

# Kickstarting a Pension System Through Privatisation

Jeremy Coller

David Pinkus

June 2023

Coller  
Pensions  
Institute

---

# Kickstarting a Pension System Through Privatisation

Jeremy Coller  
David Pinkus

## Executive Summary

In this paper, we present a solution-oriented idea to combine the building of a resilient pension system and the privatization of state assets: privatization through pension funds. Many countries face the challenge of establishing or developing retirement systems while seeking to professionalize the management of state assets. Under the right conditions, privatization through pension funds can contribute to both outcomes and should be considered by policymakers. The key difference to the traditional privatization of state assets is that this idea would keep ownership of the asset with the population and spread the profit among a country's population in the form of future retirement income. Privatization through pension funds, therefore, constitutes a form of democratization of a nation's wealth.

This report outlines a series of arguments on how pension funds can contribute to economic development and how asset transfers can support this process. Establishing pension funds can, over time, create an important source of domestic long-term capital for the economy to grow and support the development of local financial markets. While asset transfers from the government to pension funds can be undertaken at any time, we argue that they are particularly impactful in the early days of a pension system to shore up its asset base and ease transition costs. Given adequate managerial expertise, pension funds will be able to improve underperforming assets and increase their value. Transferring assets to well-governed pension funds can also help to reduce corruption, conditional on well-designed regulatory, governance, and supervisory frameworks, and ensure that the assets' revenues will be used to finance future retirement income. Policymakers interested in pension reform need to assess a country's specific conditions and should turn to international experiences to inform pension system design. Ultimately, privatization through pension funds can increase the value of public assets while assisting the creation of a successful universal pension system that supports domestic development.

## I. Introduction

The Universal Declaration of Human Rights (United Nations Human Rights Declaration, 1948) acknowledges the universal right to social security and an adequate standard of living, including in old age. Ensuring that every citizen has the means to live once they have reached retirement age should be a key concern for any government. Pension systems foster economic growth and prosperity by reducing the need for younger generations to care for the elderly, thus enabling the younger population to enter the workforce and invest in human capital. These systems can also have wider economic effects, such as spurring aggregate demand and employment (OECD, 2019b). There are, however, important welfare implications at stake, making pensions a crucial policy issue.<sup>1</sup>

Although pension coverage has grown over the past decades, large disparities still exist across regions. The International Labour Organization (ILO) reports that while 68% of people above the country-specific retirement age receive a pension globally, this ratio is only 22.7% in sub-Saharan Africa and 23.6% in Southern Asia (ILO, 2018). This disparity entails different challenges. Increasingly, governments in developed economies are recognizing the need for pension reform to account for an ageing population and longer life expectancies. Ultimately, this means that fewer workers will have to support more pensioners over a longer period. Some developing countries are also faced with the challenge of establishing robust pension systems while fostering economic growth and spurring job creation to accommodate a growing working-age population.

The stakes for developing countries are high. The United Nations Population Fund (UNPFA) estimates that by 2050, one in five people in the developing world will be over the age of 60, representing 80% of senior citizens globally (UNPFA, 2012). Without pension reform, government expenditure on pensions will increase significantly in many countries over the coming decades. The International Monetary Fund (IMF) estimates that, on average, public pension expenditure will increase by one percentage point of GDP in advanced economies by 2050, and two point five percentage points of GDP in emerging market economies (Amaglobeli et al., 2019). Governments recognize the importance of this and have begun to act. In 2019, a much-anticipated pension reform in Brazil raised the retirement age by nine years. This reform was considered key for the Brazilian economy because social security spending accounted for 44% of the federal budget and 8.6% of GDP in 2018. Moreover, it is expected to save the government around US\$200 billion over the next decade (Schipani & Harris, 2019).

While the main objectives of a pension system for the individual are consumption smoothing and insurance, governments may have additional objectives, such as poverty relief and redistribution (Barr & Diamond, 2008c). Pension design affects multiple parts of a country's economy, including labour markets, the distribution of wealth and risk, and prospects for economic growth. It is, therefore, crucial to consider pension reform in relation to other public policy issues and priorities. This report argues that in many developing countries, transferring public assets to pension funds could support another policy goal: privatization.

Governments have made in-kind contributions to their pension systems and sold assets to pension funds in several primarily developed economies, such as Australia and the USA. The appendix to this report summarizes some of these transactions, which are still scarce. We argue that under the right conditions, combining privatization and pension reform could yield positive outcomes in developing and emerging economies. We have chosen to focus on this group of countries because they face the challenge of developing pension systems while important assets remain under public ownership. Many of our arguments, however, do also apply to developed economies.

Privatization is an important topic in many developing countries. In 2019, Angola announced PROPRIV, an initiative to privatize 195 state-owned companies and assets by 2022, with the proceeds being used to foster the development of productive domestic sectors (Clifford Chance, 2019). In early 2020, India announced plans to raise US\$30 billion from asset sales to address the pressure on public finances (Kazmin, 2020). Privatization is also high on the policy agenda in Ethiopia and Brazil, with the latter creating a dedicated Secretariat of Privatization and Divestment while planning to sell the vast majority of its 134 state-owned companies (Barber & Pilling, 2019; KPMG, 2020a).<sup>2</sup> Although industrial nations have already privatized a large share of state assets, they could still transfer assets to pension funds in order to strengthen retirement systems or address financing gaps. This is illustrated further by the case studies in the appendix.

---

1 For a discussion, including potential distortions introduced by pension systems, see Barr and Diamond (2008f).

2 Progress on the Brazilian programme has slowed, see Harris (2020).

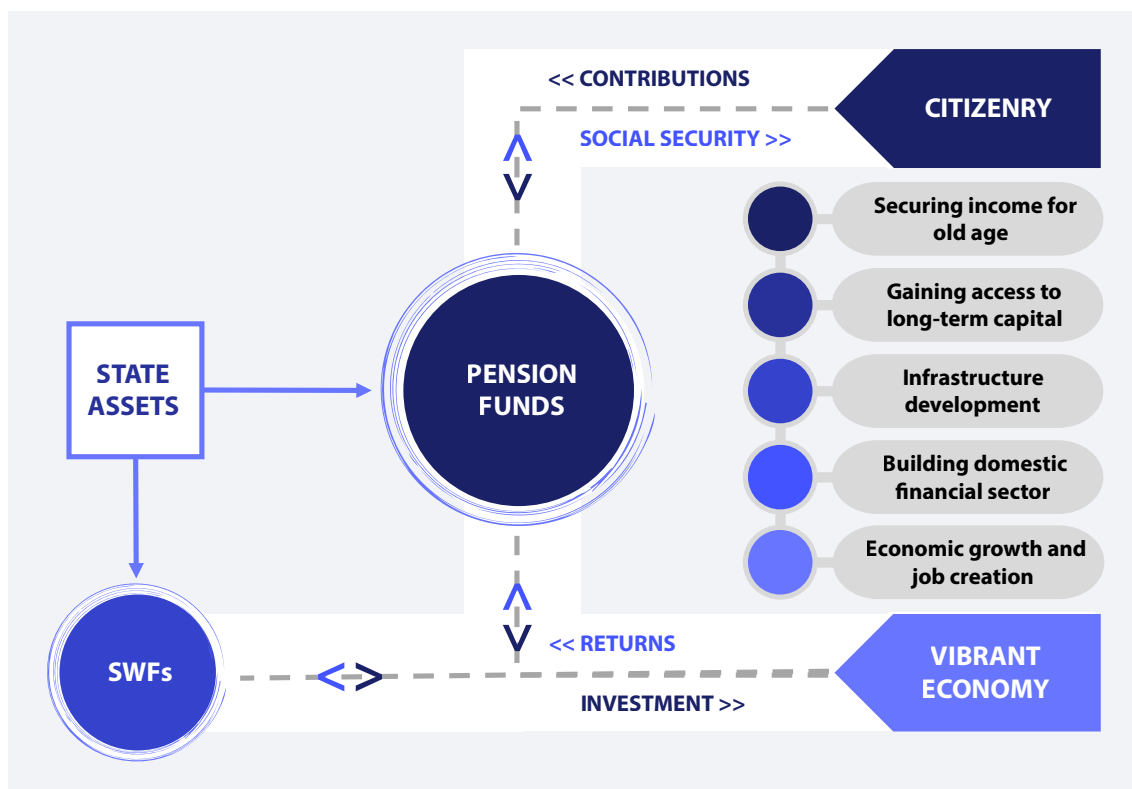
We argue that endowing pension funds with public assets, especially in the early stages of the pension system, has the potential to make pension systems more resilient while boosting privatization, as well as economic growth, vibrancy and development. Proper oversight and regulation of the pension system can also reduce the scope for corruption. While we do touch upon the most relevant arguments and findings with respect to the relationship between funded pensions and economic growth, we do not claim to give a complete picture of that discussion, nor the issues considered when looking at pension reform. Furthermore, we do not claim that funded pensions alone are the panacea for demographic change and other economic issues.<sup>3</sup>

The rest of this report is structured as follows. Section II describes the idea. Section III discusses recent research on the role that pension funds and privatization have in fostering economic growth. Section IV discusses arguments in support of privatization based on existing literature and research, while Section V discusses the potential limitations and issues to consider. Section VI concludes. The appendix, furthermore, contains a series of short case studies about the international experience with asset transfers and sales to pension funds to further illustrate the arguments.

