</u> [Accessed 10 Dec. 2022].

British Venture Capital Association. (2017). Defined Contribution pension investment into illiquid assets. [online] *BVCA*. Available at:

https://www.bvca.co.uk/Portals/0/Documents/Policy/Political%20Engagement/BVCA%20representat ions%20-%20DC%20investment.pdf [Accessed 13 Dec. 2022].

Brogaard, C. (2018). Guidance. [online] *www.dfsa.dk.* Available at: <u>https://www.dfsa.dk/Rules-and-Practice/Guidance-on-alternative-investments</u> [Accessed 13 Dec. 2022].

CFA Institute. (n.d.). Certificate in ESG Investing. [online] Available at: <u>https://www.cfainstitute.org/en/programs/esg-investing [Accessed 13 Dec. 2022].</u>

Chancellor of the Exchequer. (2022). Remit and recommendations for the Financial Policy Committee: Autumn Statement 2022. [online] *GOV UK*. Available at: <u>https://www.gov.uk/government/publications/remit-and-recommendations-for-the-financial-policy-</u> <u>committee-autumn-statement-2022</u> [Accessed 10 Dec. 2022].

Cheung, C. (2022). Pension funds will increase impact investing, research finds. [online] *The FT Advisor.* Available at: <u>https://www.ftadviser.com/investments/2022/03/14/pension-funds-will-increase-impact-investing-research-finds/</u> [Accessed 2 Dec. 2022].

Crystal Capital Partners. (2022). The Rise of Venture Capital Investment in Southeast Asia. [online] Available at: <u>https://www.crystalfunds.com/insights/investing-in-southeast-asia</u> [Accessed 19 Dec. 2022]

Cua, G. (2019). Investing for good. [online] *The Business Times.* Available at: <u>https://www.businesstimes.com.sg/wealth-october-2019/investing-good</u> [Accessed 22 Dec. 2022]

Cutler, J. (2022). Aviva, L&G and Phoenix rise as Solvency II reforms get the thumbs up. [online] *Proactiveinvestors UK.* Available at:

https://www.proactiveinvestors.co.uk/companies/news/998841/aviva-l-g-and-phoenix-rise-assolvency-ii-reforms-get-the-thumbs-up-998841.html [Accessed 13 Dec. 2022].

Danske Bank, Tech Nation, ImpactCity and dealroom.co. (2022). Impact startups and venture capital -Q1 2022. [online] *Dealroom.* Available at: <u>https://dealroom.co/uploaded/2022/04/Dealroom-Impact-Q1-2022.pdf</u> [Accessed 12 Dec. 2022].

De Amicis, L., Binenti, S., Maciel Cardoso, F., Gracia-Lázaro, C., Sánchez, Á. and Moreno, Y. (2020). Understanding drivers when investing for impact: an experimental study. *Palgrave Communications*, *6*(1), pp.20. <u>https://doi.org/10.1057/s41599-020-0447-y</u>

Dhaka Tribune. (2022). Dhaka now 4th most populous city globally. [online]. Available at: <u>https://www.dhakatribune.com/world/2022/12/04/dhaka-4th-most-populous-city-</u> <u>globally#:~:text=With%20a%20density%20of%2023%2C234,increase%20in%20population%20from</u> <u>%202021</u>.

Engel, J.S. (2014). *Global Clusters of Innovation: Entrepreneurial Engines of Economic Growth around the World.* Edward Elgar Publishing Inc.

Engel, J.S. and del-Palacio, I. (2011). Global Clusters of Innovation: The Case of Israel and Silicon Valley. *California Management Review, 53*(2), 27–49. <u>https://doi.org/10.1525/cmr.2011.53.2.27</u>

Engel, J. S., Hamirani, H. and Saklatvala, K. (2016). *Pursuing Innovation: Sovereign Wealth Funds and Technology Investment.* [online] *Future Planet Capital.* Available at: <u>https://ssrn.com/abstract=2864853</u> [Accessed 16 Dec. 2022].

ESG Investing. (2022). Sovereign wealth funds increase ESG adoption | ESG Investing. [online] Available at: <u>https://www.esginvesting.co.uk/2022/07/sovereign-wealth-funds-increase-esg-adoption/#:~:text=40%25%20of%20sovereign%20wealth%20funds</u> [Accessed 12 Dec. 2022].

EV News. (2010). General Motors EV1 Impact Electric Vehicles History. [online] *www.electricvehicle news.com.* Available at:

https://electricvehiclesnews.com/History/Companies/General_Motors_EV1.htm [Accessed 12 Dec. 2022].

Faulkender, M., Hankins, K.W. and Petersen, M.A. (2022). Why Are U.S. Companies Hoarding So Much Cash? [online] *Kellogg Insight*. Available at: https://insight.kellogg.northwestern.edu/article/companies-hoarding-cash [Accessed 9 Dec. 2022].

FCA. (2022). CP22/20: Sustainability Disclosure Requirements (SDR) and investment labels. [online] Available at: <u>https://www.fca.org.uk/publications/consultation-papers/cp22-20-sustainability-disclosure-requirements-sdr-investment-labels</u>. [Accessed 5 Dec. 2022].

