WINSTON MA | PAUL DOWNS

THE HUNT FOR UNICORNS

HOW SOVEREIGN FUNDS ARE RESHAPING INVESTMENT IN THE DIGITAL ECONOMY

Forewords by
Margaret Franklin, CFA
President and CEO, CFA Institute
Russell Read, CFA PhD, former CIO, CALPERS, GIC-Kuwait, and APFC
Ajay Royan, Co-founder with Peter Thiel of Mithril VC Funds

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“State-owned investment funds are the new frontier investors, larger in size, influence, and power than the traditional Wall Street of investment banks, asset managers, and hedge funds. They are the “unicorn-makers” behind the scene. Offering a series of in-depth case studies that combine broad perspectives on the tech investment world with specific national examples, this highly original book examines a vital and increasingly important relationship between governments and globalizing VC tech markets.”

– **Anthony Scaramucci**, Founder & Managing Partner of SkyBridge

“Ma and Downs' clear and expansive insights into these disproportionately important and yet little-known institutions will prove critical, both to practitioners in the field of investing as well as to the general public seeking answers to the big picture questions of why the new unicorns transforming their lives arose from the modern financial system.”

– **Russell Read**, CFA, Ph.D, former CIO for CalPERS, GIC-Kuwait, and APFC

“The private sector doesn't have the answers to a growing list of the world ‘s problems. It is the State, working through powerful institutions such as sovereign wealth funds, that has taken a key economic and investment role. Investors need to understand these state-controlled wealth funds - what they do and how they do it – and this book provides a timely update that fills a gap in the literature on global finance.”

– **Dato’ Seri Cheah Cheng Hye**, Co-Founder and Co-Chairman, Value Partners and Non-Executive Director, Hong Kong Exchanges and Clearing Ltd

“Sovereign Wealth Funds (SWFs) lie at the intersection of finance, politics, macroeconomics, international relations. This book not only constitutes perhaps the most in-depth and insightful investigation of sovereign investors to date, but the book starts a broader debate over globalization and state economic intervention in the context of world digital revolution. Invaluable to European governments and businesses, in particular, as the EU strives to become the third tech pillar of the world next to the US and China.”

– **Pierre-Yves Lucas**, Head of Cooperation Mongolia, European Union and former Adviser to the CEO of the SWF of Kazakhstan

“A book that, against the backdrop of the world-altering coronavirus epidemic, provides a thoughtful guide to the role sovereign investors play in the world-changing digital transformation – and how one accelerates the other.”

– **Margaret Franklin, CFA**, President and CEO, CFA Institute

“This is a story about Time Machines.”

– **Ajay Royan**, Co-founder with Peter Thiel of Mithril VC Funds

To Angela – I love you dearly

– Winston Ma

To Rebecca, whose support has been invaluable.

– Paul Downs

Foreword

It is Time to Build the Greatest of Time Machines

This is a story about Time Machines.

No, dear reader, you did not stumble upon the science fiction aisle at the bookstore. You are, however, holding a chronicle of the hunt for their closest earthly cousins.

In this timely book, Winston Ma and Paul Downs bring to light the oft mysterious world of transformative technology startups and the burgeoning sovereign wealth funds who invest in them. Together, these constitute a group of builders and investors who have emerged as two of the biggest forces reshaping the world as we know it. Their origins are diverse, but their evolution has many parallels. And their future, and ours, is intertwined in more ways than anyone anticipated.

Over a nearly two-decade career in tech and investing, I have come to appreciate that every great technology startup is in fact a Time Machine, the fruit of a tribe of mad-genius progenitors intent on hurtling us into the future. Most fail, and almost all are unprecedented by popular opinion. When they succeed, however, they famously remake whole industries for a generation or two.

As this book goes to press, seven of the ten largest companies on earth by market capitalization are tech giants domiciled in the United States and China: Apple, Microsoft, Amazon, Alphabet, Facebook, Alibaba, and Tencent. Even a decade ago, that list would have been significantly varied to include energy, financial, and industrial leaders such as Exxon, ICBC, GE, and Citi. Today, the only *non-tech* companies in the top-ten are Berkshire Hathaway, Visa, and Johnson & Johnson.

Largely ignored by Wall Street after the 2000 Dotcom Bust, these startups managed to thrive with the quiet backing of a new generation of investors, themselves often startup founders who took pride in being founder centric. There was, and is, a strong element of community spirit among the best founders and their funding partners — you paid the favor forward, and in turn found yourself working with kindred spirits conspiring to brilliantly pull forward the future. There exists an equal measure of what one might call constructive paranoia, that no matter how successful one's enterprise might become, there is always lurking a competitor that mustn't be underestimated. After all, the venerable Microsoft and Apple had to be completely reinvented before they could take their spots on that list. Amazon, for its part, is famously obsessed with “Day 1”. As founder Jeff Bezos emphasized in his 2016 shareholder letter, “Day 2 is stasis. Followed by irrelevance. Followed by excruciating, painful decline. Followed by death. And that is why it is always Day 1.”