## II. The Idea

In essence, the idea is quite simple: governments kick-start a funded pension system by transferring public assets—be they public (or unused) land, infrastructure, or shares in state-owned enterprises (SOEs)—to newly created pension funds that would subsequently be responsible for managing the asset and increasing its value. The transferred assets, combined with pension contributions from the population, will enable the pension funds to become important local investors and support economic growth over time. Citizens will directly benefit from the pension system in the form of future retirement income, as well as indirectly via the positive effects that long-term investors, such as pension funds, can have on the domestic economy. Pension funds, in particular, would constitute a source of long-term capital to finance infrastructure projects, support the development of local financial markets and ultimately spur job creation. Figure 1 illustrates this process, which is discussed in further detail throughout this paper.

**Figure 1: How Privatization Through Pension Funds Benefits Citizens and the Economy**



Source: Collier Pensions Institute

3 See Barr and Diamond (2008f) and Clements et al. (2014) for a more comprehensive discussion of funded pensions and the pension reform process, including a framework to compare pension systems.

Financial vehicles that foster economic development do, of course, already exist, for example, in the form of Sovereign Wealth Funds (SWFs). The creation of pension funds and dedicated SWFs is not mutually exclusive. Each vehicle can complement the other, and it is conceivable to split public assets between these two kinds of institutions. However, there are two key differences between pension funds and SWFs. First, the primary purpose of a pension fund is to invest assets to secure retirement income for its contributors, while an SWF can have other primary purposes. Second, a pension fund has liabilities and a fiduciary duty towards its policyholders, whereas an SWF has no liabilities and only a fiduciary duty towards the government. To build upon this discussion, we now focus on a subcategory of SWFs: Sovereign Development Funds (SDFs). SDFs are presented in detail in Box 1.

### **Box 1: Sovereign Development Funds<sup>4</sup>**

Bruce-Clark and Monk (2017) define SDFs as a sub-category of SWFs with a dual objective: financial performance and domestic development. While SDFs alone cannot solve all issues relating to development, they can impact economic growth by making strategic investment alliances with other domestic and foreign actors, while contributing to financial market development (Singh Bachher et al., 2016).

Through their investment activities, SDFs aim to generate positive externalities on domestic development. Economic development, in turn, can affect the financial success of other investments, creating a positive feedback loop. For example, a large-scale infrastructure project could have positive effects on regional companies in which the fund has shares. Successful SDFs have become key actors in their domestic economies, investing in infrastructure projects, financing the development of crucial sectors, participating in venture capital markets, and encouraging company creation and growth (Bruce-Clark & Monk, 2017). Positive experiences with such vehicles include Temasek in Singapore and Khazanah Nasional Berhad in Malaysia, which aims to grow SOEs into market-leading private companies (Bruce-Clark & Monk, 2017).

Over time, SDFs could attract greater confidence from international investors and lead to increased foreign investment, as well as unlock more domestic investment (e.g., by co-investment partnerships with domestic and foreign actors). SDFs can also act as facilitators between local government and private investors—an aspect that is especially important for large-scale projects.

The central thesis of this report is aligned with what Singh Bachher et al. (2016) call the “reinforcing” strategy for SDFs. Under this strategy, SDFs are endowed with underperforming public assets and become responsible for increasing returns and development through the reorganization and professionalization of the asset. An example of a recently established SDF is Ethiopian Investment Holdings (EIH), which started operating in early 2022 as the strategic investment arm of the Ethiopian government. The purpose and framework of EIH (See Box 2) align with the idea of professionalizing asset ownership through an SWF: state-owned assets are transferred to the fund, which then becomes responsible for managing the assets and increasing their value. We hereby propose a similar process for pension funds.

The differences between transferring assets to a sovereign vehicle, such as the EIH, and privatization through a pension fund are better understood by looking at who the fund is accountable to and how the profits are used. An SWF, for example, is accountable to its government, whereas a pension fund is accountable to its plan members. While the government is the ultimate owner of the assets of an SWF, the pension plan members and future retirees are the ultimate owners of the assets in pension funds. The primary purpose of a pension fund is to finance (future) retirement income, whereas a sovereign vehicle, such as the EIH, transfers part of the proceeds back to the government. As a result, profits made by a pension fund accumulate and directly serve to finance the retirement of individuals as opposed to financing general government expenses.

---

4 For a more comprehensive discussion of SDFs, their goals, management practices, pitfalls and preconditions for success, see Bruce-Clark and Monk (2017) and Singh Bachher et al. (2016).

## Box 2: Ethiopian Investment Holdings (EIH)

### Background

EIH was set up to optimize the value of significant state-owned assets in Ethiopia. The vehicle pools state-owned assets under one legal entity while the government provides strategic oversight. State-owned assets are the main source of capital and are transferred to EIH from the government.

### Objectives

The main objectives of EIH include:

- Optimizing the value of state-owned assets through professional management
- Attracting foreign investment
- Establishing a co-investment platform
- Contributing to sustainable economic development and serving the “strategic needs of the economy”

### Governance

EIH should incorporate international best practices for professional management and corporate governance. The fund’s board of directors is chaired by the Prime Minister of the Federal Democratic Republic of Ethiopia. The chair appoints the other board members, who then appoint a CEO. The structure of the organization also includes auditors and an independent international advisory board.

### Use of profits

EIH will retain part of its profits for re-investment. The rest will be transferred to the government according to a dividend policy, which is set by the board of directors.

Source: Council of Ministers (2022)

Transferring assets to a nascent pension system will allow for future revenue to fund retirement benefits along with other investments. This will simultaneously strengthen the young pension system and make the funds operational sooner. Such a transfer can generate financial returns and increase welfare, assuming that the full value of the asset has not yet been realized and the pension fund is able to remedy this.<sup>5</sup> Several exit routes are conceivable for the pension fund, such as an IPO or a traditional sale. The goal in this respect is not for pension funds to exclusively manage former state-owned assets, but for them to diversify investment over time. The Queensland Motorways transaction, which is described in the appendix, presents a possible blueprint for this type of transaction.

The idea of combining pension reform and the privatization of SOEs served as an important motivation for the pension privatization wave of the 1990s, which took place in the former Communist countries of Central and Eastern Europe (Naczyk, 2019). In Poland, for example, the legislation for pension privatization reform in 1997-1998 explicitly stated that transition costs must be funded by proceeds from the privatization of SOEs. Wiesław Rożłucki, economist and co-founder of the Warsaw Stock Exchange, called the creation of pension funds the “greatest event in the history of the [Polish] capital market” outside the creation of the Warsaw Stock Exchange (Rzeczpospolita, 2009, as cited in Naczyk, 2019:18). In Bolivia, privatization and pension reform came together earlier in 1996 when the government used proceeds from the sale of SOEs to finance a new non-contributory pension for its elderly population (Barr & Diamond, 2008b). The appendix also details several actions taken by the Chinese government to transfer shares in SOEs to its National Social Security Fund (NSSF).

But why should pension funds and privatization be on the policy agenda at all? We explore this in the next section, which looks at how pension funds and privatization can contribute to economic growth and long-term prosperity.

5 Higher financial returns do not necessarily entail higher overall welfare. Some SOEs may provide essential services to the population while not being profitable; however, these assets would not strengthen the pension system.

## III. Pension Systems, Privatization and Economic Growth

### III.1 Pension Funds and Economic Growth

At the end of 2020, accumulated assets in retirement savings vehicles<sup>6</sup> amounted to US\$56 trillion globally. Pension funds managed almost 70% of these assets, amounting to US\$35 trillion. In OECD countries, pension assets grew faster than gross domestic product (GDP) from 2010, reaching 100% of GDP by the end of 2020 (OECD, 2021). Given their scale, it is not surprising that these institutional investors are at the centre of a global policy effort to unlock long-term capital for economic growth. While assets managed by pension funds are on the rise globally, developing countries, in particular, have an opportunity to grow their domestic pension fund market. Having a relatively young population contributing to the funds over a longer period will allow assets to accrue. Similarly, fewer retirees at the system's inception mean that there will be fewer outgoings in the early days so assets can accrue faster.

Pension systems can take two general forms: pay-as-you-go (PAYG) and funded schemes. In a PAYG system, current pension benefits are financed via the contributions of the current workforce. In a funded scheme, an individual builds up financial assets by contributing to the system throughout their working life. These assets are invested, which earns a return and funds the individual's retirement benefits from the resulting pool of assets.<sup>7</sup> While both systems have multiple and far-reaching impacts on the economy, there is a key distinction between them; namely, a funded scheme creates a large pool of investable savings. The transformation of these savings into productive investments can have positive implications for the wider economy, such as capital market development and the provision of long-term capital to domestic companies and large-scale projects conducive to economic growth (e.g. infrastructure).

