



municipalservicesproject

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# The Cupboard is Full:

Public Finance for Public Services  
in the Global South

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Ronnie D. Lipschutz & Sarah T. Romano

## Series Editors: David A. McDonald and Greg Ruiters

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### ABOUT THE PROJECT

The Municipal Services Project (MSP) is a research project that explores alternatives to the privatization and commercialization of service provision in electricity, health, water and sanitation in Africa, Asia and Latin America. It is composed of academics, labour unions, non-governmental organizations, social movements and activists from around the globe who are committed to analyzing successful alternative service delivery models to understand the conditions required for their sustainability and reproducibility.

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## EXECUTIVE SUMMARY

Across the world there are one to two billion people lacking access to basic services, primarily water and sanitation, electricity and health care. Over the past three decades, governments and international financial institutions have touted the ‘privatization’ of service delivery as the solution to these shortcomings, with disappointing results. Private providers have not proved to offer essential services more reliably and cheaply than their public counterparts, however, and have a poor record of extending coverage to the neediest.

Under earlier 20th century public service models, better-off users paid higher service tariffs and were taxed to cross-subsidize service delivery to the poor. Today, there is no common public model across the global South but a great deal of organizational and institutional experimentation. Because technology, costs, management and operating schemes vary dramatically across place and context, none is emerging as an evident model to be emulated. Yet these projects suggest that the ‘public’ approach is alive and well, thriving with community participation and constituting a real alternative to privatization.

But a concerted funding effort will be needed to enable public initiatives to work toward services for all. Where could these monies be drawn from in a time of economic austerity? Our cost estimate to bridge the global public services gap, including annual capital costs and operation and maintenance, is US\$75 billion per annum. In comparison, total global production of goods and services amounts to \$60 trillion per year, US defense and security spending is around \$800 billion per year, and total annual overseas development assistance from OECD members is roughly \$125 billion. In light of these figures, addressing the basic services deficit in the South seems but a small portion of global spending and income generation.

One potential untapped source for renewed funding of public services is the large pools of public capital accumulating in Public Pension Funds (PPFs) and Sovereign Wealth Funds (SWFs). The former are made up of regular contributions from public employers and employees, offering fixed pensions to members upon retirement. The latter have been created by governments to collect and invest revenues generated from sales of natural resources (mostly petroleum) and foreign exchange from trade, and function as national income pools that could be used toward future domestic needs. PPFs and SWFs operate much like mutual funds, seeking diversified portfolios, large-scale investments and, when possible, rapid movement of funds among investments so as to maximize gains and minimize losses.

SWFs and PPFs collectively manage as much as \$10 trillion in assets, and are expected to grow substantially over the next decade. They have fiduciary responsibilities to their members that require prudent investment and matching of assets to long-term liabilities. They invest heavily in the private sector to maximize returns for their clients, seeking a targeted return rate of around 7% annually

(compared to most stable government bonds that can yield up to 3%). At present, some invest in privately owned water and electricity companies, infrastructure operators (e.g. toll roads and airports) and health care firms.

While a growing number of these funds favour companies that follow principles of corporate social responsibility, they do not appear to ensure that their own activities are 'socially responsible'. Even though returns on investment in public services are often lower than those in private equity in the near to medium term (1-3 years), regulated public utilities tend to be more reliable sources of income growth over the longer term. Under appropriate conditions, PPFs and SWFs could actually realize greater long-term returns from investment in public service provision while avoiding the politically controversial and contradictory practice of using public sector funds to support privatization.

Setting up a special development bank in partnership with public pension and sovereign wealth funds could provide the resources required for desperately needed public service projects. We envision a 'GapServe' bank in the form of a global non-governmental organization or a UN-affiliated entity financed by fund deposits and fund-owned equity. It would offer loans for closely monitored projects and serve as an investment manager for funds, much like the World Bank but with a very different ideological framework and institutional make-up.

We suggest four possible approaches to changing current policies and practices and creating new funding sources for public services:

- (1) development and dissemination of economic analyses explaining the costs and benefits of investment in public service provision and highlighting ethical considerations
- (2) political pressure campaigns targeted to the general public, legislators, institutions, fund managers and plan members to encourage more socially responsible fund management
- (3) lobbying of legislators and politicians to change existing laws or impose new legal requirements on the funds
- (4) potential legal challenges to funds' investment practices

A variety of cases are available of recent fund activism and pressure campaigns, such as the efforts by the California Public Employees' Retirement System (CalPERS). It is critical that such models be expanded and internationalized if programs to provide essential services to the world's poor are to succeed. This will require a collaborative effort between and among researchers, NGOs, legislators and activists in the North and the South, and the creation of a global coalition that can pressure funds, governments, the UN and IFIs to commit to a set of development goals and targets that allocate public funds for public services.

## Introduction

Across the world, one to two billion people lack access to basic services essential to their health, well-being and development. This service gap encompasses clean water (884 million-1 billion), sanitation (2.6 billion), electricity (1.5 billion) and health care (1 billion), disproportionately affecting the global South (IEA 2011; Tollman, Doherty and Mulligan 2006, 1193; WHO/UNICEF 2010; WHO 2011). While some efforts have gone into expanding service coverage, many governments have proved unable or unwilling to foot the bill, often citing shortages of capital as the ‘problem’. As a result, over the past three decades governments have touted ‘privatization’ of public service delivery as the miracle solution to improve anything from quality to distribution, from access to gender equity.

Experiences with privatization have fallen short of stated goals. From a private capital perspective, they have not given rise to the high return and low-risk investments promised; examples abound of failure and corporate withdrawal. From the perspective of low-income households, even where services are delivered efficiently and sufficiently, privatized services are often unaffordable. As the number of people without clean water, sanitation, power and health care continues to grow – especially in rural areas and poorer urban neighbourhoods – the future of privatization initiatives is uncertain. At the same time, governments continue to claim they cannot afford to finance, build and operate public services.

During much of the 20th century governments took on the responsibility to provide essential public goods and services to their populations, especially the very poor. Even where provision of water, sewerage, electricity and medical care was in private hands, states were seen as the guarantors of access for all. But from the 1980s to privatization’s heyday in the 2000s, this basic principle was abandoned. Government investments in infrastructure and services were judged inefficient, open to corruption and ‘free market’ distorting. ‘Tax revolts’ in the global North, structural adjustment programs imposed on the global South by international financial institutions, and economic restructuring worldwide reduced government revenue and, consequently, public sources of capital for essential services. To counter this trend, public monies went increasingly to economic liberalization and other programs deemed more ‘efficient’ and ‘productive’ in the hope of attracting international public and foreign private investment to boost economic growth and generate more tax revenues – albeit with tax cuts for the rich and for corporations. Public infrastructure projects focused on developing transport systems (e.g. highways, railroads), energy production (e.g. dams) and communication networks for industry, on the premise that this would contribute most to economic growth in so-called emerging markets. The very poorest countries and people were left out.

Economic liberalization was based on the widespread – but incorrect – assumption that public services are more costly than private provision, suffer from a lack of market ‘discipline’ and, in any case, do a poor job of providing essential services reliably and at reasonable cost. The market-regulated

private sector, it was argued, could deliver better services and more cheaply, with lower tariffs for end users. The emerging empirical record undermines such claims (Hall and Lobina 2008, 2009). Experiences in both the global North and South suggest, moreover, that private enterprise is not very interested in offering universal access, unless it is heavily subsidized to make up for revenue losses from provision to the very poor. Under the older welfare state model, the better-off paid higher service tariffs and were taxed to cross-subsidize service delivery to the poor (even as they benefited more from social programs, subsidies and tax deductions). Neoliberalism's mantra of recent decades changed to 'pay to play', and the better-off are unwilling to subsidize those services and demand tax cuts.

Are there alternatives to privatization and what might they be? Are the coffers of public capital to build infrastructure and provide essential services as empty as claimed by authorities in both the North and South? Are there other public pools of funds that might be directed to these ends, especially where they are most needed in Africa, Asia and Latin America?

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### **“Considerable pools of public capital do exist, in the form of Public Pension Funds (PPFs) and Sovereign Wealth Funds (SWFs).”**

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As it turns out, considerable pools of public capital do exist, in the form of Public Pension Funds (PPFs) and Sovereign Wealth Funds (SWFs). PPFs accumulate regular contributions from public employers and employees, and invest those with the promise to pay out fixed pensions to plan members on retirement. SWFs have been created by governments to accumulate and invest revenues generated from sales of natural resources (mostly petroleum) and foreign exchange from trade, and they function as a national income pool. Although both types of funds already invest in infrastructure, utilities and health services, they have found it more remunerative to put their capital in the private rather than public sector, especially into equity (stocks) and real estate markets that offer higher, near-term<sup>1</sup> returns on investment.

But private enterprises can come and go while states, their service mandates and public service agencies last longer, offering safer sources of investment income over the long run. The volatility and uncertainty of private markets was made evident during the financial crisis of 2008-2009 and the European debt crisis of 2011 when the value of PPF and SWF holdings plummeted, due mostly to declines in equity and real estate markets. Revenue flows and subsidies from public investments are more stable and predictable because people always require water, food, power and health care, even in times of crisis. Under the appropriate conditions, PPFs and SWFs could actually realize greater long-term returns from public investment.

This paper explores how capital from PPFs and SWFs can serve to develop alternative investment strategies, and lays out political strategies to achieve this goal. It makes economic sense for governments to encourage investment in public services. In addition, this would contribute to improving people's living standards and proves to be the socially responsible thing to do. The general public and contributors to these funds should be made aware of current practices and demand greater attention to public needs.

The paper begins with a brief overview of the 'problems' associated with public service provision that led to privatized 'solutions' and an assessment of the current global service gap. Secondly, we explain our rough estimate of US\$75 billion per annum in capital, operating and maintenance costs to provide water, sanitation, power and health care to those currently in need across the planet, a good fraction of which could be covered by public funds.

The paper then turns to an in-depth examination of SWFs and PPFs, their functions and fiduciary responsibilities. Both want assets to grow rapidly and invest large portions in the private sector in order to maximize returns. They operate much like mutual funds, seeking diversified portfolios, large-scale investments and rapid movement of funds when necessary, but their managers also have fiduciary responsibilities to their members that require prudent investment and matching of assets to long-term liabilities. At present, some funds invest in privately owned water and electricity providers; in public and private companies that own or manage infrastructure, such as toll roads and airports; and in private health care companies running hospital chains. There is no empirical evidence of investments by funds, either directly or indirectly, in essential public services to the poor. A growing number of PPFs and a few SWFs hold shares in companies that follow principles of corporate social responsibility, yet the funds themselves do not guarantee that their activities are 'socially responsible'.