Much has changed already for those who would build to last.

As Peter Thiel pithily outlined in *Zero to One*, today's tech markets are defined above all by a winner-take-all dynamic. Victory belongs to the “last-mover”, the first company to innovate and get something “just right”, which almost never is the first company to enter the category. At the zenith, the sum of the value of all the competitors in a given category often adds up to less than that of the dominant leader. And what's more, it takes at least a decade to incubate and mature such winners.

As a result, today's winners are seemingly more mature, definitely much larger, and yet imbued with an awkward, permanent adolescence that belies their power. Gone are the shotgun IPOs and retail market boomlets. They've been replaced by vast sums of private capital fleeing depressed interest rates for the promise of enduring growth. And once successful, each of these champions begets well-funded corporate treasuries and large cohorts of successful employees, both of which become engines to fund yet another generation of transformative ideas.

Today's tech leaders are also more global, both in their reach and in their origins. Silicon Valley might host an outsized proportion of startups, but it is increasingly a state of mind divorced from location. And here lies a bigger story. For tech startups are scarcely the only time machines in this chronicle.

Before a teenaged immigrant journey that took me to Canada, and eventually to Silicon Valley, I grew up in what felt very much like a Time Machine. 1980s Abu Dhabi was at its core a startup city on a single-minded mission to pull the future forward as fast as humanly possible; where nothing was constant save rapid change and growth. As the best founders will attest, progress cannot happen without taking risk. Success depends on the unlikely combination of vision, focus, skill, drive, and endurance. And on being right. It was so for Abu Dhabi.

Once a small oasis dependent on pearling, Abu Dhabi transformed in the span of just a few decades into one of the world's most modern city-states. Hailing from India, I found myself living between two very different worlds: An ancient, deeply spiritual native land whose industrious people champed at the bit of the License Raj; and a bustling metropolis that seemed to arise from nowhere, its own economy the marriage of nature's gifts, global talent, and its leader's vision.

Similar dynamics unfolded elsewhere, both presaging and following Abu Dhabi's journey: Post-War Japan and South Korea, Lee Kuan Yew's Singapore and its neighboring Asian Tigers, and of course China under Deng Xiaoping. Each was rebooted into a startup mode designed to inspire a whole society to pull the future forward. As with startups, there were spectacular successes among the countries who tried; and yet many more failures. At the peak of their transformative journeys, each of these successes were defined by a strong sense of mission and competent execution that transcended governments and led to widespread prosperity. And once successful, each of these economic champions beget well-funded national treasuries and large pools of sovereign capital designated to sustain that prosperity for generations.

But more prosperity comes with a price. The cost of short-term incremental growth is rising due to greater competition within well-established industries; and low-hanging yields have been obliterated by a decade-long program of financial repression across the developed world. The economies who worked so hard to “arrive” into the developed world have found that they, and those whom they joined, are both faced with the Sisyphean paradox of constant and disruptive change. Further, as a country or company evolves into “developed” status, it becomes inured to set ways of doing things, comfortable in its newfound financial prowess and shockingly vulnerable to insurgents better able to harness the next generation of competitive innovations.

Meanwhile, even as low-hanging yields disappear, competitive pressures within tech mean that the next generation of blue water innovation often involves the transformation of healthcare or materials science, or of physical goods and services employing software and automation. These concepts embody a higher level of risk and complexity, and an intrinsically longer gestational period than traditional software or consumer Internet companies. An investor cannot harness these innovations and their associated equity premia unless it develops a capability to assess novel ideas from first principles *and* is able to underwrite productive risk capital with the time horizon appropriate to each project. This is what classic venture capital firms like mine are designed to do, mainly because they are small and nimble.

But, as Winston and Paul ably show, it is this reality that has caused the sovereign funds — large, long-term, and naturally defensive organizations — to remarkably evolve into some of the most prolific and capable investors in transformative technologies.

The underlying irony, unsurprising to my venture investor's gaze, is that several of the most capable funds are themselves startups, often mirroring the national developmental dynamic that begat them. Some, like Mubadala of Abu Dhabi or CIC of China, are young, dynamic organizations that simply didn't exist before 2002. Others, like Temasek of Singapore or CDPQ of Quebec, date from the 1960s and 70s but, much like the Microsoft and Apple of recent years, have been imbued with a progressive leadership that “gets it”. The net result is that my peers in venture capital, who fifteen years ago would likely not have recognized any of the major sovereign funds save a few who made passive fund investments, find themselves happily partnered with them in everything from cancer therapy to cybersecurity, microsatellite constellations to nuclear fusion.

