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CHAPTER 1

The Need for Investing Long-Term

Long-term investing has never been more important than today. Many of society's most intractable problems—from addressing the environmental ills of the planet, to revitalizing decaying infrastructure in developed and developing nations alike, to ensuring national security, to the hunger for innovation to stimulate economic growth—resist easy solutions. Rather, they can only be addressed with the thoughtful application of time and money.

Moreover, it is increasingly clear that the "investor" who has traditionally stepped up to address many of these problems—the government—is unwilling or unable to do so in much of the world. In Europe, many ambitious efforts have been pared back or have proved ineffective. Consider Spain, for instance. Its landscape is littered with "ghost airports" whose construction was funded by the European Union and the national government, despite the absence of demand for them.[1] Some of these airports failed to attract a single commercial flight in the first few years after their construction.[2] Meanwhile, the nation's efforts to encourage alternative energy have been a victim of inconsistent policies. Numerous Spanish renewable energy companies teeter on the edge of bankruptcy, a consequence of the government's abrupt shift from the promise of extended generous subsidies to a "solar tax" and draconian regulation.[3]

In the United States, the ideology of small government appears to be resulting in a reduced role of public investment in areas such as environment technology and innovation more generally. Even in areas targeted

by the current administration, such as President Trump's much-hyped infrastructure plan, prospects are uncertain and the government anticipates playing a limited leadership role: the program seems to depend critically on private sector spending. And in defense research, since 9/11 the trend appears to have favored short-run projects with well-defined end points, rather than the kind of expansive projects that characterized earlier decades and led to computing and communications breakthroughs.[4]

If the long-run needs are to be addressed, it seems clear that another set of actors will need to take the lead. Those best positioned to address them are likely to be the pools of capital in the hands of pensions, insurers, sovereign wealth funds, endowments, and families. These organizations are given the responsibility of holding capital for many years, or even forever, in the case of universities and families.

In addition to their long time frames, these institutions command enormous sums of money. The Organization for Economic Cooperation and Development (OECD) estimates that pensions in the nations under their purview alone held over $35 trillion in assets in 2015. They also estimate that the life insurers in the same countries had close to $15 trillion in assets in 2015.[5] As we seek to estimate the amount of investible assets held by sovereign wealth funds, endowments, and family offices, the task becomes progressively harder, but these run into trillions of dollars.[6]

The hunger of these parties—which we henceforth refer to as investors—for opportunities to invest long-term is greater than ever. Public pensions and social insurance programs are facing huge shortfalls, which are unlikely to be made up with traditional stocks and bonds. For example, Moody's estimates that US federal, state, and local pensions had a shortfall of $7 trillion in 2017 (not including the "big kahuna" of $13 trillion of unfunded social security obligations).[7] The same report suggests that the situation was little better in many other nations. Similarly, sovereign wealth funds are being rapidly depleted in many nations as governments spend their resources faster than they can garner returns, in hopes of avoiding crippling recessions and social unrest.

In this era of depleted resources, generating attractive returns is a priority. But the challenge of doing so with traditional assets in an environment where stocks worldwide are anticipated to be modest performers over the coming years[8] and interest rates are slowly being ratcheted upward is substantial. As a result, in the past two decades investors have been increasingly lured to approaches such as the Yale model or the Canadian model, in which long-term assets such as private equity and real estate play an essential role. For instance, Yale—for many years a poster child for this kind of approach—over the past two decades (through the end of the 2016 fiscal year) earned only 5% annually from its bond holdings and a more attractive 12% annually from its domestic equities, but 14% and 16%, respectively, from private equity and real assets, such as timber and farmland. Meanwhile, Yale has earned an almost unbelievable 77% annual return from its venture capital investments over the last two decades; by way of perspective, had someone invested a thousand dollars and gotten such a return over twenty years, it would have grown to $91 million![9] To be clear, that is only true if one can continuously reinvest all cash flows at the 77% rate of return.

Intuitively, the appeal of investing in the long term is clear. History is full of examples of savvy investors who went "against the grain" and enjoyed fabulous returns as a result. John D. Rockefeller Jr.'s investments in Tokyo real estate beginning in 1946, Warren Buffett's investments after the purchase of Berkshire Hathaway in 1965, and Charlie Lea's decision to support Federal Express through a half dozen rounds of disappointments and earnings shortfalls have been justly celebrated.