In theory, funded pensions can foster economic growth through several mechanisms. First, the creation of large institutional investors, such as pension funds, can have positive effects on corporate governance and the efficiency of capital allocation (Börsch-Supan et al., 2005; Wurgler, 2000). Second, funded pensions can increase private saving rates since contributions are deposited in private accounts and make the transformation of savings into investments more efficient by promoting domestic capital market development (Barr & Diamond, 2008e). Capital market development, in turn, is recognized as having a positive impact on economic growth (R. Beck et al., 2014; T. Beck & Levine, 2004). Finally, pension funds and insurance companies have been found to act as long-term investors, which highlights their ability to finance long-term projects and the real economy (Lakonishok et al., 1992). However, these are not necessary consequences of funded pension systems and will depend on many country-specific factors.<sup>8</sup>

The empirical literature on funded pensions and economic growth remains scarce, and existing literature offers mixed conclusions. Most studies do not take into account the importance of pension funds' asset allocation,<sup>9</sup> despite this being pivotal to economic growth (Barr, 2000). If pension funds invest mostly in domestic government securities that are issued to finance the transition to a funded system, it is unlikely to result in economic growth (Altiparmakov & Nedeljkovic, 2018). Similarly, the impact on domestic economic growth should be smaller if a large fraction of assets is invested abroad. The core question here is whether pension savings are invested in projects that are conducive to economic growth and development.

---

6 Following the OECD definition, retirement savings vehicles are defined as assets in pension funds, employers' book reserves, pension insurance contracts and funds managed by banks and investment funds, and other vehicles that provide or facilitate retirement savings.

7 Partial funding is also possible and represents a combination of these two types. Pension funds can exist under both systems, but we will mainly address them under a funded scheme.

8 A complete discussion of these factors goes beyond the scope of this report. The interested reader can refer to Barr and Diamond (2008g) and Clements et al. (2014).

9 For a summary of the recent empirical literature see Box 3 at the end of this report as well as Thomas and Spataro (2016).



## III.2 Privatization and Economic Growth

SOEs are important players in the global economy. The IMF recently started compiling and analysing data on public sector balance sheets for 38 countries. Its estimates suggest that public sector assets in these countries are worth US\$103 trillion or 216% of GDP (J. Harris & Senhadji, 2019). Total liabilities stand at US\$93 trillion, with over 23% of this due to current pension obligations. SOEs are becoming more and more important, with assets totalling US\$45 trillion. This accounts for 20% of total assets of the world's largest 20 firms in 2018, up from just 5% in 2000 (IMF, 2020). The SOE sector is also providing crucial services and investments in emerging markets and low-income developing countries. The World Bank, for example, estimates that SOEs provided 55% of total infrastructure investments to this group of countries in 2017 (World Bank, 2017). The same report states that ownership structures have evolved, with a mix of public and private ownership amongst 60% of the largest SOEs. Furthermore, the IMF estimates that improved management of public non-financial corporations and financial assets could increase revenue from these assets by 3% of GDP annually (IMF, 2018).

Extensive research has been published on the effects of privatization on company performance.<sup>10</sup> For example, early work analysed the sales of SOEs in developed economies in the 1980s and the 1990s, including how this affected efficiency and competition. The research found that privatization generally had positive effects on the performance and corporate governance of the companies in question. More recent literature, however, has included an analysis of privatization in emerging and developing economies, including China, and come to a more nuanced conclusion. Crucially, the importance of regulatory and institutional preconditions for successful privatization was made apparent (Estrin & Pelletier, 2018). SOEs with a mix of private and public ownership were also found to be more productive than SOEs that fall exclusively under public ownership (IMF, 2020). Indeed, well-functioning SOEs are important for productivity and economic development, particularly in countries where they dominate specific industries and services. Policymakers should, therefore, consider policies that ensure the productivity of SOEs and allow for successful privatization, if appropriate. Cost-benefit analysis of asset transfers to pension funds from the perspective of different stakeholders (the pension system, the government, the wider economy) constitutes an interesting avenue for future research.

## IV. Arguments

In this section, we present a series of arguments supporting privatization through pension funds. Each argument is discussed with respect to recent research.

### IV.1 Creating Large Domestic Investors

By pooling the savings of multiple individuals, pension funds can achieve significant scale and become important actors in their domestic financial markets. From the end of 2010 to the end of 2020, global assets in retirement savings plans almost doubled from US\$30 trillion to US\$56 trillion, respectively (OECD, 2021). Countries with a young pension system, in other words those that have an expanding contributor base and relatively low pay-out obligations, experienced particularly strong growth.<sup>11</sup> This can be expected in the early stages of the system, assuming that a broad part of the population contributes to it.

The newly created pension funds would constitute domestic investors and offer a source of long-term capital in the local currency. The increased supply of capital in the local currency would reduce a country's dependency on foreign capital, as well as its sensitivity to exchange rate risk. In fact, there is evidence of a home bias in the asset allocation of pension funds, meaning that they invest more in domestic assets than the home country's share of global financial assets (OECD, 2019a). Understandably, domestic investment is crucial to any debate about pension funding and economic growth. Barr and Diamond (2008e) note that domestic investment is key to the positive effect of funded pensions on economic growth. In addition to providing capital, pension funds can become influential actors in financial markets, with any investment from a large pension fund being seen as a positive sign by other potential investors. Jara et al. (2019), for example, compare publicly listed firms in Chile that receive domestic pension fund investment and those that do not, and find that firms in which a pension fund invests are more likely to use public bond markets to issue debt, and often at a lower cost.

10 A full review of research on privatization lies outside the scope of this report. For a review of existing literature, see Estrin and Pelletier (2018) and IMF (2020).

11 Other factors that can drive asset accumulation include investment returns and legislation on coverage and contributions.



Although methods and results diverge to some extent, academic research has generally found a positive and significant relationship between funded pensions and capital market development.<sup>12</sup> Most of these studies focus on developing economies, particularly those in Latin America, since several countries in the region instituted funded pensions over the last five decades. This positive relationship has been evidenced by increased demand for domestic securities, both equity and debt, and improvements in the functioning of financial markets (Thomas & Spataro, 2016), meaning that pension funds can assist in the development of a local financial centre. While it is unlikely that pension funds will support capital market development if no financial infrastructure exists (see section V.5) or where capital markets have already fully developed, capital markets that find themselves between these two extremes could benefit from the introduction of pension funds.

Pension fund policy and regulation, however, must strike a difficult balance. On the one hand, financial gains from international diversification could be significant, especially in developing economies, and foreign investment is necessary for risk mitigation. On the other hand, channelling savings into foreign markets might increase the cost of capital domestically and negatively affect long-run economic growth in the home country (Barr & Diamond, 2008e). Naczyk (2016) argues that creating large domestic shareholders to i) provide long-term capital and ii) shield French companies from the influence of foreign investors were key factors leading to the partial privatization of the French pension system in the 1980s and 2000s. This illustrates that domestic pension funds can support the building of local capacity and financial markets while reducing the dependency on foreign investors.

## **IV.2 Creating Institutions with a Development Mandate and Endowing them with Assets to Manage**

The concept of pension funds impacting economic growth through investment activities can be likened to the basic concept of SDFs (See Box 1). While Singh Bachher et al. (2016) suggest that an SDF could be used to cover shortfalls in public pension systems, thereby ensuring intergenerational equity, our idea goes a step further. We argue that the objectives of a pension fund could include national development and partially share goals with SDFs. One example of a pension institution with a local development mandate is South Africa's Public Investment Corporation (PIC). At the end of March 2020, 98.2% of the US\$107 billion that it had under management came from pension funds for public employees, with the largest being the Government Employees Pension Fund. As well as managing these pension savings, PIC has an explicit mandate to foster domestic development, namely job creation and infrastructure development (PIC, 2020).

By adopting a "wealth creation" strategy, pension funds could take on a similar role to SDFs in countries with limited financial markets. Bruce-Clark and Monk (2017, p.44) define such a strategy as "...catalyzing new enterprises and industries or driving efficiency and innovation in older industries, or infrastructure or real estate projects that contribute to the dynamism of an economy." As their assets grow and their investments become more diverse over time, these large investors could develop capabilities to identify synergies and emerging players in the domestic market. This would then allow them to accelerate their development and identify key sectors needing support. The success of such a strategy, however, hinges on the quality of management and the governance framework of the funds. Without skilled managers and investment professionals, pension funds are less likely to take advantage of local capabilities and have sufficient knowledge about the domestic economy and economic environment. Similarly, sound governance processes are necessary to ensure that pension savings are not misallocated or misappropriated. It is, therefore, paramount to develop the right regulatory framework, ensure the arm's length principle, and carefully consider the domestic environment of each country individually when assessing the feasibility of such a solution.

## **IV.3 Endowing the Pension System and Investors with Capital from the Start**

Endowing a nascent pension system with assets from the start could increase the chances of financial success. As Clark and Monk (2019) highlight, a large asset base can positively affect the performance of an investment strategy. Furthermore, assets of a certain quality on the balance sheet would enable the newly created funds to take out credit against those assets and thereby generate more transactions. They would be able to undertake large-scale investments and establish a long-term strategy sooner.

As illustrated by the case studies at the end of this report, governments have sold assets to address shortfalls in pension funding. Endowing a pension system with these assets, however, could provide a more long-term solution as it would allow for steady future revenue rather than a one-off government payout.