Part four discusses alternative forms of public delivery, including small user groups, user cooperatives and corporations, public-public partnerships, and traditional public agencies, and proposes financing through both local and international equity and debt via a new development bank financed by PPF and SWF deposits and fund-owned equity. This Global Public Service and Infrastructure Development Bank (GapServe) is envisioned as an international non-governmental organization or a UN-affiliated entity that would loan its capital for projects and serve as an investment manager for funds. GapServe would also vet project proposals and monitor project finances and progress just as the World Bank does, but would operate with a very different ideological and institutional framework.

The final part of the paper discusses various strategies to pressure PPFs and SWFs to invest in essential services. Several examples of fund activism and pressure campaigns are offered, and the paper concludes with a brief discussion of lessons learned and identifies questions and issues for future research.



## Global gap in essential services

In countries where many lack access to essential services, the necessary infrastructure simply may not exist – as is often the case in rural areas – or delivery systems and institutions may have decayed or have not extended to rapidly growing poorer urban areas. Such gaps in services have two main causes: the poor tend to have less influence on public authorities and serving their needs is no lucrative business compared to paybacks from improving service delivery for the better-off and for businesses.

The failure to address service gaps has frequently been ascribed to the lack of public capital: governments must make cost-benefit calculations about where to put their limited resources, and provision of services to the very poor contributes little to economic growth, which is seen as the key priority to increase available tax revenues for public investment. In the 1980s-90s, as part of the process of 'structural adjustment', international financial institutions (IFIs) insisted on reduction in social spending by governments as the quid pro quo for receiving, or refinancing, development grants and loans. IFIs have also insisted that users cover a larger share of the cost of receiving public services, a process called 'cost reflexive pricing' or 'cost recovery'. For political reasons, public service providers are often reluctant to cut off access to non-payers and, consequently, may run constant deficits. IFIs and others argue that private providers are insulated from such public pressures and are more able to coerce users into paying their bills. But even private enterprises can fall prey to public outrage if they are insensitive to the impacts of higher service prices, as was made evident in Cochabamba, Bolivia, where a private water provider was ousted by popular protest in the early 2000s.

Although some funds continue to be available from international public financial institutions, such as the World Bank and regional and national development banks and agencies, these sources tend to be under-capitalized and lenders prefer to direct their limited funds to projects in which there is significant private buy-in. Private companies mainly seek investment opportunities in places where at least a modicum of service is already provided, such as in formal urban sectors. Urban areas that lack services are unattractive because of uncertain property rights, low incomes and, in the case of electricity and water, theft in response to excessive prices. Rural areas lack the population density to provide economies of scale and acceptable private sector returns. Finally, in anticipation of private capital inflows, public sources of finance have been directed to other investments (Bayliss 2009, 4; Bayliss and Fine 2008).

The rationale for privatization of basic services has also rested on claims of greater efficiency and lower delivery costs, although the evidence on these points remains weak (Spronk 2010). Increasingly, private entities fail to meet such expectations (Anderson 2011; Balanyá et al 2005; Lobina and Hall 2000). The supposed financing shortage is exacerbated by difficulties in collecting sufficient revenues, either from public sources or users unable to afford rising tariffs (Winpenny 2003). According to a study of water costs in Chile:

Studies done by the National Federation of Water Services Workers (FENATRAOS) based on figures from the Superintendence of Sanitary Services (SISS) show that before privatization, between 1989 and 1998, rates for drinking water and sewage rose from US\$0.18 to \$0.78 per cubic meter. However, after privatization, the rise in rates for drinking water and sewage has reached \$1.10 per cubic meter in Santiago, to \$1.60 in La Serena, to \$2.07 in Punta Arenas and to \$2.60 in Antofagasta. (Larraine and Schaeffer 2010, 18)

Similar tariff hikes in other countries have given rise to public opposition and financial difficulties in operating and maintaining services and managing these profitably. The wave of utility privatization offered as the 'solution' to service delivery problems has thus begun to lose credibility (Hall and Lobina 2009).

Moreover, the overall extent of privatization is more limited than often claimed. For the most part, where the four basic services are available, they are provided largely through public entities, agencies and utilities (Hall and Lobina 2010; Lobina and Hall 2000). In many ways, public provision is preferable for service users and providers, especially if some infrastructure is already in place and if there exists a reliable revenue stream to support operation, maintenance and other recurrent costs as well as capital investment necessary to sustain and expand the reach of services. There is also good reason to continue to rely on local public institutions: they cannot disinvest and leave should the economics become less favourable, and are less likely to cut off users in arrears. In other words, privatization is not a panacea for governments' inability or unwillingness to provide and subsidize public services for the poor, and there is growing sentiment that a return to public provision is essential.

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**“Privatization is not a panacea for governments' inability or unwillingness to provide and subsidize public services for the poor.”**

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## Scale of need

There is no gainsaying that the global need for improved water, sanitation, electricity and health care is substantial, but the numbers are not altogether certain. Statistics are fairly rough and subject to considerable variance, due to differing methods of – and imprecision in – data collection and calculation, uncertainties about the extent to which these needs are met by existing services, and the fact that many countries do not collect specific data about service provision or its absence. As a rough guide, those lacking adequate service provision live primarily in so-called 'low income' countries, where per capita income is less than \$1,000/year (\$3/day) and aggregate population comes close to 850 million; yet many live in 'middle income' countries where nominal per capita income is

greater than \$1,000/year (e.g. India and China).

There is some debate over what constitutes ‘improved’ services, especially with respect to water and sanitation. Some agencies and analysts consider any type of provision, such as an outdoor stand-pipe or latrine as an ‘improvement’ over alternatives. Others argue that this level of service is both undignified and unacceptable, and would never be tolerated in the global North or among the middle and upper classes in the South. Table 1 shows estimates from several different sources of shortfalls in the provision of water, sanitation, electricity and health services as well as estimates of an individual’s ‘minimum requirement’ for these services.

**TABLE 1:**  
**Shortfalls in global provision of basic services**

Service/need	Minimum number of people lacking access	Minimum need
<b>Improved water</b>	884 million	55 l/person-day
<b>Improved sanitation</b>	2.6 billion	1 latrine per household
<b>Electricity</b>	1.5 billion	0.7-1.4 kWh/household/day
<b>Medical/health</b>	1 billion	General primary care*

\* General primary care can be defined as “the immediate – and often continuing – medical and health management of a child, adult, or family when the patient first presents to the formal health system. In low- and middle-income countries, such care is often provided from publicly funded health posts and health centers by nurses or other midlevel health workers, with medical doctors expected to play a support, training, and referral role” (Tollman, Doherty and Mulligan 2006, 1193).

Sources: IEA 2011; Tollman, Doherty and Mulligan 2006; WHO/UNICEF 2010; WHO 2011.

## Cost estimates for services provision

The literature on essential services offers a range of cost estimates on provision for all, mostly with a focus on water and sewerage. According to Fonseca and Cardone, for example, there is significant divergence in estimates of the annual costs of meeting water and sanitation targets of:

between US\$6.5 billion by the UN MDG Task Force on Water and Sanitation in 2004 and US\$75 billion by the World Water Vision in 2000. Only a few of the estimates assessed include calculations for the maintenance and rehabilitation of existing infrastructure. Further, none of the estimates consider the costs to maintain the institutions and support services for service sustainability including the development of capacities to put into practice strategies adapted to the needs of the poorest. (2005, 2)

Table 2 illustrates the wide range of cost estimates and calculations drawn from various sources,

with costs normalized to the estimated global population lacking each specific service as outlined in Table 1. Tables 3 and 4 offer per capita cost estimates from a range of sources. How accurate are the estimates shown in the tables presented here and what do they mean in aggregate? A number of caveats must be taken into consideration in answering this question. Estimates provided in Tables 2 and 3 depend on a number of contextual and contingent factors, including the location and the extent of already existing infrastructure; whether the setting is urban or rural; as well as assumptions about design, delivery, materials, labour, operation and maintenance. The financing levels in Table 4 are probably correct within an order of magnitude, but may be too low by as much as a factor of two or three, owing to the variance and unreliability of available data. Notwithstanding, the data do indicate that immediate action is required.

The most comprehensive set of estimates of per capita costs was developed in 2005 by the Millennium Project directed by Jeffrey Sachs. The initiative is associated with the United Nations' Millennium Development Goals (MDGs) announced in 2000 that set targets for halving the global level of extreme poverty – defined as \$1.25 per capita per day or less – by 2015, with a target population of about one billion people. The goals themselves fall into eight categories and 18 targets and are fairly comprehensive and encompassing, including provision of water, sanitation, electricity and health care as well as income, education, sustainability and development (UN Millennium Project 2006). The most recent update on the status of the Millennium Development Goals reports that there has been heroic albeit limited progress toward achieving them (UN 2011). For example, "An estimated 1.1 billion people in urban areas and 723 million people in rural areas gained access to an improved drinking water source over the period 1990-2008" (UN 2011, 4). Over the same period, however, the world's population grew from 5.3 billion to 6.7 billion, with most of that increase taking place in the global South. There is little chance the MDGs will be achieved by 2015 (UN 2011, 6).

The Millennium Project estimates offer useful benchmarks for the purposes of this paper, although they must be used with caution because they generalize across countries, hiding significant variations between them. The estimates of per capita cost for delivery of the four basic services in five developing countries in 2015 (other MDG services are excluded) are shown in Table 3 (UN Millennium Project 2005). These estimates include both capital and operating costs and assume that close to 70% can be covered by "domestic resource mobilization," which includes government and "partial cost recovery from households." In terms of the latter, "Households are expected to contribute financially within their means to sectors where the incentive effects of well-designed user fees are compatible with the overall policy objectives of ensuring effective and equitable access to basic infrastructure and social services" and "people below the poverty line will not pay any user fees" (UN Millennium Project 2005, 245-46, 296). In comparison, Table 4 offers per capita annual costs for the four services based on several different studies not directly associated with the Millennium Project. These estimates vary rather widely, as do the assumptions behind them (see notes to Table 4).

**TABLE 2:**

Cost estimates of meeting global MDG water and sanitation targets

Report and year of publication	Estimated annual total expenditure in \$US, and time frame	Total cost over time frame of 2011-2030*	Per capita cost (US\$) over 20 years
<b>World Water Vision, 2000</b>	\$75 billion, 2000-2025	\$3 trillion	\$2,000 or \$100/yr
<b>Vision 21, 2000</b>	\$8.92 billion, 2000-2025	\$357 billion	\$238 or \$11.90/yr
<b>WHO/UNICEF, 2000</b>	\$15.7 billion, 2000-2015	\$628 billion	\$419 or \$20.93/yr
<b>World Bank, 2002</b>	\$29 billion, 2000-2015	\$1.16 trillion	\$773 or \$38.67/yr
<b>Camdessus Report, 2003</b>	\$30-40 billion, 2000-2025	\$1.4 trillion	\$933 or \$46.67/yr
<b>French Water Academy, 2003</b>	\$32 billion, 2000-2015	\$1.28 trillion	\$853 or \$42.67/yr
<b>MDG Task Force, 2004</b>	\$6.7 billion, 2001-2015	\$268 billion	\$179 or \$8.93/yr
<b>Hutton and Bartram, 2008</b>	\$18 billion, 2004-2015	\$720 billion	\$480 or \$24/yr
<b>Mean of these estimates</b>	\$28.9 billion, 2011-2030	\$1.10 trillion	\$734 or \$36.72/yr

\*Calculation from base estimates, assuming twice the study cost (total as opposed to half), 1.5 billion lacking water and sanitation, and implementation over 20 years. Mean is the average of eight estimates.