So investors are looking beyond traditional stocks and bonds, in the hope of garnering more attractive returns by turning to stickier, longer-term investments. The *Wall Street Journal* estimates that the amount raised in US private markets, including private placements of debt and equity directly to investors, totaled $2.4 trillion in 2017, more than the $2.1 trillion raised in public markets.[10] Even if investors wanted to stick to public markets, the supply of firms has shrunk, at least in the United States. Craig Doidge, Andrew Karolyi, and René Stulz document that the number of domestic exchange-listed firms has fallen by about one-half over

the last two decades.[11] (In the rest of the world, the number of new listings continued to grow until recently, when the number appeared to level off.) Instead, investments in categories as diverse as young and restructuring ventures, highways and bridges, farmland, and wind farms have come into favor. In an ideal world, these disciplined investors would fill the capital gaps, simultaneously generating attractive financial returns and addressing social needs.

Yet in many cases, despite these substantial needs, investments in these areas have been problematic at best, plagued by distortions of many types. Far too often investors have taken a "quick and dirty" approach to complex investments, and then been surprised when this approach did not work. The result has been a lot of wasted money and little real progress.

A dramatic example is the notorious "cleantech bubble."[12] In the years between 2008 and 2011, venture capitalists—newly awakened to the potential risks of global warming—plowed over $15 billion in firms working on areas such as solar, wind, and biofuels. In many cases, the investors, in their hurry to deploy capital into the next big thing, funded technologies that technologists had been unsuccessfully struggling with for decades. In others, such as the notorious Solyndra, inexperienced management, flush with cash from governmental and private investors, made a series of mistakes reflecting their lack of understanding of the market and the nature of the competition. Bad luck played a role as well, particularly the rapid fall in the price of natural gas as fracking spread like wildfire in the United States, the decline in government subsidies for cleantech firms after some well-publicized failures, and the financial pressures brought about by the Great Recession.

Within a few years, it was clear that these investments were struggling, and the enthusiasm for all things cleantech began to wane considerably in the venture community. Before long, social media and its myriad applications had emerged as the new next big thing for these investors. As a result, early-stage funding of cleantech firms fell from $1.4 billion in 2011 to about $100 million in 2014. While some qualified successes may have come out of this investment boom—the emergence of Tesla and the electric car industry would be one case—it is hard not to feel that this

was an expensive and largely unsuccessful effort to address extremely complex issues that was abandoned when some seemingly appealing but naive initial approaches did not work out.

As a result of this and many other disappointments with their long-term investments, investors are increasingly seeking out fresh approaches to investing long-term. To cite three recent examples:

- In 2017, the then chief investment officer of the largest US public pension, Theodore Eliopoulos of the California Public Employees Retirement System (CalPERS), urged the $323 billion pension to begin a direct private investment program. This initiative would take a stake in privately held companies in areas such as life sciences, rather than investing through funds. In this way, CalPERS could help reduce the $800 million it paid in fees to private equity managers in the prior year, as well as holding the investments for more extended periods. Questions were raised as to whether the pension could pay the staff of this effort enough to attract top talent, even if they segregated the direct investment staff in a separate legal entity.[13] At the end of that year, the pension instead requested bids from major financial institutions to serve as a strategic partner for its private equity program.
- The Public Investment Fund, one of several sovereign wealth funds owned by the Kingdom of Saudi Arabia, made two massive commitments to new private funds. While the PIF has existed for decades as a slow-moving holding company, in recent years it has been given a huge influx of public funds, with the promise of more to follow from the proceeds of the proposed Saudi Aramco privatization. Yet even by the standards of its often free-spending sovereign wealth fund peers, its actions have been striking. In the first move, it committed up to $45 billion to the Softbank Vision Fund. The Softbank fund, which had come very close to reaching its $100 billion goal in early 2018, was thirty times larger than any other venture fund ever raised, and ten times the largest technology-focused buyout fund. In the second move, it tentatively committed to provide half of Blackstone's

proposed $40 billion infrastructure fund. The proposed fund was twice as large as any that Blackstone had raised before. The move was particularly striking in light of Blackstone's decision to abandon raising a $2 billion infrastructure fund in 2011 (though of course in a very different political climate). But as the *Financial Times* reported, the inexperience and governance structure of the Saudi fund raised concerns about the wisdom of this course both within and outside the Kingdom.[14]

- The investment office of a wealthy Asian family (whose name we cannot disclose) was ripped by dissension, as the professional investors complained about the casual approach taken by the family patriarch. In particular, the staff felt that the chair of the family office—the grandson of the founder who had sold his retail business to a global conglomerate for several billion dollars—was taking a far too undisciplined approach to investing in projects and companies. Their data suggested that the track record of the family's investments over the past decade had been quite mixed. In turn, the patriarch argued that the family office staff was seeking to constrain his ability to respond quickly and flexibly to the opportunities that his global network were presenting to them.