---

12 See Thomas and Spataro (2016) for a literature review.

## IV.4 Democratizing Wealth

The relationship between privatization and income inequality is now receiving greater attention amongst scholars. A noteworthy discussion of this relationship is offered by Estrin & Pelletier (2018), suggesting that both the mode of privatization and ownership post-privatization can have an impact on income inequality (2018). Privatization at the end of the communist era, for example, played a role in creating the high concentration of wealth that is observed in Russia today (Novokmet et al., 2018). Likewise, the distribution of company shares amongst a large part of the population often failed to yield good returns for the nation's citizens. This is evidenced by the voucher programmes carried out in Russia and the Czech Republic, which have resulted in a high concentration of ownership amongst a small segment of the population (Birdsall & Nellis, 2003). Ideally, privatization would strive for both maximizing the value of the asset and ensuring equal distribution of benefits; however, research has identified a trade-off between efficiency and equity goals in the context of privatization. While transferring public assets to a small group may be undesirable, especially when it confines many of the benefits to said group, evidence shows that companies experience the positive effects of privatization more acutely when assets are transferred to a small group rather than the broader population (Estrin & Pelletier, 2018).

Privatization via pension funds could offer a middle ground. In this scenario, the asset would be transferred to a small number of specialized institutions (or one single institution), which would then preside over operations or appoint a suitable management team. The revenue from said asset would ultimately benefit future retirees, and thus, a larger segment of the population. In this respect, privatization through pension funds can be considered a way to democratize wealth and contribute to the goals of equity and wealth redistribution. The asset can eventually be sold to a non-pension fund, the proceeds of which would feed into the retirement system. An example of this can be seen in the Queensland Motorways deal, which is described in the appendix.

The question of ownership of formerly government owned assets is also an important dimension to consider. Privatization via domestic pension funds would ensure that assets remain in the hands of the domestic population. Although privatization amongst foreign owners appears to increase efficiency more than privatization amongst domestic firms in developing economies, it could have adverse consequences for the long-term development of the country (Estrin & Pelletier, 2018). Estrin and Pelletier (2018) also note that privatization through an IPO is unlikely to succeed in countries with limited capital market development. Transferring the assets to pension funds in the early stage, instead, could support the development of the financial infrastructure and regulation needed for a successful IPO at a later stage.

Finally, an alternative scenario could see the government outright sell the assets to outside investors and then transfer the proceeds to the pension funds, mandating them to invest these in stocks, bonds and other assets. Note that transferring assets directly or transferring the proceeds from their sale to pension funds are not mutually exclusive. A government seeking to strengthen its pension system could use both approaches depending on the asset. However, for some public assets, such as national infrastructure, there might be little political will or opportunity to outright privatize. In these cases, transferring the asset itself is a more feasible approach. Furthermore, contrary to the sale of the asset to outside investors, a transfer to pension funds ensures that a broad spectrum of the population remains the owner while, given the right conditions, professionalizing the asset's management.

## IV.5 Easing Transition Costs

Establishing a funded pension system will, of course, involve transition costs, especially if all citizens are due to receive benefits via the new scheme.<sup>13</sup> The question remains: who will fund existing retirees and those soon to retire who have not contributed to the new system? These transition costs can often be significant and long-lasting, as illustrated by forecasts that the Chilean government will spend 4.2% of GDP on pensions in 2050, despite the country having switched to privately funded individual accounts in 1981 (Standard & Poor's, 2016). The issue of transition costs is important, irrespective of whether a pension system existed in the country before the introduction of funded pensions. If no pension scheme existed, the government would still be left with a generation of retirees that contributed very little, if at all, to the new pension system. If a PAYG system had existed, then one generation would have contributed to the old PAYG system and reasonably expect to receive benefits from the government. Transitioning to a funded pension scheme, however, means that the government will see lower contributions, if any, from the working population in the future. In both cases, the retirement of one generation needs to be financed without having contributions from the corresponding working population.

---

13 See Barr and Diamond (2008f) for a full discussion of transition costs.

This leaves the government with several options for that generation. First, the affected generation could be left without a pension, but for obvious reasons, this is undesirable. Second, the government could raise taxes or emit new debt to finance this transition cost, effectively shifting the burden to current and future workers. Such an approach, however, could raise concerns about government debt. A third option is to transfer assets, such as bonds and shares, from the government to the pension system. Revenue from these assets can then be used to finance the retirement of the generation that has only contributed to a limited extent. Not only would this strengthen the new funded pension system, but it would also lead to other positive developments in the long term (see section III.1).

#### **IV.6**     **Dedicating Revenue to the Pension System**

When public assets are transferred, the associated revenue no longer forms part of the public budget and instead becomes dedicated to pension accumulation and disbursement. This reduces the risk of funds being used for purposes other than pension financing and governments not fulfilling their financial obligations to the pension system. Such obligations arise in the context of government-sponsored retirement plans for public employees, which are found in many countries. When it comes to defined benefit plans, however, this creates a liability for the sponsoring institutions.<sup>14</sup> If the value of these benefits cannot be covered by individual contributions and investment returns, the law will often demand that the sponsoring institution transfers resources to the pension system to limit unfunded liabilities. The degree to which these payments are made can vary significantly across countries and sponsoring institutions, though it often leaves significant commitments outstanding.

Deficits in pension funding are not uncommon and have previously been addressed through asset transfers. Examples of this include the Batterson Park and New Jersey Lottery transactions, which are detailed in the appendix. In other instances, such as the Allentown case (also in the appendix), governments have sold assets to non-pension funds to address funding deficits. Still, endowing the system with revenue-generating assets would mitigate the risk of ending up in such a situation. Barr and Diamond (2008e) state that the advantages of having a dedicated funding source for the pension system could include increased security for workers, a longer and more predictable planning horizon, and pension wealth protection against possible short-run fiscal priorities.

While separating the pension system from the public budget may offer some protection, governments can still influence the pension system by changing legislation. Several countries, for example, allowed citizens to withdraw a proportion of their pension savings in early 2020 and 2021 to alleviate shortfalls in income during the COVID-19 pandemic—a practice that was labelled as “populist” and “bribing citizens with their own money” (Financial Times, 2020) in the context of some Latin American countries. Although early withdrawals can be beneficial in some cases, including real estate financing, policies need to be designed carefully. After all, there have been instances where pension fund assets have been nationalized by governments (Naczyk & Domonkos, 2016), and corporations have extracted resources from the company pension fund (e.g., in the UK).<sup>15</sup> In some of the aforementioned cases, the government has had to cover the resulting deficit.

#### **IV.7**     **Reducing Corruption**

Privatization through asset sales has often been marred by corruption and a general lack of transparency. An example of this can be seen in the so-called “loans for shares” programme that was carried out in Russia, enabling well-connected individuals to acquire large stakes in the country’s most important firms at a price well below market value (Megginson, 2000). Privatization through pension funds could potentially reduce corruption since the new owner (i.e., the pension fund) would hold assets on behalf of a large share of the population. Benefits would, therefore, be distributed more equitably and, depending on the incentive structure, the fund’s management team would also be less inclined to deviate from what was in the best interest of its customers.

---

14 In defined benefit systems, the employee is promised a pre-defined level of benefits upon retirement, thus creating a liability for the pension system. In a defined contribution system, no such guarantee is made.

15 See Barr and Diamond (2008f, p.157 ff.).

Corruption and/or mismanagement at the pension fund level is, of course, a notable concern. Singh Bachher et al. (2016) argue that involving the public in the success of an SDF might encourage greater transparency and accountability in the fund's operations while reducing political interference. In that respect, pension funds, which are often subjected to greater public scrutiny due to their large membership base and societal importance, are likely to be discouraged from committing fraud. This might also be a possible outcome at the asset level since both the governance and performance of transferred assets will be of greater interest to the public. Moreover, the presence of large pension funds in domestic capital markets has the potential to influence corporate practices. If, for example, pension funds were to implement high governance requirements, corporations would look to improve practices to qualify for investment.

Other arguments look at isolating assets from corrupt governments by transferring them to pension funds. Baum et al. (2019), for example, conclude that government corruption harms all firms, though it is more pronounced for SOEs. If the governance framework of the pension funds is well defined and less prone to corruption than that of the original owner, the asset could become more productive following the transfer.

While there is no direct evidence of the prevalence of corruption regarding asset transfers to pension funds and SWFs, one cannot overlook the risk. Governments should turn to international experiences to understand and implement best practices. In fact, having strong and independent regulatory institutions is pivotal to reducing corruption throughout the privatization process and the time thereafter (Estrin & Pelletier, 2018). Indeed, the importance of the arm's length principle between governments and the pension industry cannot be overstated.

## **V. Potential Limitations and Issues to Consider**

In this section, we discuss the limitations and issues to consider when looking at privatization through pension funds and the establishment of funded pensions more generally. A complete discussion of the latter goes beyond the scope of this report; however, we refer the interested reader to the literature referenced in this section.

### **V.1 Conflicts of Interest and Political Interference**

Stakeholders with diverging interests, such as trade unions, politicians and managers of both financial and non-financial firms, may look to influence a pension fund's asset allocation and engagement with outside actors (Naczyk, 2016). Even in the case of SDFs, which tend to be more aligned with the government than traditional SWFs, Bruce-Clark and Monk (2017) emphasize that operating at arm's length is paramount to success. It is, therefore, crucial to devise mechanisms that shield the pension funds from political interference. Andonov et al. (2018) found that US public pension funds with more state officials on their boards, meaning stronger political representation than comparable public pension funds, see a lower return on their private equity investments. Similarly, Bradley et al. (2016) found that US state pension funds invest more in local firms that either make political contributions to state politicians or engage in lobbying activities, which negatively impacts fund performance. They also found a correlation between the number of politically appointed board members and the strength of the bias towards politically connected firms. The study provides tentative evidence showing that a higher proportion of political board members receiving large contributions from the financial industry is associated with lower returns. This issue is highly relevant in practice. For example, South Africa's PIC, which is often considered a successful example of an SWF, has recently been embroiled in a controversy relating to political interference, adding greater weight to these concerns (Cotterill, 2019).