Finch, C. (2022). What does Solvency II reform mean for pension schemes' de-risking plans? [online] *LCP*. Available at: <u>https://www.lcp.uk.com/our-viewpoint/2022/06/what-does-solvency-ii-reform-mean-for-pension-schemes-de-risking-plans/</u> [Accessed 7 Dec. 2022].

Flood, C. (2021). Temasek commits \$500m to impact investing specialist LeapFrog. [online] *Financial Times.* Available at: <u>https://www.ft.com/content/c77d10f5-8f09-4ff3-8b48-8f521ea00dec</u> [Accessed 19 Dec. 2022].

Foglia, J. (2022). Blue Ocean: Impact Investing in Monaco. [online] *Wealth Monaco*. Available at: <u>https://www.wealthmonaco.com/en/blue-economy-impact-investing-monaco/</u> [Accessed 19 Dec. 2022].

Follett, C. and Cochran, M. (2022). Sri Lanka Is a Wake-Up Call for Eco-Utopians. [online] *Human Progress.* Available at: <u>https://www.humanprogress.org/sri-lanka-is-a-wake-up-call-for-eco-utopians/</u> [Accessed 14 Dec. 2022].

Foy, S. (2022). Bank of England is 'dragging its feet' on cutting EU red tape. [online] *The Telegraph*. Available at: <u>https://www.telegraph.co.uk/business/2022/11/13/bank-england-dragging-feet-cutting-eu-red-tape/</u> [Accessed 13 Dec. 2022].

Impact Investing Institute. (2022). Estimating and describing the UK impact investing market. [online] Available at: <u>https://www.impactinvest.org.uk/wp-content/uploads/2022/03/Estimating-and-describing-the-UK-impact-investing-market.pdf</u> [Accessed 12 Dec. 2022].

FTI Consulting. (2022). ESG in India: It's Time to Take Notice. [online] Available at: <u>https://www.fticonsulting.com/insights/articles/esg-india-time-take-notice</u> [Accessed 20 Dec. 2022].

Gani, A. I. (2022). UK Fintechs Are Now on the Sharp End of Cost of Living Crisis. [online]. *Bloomberg.* Available at: <u>https://www.bloomberg.com/news/articles/2022-11-16/uk-fintechs-are-now-on-the-sharp-end-of-cost-of-living-crisis?leadSource=uverify%20wall</u> [Accessed 13 Dec. 2022].

Gifford. J. and Chee J. (n.d.) Unlocking the Untapped Opportunity in Asia through Impact Investing. [online] *Credit Suisse*. Available at: <u>https://www.credit-suisse.com/sg/en/private-banking/invest-with-impact/solutions-for-your-goals/unlocking-the-untapped-opportunity-in-asia-through-impact-invest.html</u> [Accessed 21 Dec. 2022].

GIIN. (2022). *Impact Investing*. [online] Available at: <u>https://thegiin.org/impact-investing/</u>. [Accessed 2 Dec. 2022].

GIIN. (2019a). Annual Impact Investor Survey. [online] Available at: <u>https://thegiin.org/assets/GIIN_2019%20Annual%20Impact%20Investor%20Survey_webfile.pdf</u> [Accessed 2 Dec. 2022].

GIIN. (2019b). Core Characteristics of Impact Investing. [online] Available at:<u>https://thegiin.org/assets/Core%20Characteristics_webfile.pdf</u> [Accessed 2 Dec. 2022]

Glen, J. (2022). Speech by John Glen MP, Economic Secretary to the Treasury, to the Association of British Insurers Annual Dinner. [online] *GOV UK*. Available at: <u>https://www.gov.uk/government/speeches/speech-by-john-glen-mp-economic-secretary-to-the-treasury-to-the-association-of-british-insurers-annual-dinner</u> [Accessed 12 Dec. 2022].

GOV UK. (2022). Facilitating investment in illiquid assets by defined contribution pension schemes. [online] Available at: <u>https://www.gov.uk/government/consultations/facilitating-investment-in-illiquid-assets-by-defined-contribution-pension-schemes</u> [Accessed 12 Dec. 2022].

Grab. n.d. Sustainability. [online] Available at: <u>https://www.techinasia.com/grab-indonesias-unicorn</u> [Accessed 19 Dec. 2022].

Graham, A. (2022). EU insurance laws should be changed, says Bank governor Bailey. [online] *uk.finance.yahoo.com.* Available at: <u>https://uk.finance.yahoo.com/news/eu-insurance-laws-changed-says-173720582.html</u> [Accessed 12 Dec. 2022].

Gridline. (2022). Three Common Misconceptions About VC Investing. [online] Available at: <u>https://gridline.co/knowledge-base/three-common-misconceptions-about-vc-</u> investing/#:~:text=The%20average%20VC%20fund%20generates [Accessed 4 Dec. 2022].

Haegeli, J. (2021) Global economic and insurance outlook. [online] *Swiss Re Institute.* Available at: <u>https://www.swissre.com/dam/jcr:409e0705-9c1b-4cfc-b7d0-5cf74a3f686a/global-economic-insurance-outlook-sigma5-2021-group-chief-economist-ppt.pdf</u> [Accessed 10 Dec. 2022].