These three episodes illustrate some of the critical land mines that long-run investment programs face. However desirable from an abstract perspective, the success of these programs in execution has been repeatedly hindered by the same issues. Thus, we are not great fans of investors simply diving into the pool of long-run investing, as so many are today. Indeed, the pursuit of long-term investments is no longer a focus of just the largest institutions: our work shows that, between 2008 and 2017, all pension funds aggressively expanded into alternative investments; a pattern that holds for funds of all sizes, including those with only $50 million in assets under management.[15] There is an urgency to think carefully about the major pitfalls that others have encountered and to strategize about how they will overcome them. These barriers are not impossible to overcome—we will highlight numerous successful examples—but

without proper attention, they are certain to appear. The goal of this book is to identify these pitfalls and to propose actionable solutions to avoid them.

WHAT IS LONG-TERM INVESTING AND WHY IS IT NEEDED?

A natural starting question is, What exactly is long-term investing? In many discussions, the definition is left quite vague, reminiscent of US Supreme Court Justice Potter Stewart's memorable delineation of obscenity ("I know it when I see it"[16]). For instance, the World Economic Forum defines long-term investing as "investing with the expectation of holding an asset for an indefinite period of time by an investor with the capability to do so"[17]; while the Focusing Capital on the Long Term Project, an august body of industry elders, defines long-term investing as "a multiyear time horizon for value creation."[18] Both definitions seem close to tautological.

For our purposes, we take a more prosaic definition of long-term investing: investments with typical holding periods exceeding five years that, in recent decades, have been typically pursued in private partnerships. This categorization includes investments in cutting-edge technologies, fast-growing private firms hungry for capital and more mature restructuring ones, infrastructure projects, and more esoteric categories, such as farmland and water. As we already indicated, main investors that primarily do long-term investing (whether directly or through intermediaries) include private and public pension funds, family offices, endowments, insurance companies, and sovereign wealth funds.

Meanwhile, short-term investing involves liquid assets that can be readily bought and sold, such as stocks and bonds. While few people boast about being short-term investors, there are a lot of them! The World Bank calculates (based on statistics from the World Federation of Exchanges) that the mean holding period of a stock has dropped from over five years in 1975 to under eight months in 2016; worldwide over a similar period, the decline has been from about four years to nine months.[19]

Our focus on long-term investing should not obscure the fact that short-term investing conveys important benefits as well, providing liquidity to capital markets.

In fact, the shortening of public equity holding periods may beg the question, Why do we need long-term investors at all? If a series of short-term investors each makes the decisions that maximize the value of the company they hold, wouldn't we get to the right place, despite the multiplicity of owners? In other words, how can patient capital create value?

One answer is that assessing potentially innovative new products and services can be very hard. What appears to be a disastrous misstep in the short run can ultimately turn out to be an overwhelming success in the long term. This can be illustrated by considering some of the most revolutionary product introductions of the last half century. Apple's initial foray into mobile devices, the iPod, sharply undersold estimates after its 2001 release in the face of critical skepticism.[20] (*Wired* suggested that the name might be an abbreviation for "I Prefer Other Devices" or "I'd Prefer Owning Discs," while the *New York Times* snarked that "'Breakthrough digital device' might be pushing it."[21]) As sales lagged projections, the company's share price fell by 25%. Rather than reversing course, the board supported Steve Jobs. And by the time Apple stopped breaking out iPod sales in 2014, the firm had sold 390 million of these devices.[22] The Boeing 747 and IBM 360 are similar examples of products that ultimately proved to be wildly successful—and to have much broader societal implications, at least mostly for the better—despite delays, cost overruns, and extensive criticism by stock analysts.[23] And these same issues also face organizations that are simply trying to adopt technologies developed elsewhere.

The intuition behind these observations is formalized in a line of work on the myopic behavior of public markets started by Jeremy Stein.[24] While Apple, Boeing, and IBM may have had the deep pockets to ignore the suspects and finance their "troubled" projects, these may be more the exception than the rule. Stein depicts a world where the market rewards firms for having higher earnings, anticipating that more profits today presages even more next year. Managers, knowing this, feel compelled to

boost today's earnings, even if it means not funding long-run projects that will ultimately create value. He argues that even though the investors know that the managers are doing this (and consequentially, the investors discount the price of the company's shares), managers continue this behavior because all the other managers are doing the same thing. Thus, the managers are trapped in what economists call a "prisoner's dilemma," referring to a setting where two inmates inform on each other, even if they would be better off staying mum. In a similar vein, firms may cut long-run expenses to impress the market, even though the world would be better off had they collectively decided not to do so.

While Jeremy wrote this model in the 1980s, its depiction of the world is even truer today, given the proliferation of activist hedge fund investors such as Bill Ackman and Dan Loeb, who have successfully agitated for cost-cutting and restructurings at many "underperforming" firms. The academic finance literature has argued that in many cases interventions by hedge funds have boosted shareholder value and long-term firm performance.[25] But it is hard not to be suspicious that in some instances the single-minded focus of these activists on returning cash to investors leads to detrimental outcomes.