### **V.2 Reduction of Government Revenue**

When a government transfers assets to a pension fund, the revenue from said assets will no longer be available for public spending. Then again, one could argue that the government already uses this revenue to benefit the population, so this kind of asset transferral would only constrain the government. Generating added value for citizens does, of course, rely on the assumption that the asset's value can be increased post-transfer, and that endowing the pension system with these assets will lead to an overall increase in productivity.

### V.3 Managerial Expertise, Governance and Local Financial Sector Capacity

The positive outcomes described in this report demand that pension fund managers be able to make decisions that increase the value of their holdings. Improving the management of large assets requires a certain level of managerial skill and operational expertise. We cannot assume that pension fund managers will necessarily make choices that foster retirement security or economic growth. Appropriate regulatory and governance frameworks are, therefore, needed to promote sound investment practices. The presence of sufficient local management expertise to improve an asset's value is another necessary pillar of the ideas we describe. This condition needs to be carefully evaluated before engaging in asset transfers. Equally, some level of domestic financial market infrastructure is required before establishing pension funds. Barr and Diamond (2008e) note that funded pensions are unlikely to affect economic growth in two polar cases, one where highly developed capital markets exist and one where there is no financial infrastructure at all. For the majority of other cases, however, the arguments described in this report can be applied. Nevertheless, the situation would have to be assessed on a country-by-country basis.

Indeed, pension funds might need disposable capital to implement a successful strategy. Assets that have not yet fully developed may require time, capital and management efforts to generate positive cash flow. In some cases, the cash flow might even be negative in the beginning. Pension funds need the necessary resources to cope with such situations. This might be easier to manage in the early stages of the system since the pension fund would not have to pay out large benefits while the population is still young. Transferring assets would also enable a pension fund to take out debt against said assets. If, however, these assets are sold instead of transferred to the pension fund, it would need to have sufficient liquidity, not only to purchase the asset but also to pay out pension benefits. The required capital can be substantial, especially for infrastructure facilities, with further capital undoubtedly being needed for maintenance and improvements. Moreover, if the transferred asset or company provides essential services or fulfils a function that is in the public interest, the government may impose restrictions on usage charges or other elements that might affect the profitability of the asset.

### V.4 Financial Regulation

A sound and holistic regulatory environment is crucial for the success of a funded system. After all, regulation can have unintended consequences for pension fund asset allocation. In the US, for example, a fund may employ a higher liability discount rate if it was to invest in riskier assets. According to Andonov et al. (2017), this regulatory incentive explains why public pension funds with a less favourable funding ratio tend to invest in riskier assets, and also find a negative impact on fund performance. Policymakers should, therefore, look to international experiences to identify best practices for pension reform and pension fund regulation.

Performance incentives for the pension fund industry need to be clearly defined. Governments need to design incentive schemes carefully to be conducive to the interest of pension fund managers in raising asset value.<sup>16</sup> Likewise, associated fees are a matter of importance for pension savers, especially since they compound over time. Barr and Diamond (2008d) calculate that a 1% annual charge will reduce accumulated pension savings by approximately 20% after 40 years.

### V.5 Importance of Assessing the Country-Specific Environment at the Time of Reform<sup>17</sup>

International experiences have shown that pension reforms are unlikely to achieve their goals if the country-specific regulatory conditions and development stages are not given sufficient attention. In the 1990s, the World Bank consulted and supported a number of countries on pension reform. The institution encouraged a three-pillar framework that was comprised of (1) a publicly managed and tax-financed pension scheme, (2) a privately managed, funded pillar and (3) voluntary retirement savings accounts. Policymakers should look to international experiences with the design of funded pension schemes to avoid repeating mistakes made in the past.

---

<sup>16</sup> It is important to point out that maximizing an asset's value might not maximize welfare.

<sup>17</sup> A complete discussion of preconditions for a funded pension system goes beyond the scope of this report. The reader may refer to Barr and Diamond (2008a), among others.



In an evaluation report of these activities, published in 2006, the World Bank recognized that in some cases, it recommended the three-pillar structure, even though the country lacked several important characteristics, such as the appropriate economic, regulatory and financial market framework (Andrews, 2006). Another shortcoming related to the recommendations to establish funded pillars in countries that had poor corruption indicators. After all, funded pillars were unlikely to succeed if the government had already accrued a large amount of debt at the time of implementation; hence, pension reforms failed and, in some cases, were even rolled back. The large fiscal burden that stemmed from the transition to a funded pension system was identified as an important driver of these reversals in several Central and Eastern European countries (Wilson Sokhey, 2017). One of the main arguments from the World Bank in favour of its reform proposal was the expectation that the multi-pillar structure would boost growth by increasing savings and deepening capital markets. However, this expectation was only met in a few countries.<sup>18</sup>

This reveals a dilemma between pension reform and the conditions of the domestic financial infrastructure. On the one hand, a policy programme aimed at improving financial and insurance markets, coupled with pension reform, can have positive effects on the functioning of these markets, including corporate governance, legislation and regulation (Barr & Diamond, 2010). On the other hand, financial and institutional frameworks need to be functioning at a sufficient level to allow a capitalised pension system to develop successfully. Therefore, the state of a country's financial infrastructure is crucial for assessing the creation of pension funds. Given the right conditions, a positive feedback effect between the pension funds and the financial infrastructure can develop.

## V.6 Financial and Operational Risk

By tying future pension benefits to the performance of pension funds, governments are exposing pension savers to capital market risks. Although pension funds have seen positive returns in the past, appropriate regulation of their activity is necessary. The OECD reports that pension funds have achieved a real positive average annual return in 23 out of 27 reporting countries between 2005 and 2020 - a period that includes the 2008 global financial crisis. Between 2010 and 2020, only three of 40 reporting countries reported a negative average annual return (OECD, 2021). Furthermore, pension funds in countries with early-stage financial markets are likely to become important investors in the domestic financial sector. Some researchers point to the potentially negative effects of pension funds on capital markets, such as increased price volatility, reduced liquidity and decreased bank financing, especially where pension funds dominate the domestic financial landscape.<sup>19</sup>

Lastly, transferring assets to pension funds also entails transferring the associated operational risks. If the pension funds mismanage the assets, the result could be worse for the population than the initial situation. Therefore, the funds need to have the necessary expertise to properly manage the asset. Selling the assets to outside investors and simply transferring the proceeds to the pension funds would not transfer this risk to the pension system. However, the potential benefits outlined in this report can make it worthwhile to take the risk. Furthermore, as already mentioned above, in some situations an outright sale of the asset might not be an option.

---

18 For a more detailed discussion, see Andrews (2006) and Barr and Diamond (2008a).

19 See Thomas et al. (2014) and Hu (2012) for a discussion and further references.



## VI. Conclusion

Many developing countries face the dual challenge of creating pension systems for a growing population and privatizing large state-owned assets. This report argues that both challenges can be partially and simultaneously addressed by establishing pension funds and endowing them with state-owned assets, such as land, companies or infrastructure. These institutions would then be responsible for managing the assets and benefit from future revenues, including any proceeds from a potential sale. Several arguments support this idea, though we must recognize that such a scheme is not a one-size-fits-all solution and does need to be evaluated on a country-by-country basis. Strong regulatory and governance frameworks as well as sufficient expertise at pension funds to manage the assets are particularly important for the concepts we describe. Policymakers should look to international experiences to avoid the same mistakes when designing a funded pension system.

Creating large domestic pension funds and endowing them with assets could facilitate the development of both domestic financial centres and capital markets by establishing important domestic investors. Pension funds can also become a crucial source of long-term capital needed for economic development. Asset transfers could provide the newly created pension funds with the capital needed to make substantial investments sooner while helping to ease the transition costs associated with a funded pension system in its early stages. Transferring assets and earmarking their revenue for future pension payouts can limit the risk of eventual funding gaps, which are already being seen in many countries. Simultaneously creating or strengthening existing safeguards, such as national regulators, governance rules and regular audits, will also be paramount to prevent corruption and the misallocation of resources. Such a privatization scheme does not necessarily guarantee that a pension system is well designed, but it can facilitate its growth in the early years.

Crucially, privatization through pension funds constitutes a form of democratizing the nation's wealth. By using the assets to effectively finance the population's retirement, any revenue will be shared by a large segment of the population. This is an important difference from traditional privatization. Privatization through pension funds can, therefore, facilitate the establishment of a universal pension system while promoting economic growth.

### Box 3: Recent Empirical Evidence on Funded Pensions and Economic Growth

The empirical literature on funded pensions and economic growth is somewhat scarce and offers diverging conclusions.

Bijlsma et al. (2018) analysed 34 OECD countries between 2001 and 2010 and concluded that firms in sectors that have a higher dependence on external financing grow stronger in countries with a large pension asset pool. The authors, however, note that the generalization of this finding, which aggregates output levels, may not be appropriate.

Davis and Hu (2008) study a panel of 38 OECD countries and emerging economies by using a modified Cobb-Douglas production function. They identify a positive relationship between the ratio of pension fund assets to GDP and output per capita, with a stronger effect in EME countries than OECD countries.