Hand, D., Dithrich, H., Sunderji, S. and Nova, N. (2020). 2020 Annual Impact Investor Survey, 10th ed. *The GIIN.* Available at:

https://thegiin.org/assets/GIIN%20Annual%20Impact%20Investor%20Survey%202020.pdf [Accessed 4 Dec. 2022].

Hand, D., Ringel, B. and Danel, A. (2022). SIZING THE IMPACT INVESTING MARKET GIINSIGHT SUPPORTED BY ACKNOWLEDGMENTS. [online] *The GIIN.* Available at: <u>https://thegiin.org/assets/2022-Market%20Sizing%20Report-Final.pdf</u> [Accessed 4 Dec. 2022].

Hapsoro, M.L. (2021). ASEAN development trajectories reach new milestone. [online] *ASEAN*. Available at: <u>https://asean.org/asean-development-trajectories-reach-new-milestone/</u> [Accessed 17 Dec. 2022].

Harvard Business School. (2022). Press Release: International Foundation for Valuing Impacts Holds Inaugural Board Meeting. [online] *HBS*. Available at: <u>https://www.hbs.edu/news/releases/Pages/IFVI-IAWI.aspx</u> [Accessed 11 Jan. 2023].

Harvard Business School. (2019). Impact-Weighted Accounts - Impact-Weighted Accounts. [online] *HBS*. Available at: <u>https://www.hbs.edu/impact-weighted-accounts/Pages/default.aspx</u>. [Accessed 12 Dec. 2022].

Hickey, S. (2022). Large cap ESG funds perform worse than non-sustainable counterparts. [online] *FT Adviser*. Available at: <u>https://www.ftadviser.com/investments/2022/07/13/large-cap-esg-funds-perform-worse-than-non-sustainable-</u>

counterparts/#:~:text=Research%20by%20Bowmore%20showed%20the,which%20lost%204%20pe
r%20cent. [Accessed 7 Dec. 2022].

HM Treasury. (2022a). December 2022. Recommendations for the Financial Conduct Authority. [online] *Open Government UK*. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1 122924/FCA_Remit_Letter_December_2022_with_cover.pdf. [Accessed 17 Dec. 2022].

HM Treasury. (2022b) December 2022. Recommendations for the Prudential Regulation Committee. [online] *GOV.UK*. Available at:

https://www.gov.uk/government/publications/recommendations-for-the-prudential-regulationcommittee-december-2022 [Accessed 17 Dec. 2022].

HM Treasury. (2022c). November 2022. Autumn Statement. [online] *Open Government UK.* Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1

118417/CCS1022065440-

001_SECURE_HMT_Autumn_Statement_November_2022_Web_accessible__1_.pdf [Accessed 17 Dec. 2022].

Hodgson, C. (2022). Two pension funds quit Mark Carney's green alliance. [online] *Financial Times*. Available at: <u>https://www.ft.com/content/df321358-c6d1-4dfc-8ab7-4526fab1305b</u>. [Accessed 12 Dec. 2022].

Human, T. (2022). IPOs that don't meet ESG standards can expect a discount, says consultant. [online] *IR Magazine*. Available at: <u>https://www.irmagazine.com/sell-side/ipos-dont-meet-esg-standards-can-expect-discount-says-consultant</u> [Accessed 8 Dec. 2022].

IEA. (2020). World Energy Outlook 2020. [online]. Available at: <u>https://www.iea.org/reports/world-energy-outlook-2020</u> [Accessed 23 Dec. 2022].

IMF. (2008). IMF Survey: IMF Intensifies Work on Sovereign Wealth Funds. [online] Available at: https://www.imf.org/en/News/Articles/2015/09/28/04/53/sopol03408a [Accessed 19 Dec. 2022].

Impact Investing Institute (n.d.). Pensions with Impact. [online] Available at: <u>https://www.impactinvest.org.uk/project/pensions/</u> [Accessed 13 Dec. 2022].

Impact Investing Institute. (2020a). Buy – South Yorkshire Pension Fund. [online] Available at: <u>https://www.impactinvest.org.uk/case-studies/buy-south-yorkshire-pension-fund/</u> [Accessed 13 Dec. 2022].

Impact Investing Institute. (2020b). Impact investing by pension funds: Fiduciary duty - the legal context. [online] Available at: <u>https://www.impactinvest.org.uk/publications/impact-investing-by-pension-funds-fiduciary-duty-the-legal-context/</u> [Accessed 13 Dec. 2022].

ISO. (2021). Impact washing: what is it and how to spot it. [online] Available at: <u>https://www.iso.org/news/ref2752.html</u> [Accessed 8 Dec. 2022].

Invesco. (2022). Invesco Global Sovereign Asset Management Study. [online] Available at: <u>https://www.invesco.com/content/dam/invesco/igsams/en/docs/Invesco-global-sovereign-asset-management-study-2022.pdf</u> [Accessed 15 Dec. 2022].

Jenkins, P. (2022). The LDI crisis is spurring a seismic shift in the gilt market. [online] *Financial Times*. Available at: <u>https://www.ft.com/content/8d05c9d9-53d5-46e5-80c1-cbd83c549586</u> [Accessed 13 Dec. 2022].