Private patient markets may have powerful advantages in this setting. In today's world with its emphasis on big data and continuous measurement, we might be inclined to think that the feedback provided by the public markets would always be a good thing. But practitioners frequently argue the very fact that the investment is privately held can insulate management from the pressures to "do the wrong thing" to please the markets. Outside of the public spotlight, it can be easier to undertake the riskier product development plan, the painful restructuring, or the substantial but slow-to-bear-fruit investment.

These claims about the virtues of private markets are intriguing but hard to prove. For the decision to go public is not a random or casual one. Firms that go public are disproportionately the more successful and promising ones. Shai Bernstein illustrates some of the virtues of private markets in an ingenious way: by comparing post-IPO behavior of companies that go public with companies that filed to go public but were

unable to complete the offering because the stock market fell in the months after their filing.[26] (Because the market for new offerings is so fickle, an extended downturn may make it next to impossible to go public.) The companies that go public experience a relative decline in the quality of new ideas being generated by the firm. In this case the shortfall appears to result from the facts that many of the key inventors depart the firms (doubtless to other start-ups) and those who remain become less productive (presumably distracted by the joys of their newly acquired wealth).

Not only may public markets push managers to do the wrong thing, but they may not be very effective at providing oversight in the first place. In many cases, it is very hard for investors to discern what private information and incentives the entrepreneurs and their cronies may have. For instance, when a firm raises equity from outside investors, the managers have an incentive to engage in wasteful expenditures (e.g., lavish offices) because they may benefit disproportionately without bearing the entire cost.[27] In the context of long-term investing, entrepreneurs might invest in strategies, research, or projects that have high personal returns but low expected monetary payoffs to shareholders. As an example, consider a biotechnology company founder who chooses to invest in a certain type of research that brings him great recognition in the scientific community but provides little return for the investors. Consistent with this observation, Ilan Guedj and David Scharfstein have shown that the success rate of the pivotal clinical trials involving cancer drugs for cash-rich, young biotech firms is only 3%, as opposed to 35% for pharmaceutical companies.[28] They suggest that in many cases the managers proceed despite clear indications of problems, eager to hold on to the role of CEO for as long as possible.

If entrepreneurs and investors could write detailed contracts covering every contingency, these problems might be avoided, but this is impractical. Even if the investors strongly suspect the entrepreneur has followed a certain action that was counter to their original agreement, they cannot prove it in a court of law. As a result, investors often shy away from these situations, making patient capital hard to find.

We have highlighted two things that can go wrong with public market investing: the market may push the manager to be too short-term, and managers may promote their own agenda at the expense of the investors. A third difficulty is more prosaic. There may be misjudgments of the size of the opportunities. The difficulty of discerning which projects will be winners in the long run is not just confined to stock market analysts or the general public. Even those who specialize in investing in such projects can struggle to discern their potential. An example of the difficulty of determining long-term value is demonstrated in the context of Bessemer Venture Partners, a top-tier venture capital firm that has made its reputation investing in young firms. On its website, the organization has a long list of failures: terrific companies that it failed to invest in, and why. (Of course, Bessemer has also chosen many winners, or else it would not be around to put such a list together!) For instance, the organization reveals it declined the opportunity to invest in eBay when it was first founded because the investors could not see the value in a platform for trading comic books and Pez dispensers.[29]

Making this point more systematically, our colleagues Bill Kerr, Ramana Nanda, and Matt Rhodes-Kropf examined the ultimate investment outcomes of a single large and successful venture capital group. [30] This firm routinely asks its team to score the deals that it undertakes at the deal closing. The striking finding that emerges from over a decade of transactions is that the initial ratings of the deals that ultimately turned out to be superwinners, moderate successes, and outright failures were essentially identical.

These three challenges—the pressure for short-run performance, the need to oversee managers, and the difficulty of determining which opportunities are greatest—suggests a role for a different type of strategy than investing short-term. Long-term investors who are actively involved in managing an investment may be able to contribute a lot of value. Although they cannot predict up front whether the venture is going to be successful, they can work really closely with the companies and projects in which they have a stake. Ideally, long-run investors may be able to steer

the investments in the right direction as well as limit the kinds of distortions discussed above.

In an increasing number of cases, as already suggested, long-term investors have adopted private investment partnerships as their vehicles of choice. These partnership investors employ tools—the screening of investments, the sophisticated transaction structures, the staging of investments, and the provision of oversight and informal coaching—that help ensure project success. If things are going poorly and cannot be altered, they may sometimes cut off funding to avoid throwing good money after bad. In addition, private equity firms' high-powered compensation schemes give these investors incentives to monitor companies more closely, because individual compensation is closely linked to the firms' returns.