Sources: Rows 1-7, Fonseca and Cardone 2005, 5-10; Row 8, Hutton and Bartram 2008, Table 5.1.

**TABLE 3:**

Estimates of annual per capita (2015) and mean annual cost of provision of four services in five LDCs and all low income countries (2003, US\$)\*

Country	Water & Sanitation	Energy	Health	Total
<b>Bangladesh</b>	\$6	\$20	\$30	\$56
<b>Cambodia</b>	\$8	\$23	\$32	\$63
<b>Ghana</b>	\$10	\$18	\$34	\$62
<b>Tanzania</b>	\$12	\$18	\$18	\$58
<b>Uganda</b>	\$9	\$19	\$19	\$47
<b>Mean</b>	\$9	\$19.60	\$26.60	\$57.20

\* Estimates probably include more than basic levels of service provision, and represent additional funds required beyond those already being invested. The figures include both capital and operational costs. See UN Millennium Project 2005, chapter 17 for details.

Source: UN Millennium Project 2005, Table 17.1.

**TABLE 4:**  
Estimated annual per capita costs of service provision (current dollars)

	Whit- tington et al 2008, Table 2.4*	Lenton and Wright 2004, 55**	Hutton and Bartram 2008, Table 4***	Interna- tional Energy Agency 2010, Table 6†	Doherty and Gov- ender 2004‡	UN Mil- lennium Project 2005
<b>Water</b>	\$8-\$80	\$15-87	\$73-181; \$0.73-12.53			\$3-6
<b>Sanitation</b>	\$8-80	\$10-300	\$67.33-233; \$3.67-9.43			\$3-6
<b>Electricity</b>				\$64.50; \$54.75		\$18-23
<b>General primary care</b>					\$20.30- 35.90	\$18-34

\*55-220 l/day/person, in-house, private water connection and piped sewer; capital and recurrent costs based on 20-80 cubic meters per year per person water use.

\*\*Capital costs for rural and peri-urban water provision and sanitation service.

\*\*\*Standpipe and household connection; pit latrine and household sewer connection. First set of numbers is capital cost; second is operation and management and water costs.

† Derived from estimated total of \$698 billion investment to provide universal electricity access to 1.5 billion in LDCs from 2010-2030. Operation and management is assumed to be 5% of investment cost. Annual interest of 5%. Individual electricity consumption assumed to be 1 kWh/day at \$0.15/kWh.

‡ Cost of World Bank 'Minimum Package,' as described in Doherty and Govender 2004.

What do these numbers mean in aggregate? According to Sachs and his associates:

[A] typical low-income country in 2006 will need to invest around \$70–\$80 per capita in capital and operating expenditures toward meeting the [Millennium Development] Goals. Since investments can be scaled up only gradually, the financing will be lower at the beginning of the period and rise to \$120–\$160 per capita toward the end of the period. A rising share of these investments will be financed through domestic resource mobilization, which we project to increase sharply by up to four percentage points of GDP. Still, most low-income countries will experience an MDG financing gap of 10-20 percent of GDP that will need to be financed through official development assistance...only a small share of today's global official development assistance –an estimated \$16 billion of \$65 billion in 2002 (in 2003 dollars)– supports direct MDG investment needs at the country level. Official development assistance (ODA) for direct MDG support will need to rise to \$73 billion in 2006 and \$135 billion in 2015 if all countries are to meet the Goals... By 2006 global official development assistance needs to reach \$135 billion, up from \$65 billion in 2002 and \$69 billion in 2003. (UN Millennium Project 2005, 239-240)

Table 5 shows Millennium Project estimates of the total cost of meeting the MDG goals over the period 2002-2015 and the 'MDG financing gap' that must be filled by external sources. These figures include annual capital costs and operation and maintenance. Although data from Table 4 suggest that costs might be higher than calculated by the Millennium Project, it is difficult to determine from the various sources exactly what has been included (e.g. only capital costs or operation and maintenance as well? resource costs? financing costs?). The data in Table 3 appear the most straightforward and have been used to calculate the annual and 20-year costs of service provision presented in Table 6. Note that the difference between these estimates and those of Sachs and associates in the citation above is due to the much broader scope of the Millennium Development Goals.

Is \$73.5 billion too great a sum to ask for addressing basic service gaps around the world (with a possible range of \$50-125 billion)? Table 7 offers comparable estimates of annual expenditures on various goods and services. Note, in particular, that the current level of Overseas Development Assistance (ODA) is about \$125 billion, or less than one percent of global gross domestic product.

**TABLE 5:**  
Millennium Project estimates of annual financing requirements to achieve MDGs, 2002-2015 (US\$, 2003)

	2002	2006	2010	2015
<b>Millennium Development Goals investment needs</b>	\$149 billion	\$253 billion	\$348 billion	\$529 billion
<b>Domestic resources</b>	\$137 billion	\$180 billion	\$259 billion	\$394 billion
<b>Financing gap</b>	\$12 billion	\$73 billion	\$89 billion	\$135 billion

Source: UN Millennium Project 2005, Table 17.2.

**TABLE 6:**  
Total costs of service provision, annual and 20 years (2010-2030)\*

	Number of people lacking service	Estimated annual cost per capita	Total annual cost	Total 20-year cost
<b>Water</b>	884 million	\$4.00	\$3.52 billion	
<b>Sanitation</b>	2.6 billion	\$5.00	\$13 billion	
<b>Electricity</b>	1.5 billion	\$20.00	\$30 billion	
<b>General primary care</b>	1 billion	\$27.00	\$27 billion	
<b>Total</b>	—	—	\$73,52 billion	\$1.47 trillion

\*Assumes interest on loans is internalized in annual cost.

Source: Calculations by authors.

**TABLE 7:**  
Annual capital flows, investments, expenditures

Budget or expenditure	Annual sum
<b>Global gross domestic product (2009)</b>	\$59 trillion
<b>Global military spending (2011 est.)</b>	\$2.16 trillion
<b>US GDP (2009)</b>	\$14.2 trillion
<b>US federal budget (2011)</b>	\$3.8 trillion
<b>US military spending (2011 est.)</b>	\$741.2 billion
<b>US foreign aid expenditures (incl. military aid, 2009)</b>	\$28-33 billion
<b>Canada's GDP (2009)</b>	\$1.4 trillion
<b>China's GDP (2009)</b>	\$4.8 trillion
<b>World Bank assets (2010)</b>	\$238 billion
<b>UN budget (2010-2011)</b>	\$4.9 billion
<b>UNDP budget (2010-2011)</b>	\$1 billion
<b>Net Foreign Direct Investment, middle and low income countries</b>	Ml: \$346.5 billion; Ll: \$12 billion
<b>Global Overseas Development Assistance (2010)</b>	\$125 billion
<b>Gates Foundation assets (2008)</b>	\$61.6 billion
<b>Net transfer of financial resources from LDCs</b>	\$881 billion
<b>Troubled Asset Relief Program (TARP) (US banks 'bailout' total in 2008-2009)</b>	\$700 billion
<b>Consumer annual spending on automobiles (authors' estimate)</b>	\$600 billion
<b>Global annual ice cream market</b>	\$59 billion
<b>Global annual lingerie market</b>	\$29 billion

Sources: Bill and Melinda Gates Foundation 2008; GlobalSecurity.org 2011; ResearchandMarkets n.d.; Rooney 2010; UN Development Policy and Analysis Division 2011, Table 3.1; UN Development Program 2010, 10; UN General Assembly 2009; US Official Development System Database 2009; US Office of Management and Budget 2011, Table S-1; Warburton 2011; World Bank 2010, 2; 2011.

How does \$73.5 billion compare to the \$10 trillion in assets of Sovereign Wealth and Public Pension Funds (which, by some estimates, could grow to \$15-20 trillion by 2030)? Assuming an average annual return on all investments of 4%, and ignoring payouts for the moment, revenue flows back into the funds are on the order of \$300-400 billion per year. Hence, the cost of annual funding of the capital costs of basic service delivery would be on the order of 1-3% of total fund assets or less than half of the funds' aggregate annual return. As will be discussed later in this paper, this comparison is not entirely helpful inasmuch as funds invest with the expectation of a reasonable return. Whether a 4-5% return on investment in service provision is possible is discussed below.



## What are Public Pension Funds and Sovereign Wealth Funds?

Public Pension Funds are quite old institutions compared to the newest Sovereign Wealth Funds whose operation, objectives and influence remain somewhat opaque. PPFs (also known as Public Employee Retirement Systems, or PERS) and SWFs are both repositories of assets for reinvestment, growth and eventual disbursement. Mitchell, Piggott and Kumru call them “public investment funds [PIFs]. . . [which are] investible assets under the control of the public sector.” They identify three types of PIFs:

[F]oreign exchange reserve funds held for stabilization purposes; sovereign wealth funds accumulated from natural resource taxes or fiscal surpluses; and public pension funds built up either through an explicit funded arrangement or the result of an excess of contributions over benefits during a demographic transition. (Mitchell, Piggott and Kumru 2008, 3)

However, the last category’s definition also includes public pension systems, such as US Social Security that operates on a current funding basis, with surpluses invested in US government bonds and held by a trust fund (while substantial, these funds are not available for discretionary investment and therefore not addressed in this paper). The International Monetary Fund divides SWFs into five broad categories:

- stabilization funds, whose primary objective is to insulate the budget and the economy against commodity (usually oil) price swings
- savings funds for future generations, which aim to convert non-renewable assets into a more diversified portfolio of assets
- reserve investment corporations, whose assets are often still counted as reserve assets, and are established to increase the return on reserves
- development funds, which typically help fund socio-economic projects or promote industrial policies that might raise a country’s potential output growth
- contingent pension reserve funds, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government’s balance sheet. (IMF Survey Online 2008)

The distinction between PPFs and SWFs is not always entirely clear, however. For example, the Government Pension Fund Global of Norway accumulates assets from oil and investments and operates much like a SWF, but it is mandated to support retirees rather than the country as a whole (similar to US Social Security and South Africa’s pension funds). At least one writer questioned whether the California Public Employees’ Retirement System (CalPERS) should not be considered a sovereign wealth fund (Truman 2008, Table 1), while another says it is “definitely not” (Monk 2008, 5).