Khan, N.A. (2021).India's 2W industry approaches a crossroad; will electrification take over? [online} *Economic Times Auto*. Available at: <u>https://auto.economictimes.indiatimes.com/news/two-wheelers/scooters-mopeds/ev-day-special-in-depth-indias-2w-industry-approaches-a-crossroad-will-electrification-take-over/86025614</u> [Accessed 23 Dec. 2022].

Karlgaard, R. (2021). The Venture Capital Boom In Southeast Asia: The Best Is Yet To Come. [online] *Forbes.* Available at: <u>https://www.forbes.com/sites/richkarlgaard/2021/10/06/the-venture-capital-boom-in-southeast-asia-the-best-is-yet-to-come/?sh=40b796302483</u> [Accessed 19 Dec. 2022].

Kiai, E. (2022). Why wait? How to beat the queue for a new electric car. [online]. *Electrify*. Available at: <u>https://www.electrifying.com/blog/article/waiting-times-for-electric-cars</u> [Accessed 22 Dec. 2022].

LaPointe, S. (2022). Impact investing: investors prioritise social factors over environmental ones. [online] *Motley Fool*. Available at: <u>https://www.fool.co.uk/2022/03/31/impact-investing-investors-prioritise-social-factors-over-environmental-ones/</u> [Accessed 19 Dec. 2022].

Lee, J.-O. and Adam, S. (2022). ASEAN is poised for post-pandemic inclusive growth and prosperity – here's why. [online] *World Economic Forum.* Available at: https://www.weforum.org/agenda/2022/01/asean-is-poised-for-post-pandemic-inclusive-growth-and-prosperity-heres-why/ [Accessed 19 Dec. 2022].

Lenhard, J. and Fulford-Smith, K. (2022). Impact and ESG in venture capital- getting the basics right and pushing forward. [online] *Impact venture at Big Society Capital.* Available at: <u>https://medium.com/impact-venture/impact-and-esg-in-venture-capital-getting-the-basics-right-andpushing-forward-40b9f73a8bc5</u> [Accessed 8 Dec. 2022]

Lenhard, J. and Shadbolt, A. (Forthcoming). ESG de-bubbling? How moving towards ESG for venture capital investors impacts skyrocketing valuations. *Keynes Fund, University of Cambridge.* Information at: <u>https://www.keynesfund.econ.cam.ac.uk/lenhard-esg-de-bubbling</u> [Accessed 8 Dec. 2022].

LGIM (2022). DC ESG research | Defined contribution | LGIM. [online] *LGIM*. Available at: <u>https://www.lgim.com/uk/en/capabilities/defined-contribution/esg-pensions-research/</u> [Accessed 19 Dec. 2022].

LGT, n.d. Impact investing with a financial and social return. [online] *www.lgt.com*. Available at: <u>https://www.lgt.com/en/investment-solutions/impact-investing/</u> [Accessed 23 Dec. 2022].

Lightrock, n.d. About. [online] *www.lightrock.com.* Available at: <u>https://www.lightrock.com/about</u> [Accessed 23 Dec. 2022].

Lloyd's. (2016). What Is Solvency II - Lloyd's. [online] Available at: <u>https://www.lloyds.com/conducting-business/regulatory-information/solvency-ii/about/what-is-</u> <u>solvency-ii</u> [Accessed 14 Dec. 2022].

Lowe, R. (2022). UK government looks to push £16bn of LGPS capital to local investments. [online] *Real Assets*. Available at: <u>https://realassets.ipe.com/news/uk-government-looks-to-push-16bn-of-lgps-capital-to-local-investments/10057824.article</u> [Accessed 13 Dec. 2022].

LSEG (2021). UK lists its £10bn inaugural green gilt on the London Stock Exchange. [online] *LSEG.* Available at: <u>https://www.lseg.com/en/media-centre/press-releases/2021/uk-lists-its-10bn-inaugural-green-gilt-london-stock-exchange</u> [Accessed 19 Dec. 2022].

Lundgren, K. and Treloar, S. (2022). Norway Wealth Fund Sets Net-Zero Target for Portfolio Firms. [online] *Bloomberg.com*. Available at: <u>https://www.bloomberg.com/news/articles/2022-09-</u> 20/norway-wealth-fund-sets-2050-net-zero-target-for-portfolio-firms [Accessed 19 Dec. 2022].

Macdonald, C. (2022). Unleashing Capital. [online] *The Policy Exchange*. Available at: <u>https://policyexchange.org.uk/wp-content/uploads/2022/11/Unleashing-Capital.pdf</u> [Accessed 13 Dec. 2022].

Madzou, L., De Jesus, M. and Taylor, S. (2022). Venture capital must embed ESG to back companies of the future. [online] *World Economic Forum*. Available at:

https://www.weforum.org/agenda/2022/02/vcs-must-embed-esg-to-back-the-companies-of-thefuture/ [Accessed 13 Dec. 2022].

Manager, P.Z. and Research, S.S. (2021). FINANCIAL PERFORMANCE OF IMPACT INVESTMENTS. [online] *Asia-Pacific Research Exchange: CFA Institute.* Available at: <u>https://www.arx.cfa/-/media/regional/arx/article/20210527_Financial-Performance-of-Impact-Investing_ARX.pdf</u> [Accessed 8 Dec. 2022].