Of course, long-run investing and private partnerships are not synonymous. Berkshire Hathaway, for instance, has made a series of highly successful acquisitions out of a public fund structure. TIAA, which manages pensions for academic and medical professionals (among others), is well known for its active stances regarding the governance of particular public companies. These activities can have what economists term *positive externalities*: all investors benefit from the increase in value when they improve the operations of the firm.[31] As has been well documented in the finance literature, the active involvement of the investor can help improve the outcome of the firms being financed.

But this process is not an easy one, and many organizations do not have the skill set or structure to successfully select and oversee investments. For instance, banks seem poorly designed to do these tasks. Bankers often do not have the necessary skills to evaluate projects with few tangible assets and significant uncertainty, or to provide intense monitoring after the capital goes in. They are also often severely limited in their ability to take risks. Moreover, banks (as well as corporations) have found it difficult to replicate the compensation schemes of private partnerships. Organizations without high-powered incentives have found it difficult to retain personnel once the investors have developed a performance record that enables them to raise a fund of their own.[32] So even in countries

where the financial sector is centered on the banking system, such as Germany and Japan, policymakers today are seeking to encourage the development of a private capital industry to ensure more adequate financing for risky entrepreneurial projects.

At least in theory, the willingness to take on investing long-term—and the consequent need to assess opaque projects, provide oversight, and face the danger of not being able to readily liquidate investments—should be rewarded. If profitable opportunities cannot be funded by traditional short-term investors in public markets, we anticipate that other ways would be developed to provide them capital. A long body of work on financial innovators has highlighted their energy and creativity in addressing the major financial challenges of the day, whether the need for funding sailing ships to travel from Europe to Asia for trade or to build the railroad networks of the United States.[33] The explosion of private capital firms over the last three decades can be understood precisely as such a response. And indeed, a substantial body of evidence suggests that venture capital–backed firms have greater innovation and job creation than their peers,[34] while those funded by private equity experience increases in product safety, productivity, resiliency in economic downturns, and innovation, as well as decreases in workplace injuries.[35]

THE CHALLENGES OF LONG-TERM INVESTING

In theory, therefore, investing for the long term provides important benefits to companies and the economy. These investors allow projects that otherwise would not be funded to receive funding; they provide oversight and protect companies and projects from the potentially distorting pressures of public markets. Moreover, because the investors should be rewarded for their willingness to make these investments, the ultimate beneficiary groups—whether pensioners, citizens, or students—should also benefit. This all sounds terrific!

This begs another question: If it is all so wonderful, why is there a need for this book? Of course, it is not so simple and pretty a picture. There

is undoubtedly a confluence between a plethora of opportunities crying out for long-run investment and the desire on the part of many investors for higher-performing investments. But, as the cleantech story earlier suggests, many forays by investors into long-term investing have had limited success. What accounts for these disappointments, which have been more the norm than we might like to believe?

Despite the appeal of long-term investing, and the potential for outsized gains, the experience for many investors has been mixed. The returns in aggregate from many classes of alternatives as a whole have barely matched the public markets in recent years, not even providing compensation for the greater risks and illiquidity that these investments bring along with them. In many cases, investors have approached long-term investments in a stop-start pattern, jumping in when markets are hot and dropping out when returns decline. And in all too many cases, the managers of the funds doing these investments have done well, even as the individuals and institutions providing funding have suffered.

Consider, for instance, the experience of the state of Alabama, which has seen a substantial series of reverses in its pension investments, almost to the point of being comical, were it not for the state's desperate need for resources.[36] For decades, the Retirement Systems of Alabama has been under the purview of David Bronner, who had extensive powers to invest in assets of any type. Bronner sought to make long-term investments that ranged from purchasing office towers to buying large equity stakes in firms.

So far, so good. But many of these bets ended disastrously: in 2003, for instance, he invested $240 million into US Airways, an investment that netted eight board seats for the retirement system and the title of chairman for Bronner. The company ended up filing for bankruptcy in 2004. Other forays, such as ones into broadcast media and newspapers a few years after, also encountered economic headwinds as digital media gained traction. The pension did not hesitate to invest in local projects as well, such as the RSA Tower in Mobile and the Robert Trent Jones Golf Trail, many of which had questionable economic logic. The return on the $200 million investment by state pensions in the golf course was reported

to be about 1.5% annually between 2011 and 2014, at a time when public equity markets were booming.[37]

But doubtless the biggest failure was what was supposed to be a $350 million investment in 2007 into a new railcar facility in Barton, Alabama, which promised to create 1,800 jobs.[38] Apparently, during the due diligence process, the pension missed the facts that the facility would cost almost twice as much to build as the entrepreneur estimated, and that the entrepreneur had misrepresented his indebtedness and assets. Ultimately, the project ended up in bankruptcy in 2010 before any railcars were produced. The pension took possession of the property and invested another $275 million to complete it.