Altiparmakov and Nedeljkovic (2018) analyse a panel of 36 countries in Latin America, Eastern Europe and Central Asia between 1990 and 2013. Of these countries, 20 undertook some form of pension reform during the sample period. Using a difference-in-difference approach, the authors compare reforming and non-reforming countries, but find no significant effects of pension reform on economic growth.

Finally, Zandberg and Spierdijk (2013) do not find any short-term effects of funded pensions on economic growth, though long-term consequences are mixed. The authors highlight that most of the theoretical effects of pension funding on economic growth are long-term effects.

## APPENDIX

### Case Studies Of In-Kind Asset Transfers To Pension Funds

#### **Batterson Park, Hartford, Connecticut, USA**

Originally owned by the City of Hartford, Connecticut, Batterson Park is a public space that is based largely outside the city's regional jurisdiction. It generates revenue from entry fees, but since 2016, the park has been closed to public access due to liquidity constraints (Fitch, 2017).

In 2017, ownership of 86 acres of the park was subsequently reassigned to the city's pension fund for municipal employees. This in-kind transfer was intended as a replacement to the city's regular US\$5 million contribution and was a part of a broader effort to reduce the city's budget deficit of US\$48.5 million (Fitch, 2017).

The land was put up for sale (or lease) in 2019, with the proceeds being channelled into the pension fund. At the time of writing, the terms of this sale (or lease) have yet to be confirmed (Seay, 2019).

#### **The UK National Lottery**

The Gambling Commission, which is part of the UK Government, grants a fixed-term licence to any company seeking to operate the National Lottery.

In 2010, the Canadian Ontario Teachers' Pension Plan (OTPP), one of the largest pension funds in the world, acquired the Camelot Group plc (Camelot) for an estimated price of GB£389 million (US\$603 million). Prior to its acquisition, Camelot was awarded a ten-year licence to operate and run the UK National Lottery. This licence was then extended for another four years in March 2012. Camelot, which formed in 1994 as a consortium to bid for the franchise, has held the exclusive rights to operate and run the UK National Lottery since its inception.

The OTPP acquired Camelot on behalf of its Long-Term Equities Division, which targets investment opportunities with a steady cash flow and potential for growth in the long term. The division actively engages with the management of OTPP's portfolio companies to foster long-term business growth (OTTP, 2010).

The Gambling Commission did have to approve the sale, with the OTPP's plan to maximize revenue being a key factor in its decision (National Lottery Commission, 2011). Lottery revenue is important to the public sector, given that 95 % of it is set aside for prize money, community projects and other good causes. Of the remainder, approximately 4% is used to cover running costs and 1% is retained as profit (National Lottery Commission, 2022).

Interestingly, the UK government was one of the original shareholders of Camelot through the formerly state-owned company Royal Mail. Thus, this deal represents the sale of a partially state-owned company to a foreign pension fund and illustrates the theme of this report.

#### **The National Irish Lottery**

In 2012, the Irish Government announced that companies were to compete for the next National Irish Lottery licence, requiring an upfront payment to the Irish state. This was done as a means of generating revenues to finance various job-creating projects, such as the Wild Atlantic Way and the National Sports Campus. Under this licence, its annual contribution to good causes is set at 65 % of gross gaming revenue (i.e., total sales minus prizes).

Premier Irish Lotteries (PLI) was then founded in 2013 by a consortium comprising of An Post, An Post Pension Funds and the OTPP in order to bid for this licence. It was selected as the preferred candidate in 2014, given that it met all essential requirements and had submitted the highest licence fee proposal, amounting to EU€405 million. Now, An Post and the OTPP are jointly managing the National Irish Lottery for a period of 20 years, drawing on the experience of Camelot (see the case about the UK National Lottery).

## Allentown, Pennsylvania, USA

In April 2013, the City of Allentown was facing a pension liability that could have consumed up to one-third of the city's general fund budget by 2015 (Paul, 2013). To address this issue, the Allentown City Council tried to generate up-front revenue by leasing its water and wastewater systems to the non-profit, quasi-public agency, Lehigh County Authority (LCA) (Gilroy, 2015). LCA's bid of US\$220 million proved to be the highest amongst the seven other bidders (Sieger, 2020).

To complete the transaction, LCA issued US\$220 million in bonds to the City of Allentown for the rights to manage its water and wastewater system for a 50-year period. The deal stipulates that the city is also to receive annual royalties of US\$500,000, which is due to take effect from year four. The City of Allentown has so far used approximately US\$160-180 million to reduce its pension deficit and US\$30 million to pay off existing water and wastewater system debt.

Each year, LCA expects to collect more money than it spends on these systems, which will cover bond costs and help to build a reserve for eventual upgrades. The onus of maintenance, equipment purchases and infrastructural repairs, moreover, will no longer be on the city or its budget.

## Philadelphia Pennsylvania, USA

In 2013, the City of Philadelphia agreed to sell Philadelphia Gas Works (PGW) to UIL Holdings Corporation for US\$1.86 billion. Once all costs had been covered, the City was expecting to have around US\$424-631 million remaining (Shelly, 2014), which the mayor intended to use towards reducing the funding gap faced by the City's municipal pension fund.

Despite this agreement, the sale required approval from Philadelphia City Council and the Pennsylvania Public Utility Commission. The council concluded that the risks of selling the utility outweighed the stated benefits and as a result, the sale was terminated in October 2014 (Maykuth & Vargas, 2014).

## New Jersey Lottery, USA

The New Jersey Lottery Enterprise is owned and operated by the State of New Jersey. Its original purpose was to provide revenue-generating entertainment to fund education and state institutions.

In April 2017, this asset was transferred for a period of 30 years to New Jersey's three largest state-administered pension funds, which valued it at US\$13.5 billion. Although the Lottery continues to be administered by the State, all net revenues remain with the pension funds as opposed to flowing into the general State budget (Lottery, n.d.).

This step was taken to address the State's historic and unfunded pension liabilities. As a result of the transaction, the funded proportion of its pension system increased from 45% to 59% (KBRA, 2017).

## Queensland Motorways, Australia<sup>20</sup>

Queensland Investment Corporation (QIC), which is owned by the Queensland Government, was originally established to manage the pension funds for state employees. Nowadays, however, it represents a wide variety of institutional investors. In 2011, the government transferred Queensland Motorways Ltd. (QML) to QIC under a long-term concession, having valued the asset at AU\$3.088 billion (US\$3.181 billion).

At the time of the transfer, the Queensland Government sold five public assets to address its budget shortfalls. The defined benefit fund for public employees, for example – which is managed by QIC – had a funding deficit of AU\$1.4 billion in 2010, meaning that it was legally entitled to a government cash injection. Unfunded pension liabilities were one of the main reasons that rating agencies downgraded Queensland's credit rating in 2009. The government had been unable to fulfil its financial obligations to maintain the motorway and hence, the transfer allowed it to address two issues simultaneously: (1) shortfalls in pension funding and (2) maintenance of the asset itself. Still, notwithstanding government assurances that toll growth for QML would not exceed the rate of inflation, public opposition to the privatisation plans soon emerged.

QIC implemented numerous operational changes at QML, including changes to its management, governance framework and compensation scheme. The new owner made improvements and additions to the system and eventually sold the asset to a private consortium<sup>21</sup> for AU\$7.057 billion (US\$6.351 billion) in 2014.

20 Based on Bennon et al. (2017).

21 Consisting of Transurban, the Abu Dhabi Investment Authority and another Australian pension fund.

Three of the key arguments in favour of an in-kind asset transfer were:

1. Limiting the downside risk of a competitive bidding process (or rather, the risk of the government not realizing its full value).
2. Balancing the government budget by avoiding the traditional transfer of capital to QIC.
3. Keeping the asset under public ownership via QIC, thereby mitigating conflict with stakeholders regarding privatization.

## Policy

### China

SOEs remain key players in the Chinese economy and drive the global growth in SOE assets. In 2017, domestic SOE assets represented over two times domestic GDP (IMF, 2020). The Chinese government has also used SOEs on multiple occasions to strengthen its developing pension system.

In their proposals for pension reform in China, Barr and Diamond (2010) stress that the transfer of SOEs reduces the required level of financial subsidies for the pension system. They also highlight the potential for the National Social Security Fund (NSSF) to become a significant long-term shareholder through a continuation of this process. It would then be able to promote improved governance among SOEs while encouraging enterprise and regulatory reform.

To address transitional costs from the 1998 pension reform, China transferred some of the shares of its SOEs to the NSSF in 2003. In 2009, the government then legislated that all SOEs and partial SOEs listed on the stock exchange after 2005 would be obliged to transfer 10% of their IPO shares to the NSSF (Barr & Diamond, 2010). In 2019, the Ministry of Finance finally announced plans to significantly enlarge the number of SOEs, with 10% of shares being transferred to the fund. As of that year, the equity transfers of 55 SOEs under this scheme totalled RMB660 billion (KPMG, 2020b). This last step was explicitly taken to shore up the fund in anticipation of increased financial pressure on the pension system, namely due to a shrinking workforce and an ageing population.