Much depends on how a fund's practices are defined and understood. A point of concern among analysts and observers rests on the extent to which governments control SWFs and can order them to allocate assets in pursuit of a state's strategic policies (e.g. taking ownership of another country's industries) and how transparent such funds are about making investments. This concern has led to some calling for their exclusion from particular countries out of fear that foreign governments might gain control over strategic economic sectors (Kimmit 2008). There is not much evidence to date, however, that SWFs are being controlled in this fashion.

**TABLE 8:**  
Characteristics of 'Sovereign Investment Vehicles'

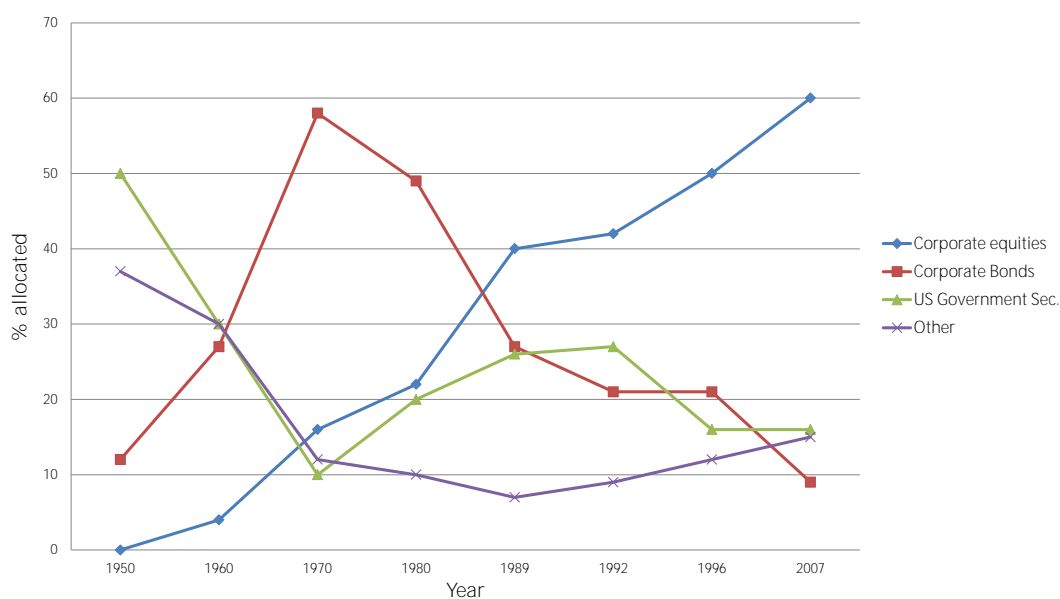
	Sovereign Wealth Fund	Public Pension Fund
<b>Asset ownership</b>	Government	Pension members (in theory)
<b>Primary purpose</b>	Pensions, infrastructure, budget smoothing	To fund defined benefit retirement obligations
<b>Funding source</b>	Commodities, foreign exchange surplus	Member and government contributions, investments
<b>Government control</b>	Direct, or as parastatal corporation	Generally low or none
<b>Disclosure</b>	Varies from transparent to opaque	Transparent by law
<b>Examples</b>	Abu Dhabi Investment Authority; Kuwait Investment Authority; Alaska Permanent Fund; Government Pension Fund Global-Norway*	CalPERS; ABP-Netherlands*; Ontario Teachers' Pension Plan; Local Government Officials-Japan

\* There is disagreement about whether these two are SWFs or PPFs.

Source: Adapted by the authors from Sovereign Wealth Fund Institute n.d.

This paper focuses on PPFs and SWFs as two general categories of public funds for capital investment. PPFs hold monies contributed by public employees and their employers and are managed for plan members as 'defined benefit'<sup>2</sup> retirement pensions. PPFs are regulated under public law and invest in various types of income-generating assets whose dividends and rising share values contribute to fund growth and cover future pension liabilities. In the United States and Canada, PPFs control about \$3 trillion in assets. This figure might be as great as \$6 trillion if sovereign pension funds are included (Bingwen 2009). SWFs (including foreign exchange funds) "are broadly defined as special government asset management vehicles which invest public funds in a wide range of financial instruments"(Fernandez 2008, 4). The funds hold surplus monies generated by sales of commodities such as oil and minerals, from budget surpluses and other state income, and from sterilized foreign reserves accumulated through balance of payment surpluses. The objectives of SWFs vary but they are generally meant to firewall surplus income from inclusion in national budgets and to provide stable sources of funds in the future when such surpluses may disappear. Globally, SWFs are estimated to control some \$4.3 trillion (Sovereign Wealth Fund Institute 2011); by some estimates, their holdings could exceed \$20 trillion by 2020 (Florida State Board of Administration 2008). Table 9 lists a selection of both types of funds.

**FIGURE 1:**  
PPF asset allocations, 1950-2007



Sources: Mitchell et al 2001, 30; Weller and Wenger 2008, 8.

**TABLE 9:**  
A selection of the largest PPFs and SWFs (US\$ billions, 2009/2010)

PPF	Established	Assets	SWF	Established	Assets
Government Pension Investment-Japan	2006	\$1,315	Abu Dhabi Investment Authority	1976	\$627
Government Pension Fund Global-Norway	1990	\$557	SAMA Foreign Holdings-Saudi Arabia	N/A	\$439
ABP-Netherlands	1922	\$300	SAFE Investment Company-China	1997	\$347
National Pension-Korea	1988	\$235	China Investment Company	2007	\$332
US Federal Retirement Thrift	1986	\$234	Hong Kong Monetary Authority	1993	\$292
California Public Employees' Retirement System	1932	\$205	Kuwait Investment Authority	1953	\$260
Local Government Officials-Japan	N/A	\$166	Singapore Investment Corporation	1981	\$248
California State Teachers' Retirement System	1913	\$155	Australian Future Fund	2004	\$73
Ontario Teachers' Pension Plan	1990	\$108	Alaska Permanent Fund	1976	\$40

Sources: Sovereign Wealth Fund Institute 2011; Watson 2010.

## History of PPFs and SWFs

Public pensions have a history reaching back to the 16th and 17th centuries (Arza and Johnson 2006; Blackburn 2002), while sovereign wealth funds are of more recent vintage. Modern public pensions were launched in Europe and the United States in the middle to late 19th century, primarily to provide benefits to retired public employees (Arza and Johnson 2006; Mitchell et al, 2001). For much of the 20th century, PPFs were funded such that plan member and government contributions matched assets to future liabilities, that is, future pension payouts to plan members. This was possible because the public sector was smaller than it is today, there were far fewer retirees than active contributors, and government contributions were not regarded as onerous or excessive. Over the past few decades, however, with the expansion of public sector employment, the aging of working populations, relatively stagnant incomes and demands to reduce government contributions to pensions, many PPFs have seen their assets falling short of projected long-term liabilities (Baker 2011). Because of low returns on investment and growing numbers of retirees, government payments to pension funds have been consuming growing fractions of public spending, fueling opposition to increased contributions (Pew Center on the States 2010). This so-called pension crisis has prodded fund managers to seek higher returns from investment categories such as equities, derivatives and real estate, with the goal of making up for some, if not all, of the projected shortfalls. Their strategy has proved less successful than hoped, especially due to market volatility.

For their part, sovereign wealth funds date from the mid-20th century – although the French *Caisse des Dépôts et Consignations* created in 1816 was apparently one such fund (Hildebrand 2007, 2). SWFs are designed, first, to ‘sterilize’<sup>3</sup> foreign exchange income so that it does not enter domestic economies and stimulate inflation, and second, to diversify state income sources in anticipation of future declines in resource and other state revenues. The first modern SWF was the Kuwait Investment Authority established in 1953, followed in 1956 by the Kiribati Revenue Equalization Fund. Initially, oil-producing countries with large petrodollar surpluses deposited these in northern banks, where they were loaned out to developing countries. This was not an ideal investment strategy because inflation and defaults eroded financial assets and it became clear that banks were realizing greater profits from loans than were depositor countries. As a result, SWFs began to increase in numbers during the 1970s, as petrodollar earnings piled up around the world, and their numbers jumped again during the 1980s, as oil incomes plummeted and governments decided to bank rather than spend reduced incomes.

In recent years, countries with large foreign trade surpluses such as China have established SWFs. Altogether, there are some 48 SWFs around the world (including those of several US states, notably Alaska), of which 28 were established after 2000. The assets of individual funds range from a few tens of millions of dollars to as much as \$800 billion; China and Hong Kong together have at least five such funds, with total assets in excess of \$1.1 trillion (Sovereign Wealth Fund Institute 2011; US General Accounting Office 2008). While SWFs are found in both the global North and global South, the available data show that roughly 75% are in the latter. By contrast, the majority of PPFs are in the North (although there are numerous state-run retirement programs in the global South).

## Investment strategies

While some funds rely entirely on their own in-house operations to make investment decisions, others also use outside management companies with more experience in making higher-risk investments in equity, resources and real estate. Until the 1960s, PPFs were generally required by law to put most of their assets into relatively low-yield, 'fixed income' investments, such as government bonds, which were seen as very stable. In the following decades, legal restrictions on investment by both private and public pension plans were lifted because stocks yielded higher returns over the long term, with the proviso that funds needed to balance riskier investments against their fiduciary responsibilities to ensure that assets matched liabilities (see Figure 1). Thus, fund managers began to move out of fixed income and into equities and 'real assets' (real estate, commodities, infrastructure) with the promise of higher returns, but also more market volatility. When inflation eroded the value of assets in the 1970s, opting for shorter term high return investments became the more attractive strategy, even though they were prone to losing value very rapidly if investors panicked. In order to avoid massive losses in bull markets and 'manage' risk, PPF managers today distribute their assets across a range of possible investments, as seen with the example of the Ontario Teachers' Pension Plan in Table 10.

**TABLE 10:**  
Asset distribution for Ontario Teachers' Pension Plan (for year ended Dec. 31, 2010, in \$billions)

Net investment by	2009	2010
<b>Canadian equities (shares)</b>	8.4	9.3
<b>Non-Canadian equities (shares)</b>	32.8	38.2
<b>Bonds</b>	15.4	22.7
<b>Real-rate products</b>	19.9	23.2
<b>Commodities</b>	1.9	5.2
<b>Real estate</b>	14.2	16.9
<b>Infrastructure</b>	5.6	7.1
<b>Timberland</b>	2.3	2.2
<b>Absolute return strategies</b>	11.7	11.4
<b>Money market</b>	(18.7)	(31.5)
<b>Total</b>	\$93.5 billion	\$104.7 billion

Source: OTPPP 2010b, 29.