The ultimate losses of the investment are hard to compute. The pension did succeed in leasing the plant to Navistar, which in turn has subleased portions of the facility to other firms. But this was hardly an arm's-length deal. Navistar had received substantial investments from the pension to encourage it to construct diesel engine facilities elsewhere in the state, and as part of the transaction, the local economic development authority gave generous subsidies to Navistar based on jobs created at the facility.[39] (The employment thresholds for these payments were subsequently revised downward when Navistar did not meet these targets.[40]) The CEO of the company reimbursed $21 million to the state pension as part of a deal to avoid criminal prosecution.[41] But even Bronner acknowledges that the losses on the project have been in the hundreds of millions.[42]

As a result of these miscues, as well as the more typical challenges of overly generous benefit promises to employees, Alabama is critically underfunded. While the pension claims its unfunded liabilities are $16.7 billion, calculations by Josh Rauh suggest a fairer estimate would be $46.3 billion (one of the largest discrepancies in percentage terms of any state).[43] This puts Alabama in the bottom quartile of state pensions both in regard to assets over liabilities (about 40%) and in the ratio of state pension liabilities to state tax revenue. The Alabama Policy Institute indicates that payments to cover pension shortfalls were already the largest expenditure by the state after education in 2015, and projected that they

would rise sharply in subsequent years.[44] Given the lagging performance and shaky finance of Americans' public pensions, Alabama's performance is akin to finishing at the back of the marathon—painful for the participants and painful to watch.

If this was just the experience of one of the fifty states, it might be easy to dismiss. But, unfortunately, it is easy to find many others. Kentucky, for instance, has gained notoriety for being home to the worst-funded pension plan in the US.[45] The Kentucky Retirement Systems (KRS) unfunded pension liability was $32.8 billion at the end of the 2016 fiscal year, and under more conservative assumptions this number could be as high as $84 billion, or about $26,000 for every adult residing in the state.[46] The perilous state of KRS does not just have problematic implications for state employees. The shortfall caused national bond-rating agencies to lower Kentucky's credit rating, making it more expensive for the state to build schools, roads, and other public infrastructure projects. Indeed, the pension obligations were at the heart of the accounting firm PricewaterhouseCoopers rating of Kentucky as the state with the next-to-worst financial position, ahead only of basket case New Jersey.[47]

How did Kentucky reach this unfortunate condition? A wide variety of systemic problems created its funding gap, but long-term investments were again a magnet for problematic behavior. For instance, a 2011 investigation by state auditors revealed $11.6 million in fees paid or committed to "placement agents" acting as intermediaries between KRS and private investment firms that needed help selling their products, a number of whom were close to the chief investment officer at the time.[48] (Although the US Securities and Exchange Commission (SEC) opened an inquiry into the matter, no charges were filed.) To cite one egregious consequence of this alleged "pay to play" decision-making, in 2009, KRS allocated more than $24 million to Lawrence Penn's $120 million Camelot Acquisitions' Secondary Opportunities fund. KRS was one of the fund's biggest and earliest investors.[49] An SEC investigation subsequently revealed that Penn diverted $9.3 million from the investment vehicle to fuel his luxurious lifestyle, buying jewelry, a fancy car, and other lavish goods.[50]

Nor is this a problem confined to south of the Mason-Dixon Line. Similar stories could be repeated in New Jersey, New York, Illinois, California, and on and on. But beyond these tales of shenanigans, a broader lesson is clear: simply undertaking investments in long-run, illiquid assets is not a magic potion for high returns.

Some of the problematic issues can be laid squarely at the feet of the families and institutions who ultimately control the funds:

- Inadequate incentive schemes to reward staff members for making the right choices for long-term performance;
- Poor processes for selecting investments, based more on the safety of a familiar brand name or the fashionable nature of the area rather than the nature of the investment, often driven by boards and advisers who do not steer in the right direction;
- A lack of tools for measuring their own financial position, whether the extent of their need for future capital, the amount of risks they are exposed to, or even in some cases how well they are doing and the extent of their holdings; and
- A failure to effectively communicate what they are doing to stakeholders or potential partners, which in turn creates a cascading series of difficulties.

Other issues, though, must be laid at the feet of the investors who are managing funds seeking to undertake long-run investments:

- Inappropriate incentives that lead to the temptation to increase assets under management relentlessly, even if it translates into lower returns for the investors managing the funds (albeit not to the fund managers themselves).
- The gaming of performance, which makes traditional performance metrics—at best, often limited and flawed—even less revealing.
- The exploitation of market power by established private capital groups and a lack of coordination among investors who, desperate to access an attractively performing fund, bypass many of the principles of good governance (ironically, the same governance

principles that fund managers insist on in the companies in their portfolios)
- In many cases, concentration of power among the founding partners and a broader lack of fairness within the partnerships, leading to defections and attenuation of investment success over time.