## References

- Altiparmakov, N., & Nedeljkovic, M. (2018). Does pension privatization increase economic growth? Evidence from Latin America and Eastern Europe. *Journal of Pension Economics and Finance*, 17(1), 46–84. <https://doi.org/10.1017/S1474747216000160>
- Amaglobeli, D., Chai, H., Dabla-Norris, E., Dybczak, K., Soto, M., & Tieman, A. (2019). The Future of Saving: The Role of Pension System Design in an Aging World. In *Staff Discussion Notes* (Vol. 19, Issue 01). <https://doi.org/10.5089/9781484388990.006>
- Andonov, A., Bauer, R. M. M. J., & Cremers, K. J. M. (2017). Pension Fund Asset Allocation and Liability Discount Rates. *The Review of Financial Studies*, 30(8), 2555–2595. <https://doi.org/10.1093/rfs/hhx020>
- Andonov, A., Hochberg, Y. V., & Rauh, J. D. (2018). Political Representation and Governance: Evidence from the Investment Decisions of Public Pension Funds. *Journal of Finance*, 73(5), 2041–2086. <https://doi.org/10.1111/jofi.12706>
- Andrews, E. S. (2006). *Pension Reform and the Development of Pension Systems: An Evaluation of World Bank Assistance*. The World Bank. <https://doi.org/10.1596/978-0-8213-6551-9>
- Barber, L., & Pilling, D. (2019, February 24). 'My model is capitalism': Ethiopia's prime minister plans telecoms privatisation. *The Financial Times*. <https://www.ft.com/content/433dfa88-36d0-11e9-bb0c-42459962a812>
- Barr, N. (2000). Reforming Pensions: Myths, Truths, and Policy Choices. In *IMF Working Papers* (Vol. 00, Issue 139). <https://doi.org/10.5089/9781451856033.001>
- Barr, N., & Diamond, P. (2008a). Implementing Pensions. In N. Barr & P. Diamond (Eds.), *Reforming Pensions* (pp. 151–177). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195311303.003.0009>
- Barr, N., & Diamond, P. (2008b). International Diversity and Change. In N. Barr & P. Diamond (Eds.), *Reforming Pensions* (Vol. 15, Issue 1, pp. 195–226). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195311303.003.0011>
- Barr, N., & Diamond, P. (2008c). Core Purposes of Pension Systems. In N. Barr & P. Diamond (Eds.), *Reforming Pensions* (pp. 25–34). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195311303.003.0002>
- Barr, N., & Diamond, P. (2008d). Conclusion to Part I. In N. Barr & P. Diamond (Eds.), *Reforming Pensions* (pp. 181–192). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195311303.003.0010>
- Barr, N., & Diamond, P. (2008e). Finance and Funding. In N. Barr & P. Diamond (Eds.), *Reforming Pensions* (pp. 85–110). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195311303.003.0006>
- Barr, N., & Diamond, P. (2008f). *Reforming Pensions* (N. Barr & P. Diamond (eds.)). Oxford University Press New York. <https://doi.org/10.1093/acprof:oso/9780195311303.001.0001>
- Barr, N., & Diamond, P. (2010). *Pension Reform in China : Issues , Options and Recommendations* (Issue February).
- Baum, A., Hackney, C., Medas, P., & Sy, M. (2019). Governance and State-Owned Enterprises: How Costly is Corruption? *IMF Working Papers*, 2019(253). <https://doi.org/10.5089/9781513519296.001>
- Beck, R., Georgiadis, G., & Straub, R. (2014). The finance and growth nexus revisited. *Economics Letters*, 124(3), 382–385. <https://doi.org/10.1016/j.econlet.2014.06.024>
- Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, 28(3), 423–442. [https://doi.org/10.1016/S0378-4266\(02\)00408-9](https://doi.org/10.1016/S0378-4266(02)00408-9)
- Bennon, M., Monk, A. H. B., & Cho, Y. (2017). In-Kind Infrastructure Investments by Public Pensions: The Queensland Motorways Case Study. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2981707>
- Bijlsma, M., Bonekamp, J., van Ewijk, C., & Haaijen, F. (2018). Funded Pensions and Economic Growth. *De Economist*, 166(3), 337–362. <https://doi.org/10.1007/s10645-018-9325-z>
- Birdsall, N., & Nellis, J. (2003). Winners and Losers: Assessing the Distributional Impact of Privatization. *World Development*, 31(10), 1617–1633. [https://doi.org/10.1016/S0305-750X\(03\)00141-4](https://doi.org/10.1016/S0305-750X(03)00141-4)
- Börsch-Supan, A. H., Köke, J. F., & Winter, J. K. (2005). Pension reform, savings behavior, and capital market performance. *Journal of Pension Economics and Finance*, 4(1), 87–107. <https://doi.org/10.1017/S1474747205001915>
- Bradley, D., Pantzalis, C., & Yuan, X. (2016). The influence of political bias in state pension funds. *Journal of Financial Economics*, 119(1), 69–91. <https://doi.org/10.1016/j.jfineco.2015.08.017>
- Bruce-Clark, P., & Monk, A. H. . (2017). Sovereign Development Funds: The Governance and Management of Strategic Investment Institutions. In D. Cumming, G. Wood, I. Filatotchev, & J. Reinecke (Eds.), *The Oxford Handbook of Sovereign Wealth Funds*. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198754800.013.30>
- Clark, G. L., & Monk, A. H. B. (2019). Assessing Long-Term Investor Performance: Principles, Policies and Metrics. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3321963>
- Clements, B., Eich, F., & Gupta, S. (2014). *Equitable and Sustainable Pensions: Challenges and Experience*. INTERNATIONAL MONETARY FUND. <https://doi.org/10.5089/9781616359508.071>
- Clifford Chance. (2019). *Publication of Angola's privatization programme 2019-2022*.



- Cotterill, J. (2019, February 2). South Africa battles to save reputation of tarnished fund manager. *The Financial Times*. <https://www.ft.com/content/f2786dbe-2e09-11e9-8744-e7016697f225>
- Council of Ministers. (2022). *The Definition of Objectives and Function of the Ethiopian Investment Holdings Council of Ministers Regulation*. Federal Negarit Gazette Regulation 487/2022.
- Davis, E. P., & Hu, Y.-W. (2008). Does funding of pensions stimulate economic growth? *Journal of Pension Economics and Finance*, 7(2), 221–249. <https://doi.org/10.1017/S1474747208003545>
- Estrin, S., & Pelletier, A. (2018). Privatization in developing countries: What are the lessons of recent experience? *World Bank Research Observer*, 33(1), 65–102. <https://doi.org/10.1093/wbro/lkx007>
- Fitch, M. E. (2017). *What does a pension fund do with a park?* <https://yankeeinstitute.org/2017/04/28/what-does-a-pension-fund-do-with-a-park/>
- Gilroy, L. (2015). *Paying Down Unfunded Pension Liabilities Through Asset Sales and Leases*. [https://reason.org/wp-content/uploads/files/asset\\_sales\\_leases\\_pensions.pdf](https://reason.org/wp-content/uploads/files/asset_sales_leases_pensions.pdf)
- Harris, B. (2020, August 12). Brazil reels from sudden departure of top economic officials. *The Financial Times*. <https://www.ft.com/content/c63d45a1-8e79-42df-84a8-00f7b089ca88>
- Harris, J., & Senhadji, A. (2019). *A Global Picture of Public Wealth*. <https://www.imf.org/en/Blogs/Articles/2019/06/18/blog-a-global-picture-of-public-wealth>
- Hu, Y. (2012). *Growth of Asian Pension Assets: Implications for Financial and Capital Markets* (No. 360; ADBI Working Paper Series). [https://doi.org/10.1007/978-1-349-67278-3\\_116](https://doi.org/10.1007/978-1-349-67278-3_116)
- ILO. (2018). *Social protection for older persons: Policy trends and statistics 2017-19*. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---soc\\_sec/documents/publication/wcms\\_645692.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_645692.pdf)
- IMF. (2018). *Fiscal Monitor : Managing Public Wealth*.
- IMF. (2020). State-Owned Enterprises: The Other Government. In *Fiscal Monitor: Policies to Support People During the COVID-19 Pandemic* (Issue April). IMF.
- Jara, M., López-Iturriaga, F., San Martín, P., Saona, P., & Tenderini, G. (2019). Chilean pension fund managers and corporate governance: The impact on corporate debt. *North American Journal of Economics and Finance*, 48, 321–337. <https://doi.org/10.1016/j.najef.2019.02.012>
- Kazmin, A. (2020, February 3). India plans \$30bn assets sales to tackle growing deficit. *The Financial Times*. <https://www.ft.com/content/4a2598ac-45c4-11ea-aeb3-955839e06441>
- KBRA. (2017). *A Significant Step but Still a Long Way to Go: New Jersey Contributes Lottery Enterprise to Pension Funds*. [https://www.state.nj.us/treasury/assets/docs/lottery/KBRA\\_Public\\_Finance\\_A\\_Significant\\_Step\\_but\\_Still\\_a\\_Long\\_Way\\_to\\_Go\\_-\\_New\\_....pdf](https://www.state.nj.us/treasury/assets/docs/lottery/KBRA_Public_Finance_A_Significant_Step_but_Still_a_Long_Way_to_Go_-_New_....pdf)
- KPMG. (2020a). *Brazil's infrastructure and privatization market is heating up*. <https://home.kpmg/xx/en/home/insights/2019/03/brazils-infrastructure-and-privatization-market-is-heating-up.html>
- KPMG. (2020b). *China Pensions Outlook*. <https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2020/03/china-pensions-outlook-looking-ahead-after-a-year-of-change.pdf>
- Lakonishok, J., Shleifer, A., & Vishny, R. W. (1992). The impact of institutional trading on stock prices. *Journal of Financial Economics*, 32(1), 23–43. [https://doi.org/10.1016/0304-405X\(92\)90023-Q](https://doi.org/10.1016/0304-405X(92)90023-Q)
- Lottery, N. J. (n.d.). *New Jersey Lottery Enterprise Transparency Page*. Retrieved August 8, 2021, from <https://www.state.nj.us/treasury/njletransparency.shtml>
- Maykuth, A., & Vargas, C. (2014, October 27). \$1.86B sale of Philadelphia Gas Works is dead. *The Philadelphia Inquirer*. [https://www.inquirer.com/philly/business/20141028\\_1\\_9B\\_sale\\_of\\_Philadelphia\\_Gas\\_Works\\_is\\_dead.html](https://www.inquirer.com/philly/business/20141028_1_9B_sale_of_Philadelphia_Gas_Works_is_dead.html)
- Meggison, W. (2000). Privatization. *Foreign Policy*, 53(118), 14. <https://doi.org/10.2307/1149668>
- MerrionStreet.ie. (2013). *Minister Howlin Announces Preferred Applicant for next National Lottery Licence*. <https://merrionstreet.ie/en/news-room/releases/minister-howlin-announces-preferred-applicant-for-next-national-lottery-licence.html>
- Naczyk, M. (2016). Creating French-style pension funds: Business, labour and the battle over patient capital. *Journal of European Social Policy*, 26(3), 205–218. <https://doi.org/10.1177/0958928716642944>
- Naczyk, M. (2019). Pension privatization as a boon to stock market development? In D. Oude Nijhuis (Ed.), *Business Interests and the Development of the Modern Welfare State* (pp. 314–335). Routledge. <https://doi.org/10.4324/9781351002394-13>
- Naczyk, M., & Domonkos, S. (2016). The Financial Crisis and Varieties of Pension Privatization Reversals in Eastern Europe. *Governance*, 29(2), 167–184. <https://doi.org/10.1111/gove.12159>
- National Lottery Commission. (2011). *Annual Report 2010/2011*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/229252/1145.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229252/1145.pdf)
- National Lottery Commission. (2022). *Where the Money Goes*. <https://www.national-lottery.co.uk/life-changing/where-the-money-goes>
- Novokmet, F., Piketty, T., Yang, L., & Zucman, G. (2018). From Communism to Capitalism: Private versus Public Property and Inequality in China and Russia. *AEA Papers and Proceedings*, 108, 109–113. <https://doi.org/10.1257/pandp.20181074>