It would seem, therefore, that we are at an “End of History” moment in the growth of tech champions and sovereign investing, the categories and winners declared and enthroned.

But history is unkind to the complacent monarch.

In February 2020, the novel coronavirus pandemic definitively ended the remarkably smooth bull market that started in March 2009. Finance ministries and central banks worldwide unleashed a formidable fiscal and monetary fusillade. These acute measures can help in the near-term and potentially stanch bleeding in the *financial* economy. But the virus has exploded an economic neutron bomb across the *real* economy. Infrastructure is seemingly intact, but there are few humans in sight. Because of lag effects from the shock, widespread human suffering, continued epidemiological risk, and the general inability of supply chains to easily bounce back, this book will appear in a year where there is nary a prospect for a quick- V or W shaped recovery.

Several constructs that we have become comfortable with in recent decades have suddenly become open to debate. And startups and sovereigns alike will play critical roles in determining the outcomes.

Here are just two such questions:

> *Deglobalization vs. Globalization*. The virus has closed even the most open borders, such as between Western European countries, and reopened what was thought to be a debate long settled in favor of more free trade and common standards. It is likely that economies become increasingly autarkic, both for reasons of political belief and physical need. As such, investors and founders alike must plan for a form of deglobalization. This calls for an openminded approach to unique approaches that

originate from outside the ideas-bubble that spans Silicon Valley and its mimetic global proxies. Equally, the effort to universally vaccinate against or cure the virus might lead to more, not less, global cooperation; and more of an impetus for common approaches to shared resilience.

Decentralization vs. Centralization. The virus has disrupted the powerful, vital networks that animate modern life, creating an instant preference for technologies that increase local choice and push power to the edge of the network, thus reducing concentrated points of failure. Examples include distributed power generation and storage, efficient micro-factories, portable digital medical devices, and distributed trust applications like Bitcoin. One might think of this as a form of autarky expressed in product design. But there is also an argument to be made for even more *centralization*; that economies of scale for critical safety and productivity goods cannot be achieved without *more*, not *less*, coordination among countries and companies.

In sum, the world must plan for the worst and work, determinedly and deterministically, for the best. Here, past is *not* prologue. From Singapore to New York, governments and companies are running multiple experiments in real-time. All we know is that it will be a Long Recovery.

We will need to catch up to, and surpass, our former rate of growth. And to do so in a way that brings prosperity to billions of people. This will be impossible without a tsunami of technology-driven transformation, of entire industries and of the infrastructure needed to sustain them. Never have the protagonists described in this book had a more important mission, for the coming decade will become a live experiment in “super-productivity” that they are uniquely suited to foresee, finance, and prosecute.

The time has come to build the greatest of Time Machines.

Ajay Royan

Ajay Royan cofounded and runs Mithril, a family of long-term investment funds for transformative and durable technology companies. Together with cofounder Peter Thiel, Ajay invests Mithril's funds in companies that encompass, among other areas, cybersecurity, nuclear energy, next generation finance, medical robotics, industrial automation, advanced antibody discovery, metabolic disease therapies, and specialized data integration, visualization, and analysis.

The Investment Partners of Choice

> ‘Well, now that we have seen each other,’ said the unicorn, ‘if you'll believe in me, I'll believe in you.'”
>
> – *Lewis Carroll; Through the Looking Glass*

This timely and important book by Winston Ma and Paul Downs turns a long-standing prevailing orthodoxy entirely on its head, and for good reasons! Not so long ago, particularly prior to the onset of the Global Financial Crisis of 2008-2009, the most sophisticated and successful pools of institutional capital were managed by pension funds, insurance companies, and university endowments largely in OECD countries which allocated their capital to investment fund managers in stocks, bonds, and to some degree also in the private markets for real estate and private equity.

Large scale was viewed largely as an impediment for achieving investment success because smaller funds were viewed as more nimble and less likely to move a market while it was securing disproportionate benefits (e.g., by investing in small cap stocks). Sovereign investment funds were few in number, lightly staffed, and seemingly one step behind their more adventurous institutional fund peers.

Today, the impact of these same sovereign funds cannot be understated both in terms of their impact on the global investment markets and economic development but also on modern life generally. Indeed, the significant changes we are seeing worldwide in ride-sharing versus taxis, away from motor-fueled cars and towards electric ones, and towards sharing office and home spaces can all be attributed in large measure to the actions of these sovereign investors. Rather than being rogue actors, which was greatly feared prior to 2008-2009, these sovereign investors have become a stabilizing force in the global capital markets for stocks and bonds because of their long investment time horizons and acceptance of long-term risk.