Ultimately, the differing perspectives of capital providers and investors lead to a paradox. While long-run investors are all about funding change, the way in which these funds are organized has been remarkably noninnovative, despite the evident problems with the current model.

The issues with the current model of long-term investing are straightforward to describe but harder to fix. Because at its heart, patient long-run investing is hard and is characterized by infrequent information about how well things are going, due to long gestation periods and lack of market feedback. It is thus hard to assess risk and reward and, consequentially, to incentivize managers and govern funds.

But as vexing as these problems may seem, their solutions are not as remote as may first meet the eye. Around the world, a variety of approaches have been undertaken to address these concerns. These range from time-honored strategies by established family and endowment investors, to fresh approaches being taken by institutions newer to long-run investing, to new fund architectures being explored by intrepid managers. From these best practices, a set of potential solutions can be identified.

ROAD MAP FOR THE BOOK

In this book, we explore this seemingly remote and challenging territory. Thus, while we do not hesitate to diagnose problems, much of our attention is devoted to promising solutions. We argue that the world of institutional and high-net-worth investors, despite their seeming distance from the daily existence of most of humanity, has profound impacts on our lives and those of our children. Understanding why investors go wrong, and how they can do a better job, is therefore important to all of us.

After setting the stage in this introduction, in chapters 2 through 4 we look at the challenges and opportunities facing the individuals and institutions who provide the long-term capital.

In chapter 2, we begin with the history of long-term investing. We feature vignettes that capture some of the key historical moments, beginning with the John Maynard Keynes formulation of an investment strategy for King's College at Cambridge, which established many of the principles that long-term investors follow to this day. We then fast-forward to the pioneering family offices, focusing on the experience of the Rockefellers and their movement from opportunistic direct investing to an embrace of private capital funds.

We then highlight the diffusion of these ideas. These investment strategies were first adopted with gusto by a small group of families and university endowments, who initially operated in obscurity and later to great acclaim and interest. These approaches to long-term investing then spread to a much broader array of pension funds, sovereign funds, and other players. But this process of diffusion also saw evolution, most noticeably in the twenty-first century. In particular, while large institutions frequently invested in the same types of funds as the endowments and the family offices, they also sought to exploit their size to get more favorable economic terms and to build their own direct investment capability.

In chapter 3, we explore the set of problems that afflict these investors. We first highlight the fundamental challenges that long-term investing poses. It is hard to determine, for instance, whether private capital is worth the trouble: not only are the data ambiguous but the main yardsticks used to assess performance are flawed. Second, determining which individual groups are the top performers, and whether they are likely to remain on top in the future, can be extraordinarily hard.

These challenges can be exacerbated by the special status of many long-run investors, in particular, the heavy representation of nonprofit or public (or quasi-public) institutions. In many cases, these investors have been plagued by a lack of resources, insufficient (or inappropriately designed) rewards to the investment team, and overconfidence in their ability to select investments.

At the core of these issues lies a challenge of governance of these investors. Firefighters may have challenging jobs, but the kind of skills and training that prepare them to rush into a burning building to save a child are not necessarily linked to success on an investment committee overseeing the firefighters' pensions. Similarly, the president of a local bank may be vital to the economic life of a small college town, but that individual may not be the best person to oversee the school's endowment. Yet many institutions are characterized by inexperienced, politically connected, or parochial boards, which can lead to poor choices, confusion about missions, and many other pathologies.

In chapter 4, we explore some of the best practices to address these issues. We begin with reforms to the governance of these institutions that are long overdue. With structures that end up with dysfunctional oversight, it is almost impossible to expect that effective investment decisions can be made. We next turn to a seemingly mundane area: measurement. In many cases, institutions begin with broken yardsticks, and it is not surprising that the decisions that flow from there are troublesome. We also target the sensitive and messy issues associated with reward structures to investment team members. The tempting solution is to simply say, "Pay more!" But the truth is that compensation at public and quasi-public organizations is almost surely always going to be constrained. Instead, much of the challenge has to be how to design schemes that match tangible rewards with less costly (but often even more valuable) intrinsic ones, and making sure that the tasks people are being asked to do line up well with the skills the organization can plausibly attract. Finally, we emphasize the importance of investors effectively communicating about their strategy, both to potential financial partners and stakeholders.

In chapters 5 through 7, we turn to the perspectives of the fund pursuing long-term investing. We begin with a review of the evolution of these funds. We highlight the way in which the pursuit of long-run gains—long practiced informally—became institutionalized over the course of the twentieth century. We also trace how seemingly reasonable features became codified over time, and the way in which this introduced distortions into the industry.