Masters, B. and Temple-West, P. (2022). Vanguard quits climate alliance in blow to net zero project. [online] *Financial Times*. Available at: <u>https://www.ft.com/content/48c1793c-3e31-4ab4-ab02-</u>fd5e94b64f6b?accessToken=zwAAAYTyL4l6kc9lwXk8PjFKtNOrAv1elLZPaw.MEYCIQD8mY1BNW b4ni0r-2kawh5-QHKKS8oWd9zP_KOctDgGjwlhANMe5vQNdJumhp9PqCCSTWg7SqoJrz9xrdF7xdiGIdA&sharetype=gift&token=cbb819d8-296d-4969-9f8c-ea8b4004590e [Accessed 12 Dec. 2022].

McCulloch, C. and Saunders, C. (2022). LDI crisis should spur pension trustees to focus on liquidity and governance. [online] *Pinsent Masons*. Available at: <u>https://www.pinsentmasons.com/out-law/news/ldi-crisis-should-spur-pension-trustees-to-focus-on-liquidity-and-governance</u> [Accessed 12 Dec. 2022].

Henisz, W., Koller, T. and Nuttall, R. (November 2019). Five ways that ESG creates value. [online] *McKinsey Quarterly.* Available at:

https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corpora te%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-waysthat-ESG-creates-value.ashx [Accessed 17 Dec. 2022].

MENA (2022). MENA 2022 Venture Investment Report. [online] *Magniit*. Available at: <u>https://magnitt.com/research/mena-2022-venture-investment-report-50797</u> [Accessed 19 Dec. 2022].

Mendoza, C. (2021). LPs challenge GPs on ESG. [online] *Venture Capital Journal*. Available at: <u>https://www.venturecapitaljournal.com/lps-challenge-gps-on-esg/</u> [Accessed 13 Dec. 2022].

Millard, R. (2022). Questions over net zero as Putin sparks change in Britain's energy strategy. [online] *The Telegraph.* Available at: <u>https://www.telegraph.co.uk/business/2022/03/12/questions-net-zero-putin-sparks-change-britains-energy-strategy/</u> [Accessed 16 Dec. 2022

Miller, B. and Hewitt, A. (2021). Corporate Impact Capital Can Help Industry Marry Purpose, Profit. [online] *Crunchbase News.* Available at: <u>https://news.crunchbase.com/business/corporate-impact-capital-</u>

investing/#:~:text=Corporate%20Impact%20Capital%20Can%20Help%20Industry%20Marry%20Pur pose%2C%20Profit [Accessed 12 Dec. 2022].

Milne, R. (2022). Norwegian oil fund to vote against companies without net zero targets. [online] *Financial Times.* Available at: <u>https://www.ft.com/content/d681cabf-3189-442c-a9ed-2fd51b2f68fd</u> [Accessed 19 Dec. 2022].

Ministry of Corporate Affairs. (2018). National Guidelines on Responsible Business Conduct. [online] *Government of India*. Available at: https://www.mca.gov.in/Ministry/pdf/NationalGuildeline_15032019.pdf [Accessed 19 Dec. 2022]. Mora, A.G. (2022). Asia's immense opportunities for impact investing. [online] *Nikkei Asia*. Available at: <u>https://asia.nikkei.com/Opinion/Asia-s-immense-opportunities-for-impact-</u> investing#:~:text=The%20International%20Finance%20Corporation%20 [Accessed 12 Dec. 2022].

Morgan Stanley. (2017) Sustainable Signals: New Data from the Individual Investor. [online] *Morgan Stanley Institute for Sustainable Investing.* Available at: https://www.morganstanley.com/content/dam/msdotcom/ideas/sustainable-signals/pdf/Sustainable_Signals_Whitepaper.pdf [Accessed 21 Dec. 2022].

Mubadala. (2022). Making a Lasting Impact in a Rapidly Changing World. [online] Available at: <u>https://www.mubadala.com/en/our-impact/making-lasting-impact-rapidly-changing-world</u> [Accessed 19 Dec. 2022].

Mudaliar, A., Schiff, H. and Bass, R. (2016). Annual Impact Investor Survey. [online] *The GIIN.* Available at:

https://thegiin.org/assets/2016%20GIIN%20Annual%20Impact%20Investor%20Survey_Web.pdf [Accessed 4 Dec. 2022].

Muir, M. (2022). Breaking the binary: How thinking is evolving on primary and secondary perils. [online] *Trading Risk*. Available at: <u>https://www.trading-</u> <u>risk.com/article/2a9c5md6xxc6st8gcrbpc/industry-wide-section/breaking-the-binary-how-thinking-is-</u> <u>evolving-on-primary-and-secondary-</u> perils#:~:text=According%20to%20Swiss%20Re%2C%20primary [Accessed 13 Dec. 2022].

Muskita, P. (2019). Grab: Indonesia's fifth unicorn. [online] *Tech In Asia*. Available at: https://www.techinasia.com/grab-indonesias-unicorn [Accessed 20 Dec. 2022].

National Bureau of Statistics. (2019). Consumption Expenditure Pattern Report. [online] Available at: <u>https://nairametrics.com/wp-content/uploads/2020/05/HHold-Spending</u> [Accessed 20 Dec. 2022].