SWFs manage their own funds and allow governments to avoid the costs associated with middle-man and money management, an approach that also permits them to diversify their assets and risks. However, SWFs are similarly vulnerable to market volatility because they are funded substantially by commodity and foreign exchange earnings. When the global economy is booming, the prices of commodities and manufactured goods generally rise along with revenue flows; during recessions, income growth slows down or even stops. For example, Norway's Government Pension

Fund Global, supported primarily by oil revenues, lost about 25% of its value in 2008 as both equity and resource markets crashed (Royal Ministry of Finance 2009), while other SWFs lost as much as 30-40% (Grennes 2009; Setser and Ziemba 2009). Some SWFs are responsible not only for providing revenues for the future but also need to compensate for declines in national income; consequently, they also seek investments with higher risks and returns (see Table 11). At the same time, most SWFs do not face PPFs' asset-liability dilemma: they are not mandated to provide future defined benefit payouts to retirees and therefore do not have those types of restrictions and liabilities. In recent years, the bulk of growth in SWFs has come from higher commodity prices, especially oil. As a result, they have been growing rapidly (see Figure 2).

**TABLE 11:**  
Abu Dhabi Fund Investment neutral benchmarks, by asset class

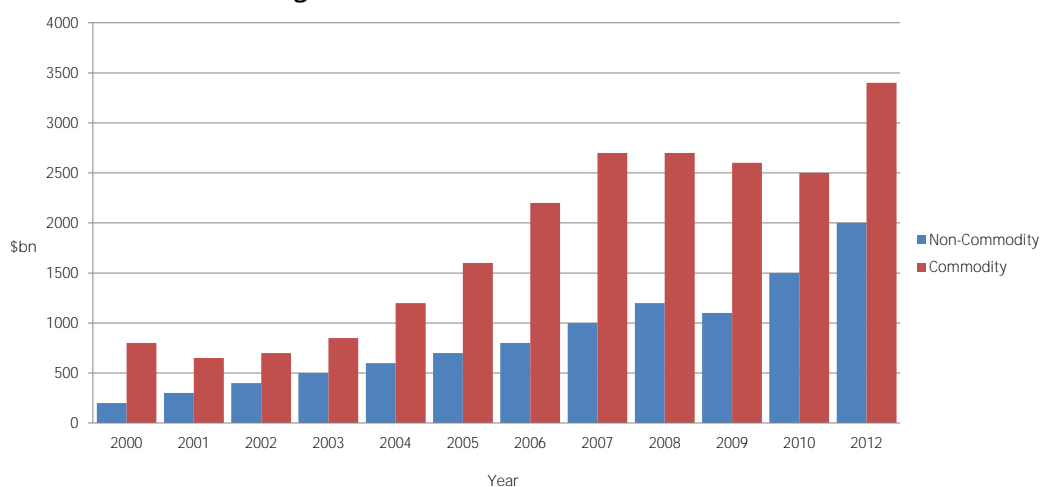
Asset Class	Minimum asset allocation	Maximum asset allocation*
<b>Developed equities</b>	35%	45%
<b>Emerging market equities</b>	10%	20%
<b>Small cap equities</b>	1%	5%
<b>Government bonds</b>	10%	20%
<b>Credit</b>	5%	10%
<b>Alternative**</b>	5%	10%
<b>Real estate</b>	5%	10%
<b>Private equity</b>	2%	8%
<b>Infrastructure</b>	1%	5%
<b>Cash</b>	0%	10%

\* Denotes neutral benchmark ranges within which allocations can fluctuate, hence they do not total 100%.

\*\*'Alternative' comprises hedge funds and managed funds.

Source: ADIA 2009.

**FIGURE 2:**  
SWF assets under management



Source: Maslakovic 2011.

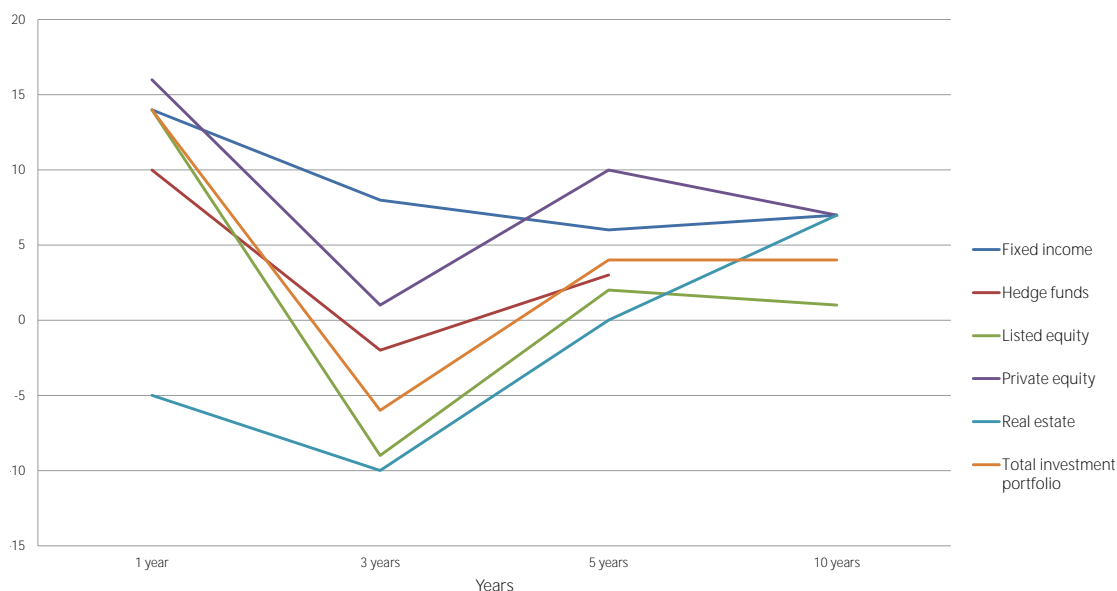
In recent years, both types of funds have sought benchmark returns on investment of 7.5 to 8%, balancing among fixed income government bonds and riskier equities, derivatives, commodities and real estate. For the most part, with a few exceptions, this approach led to rapid growth in assets during the 1990s and 2000s with a few dips and bumps. In 2007, however, things began to go awry and, in 2008, average returns went negative, leading to massive fund losses. For example, Ontario Teachers' Pension Plan (OTPP) investment income declined between 2005 and 2007 and dipped in \$20 billion in 2008 (loss primarily linked to bonds and equities); this drop totalled about \$23 billion. The California Public Employees' Retirement System (CalPERS) is somewhat more opaque on losses and gains among different investment classes, but the fund apparently lost close to \$70 billion during 2008 and 2009, and considerable amounts during the stock market decline of 2011 (Associated Press 2011). Other funds suffered comparable losses in the real estate sector (see Table 12). Figure 3 illustrates returns to different asset classes over the past one, three, five and 10-year periods; the decline in real estate and equities during 2008 is clearly visible. The general recovery in equity markets since 2009 restored a substantial fraction of asset value, although most are still below the levels last seen in 2007 and still face long-term liabilities that exceed current and projected assets.

**TABLE 12:**  
US state pension investment losses in 2008

Pension fund	Percentage decline
<b>Pennsylvania State Employees' Retirement System</b>	-28.7%
<b>Ohio Public Employees' Retirement System</b>	-26.8%
<b>Pennsylvania Public School Employees' Retirement System</b>	-26.5%
<b>California Public Employees' Retirement System</b>	-23.0%
<b>Illinois Teachers' Retirement System</b>	-22.3%
<b>Oregon Public Employees' Retirement System</b>	-22.2%
<b>Indiana Employees' Retirement Fund</b>	-21.0%
<b>Virginia Retirement System</b>	-21.0%
<b>Maryland State Retirement and Pension System</b>	-20.0%
<b>Missouri Public School Retirement System</b>	-19.3%
<b>New Jersey Division of Pensions and Benefits</b>	-19.0%
<b>North Carolina Retirement System</b>	-14.0%
<b>Georgia Teachers' Retirement System</b>	-13.1%

Source: Pew Center 2010, 7.

**FIGURE 3:**  
Median returns to PPFs by asset class (%)



Source: Primack 2011.

As fund managers have moved assets in search of higher returns, the funds have emerged as major institutional investors and have begun to influence not only individual share values but also entire markets (Yan and Zhang 2009). Fund managers must try to ensure that their decisions do not increase short-term market volatility or give rise to bull markets, since large investments in concentrated holdings can artificially increase stock prices and large divestments can cause a run on particular shares, which can then extend to others in the same general sector (e.g. across the electronics industry). On the upside, moving markets mean growth in asset value. On the downside, they can result in massive losses. Because markets tend to move in unison, diversification among equities and asset classes does not guarantee stable returns. Moreover, because different markets often move in concert, as investors seek safe havens, diversification may not work at all (Hudson 2011). The diversification strategy thus begins to look flawed in the light of the losses suffered during the financial crisis of 2008-2009 and the market declines of summer 2011.<sup>4</sup>

As funds seek high returns the investments of PPFs and SWFs also rely on 'well-functioning markets' to reduce risk. In other words, the significant divergence between fixed-income investments with relatively low rates of return and more speculative ones means that something along the lines of 25-50% of investments ride on the business cycle and depend on the good judgement and luck of money managers around the world and the hope that a herd mentality is held at bay. Even low-risk government bonds are beginning to look a bit shaky, given high levels of debt held by the United States and European countries; the current returns on bonds stand at an all-time low. This implies

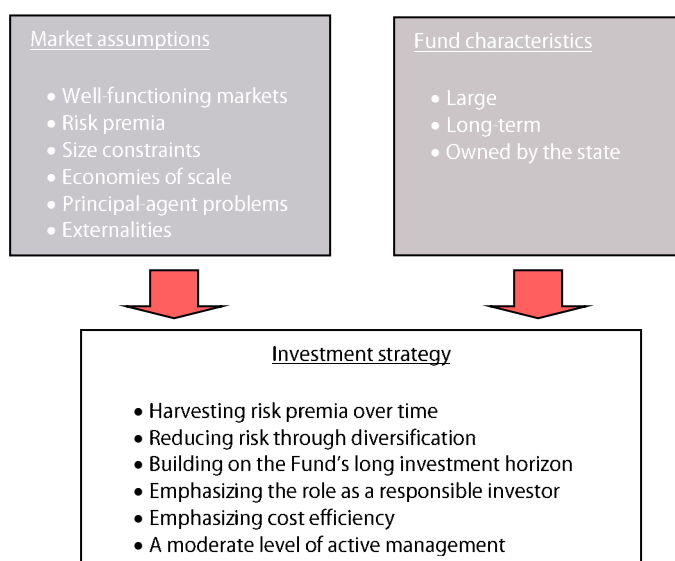


that funds must exercise great caution so as not to experience excessive losses and find that projected liabilities exceed assets. All of this uncertainty suggests a need for longer-term investments that offer more stable returns.