In chapter 5, we turn to the dramatic changes that affected investing in the 1980s. A technical ruling by the US Department of Labor in 1978—little noticed at the time—opened the doors for pension funds to undertake alternative investment. This redefinition of the "prudent man rule" led to a flood of money into the industry, and profoundly reshaped many of the pioneering firms and opened the door to many others. By the end of the 1980s, the template for the current industry—with megagroups offering families of products and smaller specialists—was already taking shape. Each subsequent decade saw greater interest and an exacerbation of these trends.

We take a more comprehensive look at the issues afflicting long-run investment funds in chapter 6. We explore the inexorable lure of increasing fund size, and how it drives managers to make decisions that may boost their own personal bottom line but often not the performance of the fund, particularly when it comes to raising new funds. Finally, we look within the partnerships and highlight how in many cases problematic behavior seeps in here as well, as founders benefit themselves at the expense of the next generation and outside investors.

We spend a considerable amount of time on the changing structure of the industry in chapter 6, particularly the increasingly dominant role of publicly traded funds and the sale of minority interests to outside investment groups. While these steps can address some of the succession and alignment issues identified, they pose their own set of issues. We highlight some of the ways that these moves can intensify problems that have always been implicit in private capital funds.

Again, we turn to best practices in chapter 7. Looking across a wide spectrum of funds, we highlight an array of creative organizations—young and old—that are addressing the issues delineated above. We also explore why addressing these issues has been seemingly so difficult for the industry, and what mechanisms might encourage greater change.

We focus our discussion here on four categories of changes. The first of these involves changes to the nature of partnerships. In many senses, long-term partnerships are about funding change but are often extremely resistant to changing the approach that was enshrined in the early

investment partnerships. The ten-year fixed-life partnership may have been appropriate for some investments but clearly does not fit others. Rethinking fund life, but also the way that funds are pushed to exit investments in set time frames more generally, is an important question. Our second suggestion is closely related: a rethinking of the way in which these partnerships are governed. While time and legal constraints limit what can be done there, a more active voice on the part of investors in these funds, typically called limited partners, or LPs, could be helpful.

Our third suggestion has to do with the way that fund performance is measured and reported. The current system, where each organization prepares their own numbers in an often inconsistent manner, is rife with issues: almost inevitably, groups present the numbers in the way that make them look best. Moreover, the common yardsticks used for these measures, such as internal rate of return, are themselves deeply flawed. Thus, there is a need for rethinking how long-term investments get measured, as well as who does the measuring: there is an urgent need for an independent certifying body to do these calculations.

Finally, we turn to incentives. When we look at the design of these reward schemes, it is clear that these features—originally established to ensure proper incentives to maximize value—became at some point "weaponized." Today they are a bargaining chip that swings back and forth, depending on whether investors or fund managers are in the driver's seat. Several reforms, having to do with the ways that investors are subsidized for costs incurred and the profits that are split over time, could help ensure better alignment.

In chapter 8, we look at the hybridization between investors and fund managers that has become commonplace in recent years. Institutional investors are increasingly attempting to do their own thing: to invest either alongside private capital groups or by themselves. We explore the very plausible rationales for such initiatives, as well as the substantial obstacles that they face. We conclude with some suggested best practices for groups seeking to invest directly.

In the chapter 9, we end by looking at the future of the industry. Given the spotty track record of financial economists in seeing the future—from

Irving Fisher's prediction in October 1929 that "stock prices have reached what looks like a permanently high plateau"[51] to the blindness of many of our colleagues to the imminent arrival of the Global Financial Crisis (not to mention the prognosticators, who, like Paul Samuelson's description of the stock market, "predicted nine of the last five recessions"[52])—we instead have hedged our bets by laying out four scenarios. We highlight a set of changes that we believe are necessary to reach the most optimistic outcome.

FINAL THOUGHTS

This chapter has introduced the complex, often mysterious territory that our book undertakes to explore: long-term investments. We seek to do so in a manner that is distinct from bewildering arrays of reports put out by organizations ranging from the World Economic Forum to the International Council of Sovereign Wealth Funds, which have previously explored these issues. These earlier works can almost universally be characterized as "inside baseball": written by industry professionals for industry professionals. Not only do they lack the texture and detail that an outsider would need to appreciate the issues at hand, they typically have all the excitement of a document produced by a committee of bankers and carefully vetted by a dozen lawyers.

We instead are writing a very different kind of book, one aimed at a general reader. As a result, we spend much more time seeking to lay out the critical issues, and illustrating through meaty examples how they manifest themselves in practice. The book does not presuppose technical knowledge of alternative investments, but instead seeks to walk readers through the key institutional features.

Just as the French statesman Georges Clemenceau argued that war was too important to be left to the generals, we believe that long-term investing is too important to be left to investment committees. The investment choices made by pensions, endowments, and other investors have profound implications for our future financial health and, more generally, the future of the world.

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