Newman, S. and Picard, N. (2022). You can't spell IPO without ESG. [online] *PwC*. Available at: <u>https://www.pwc.com/gx/en/issues/esg/publications/you-cant-spell-ipo-without-esg.html</u> [Accessed 13 Dec. 2022].

Noonan, L. (2018). Asia's young rich and the challenge for private banks [online]. *Financial Times.* Available at: <u>https://www.ft.com/content/d7406020-1559-11e8-9c33-02f893d608c2b</u> [Accessed 22 Dec. 2022].

Norges Bank Investment Management. (2021). Responsible investment Government Pension Fund Global 2021. [online] *NBIM*. Available at:

https://www.nbim.no/contentassets/950222269756407898cadb999926c16c/gpfg-responsibleinvestment-2021-web.pdf [Accessed 14 Dec. 2022].

Nyangoro, O. and Njenga, G., 2022. *Pension funds in sub-Saharan Africa* (No. wp-2022-95). World Institute for Development Economic Research (UNU-WIDER).

O'Donohoe, N., Leijonhufvud, C., Saltuk, Y., Bugg-levine, A. and Brandenburg, M. (2010). *Impact Investments: An Emerging Asset Class*. [online] *The GIIN*. Available at: <u>https://thegiin.org/research/publication/impact-investments-an-emerging-asset-class/</u>. [Accessed 4 Dec. 2022].

OECD. (2020a). COVID-19 crisis threatens Sustainable Development Goals financing - OECD. [online] Available at: <u>https://www.oecd.org/newsroom/covid-19-crisis-threatens-sustainable-development-goals-financing.htm</u> [Accessed 14 Dec. 2022].

OECD. (2020b). Global Outlook on Financing for Sustainable Development 2021: A New Way to Invest for People and Planet | en | OECD. [online] Available at: <u>https://www.oecd.org/development/global-outlook-on-financing-for-sustainable-development-2021-e3c30a9a-en.htm</u> [Accessed 14 Dec. 2022].

Office for National Statistics. (2022). Funded occupational pension schemes in the UK: July to September 2021. [online] Available at:

https://www.ons.gov.uk/economy/investmentspensionsandtrusts/bulletins/fundedoccupationalpensionschemesintheuk/july2021toseptember2021#:~:text=Image%20.csv%20.xls-,Assets,depending%20on%20the%20measure%20used. [Accessed 18 Dec. 2022].

Olavarrieta, S. and Villena, M. (2014). Innovation and business research in Latin America: An overview. [online]. *Journal of Business Research*. Available at: <u>https://EconPapers.repec.org/RePEc:eee:jbrese:v:67:y:2014:i:4:p:489-497</u> [Accessed 18 Dec. 2022].

One Planet SWF Network. (2022). Framework Companion Document 2022. [online] Available at: <u>https://oneplanetswfs.org/wp-</u>

content/pdfjs/web/viewer.html?file=/download/155/6oct2022/1959/companion-document_2022.pdf
[Accessed 19 Dec. 2022].

Owen, V. (2022). Institutional Investor Study 2022: What is the most popular approach to sustainable investing? [online] *Schroders.* Available at: https://www.schroders.com/en/insights/economics/institutional-investor-study-2022-what-is-the-most-popular-approach-to-sustainable-investing/

Pachymuthu, L. (2022). Temasek Trust launches centre aimed at advancing impact investing, a first in Asia [online] *www.straitstimes.com.* Available at: <u>https://www.straitstimes.com/business/invest/temasek-trust-launches-centre-for-impact-investing-and-practices-a-first-in-asia [Accessed 19 Dec. 2022].</u>

Pacific Investment Management Company LLC. (2022). Understanding Green, Social and Sustainability Bonds [online] *PIMCO*. Available at: <u>https://europe.pimco.com/en-eu/resources/education/understanding-green-social-and-sustainability-bonds</u> [Accessed 8 Dec. 2022].

Partington, R. and Stacey, K. (2022). Labour unveils funding shake-up to help turn UK into global startup hub. [online] *The Guardian.* Available at: <u>https://www.theguardian.com/business/2022/dec/07/labour-unveils-funding-shake-up-to-help-turn-uk-into-global-startup-hub</u> [Accessed 19 Dec. 2022].

Pensions For Purpose. (2021). Scaling up institutional investment for place-based impact - The Good Economy. [online] Available at: <u>https://www.pensionsforpurpose.com/knowledge-centre/thought-leadership/2021/05/26/Scaling-up-institutional-investment-for-place-based-impact-The-Good-Economy/</u> [Accessed 13 Dec. 2022].

Pezeshkan, A., Smith, A., Fainshmidt, S. and Nair, A. (2020) A neo-configurational institutional analysis of international venture capital attractiveness and performance: insights for Asia-Pacific.

[online] Asia Pacific Journal of Management. Available at: <u>https://doi.org/10.1007/s10490-020-09727-9</u> [Accessed 14 Dec. 2022].

Philp, C. (2022). UK's Digital Strategy. [online] *GOV.UK*. Available at: <u>https://www.gov.uk/government/publications/uks-digital-strategy</u> [Accessed 13 Dec. 2022].