Figure 4 illustrates the investment strategy of the Norway Government Pension Fund Global (GPFG). Note the extent to which assumptions are premised on the stability of markets and the reduction of risk through diversification. GPFG managers argue that this remains the best approach to ensuring asset growth:

The financial crisis in 2008 resulted in a fall in value which was substantial, historically speaking. However, the subsequent recovery has also been unusually strong and rapid. When the period 2008-2010 is considered as a whole, the Fund has generated a total return corresponding to more than NOK 260 billion. If the risk level of the Fund had been reduced in 2008 or 2009, the recovery during the upturn following the financial crisis would not have been as strong. Significant uncertainty still attaches to the future development of the financial markets, and we have to be prepared for new periods of unrest. (Royal Ministry of Finance 2011, 3)

**FIGURE 4:**  
Norway's Government Pension Fund Global's investment strategy



Source: Royal Ministry of Finance 2011, 11.

Are there alternatives to short-term high risk investing? In search of more stable, long-term returns, a growing number of funds are putting capital into the broad category of 'infrastructure', which comprises three somewhat distinct groups: transportation, utilities, and social infrastructure. The first category includes toll roads, bridges, tunnels, parking facilities, railroads, rapid transit links, airports, refueling facilities, and seaports. The second encompasses electricity generation and transmission, gas and water distribution, sewage treatment, broadcast and wireless towers, telecommunication, cable networks, and satellite networks. The third covers courthouses, hospitals, schools, correctional facilities, stadiums, and subsidized housing (Beeferman 2008, 5). Infrastructure offers a reliable revenue stream due to low elasticity of demand for services, these being less affected by, although not entirely insulated from, the business cycle: people need to use roads and bridges, their consumption of water and power does not respond strongly to changes in the economy, and transportation goes on. The resulting advantages can be summarized as follows (Inderst 2009, 7; see also Clark et al 2011, 2):

- stable and predictable cash flows
- long-term income streams
- often inflation-linked (helping with liability-matching)
- in some countries, tax-effective
- returns insensitive to the fluctuations in business, interest rates, stock markets
- relatively low default rates
- low correlations with other assets classes (offering diversification potential)
- socially responsible investing (SRI) providing public goods essential to society

There is little guidance from literature or experience, however, in terms of the level of return to be sought or gained from such investments, except in those cases in which governments guarantee fixed rates of return. Moreover, infrastructure investments are relatively illiquid and cannot be turned quickly into cash, although this should not be a problem for funds pursuing long-term strategies.

At present, not much infrastructure is directly or wholly owned by funds; most such investments take place through equity or partnerships in corporations that, in turn, own or operate infrastructure through subsidiaries. To date, no fund has yet been willing to gamble the store on infrastructure, and those that do so put less than 10% of their capital into such investments. For example, OTPP currently has about 7% (\$7 billion) of its asset investments in infrastructure, while CalPERS is reported to be raising its infrastructure investments to 1.5% of assets (\$3 billion) (Anderson 2010). Levels of infrastructure investments by several PPFs and SWFs are listed in Table 13.

**TABLE 13:**  
Portion of fund assets invested in infrastructure (2010)

Fund	% in infrastructure	Value in US\$
Canada Pension Plan Investment Board	4.7%	\$6.4 billion
Government of Singapore Investment Corporation	3%	>\$6 billion
Alaska Permanent Fund Corporation	3%	\$1.1 billion
Abu Dhabi Investment Authority	1-5%	>\$4-20 billion
Ontario Teachers' Pension Plan	7%	\$7 billion
California Public Employees' Retirement System	1.5%	\$3 billion

Source: Dimsen et al 2010, 17.

As part of their portfolios, both PPFs and SWFs also hold equity in private service provision companies, including water and power utilities and health service providers; in some instances, they are majority stockholders or even owners. OTPP, for example, owns three privatized Chilean water utilities, each of which provides more than 10% return on investment (but only because the Chilean government guarantees this as a minimum level and tops up utility profits if they fall below 10%) (Larrain and Schaeffer 2010). CalPERS holds equity in a number of private medical service companies, while Norway's GPF holds equity in private health care, energy and electricity companies. The precise sizes of these holdings are difficult to quantify, since many funds do not provide detailed information about specific equity investments; however, OTPP holds at least \$1.5 billion in such companies (1.5% of its capital). In other words, PPFs and SWFs already invest in service provision to the public, albeit indirectly and through private corporations.

Why not harness such trends to extend investment to service provision infrastructure for those lacking access? It would be possible to go well beyond investment in physical structures. The US National Association of County and City Health Officials defines "public health infrastructure" as encompassing not only hardware but also "the systems, competencies, frameworks, relationships, and resources that enable public health agencies to perform their core functions and essential services. Infrastructure categories encompass human, organizational, informational, legal, policy, and fiscal resources" (NACCHO 2011). It is widely acknowledged that such infrastructure investment contributes to the improvement of living standards as well as development of human capital and economic growth, and that the provision of basic public services is essential for the health and well-being of people and their communities and to build their capacity (Sen 1999). Are there ways to structure public service infrastructure so as to provide reliable, long-term returns to the funds? Could PPFs and SWFs grow *and* do good?

## Legal and fiduciary requirements

In the global North, laws regulating SWFs and PPFs as well as best practices require them to invest in ways that protect assets. As the discussion above indicates, fund managers pursue somewhat contradictory goals: ensuring that assets are not diminished by volatile markets, which calls for responsible, longer-term stable investments, while seeking high, riskier returns in order to remedy mismatches between assets and future liabilities. As OTPP puts it, “the Plan’s assets are managed to earn the highest rate of return possible, while taking an appropriate amount of risk” (2010a, 5). In this context, “The [OTPP] Board, its delegates and the sub-delegates shall exercise the degree of care, diligence and skill in the investment of the Fund that a person of ordinary prudence would exercise in dealing with the property of others” (OTPP 2010a, 3-4). What the term ‘a person of ordinary prudence’ means is debatable, and a level of acceptable risk might well differ between a plan member and a more seasoned investor. Arguably, the strategies leading to significant losses during 2007-2009, from which many funds have not yet fully recovered, might not be construed as prudent by an “ordinary” person.<sup>5</sup>

The various legal requirements and fiduciary responsibilities of fund managers fall into two broad categories (Sturm and Badde 2001). The first involves the expectations and restrictions imposed on a fund’s trustees, usually codified in one or more pieces of legislation and administrative law. The latter has to do with the legal and moral obligations of trustees to ‘principal parties’, that is contributors to and beneficiaries of the fund, either plan members or a country’s population. The specific legal and fiduciary responsibilities of managers and trustees vary between funds and countries, but all adhere to the general framework that prescribes pursuing safe investment at the same time as it motivates a search for high returns. Not only are fund managers and trustees legally bound concerning conflicts of interest, their fiduciary responsibility also includes an “obligation to act reasonably to avoid negligent handling of the beneficiaries [sic] interest” (Moody n.d.). This does not rule out the possibility of losses as a result of normal variations in economic conditions, but it does caution strongly against excessive risk-taking. It also raises questions about whether putting funds into lower-risk investments, when higher return ones are available, is even permitted (Vernuccio 2009).

For example, according to the Government Finance Officers Association (GFOA) in Canada and the US, “Pension fund fiduciaries must invest plan assets for the exclusive benefit of plan participants and beneficiaries” (GFOA 2009, 1). Fiduciaries must consider each investment taking into consideration: the system’s diversification plan (mixing a variety of investments in an effort to smooth out unplanned risk), liquidity (the ability to convert an asset to cash as needed), and risk/return profile (the level of risk the system is willing to take on for the level of investment return). Moreover, “Fiduciaries should adhere to the following investment guidelines when considering investments with collateral benefits (broad social or economic benefits that go beyond the pension system’s investment return)” and:

- All investments must yield a rate of return commensurate with the recognized level of investment risk.
- Fiduciaries who evaluate investments on the basis of the collateral benefits they provide should at the same time consider alternate investments with similar risk/return characteristics.
- The selected investment should be prudent on its own merit, regardless of the collateral benefits it offers.
- Investments designed with below-market rates of return or other concessionary terms are not acceptable because they compromise established risk-return standards and conflict with fiduciaries' responsibility to invest the system's assets for the exclusive benefit of the participants. (GFOA 2009, 2)

These last provisions seem to suggest that investments generating welfare benefits at the expense of returns do not meet fiduciary responsibilities. This matter has become important in recent years, due to pressure from fund participants, governments, public sector unions and activists as well as correlated trends around 'corporate social responsibility', 'socially responsible investing', and 'economically targeted investment'. Corporate social responsibility (CSR) involves decisions and policies by a corporation to impose certain social restrictions and requirements on their operations. These can include, for example, demands regarding minimum wages, working conditions and environmental quality in and around factories. Private corporations pursue CSR because of their desire to protect brand value and, some argue, to increase market share and profits (Lipschutz and Rowe 2005). Activists and many executives also propose that adhering to CSR guidelines and principles is the 'ethical' thing to do and a proper element of 'corporate global citizenship' (Sturm and Badde 2001; UNEP 2007). One argument for public pension CSR is that:

To unionists, many public officials and activists...the issue can be framed as follows: In an era of accelerating competition for access to relatively scarce capital, there should be every effort made to establish a link between the source of capital and its ultimate use, and capital such as pension funds should be 'recycled' in ways that have a beneficial direct present impact on pension fund owners through job creation and community stabilization. At the very least, pension funds should not be invested in ways that work counter to the interests of pension fund participants. (Barber 1982, 45)

CalPERS argues that:

The central rationale, that shareholders are equity owners in the company and must be active and prudent in the use of their rights in the management of their investments, is based on the concept that shareowners collectively have the power to direct the course of corporations. The Pension Plan believes economic

wealth can be either created or destroyed through shareholder activism and hence must be done responsibly. (2010, 24)<sup>6</sup>

Socially responsible investing (SRI) is similar to CSR but involves selective investment in enterprises that practice CSR or pursue what are judged to be socially beneficial activities and projects:

Socially responsible investing...refers to financial contributions into investment vehicles designed to combine the traditional investment philosophy favoring profit-maximization with a values-based component seeking non-financial benefits. Such non-financial benefits are often referred to as social returns. These social returns vary in scope but can be broadly defined as company policies and actions that enhance a socially responsible investor's specific environmental, religious or social values. These enhancements may or may not have any impact on the profit-maximization component of the socially responsible investment and may actually cause a socially responsible investment to decrease in value. (Ciocchetti 2007, 2)

Economically targeted investment (ETI) involves strategic targeting of investment either to influence corporate behaviour or to push for enterprises that will provide specific benefits to particular places or groups (Jackson 1996). ETIs resemble CSR and SRI but involve the creation of "pooling or syndication vehicles which permit pension funds...to channel a small portion of their assets into community development, affordable housing and small business" (Jackson 1996, 2). According to Hagerman, Clark and Hebb:

Public sector pension fund investments in urban economic development revitalize neighborhoods through affordable housing, retail, and commercial development. This practice could be described as investing with intent and is not restricted to a single asset class but can be found in private equity, venture capital, real estate, and fixed income products. Such investing in turn creates jobs, housing, and returns property to the tax rolls. Innovative pioneers have designed a craft that is now a hot industry with savvy real estate and private equity fund managers competing for deals. Public sector pension funds can have a significant role in urban economic development as they bring projects to scale and provide inner cities with access to capital. (2005, 4)

Both public and union pension funds have pursued ETIs during the 1990s and into the last decade despite fierce criticism ranging from the claim that they earn below-market returns and thus 'steal' from plan members (Vernuccio 2009), to the opposition to real estate 'deals' that promote gentrification at the expense of the poor.