Moreover, rather than large scale being a disadvantage, these sovereign funds have also demonstrated that large size can become an advantage in terms of their ability to access new opportunities and their heightened credibility among project managers around the world who increasingly view them as the Investment Partners of Choice for international investing.

It is this now firmly established role as the Investment Partners of Choice for international investing that will enable the sovereign funds to have a disproportionately strong impact on modern life for many decades to come. Ma and Downs' clear and expansive insights into these disproportionately important and yet little-known institutions will prove critical both to practitioners in the field of investing as well as to the general public seeking answers to the big picture questions of why the new unicorns transforming their lives arose from the modern financial system.

Russell Read, CFA, Ph.D., London

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Into the Vanguard of the Digital Transformation

Sometimes a book sheds light on a little known but powerful force. Sometimes it is timely because it catches the world at an inflection point. Rarely does a book accomplish both.

With the arrival of *Sovereign Investment Funds: The Hunt for Tech Unicorns* from Winston Ma and Paul Downs, we have that rare beast: a book that, against the backdrop of the world-altering coronavirus epidemic, provides a thoughtful guide to the role sovereign investors play in the world-changing digital transformation – and how one accelerates the other. The authors capture in a fast-paced, engaging format the way in which the world's largest pools of capital have again come to the fore, both as economic superheroes of the developing world and the comic-book villains of the developed markets.

Sovereign investors have gone from strength to strength as they navigated the first Gulf War, the Global Financial Crisis, and now the coronavirus pandemic. It is no wonder that they have been called upon in times of crisis. The resources at their command are staggering: $30 trillion, which may be on the conservative end. Simple, mechanical portfolio rebalancing at one of the larger funds can alter the course of the world's currency markets. Norway's fund holds, on average, 1.5 percent of every listed company on earth. And as they pivot from Wall Street to rescue their home economies, the resultant departure and arrival of their cash hoards will surely be felt as much in the corridors of investment banks as in their home governments' budgets and stimulus packages.

Meanwhile, the advent of stay-at-home orders and social distancing have only accelerated the trend toward the digitalization of everything. This digital transformation has been driven increasingly by massive pools of sovereign capital. Tracing the dramatic rise and recent fall of some unicorns – private companies with valuations of more than $1 billion — the book reveals in case studies how the Sovereign Investment Funds of its title have fueled the rise of this once-rare breed, backing the likes of Alibaba, AirBnb, JD.com, Tesla, Uber, WeWork, and the well-known unicorn-maker, the Softbank Vision Fund. And similarly, how they are themselves integrating AI and blockchain into their own operations – and into their thinking about mitigating digital disruption to their portfolios.

The book profiles a diverse cast of characters from the Middle East to Canada, from Southeast Asia to Africa, from Europe to Australia and from Latin America to East Asia as they invest in the digital transformation and are they themselves digitally transformed. The focus moves on from the tech hubs of Silicon Valley and Beijing to capture emerging hubs in India, Europe and the Middle East as well as Africa, a continent now entering the digital economy.

Geography also contributes to a growing digital divide: China and the US, homes to the authors, each envision a different digital future, forcing other nations to pick sides on such developments as the emerging 5G digital technology and the Internet of Things. The activities of sovereign investors are increasingly perceived as presenting risks as well but also, paradoxically, as the very means to counter those perceived risks. Against this backdrop, new funds are being launched and existing funds are being repurposed.

The sovereign investors are also becoming key arbiters of ESG and SDG principles. As major holders of equities, they have weighed in on sustainability, governance, climate change and more. In doing so, they have united across continents, giving one voice to their trillions as they speak to the companies with whose management they engage.

The authors' extensive, hands-on involvement in the deals and operations of this little-known world lends vibrancy as they recount practical, illustrative examples in a non-pedantic style. The book benefits from the contrasting backgrounds of its authors. Ma is a Chinese-born Wall Street veteran and was most recently the North America office head of China Investment Corporation (CIC), one of the world's largest sovereign wealth funds. He brings a depth of insight from his background as a lawyer, as a dealmaker, and as an institutional investor. Downs is American, formerly a partner in global law firm Hogan Lovells and has long acted as outside counsel for many sovereign funds across continents, bringing to bear on this book his decades of experience working on deals, governance and training. Together, their unique perspectives and differing approaches have produced a nuanced roadmap to the little known past and exciting prospects of these giants.

The book's timely message is clarion clear: the world's sovereign investors, the “trillion dollar club” in the authors' parlance, have shaken off their traditional, passive investor roles and stepped into the vanguard of the digital transformation we are all living through. No longer simply channeling their trillions through Wall Street handlers, these super asset owners have instead become active ESG guardians, fintech powerhouses, sustainability champions and – the authors propose a new leading role – digital diplomats. Thanks to the authors, we are now able to see clearly the perceived threat and – hopefully – the opportunity they present.