Policy Connect (2018). Bricks and Water. [online]. *Westminster Sustainable Business Forum.* Available at: <u>https://www.gov.uk/government/publications/rainwater-harvesting-regulatory-position-statement</u> [Accessed 23 Dec. 2022].

Pratama, A. H. (2021). Ruangguru becomes profitable, revenue grows by 4x [online] *Tech In Asia.* Available at: <u>https://www.techinasia.com/ruangguru-becomes-profitable-sales-growth-4x</u> [Accessed 22 Dec. 2022].

PRI. (2022). What are the Principles for Responsible Investment? [online] Available at: <u>https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment</u>. [Accessed 16 Dec. 2022].

PricewaterhouseCooper. (2022). Solvency II review - Rethinking Fundamental Spread. [online]. <u>www.pwc.com</u> Available at: <u>https://www.pwc.co.uk/industries/insurance/insights/solvency-ii-review-rethinking-fundamental-spread.html</u> [Accessed 14 Dec. 2022].

Private Equity Wire (2022). GPs are translating ESG into fundraising and exits. [online] *www.privateequitywire.co.uk*. Available at: <u>https://www.privateequitywire.co.uk/2022/11/03/318198/gps-are-translating-esg-fundraising-and-exits</u> [Accessed 8 Dec. 2022].

Private Equity Wire (2022). Constitutional Reserve Fund of Monaco allocates €10m to €150m Ocean 14 Capital impact fund. [online] *www.privateequitywire.co.uk.* Available at: <u>https://www.privateequitywire.co.uk/2022/09/07/317242/constitutional-reserve-fund-monaco-allocates-eu10m-eu150m-ocean-14-capital-impact</u> [Accessed 8 Dec. 2022].

Recommendations for the Prudential Regulation Committee. (2022). [online] *Allianz*. Available at: <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1</u> 122895/CX_Letter_to_andrew_Bailey_0812_WITH_COVER.pdf [Accessed 19 Dec. 2022].

Reuters (2022). Climate change is hurting insurers, report says. [online] *REUTERS*. Available at: <u>https://www.reuters.com/business/finance/climate-change-is-hurting-insurers-report-2022-05-17/</u> [Accessed 15 Dec. 2022].

RMS. (2022). RMS Estimates US\$67 Billion in Insured Losses from Hurricane Ian | RMS. [online] Available at: <u>https://www.rms.com/newsroom/press-releases/press-detail/2022-10-07/rms-estimates-us67-billion-in-insured-losses-from-hurricane-ian</u> [Accessed 15 Dec. 2022].

Roach, H. (2022). Essex Pension Fund commits £100m to carbon offset fund. [online] www.professionalpensions.com. Available at: https://www.professionalpensions.com/news/4059862/essex-pension-fund-commits-gbp100m-

<u>carbon-offset-fund#:~:text=Essex%20Pension%20Fund%20has%20made</u> [Accessed 19 Dec. 2022].

Romano, L. (2020). ESGenius: Insurance companies neglect sustainability at their peril. *Fidelity International.* [online] Available at: <u>https://www.fidelityinternational.com/editorial/article/esgenius-insurance-companies-neglect-sustainability-at-their-peril-b203e2-en5/</u> [Accessed 15 Dec. 2022]

Saltuk Lamy, Y. (2021). *The Next 10 Years of Impact Investment (SSIR)*. [online] *ssir.org.* Available at: <u>https://ssir.org/articles/entry/the_next_10_years_of_impact_investment</u> [Accessed 19 Dec. 2022].

Savage, M. (2022). Millions of households will be spending nearly third of income on fuel by spring. [online]. *The Guardian.* Available at: <u>https://www.theguardian.com/society/2022/nov/27/millions-of-households-will-be-spending-nearly-third-of-income-on-fuel-by-spring</u> [Accessed 28 Dec. 2022]

Shabolt, A. (2022). Future Planet Capital's Impact Potential Framework and Impact Value Gap. *Future Planet Capital.*

Shelly, J. (2018). An Entire Industry Was Duped By a Well-Spoken, Well-Dressed Silicon-Valley Tycoon; Here's Why It'll Happen Again. [online] *Risk and Insurance*. Available at: <u>https://riskandinsurance.com/an-entire-industry-was-duped-by-a-well-spoken-well-dressed-silicon-valley-tycoon-heres-why-itll-happen-again/</u> [Accessed 16 Dec. 2022].

Social Innovation and Investment Foundation. (2021). *Impact investing | Focus areas*. [online] Available at: <u>https://www.siif.or.jp/en/strategy/impact_investment/</u> [Accessed 20 Dec. 2022].

Spengler, L., Arnoldi, L., and Moses R. (2021). Mobilising institutional capital towards the SDGs and a Just Transition. [online] *Impact Taskforce*. Available at: <u>https://www.impactinvest.org.uk/wp-content/uploads/2021/12/Workstream-B-Report.pdf</u> [Accessed 22 Dec. 2022].

Statista. (2022). Number of Internet Users Worldwide as of 2022. [online] Available at: <u>https://www.statista.com/statistics/249562/number-of-worldwide-internet-users-by-region/</u> [Accessed 19 Dec. 2022].

SwipeRX. (n.d.). About. [online] Available at: <u>https://www.swiperxapp.com/</u> [Accessed 18 Dec. 2022].