In reaction to broad public support for CSR among activists and plan members and trustees,

growing numbers of PPFs and SWFs have adopted policies and investment programs that pay particular attention to social impacts (Hebb 2008; Sturm and Badde 2001; UNEP 2007). Because PPFs and SWFs are not directly involved in production, management or distribution of goods or directly responsible for either the environmental impacts of their investments or the working conditions of labour forces, their social investment strategies are focused on pressuring the businesses they invest in. There is, consequently, a growing trend among some of the funds to pursue shareholder activism by attending corporations' annual meetings, while some unions with public pension plans are selectively targeting companies that allegedly engage in unfair labour practices (Barber 1982). As a general rule, however, funds with CSR programs focus only on the companies in which they hold equity; few if any of the funds appear to subject their own activities to such evaluation.

It could also be argued that, although the funds' assets come from governments, public employees and national resources, they are really not public funds available for socially responsible and economically targeted purposes, especially those that offer lower-than-benchmark returns. In particular, because PPFs are responsible for providing a future income stream to private parties, that is, pension fund members, their fiduciary responsibility to maximize returns would appear to outweigh their social responsibility (Vernuccio 2009). This view is not held universally. For example, the anticipated costs of climate change and the negative impacts of human rights violations and environmental degradation in the global South are motivating some fund managers and trustees to take social responsibility very seriously. For example, the Swedish National Pension Fund's AP2 explains: "The common thread for the Fund's ethical and environmental policies is the set of international conventions on human rights, labour, the environment, bribery, corruption and the use of certain weapons that have been signed by the Swedish Government" (UNEP 2009b, 14). Consequently, "the [AP2] Fund's governance specific activities focus on value-generating issues such as:

- Structural issues: corporate structure, capital structure and ownership structure
- Management issues: the board, the nomination process, executive management and executive remuneration
- Transparency: information, dissemination of information, financial reports
- Investment: corporate acquisitions, divestments and investments
- Other: Corporate culture, ethics, the environment and equality issues" (UNEP 2009b, 15)

Some have proposed that a strategy of careful, socially responsible and economically targeted investment could actually fulfill fiduciary responsibility criteria by protecting and enhancing long-term shareholder value and financial returns for beneficiaries, even as companies engaging in irresponsible practices suffer from decreased share prices (UNEP 2007, 9). Consequently, fund managers and trustees would be responsible if they considered 'environmental, social and governance' (ESG) issues in their investment decisions. According to the Freshfields Report, "integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and is arguably required in all jurisdictions" (Freshfields Bruckhaus Deringer 2005, 13). Moreover,

“It is an *obligation* on pension fund trustees not simply a right or option to state in their Statement of Investment Principles what the fund’s guidelines are on responsible investment and to what extent social, environmental or ethical considerations are taken into account” (Lord McKenzie, cited in Freshfields Bruckhaus Deringer 2005, 15).

It is too soon to tell for certain whether this approach to investing does offer enhanced returns. It is fairly safe to say that a failure to take ESG into account in making investment decisions could, in some sectors and circumstances, result in significant future losses to fund assets and holdings, especially where the impacts of climate change on real estate and infrastructure are concerned.

Is there evidence that socially responsible investing can provide the returns required by fiduciary obligations? Research summarized by Jacoby (2006) argues that some socially responsible investments find improved returns to funds, while other research argues to the contrary (e.g. Becht, Franks and Grant 2010; Nelson 2006; Zur 2008). Other research focusing on improving corporate governance suggests that fund activism does not affect returns (Bauer, Koedijk and Otten 2005; Gompers, Ishii and Metrick 2003; Margolis and Walsh 2003). There is also considerable debate about whether returns on SRI are even comparable to a non-SRI investment strategy (apparently, ‘sin’ stocks outperform ‘virtuous’ ones; see Gullapalli 2006). Some sectors may also be subject to fads or fear – as was the case with the oil price spike of 2008 – with share values rising and falling in response to geopolitics and panics rather than ‘fundamentals’ (Asplund 2011). Much of the data available on returns to SRI come from the performance of mutual funds whose portfolios consist of shares in companies that meet specific standards of responsible behaviour and practice. For the most part, it appears that returns on such mutual funds closely track major stock indices, such as the S&P500, showing comparable gains and losses in response to market trends (Domini Social Investments 2011a, 2011b; see Figure 5).

**FIGURE 5:**  
Returns to an SRI mutual fund vs. Standard & Poor 500



Source: Domini 2011a.



Arguably, investment in public service provision could meet fiduciary requirements as well as social responsibility standards, if properly structured. Moreover, there is a strong argument to be made that provision of services to those who lack them is not only important for development but can also contribute to individual capacity-building, environmental protection, and economic and social growth, in both home and host countries. It is difficult to imagine a more 'socially responsible' goal than one that helps provide basic services for the one to two billion people lacking them. While such infrastructure investments are unlikely to meet a consistent 7-10% benchmark return on investment, data on the performance of SRI-oriented mutual funds suggest that there is no reason they could not follow non-SRI investments and do so in a stable and consistent fashion, especially if projects are properly designed, financed, managed and monitored. Adequate returns could be ensured through government guarantees to public services, much as the Chilean government has done for foreign investors in privatized utilities (Larrain and Schaeffer 2010). These matters are addressed later in this paper.

## Organizational alternatives and funding schemes for public provision

Due to shortcomings of privatization as described earlier, there has been renewed interest in provision of essential services by some form of public sector organization. Bayliss argues that:

In the longer term, the private sector is unlikely to provide finance for infrastructure on a major scale and expectations that it might do so seem imprudent, given that this can only lead to future liabilities... An alternative approach would be to support and strengthen state provision and encourage public providers because, like it or not, they will continue to deliver these services. This would entail addressing specific issues in order to understand the details of poor service delivery at the country level and to offer appropriate responses and support. (2009, 32-33)

This section of the paper therefore addresses the organizational and institutional requirements for PPFs and SWFs to become a successful source of capital to provide public services to the world's poor. First, the organizational structure for service delivery must be thought through. Second, there is a need to determine the best institutional architecture to funnel funds to the appropriate agencies and locations. Third, a mechanism must be designed to guarantee investment and reliable repayment, with appropriate safeguards against expropriation by the state and its agents.

## Organizational structures

A wide range of alternative 'public' organizational approaches for financing and service provision exists, as reflected in the literature and the existing systems it describes (Bakker 2003; Hall, Lethbridge and Lobina 2005; McDonald and Ruiters 2012). Some have a 'hybrid' character, relying on public and non-profit entities that may or may not possess some 'private' characteristics, such as an incorporated user cooperative or a small-user system partially funded through microfinance (Gia and Fugelsnes 2010; Mehta, Virjee and Njoroge 2007). The key point here is that no large-scale, wholly private corporations or entities are involved in the financing or operation of these public systems. This paper adopts and expands the typologies found in the literature, including 'small-scale' approaches organized and funded through 'hybrid' mechanisms:

- **Utility reform:** Because most service provision around the world takes place through regulated public utilities, the strengthening of utility capacity through more effective financing, investment and tariffs would also facilitate the extension of services to those currently without, especially in urban areas. This strategy uses public financing with repayment through user fees (Brennan et al 2004).
- **Public-Public Partnership (PuP):** A PuP matches two public partners with stated non-profit motives to improve and promote public service delivery. Partners can include governments, public utilities or service institutions, non-governmental organizations and community groups. Financing comes from the public sector (Boag and McDonald 2010, 4).
- **Consumer cooperatives:** Cooperatives are co-owned by users and can operate as a service utility or manager of contracted-out infrastructure and delivery. Cooperative members can also work or volunteer in management, maintenance and operation. Financing can be internal through user-owned equity or external via equity or debt (Morse 2000; Plunkett, Chaddad and Cook 2010; Ruiz-Mier and Van Ginneken 2006).
- **Community management:** Service users establish a community organization that contracts for service delivery with a public utility or institution, and collects user fees for direct payment to the service provider. Financing is assumed to be the service provider's responsibility (Bakker 2008; Mara and Alabaster 2008).
- **Community corporation:** Service users establish a public corporation responsible for ensuring service infrastructure and provision, which hires management that arranges financing, construction, operation or undertakes these tasks itself. Financing is through users' capital, loans and debt.<sup>7</sup>
- **Community service trust:** Using some of their own capital, service users establish a small-scale public corporation that operates as an intermediary for microfinance borrowing and as a lending institution, and that contracts with the service delivery agency. This scheme is generally small-scale (Kouassi-Komlan and Fonseca 2004).

- **Communitization:** Service users establish a community organization that contracts with government or the utility to transfer ownership of public resources and assets, control over service delivery, and delegation and building capacity to the group. This is similar to a community corporation, but less formalized. Financing comes from loans and debt (Singh and Jha 2009).
- **Small-scale user groups:** Several households, urban or rural, establish a cooperative user group that contracts for service delivery to a single location from a local utility or supplier and pays for materials and labour required to extend service to yards or individual households. Financing is internal (Brennan et al 2004).
- **NGO-community management:** A non-profit organization, often from the outside, is responsible for setting up the institutional framework and managing relations between public agencies and community groups. In some instances, the NGO is responsible for project operation. Development assistance and public funds provide the financing (Brennan et al 2004).
- **Small-scale Public-Private Partnership (PPP):** Community groups that own service delivery infrastructure and assets contract with private managers to operate the system in return for a fee tied to tariffs. Financing can be internal and external (Gia and Fugelsnes 2010; Mehta, Virjee and Njoroge 2007). Although this is not strictly public, its hybrid character justifies inclusion.