- OECD. (2019a). *Annual Survey of Large Pension Funds and Public Pension Reserve Funds: Report on pension funds' long-term investments*. <http://www.oecd.org/finance/survey-large-pension-funds.htm>
- OECD. (2019b). *Can Social Protection Be an Engine for Inclusive Growth?* OECD Publishing.
- OECD. (2021). *Pension Markets in Focus 2021*. <https://www.oecd.org/finance/pensionmarketsinfocus.htm>
- OTTP. (2010). *Teachers' to acquire UK National Lottery operator Camelot Group plc*. <https://www.otpp.com/en-ca/about-us/news-and-insights/2010/teachers-to-acquire-uk-national-lottery-operator-camelot-group-plc/>
- Paul, B. (2013, November 13). Bonding Fuels Allentown Rebound. *The Bond Buyer*. <https://www.bondbuyer.com/news/bonding-fuels-allentown-rebound>
- PIC. (2020). Integrated Annual Report 2020. In *Annual Report 2020*. [https://static02.astro.com.my/astrocorporate/media/assets/astro-iar2020-full-fledge\\_13072020\\_page\\_mid-res.pdf?ext=.pdf&ga=2.200193318.927485635.1606834563-1093205677.1606722625](https://static02.astro.com.my/astrocorporate/media/assets/astro-iar2020-full-fledge_13072020_page_mid-res.pdf?ext=.pdf&ga=2.200193318.927485635.1606834563-1093205677.1606722625)
- Schipani, A., & Harris, B. (2019, October 23). Can Brazil's pension reform kick-start the economy? *The Financial Times*. <https://www.ft.com/content/c32a93f2-f1d6-11e9-ad1e-4367d8281195#comments-anchor>
- Seay, G. (2019, September 19). Hartford's I-84 acreage in Farmington marketed for sale or lease. *Hartford Business Journal*. <https://www.hartfordbusiness.com/article/hartfords-i-84-acreage-in-farmington-marketed-for-sale-or-lease>
- Shelly, J. (2014, May 3). PGW under agreement for \$1.86 billion. *Philadelphia Business Journal*. [https://www.bizjournals.com/philadelphia/morning\\_roundup/2014/03/pgw-sold-for-186-billion.html](https://www.bizjournals.com/philadelphia/morning_roundup/2014/03/pgw-sold-for-186-billion.html)
- Sieger, E. (2020, July 10). Allentown sues Lehigh County Authority over "unconscionable money-grab." *WFMZ.Com*. [https://www.wfmz.com/business/allentown-sues-lehigh-county-authority-over-unconscionable-money-grab/article\\_cd7220a3-4643-5f72-95ed-a9e99602d22a.html](https://www.wfmz.com/business/allentown-sues-lehigh-county-authority-over-unconscionable-money-grab/article_cd7220a3-4643-5f72-95ed-a9e99602d22a.html)
- Singh Bachher, J., Dixon, A. D., & Monk, A. H. B. (2016). The New Frontier Investors. In *The New Frontier Investors: How Pension Funds, Sovereign Funds, and Endowments are Changing the Business of Investment Management and Long-Term Investing*. Palgrave Macmillan UK. <https://doi.org/10.1057/978-1-137-50857-7>
- Standard & Poor's. (2016). *Global Aging 2016: 58 Shades Of Gray*. [https://www.agefactifs.com/sites/agefactifs.com/files/fichiers/2016/05/global\\_aging\\_2016\\_-\\_58\\_shades\\_of\\_gray\\_28\\_apr\\_16.pdf](https://www.agefactifs.com/sites/agefactifs.com/files/fichiers/2016/05/global_aging_2016_-_58_shades_of_gray_28_apr_16.pdf)
- The Financial Times. (2020, November 22). Pension populism threatens Andean economies. *The Financial Times*. <https://www.ft.com/content/57461212-b2cf-4450-ab9b-8a9446912d71>
- Thomas, A., & Spataro, L. (2016). The Effects of Pension Funds on Market Performance: A Review. *Journal of Economic Surveys*, 30(1), 1–33. <https://doi.org/10.1111/joes.12085>
- Thomas, A., Spataro, L., & Mathew, N. (2014). Pension funds and stock market volatility: An empirical analysis of OECD countries. *Journal of Financial Stability*, 11(1), 92–103. <https://doi.org/10.1016/j.jfs.2014.01.001>
- United Nations Human Rights Declaration, (1948).
- UNPFA. (2012). *Population Ageing and Development 2012*. <https://www.unfpa.org/resources/population-ageing-and-development-2012>, <http://www.unpopulation.org>
- Wilson Sokhey, S. (2017). *The Political Economy of Pension Policy Reversal in Post-Communist Countries*. Cambridge University Press. <https://doi.org/10.1017/9781316995822>
- Wurgler, J. (2000). Financial markets and the allocation of capital. *Journal of Financial Economics*, 58(1–2), 187–214. [https://doi.org/10.1016/S0304-405X\(00\)00070-2](https://doi.org/10.1016/S0304-405X(00)00070-2)
- Zandberg, E., & Spierdijk, L. (2013). Funding of pensions and economic growth: are they really related? *Journal of Pension Economics and Finance*, 12(2), 151–167. <https://doi.org/10.1017/S1474747212000224>

## About the authors

### Jeremy Coller

Jeremy Coller is Chief Investment Officer and Managing Partner of Coller Capital, a leading secondary private equity business, which he founded in 1990.

In 2015 Jeremy founded the FAIRR (Farm Animal Investment Risk and Return) initiative, which is the fastest-growing investor network focused on ESG risks and opportunities in the global food sector. Through the Coller Foundation, Jeremy has launched the Coller Animal Law Forum (CALF) and a number of other initiatives dedicated to accelerating the transition away from intensive agriculture. Jeremy is also founder of CPT Capital, which invests in solutions and alternatives to intensive agriculture, and is President of the Alternative Proteins Association.

He holds an MA in Philosophy from Sussex University and a BSc (Hons) in Management Sciences from the University of Manchester, UMIST.

### David Pinkus

David Pinkus is an Affiliate Fellow at Bruegel, an economic policy think tank. He is also a Senior Advisor at the Coller Pensions Institute, an initiative of the Jeremy Coller Foundation.

His research focuses on the macroeconomic effects of pension systems and future challenges to social security systems. From 2014 to 2016, he worked as a consultant at the OECD, researching policies to enable institutional investors to finance infrastructure.

He is a Ph.D candidate in Economics at Copenhagen Business School and is affiliated with its Pension Research Centre (PerCent). David also holds an MSc cum laude in Economics from Bocconi University and a BSc in Economics from Ludwig-Maximilians-University in Munich.

*All views and opinions expressed in this paper are those of the authors alone.*

Coller  
Pensions  
Institute

---