Swiss Re. (2020). Swiss Re Institute estimates USD 83 billion global insured catastrophe losses in 2020, the fifth-costliest on record. [online] <u>https://www.swissre.com/media/press-release/nr-</u>20201215-sigma-full-year-2020-preliminary-natcat-loss-estimates.html [Accessed 2 Dec. 2022]

Swiss Re. (2022). Floods and storms drive global insured catastrophe losses of USD 38 billion in first half of 2022, Swiss Re Institute estimates. [online] <u>https://www.swissre.com/press-release/Floods-and-storms-drive-global-insured-catastrophe-losses-of-USD-38-billion-in-first-half-of-2022-Swiss-Re-Institute-estimates/4d31d695-e49f-4168-85bc-2a5944313b05</u> [Accessed 2 Dec. 2022]

Taylor, T.L. and Collins, S. (2022). Ingraining sustainability in the next era of ESG investing. [online] *Deloitte*. Available at: <u>https://www2.deloitte.com/uk/en/insights/industry/financial-services/esg-investing-and-sustainability.html</u> [Accessed 6 Dec. 2022]

Temasek, (n.d.). Index. [online] Available at: <u>https://www.temasek.com.sg/en/index</u> [Accessed 22 Dec. 2022]

Thomas, D. (2022). London's new lord mayor calls for UK wealth fund to back fast-growing businesses. [online]. *Financial Times.* Available at: <u>https://www.ft.com/content/a3f48c48-b2fd-4de5-92a2-bbbf921293e4</u> [Accessed 19 Dec. 2022].

UK Government (2022). Facilitating investment in illiquid assets. [online] *GOV.UK*Available at: <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1</u> 064306/facilitating-investment-in-illiquid-assets.pdf [Accessed 19 Dec. 2022].

UN PRI. (n.d.) What are the Principles for Responsible Investment? [online] Available at: <u>https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment</u> [Accessed 9 Dec. 2022].

Versus (2022). Bangladesh vs Republic of Singapore. [online] Available at: <u>https://versus.com/en/bangladesh-vs-republic-of-singapore</u> [Accessed 18 Dec. 2022].

Volk, A. (2021). Investing for Impact - The Global Impact Investing Market 2020. [online] International Finance Corporation - World Bank Group. Available at: <u>https://www.ifc.org/wps/wcm/connect/365d09e3-e8d6-4da4-badb-741933e76f3b/2021-</u> Investing+for+Impact_FIN2.pdf?MOD=AJPERES&CVID=nL5SF6G [Accessed 6 Dec. 2022].

Ward-Glenton, H. (Aug 17, 2022). The world's largest sovereign wealth fund loses \$174 billion in the first half, cites inflation and war in Europe. [online]. *CNBC*. Available at: https://www.cnbc.com/2022/08/17/norways-sovereign-wealth-fund-loses-174-billion-in-first-half.html [Accessed 15 Dec. 2022].

Wee, K. H. and Paulino, A. S. (2022). ASEAN Investment Report 2022: Pandemic Recovery and Investment Facilitation. [online] The ASEAN Secretariat and United Nations Conference on Trade and Development. Available at: <u>https://asean.org/wp-content/uploads/2022/10/AIR2022-Web-Online-Final-211022.pdf</u> [Accessed 20 Dec. 2022].

Wei, N. and Shadbolt, A. (2021). The Wei Forward Report: Impactful Investing for practitioners in a post-pandemic world. [online] *Future Planet Capital.* Available at: https://static1.squarespace.com/static/582e25f02e69cf5247166bad/t/61d831bfb1b0f6704067d808/1641558484505/Future+Planet+-+The+Wei+Forward+Report_+Impact+Investing.pdf [Accessed 3 Dec. 2022].

Whelan, T. and Fink, C. (2016). The Comprehensive Business Case for Sustainability. [online]. *Harvard Business Review.* Available at: <u>https://hbr.org/2016/10/the-comprehensive-business-case-for-sustainability</u> [Accessed 13 Dec. 2022].

Wiek, H. (2021). Sustainable Investment Survey 2021. *PitchBook Data, Inc.* [online] Available at: <u>https://pitchbook.com/news/reports/2021-sustainable-investment-survey</u> [Accessed 21 Dec. 2022].

Wilson, B. (2020). Theranos and the Tale of the Disappearing Board of Directors. [online] *Idaho State Bar.* Available at: <u>https://isb.idaho.gov/blog/theranos-and-the-tale-of-the-disappearing-board-of-directors/</u> [Accessed 6 Dec. 2022]

Yeo, J., Wang, R., Prakash, R. and Moore, L. (2019). Impact Investing in Asia: Overcoming Barriers to Scale. [online] *Oliver Wyman, AVPN, Marsh and McLennan Companies, and GIIN.* Available at: https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/aug/impact-investing-in-asia_16sep.pdf [Accessed 6 Dec. 2022].

Zochowski, T.R. and Rosehill, D. (2022) The International Foundation for Valuing Impacts (IFVI), announces Important Board Appointments. [online] *PRWeb.* Available at: <u>https://www.prweb.com/releases/2022/11/prweb19036937.htm</u> [Accessed 11 Jan. 2023]