Which of these alternatives is the most effective in terms of financing structure and both quality of service and delivery is not immediately evident from available studies, reports and evidence. There is a considerable number of cases described in the literature, and these offer useful insights into competing approaches, all of which must be designed to take account of local social, cultural, economic, political and physical conditions, and whether the project site is rural or urban (Balanyá et al 2004; Doherty and Govender 2004; Warwick and Cann 2007; WHO/UNICEF 2010). The vast scholarship on common property regimes has demonstrated that, with appropriate organization, resource/service users will work to ensure system sustainability, particularly when livelihoods are at stake (see Fuys and Dohrn 2010; Ostrom 2009), while other work has found that user participation in rural water supply project development, construction and system management results in these being “effective and sustainable” (Evans and Varma 2009; Narayan 1995, 5).

Recent research in Nicaragua by Romano (forthcoming 2012) is informative in this regard. Management of small-scale water infrastructure in the country’s rural areas by community-based water users’ associations, often in partnership with domestic NGOs and international bi- and multilateral organizations, has demonstrated that it is possible to make up for shortfalls in the state’s human, technical and financial resources. Though residents have demonstrated the capacity for effective and equitable water provision, the initial – and significant – investments of aid agencies, such as the Swiss Agency for Development and Cooperation (SDC), the Netherlands Development Organization (SNV), and the United Nations Children’s Fund (UNICEF), have been crucial to project

initiation. Other preliminary findings from Romano's research include:

- Technical, organizational and financial capacity-building from government and NGOs are critical to organizational and system sustainability. Projects have tended to fail if these burdens are placed wholly on residents and if there is little training or buy-in for them.
- Even in the most poverty-stricken areas of the country, residents have been able to pay small user fees (ranging from \$0.23 to \$2.85 a month per household) depending on both willingness and ability to pay and infrastructural demands.
- While the funds accumulated from user fees typically enable periodic system repairs and improvements, they may not be sufficient to cover major repairs, such as replacement of electric water pumps for wells, or entire systems of water pipes. Thus, sources of external maintenance funds are required for sustainability of water system infrastructures.

Thus as a general principle, providing service users with a tangible stake or share in the enterprise, either by way of household investment (however minimal) or sweat equity in construction, maintenance and operation, seems likely to improve successful implementation and reassure funders and financiers of the viability and sustainability of such endeavours (Jones 2011). This is especially important if capital is to be provided by public pension and sovereign wealth funds, as proposed in this paper. While it is possible for smaller-scale service institutions to raise capital directly through grants, direct loans and bonds (Brennan et al 2004, 19), this paper adopts the principle that users who hold a meaningful property share and management/decision-making stake in service infrastructure are also more likely to remain engaged in and attentive to the system, the quality of governance, operations, service delivery and finances (Halpern and Mumssen 2006).

## Financing a service delivery enterprise

What are the types of and critical elements in successful public financing of public services provision? A World Bank study of on-site sanitation in six countries (Bangladesh, Ecuador, India, Mozambique, Senegal and Vietnam) provides useful guidance in thinking about the organization and funding of a public enterprise (Trémolet, Kolsky and Perez 2010; see also Halpern and Mumssen 2006). Important points include the following:

- Public funding can trigger significantly increased access to household sanitation.
- The different financing strategies adopted had a profound influence on equity, scale, sustainability, levels of service, and costs.
- Households are key investors in on-site sanitation and careful project design and implementation can maximize their involvement, satisfaction, and financial

investment.

- Hardware subsidies of some form played a critical role in all six case studies.
- The provision of hardware subsidies on an output basis (linked to users and revenues) rather than an input basis (linked to supply) can be effective at stimulating demand and leveraging private investment.
- All of the projects included a significant publicly funded software component (sanitation and hygiene promotion and community mobilization).

Could such public enterprises be realistically financed and operated through a combination of non-private domestic and foreign capital, the latter from PPFs and SWFs? That is, are the economics of such an arrangement feasible and sustainable? During the 1990s, in particular, planners and funding institutions sought to foster 'full cost recovery' from public service provision, getting users to pay tariffs at levels ensuring coverage of the full operating and maintenance costs of service provision (and often to generate profit for the operator). This approach was pursued in the belief that such payments would reduce state budgets, allow other uses for funds otherwise required to cover the costs of capital, operation and maintenance and motivate users to be more attentive to their levels of consumption. In the past, when and where services were provided, they were often heavily subsidized or even free, which meant that public service providers ran consistent deficits with governments making up for these losses. Privatization, it was argued, could remedy this problem because private companies would not be subject to pressure from interest groups and could cut off services for non-payment. As suggested earlier, this strategy has been, for the most part, a failure (Balanyá et al 2005).

The higher levels of yearly service costs enumerated in Table 4 are likely to be out of reach for the very poor (annual income of \$500-\$1,000). For private providers, especially, the inability to recover full costs through user tariffs means that households unable to pay and even entire poor neighbourhoods and communities may be denied services (Trémolet, Kolsky and Perez 2010).

What can be done? According to Cardone and Fonseca:

There are a number of ways in which costs can be recovered. Tariffs, subsidies, and financial support mechanisms can all contribute towards sustained service delivery while raising consumer awareness for the financial, economic and environmental aspects of providing such service. It is generally agreed and widely accepted that users should, in most cases, pay for recurring costs while there are varying opinions about whether users should pay for capital costs, and if so, what percentage is reasonable, and how might it be paid (cash, sweat equity, smaller payments over time coinciding with crop or livestock market season, etc). (2003, 46)

In other instances, it has been argued that the state should cover all costs. In any event, it is clear that various forms of subsidies and scaled tariffs are necessary. As Halpern and Mumssen point out:

While subsidies are wide-spread, they often do not reach the poor. The most common form of consumer utility subsidies is the quantity-based subsidy, such as the increasing block tariff, which has been demonstrated to be by and large regressive, as the majority of the price subsidy is captured by the non-poor. This is so for several reasons. Firstly, consumption subsidies benefit those already connected. The poor are often not connected to networks. Secondly, the differences in consumption between the poor and non-poor are less than often assumed, and therefore quantity-based subsidies are not effective in differentiating between poor and non-poor. Thirdly, high fixed charges often result in high unit prices for those poor households that consume less to avoid a larger total bill. (2006, 8)

In the case of subsidies, Cardone and Fonseca write, "It is generally agreed that in poor areas of middle and low income countries, subsidies are necessary to cover basic amounts of water usage by poor customers" (2003, 53). A recent study of three rural water systems in Uganda found that, in one of them, community payments were not always sufficient to cover operation and maintenance costs, which were subsidized by the local sub-county (the other two did not require such subsidies) (Koestler, Koestler and Koestler 2010; see also LeBlanc 2007).

Today, therefore, there is a growing sense that the capital costs of service infrastructure should be wholly financed by public funds (Hall 2009), and that basic services should be provided at no cost to targeted groups, with heavy cross-subsidies through higher tariffs for those able to pay. At the very least, the first block of consumption can be structured so as to provide low-cost (or free) lifeline services, with service costs rising in proportion to level of consumption or use. This seems reasonable, inasmuch as most infrastructure has, historically, been financed from public funds and even cross-subsidized based on the argument that such public goods contribute to human well-being and overall social welfare and, in the longer term, return the cost of subsidies several times over. This would probably require reform of both tax and tariff systems in most countries, a matter not addressed here (see Brennan et al 2004, 19).

## **Institutional arrangements for financing**

Ultimately, the success of public alternatives to privatization of services depends on both politics and economics: public and activist pressure on state agencies and authorities, and the financing and investment mechanisms that underlie a successful delivery scheme. The political requirements are addressed later in this paper; this section focuses on finance. On the one hand, if PPFs and SWFs could finance these schemes directly, through direct acquisition of equity or bond purchases, with a steady repayment of the loan at an acceptable rate of interest, the long-term benefits to both users and investors would be considerable. This, however, is unlikely because the transaction, vetting and monitoring costs of supporting many such relatively small-scale schemes would be quite high and beyond the capacity of individual providers to handle. On the other hand, if financing could

be channelled through intermediary institutions with appropriate skills and capacity, there would remain associated capital management costs, potential principal-agent problems and various accounting issues, but it would also result in managerial economies of scale and skill. Among the various options, the most appropriate intermediary institution is probably some type of public or non-governmental infrastructure development fund or bank.

Several models stand out; these are summarized in Table 14. The Kreditanstalt fuer Wiederaufbau (KfW Bankengruppe) is a public development bank chartered in Germany that finances a range of both public and private projects in the global North and South, including local water projects.<sup>8</sup> Norway's Government Pension Fund Global (GPF) holds a €3 billion stake in the KfW Bankengruppe although, inasmuch as KfW's assets are in the range of €440 billion, the Norwegian holdings are rather small (KfW Entwicklungsbank 2010). Presumably, growth in the GPF's investment comes via dividends and rising share values, although neither the Fund's nor KfW's reports are specific on this question. In this instance, KfW functions as a kind of mutual fund, making internal decisions about where to invest, with whom to form partnerships and how to monitor and evaluate projects. The GPF's only role is as depositor or shareholder.

**TABLE 14:**  
Institutional mechanisms for public financing of infrastructure projects

Mechanism	Example	Focus	Funded by
<b>Public development banks</b>	KfW Bankengruppe	Broad range of public and private infrastructure	German government, public and private sources
<b>Public infrastructure investment agencies</b>	California Infrastructure and Economic Development Bank	Rehabilitation of broad range of public infrastructure	State of California through appropriations and bonds
<b>Public revolving funds</b>	Drinking Water State Revolving Fund	Funding for water and waste treatment development and rehabilitation	Federal and state funds, recycled loan repayments, leverage private financing
<b>Non-profit NGOs</b>	Community Led Infrastructure Finance Facility	Leverage financing for slum development projects	DFID, SIDA, communities and households
<b>Non-profit sinking funds</b>	Community Water and Sanitation Facility	Expand water and sanitation facilities to the poor	USAID and privately leveraged funding
<b>Non-profit venture capital funds</b>	Acumen Fund (www.acumenfund.org)	Public projects that alleviate poverty and provide social and financial returns	Philanthropic capital and recycled loan repayments

Sources: Cardone and Fonseca 2006; I-Bank 2011; KfW Bankengruppe n.d.

Recently, there has been discussion in the United States of establishing a 'National Infrastructure Investment Bank', a public corporation whose purpose would be to finance badly needed infrastructure rehabilitation (HR 3401 2007). The Obama Administration was initially supportive of this idea, seeing it as a means of injecting stimulus funds into the US economy, but opposition to any new stimulus funding and the debt and deficit reduction projects of 2011 have, for the moment, scuttled the idea. The State of California established something like this in 1994, an 'Infrastructure and Economic Development Bank' (I-Bank), whose mission "is to finance public infrastructure and private development that promote economic development, revitalize communities and enhance quality of life for Californians" (I-Bank 2011). Eligible infrastructure projects include:

city streets, county highways, state highways, drainage, water supply and flood control, educational facilities, environmental mitigation measures, parks and recreational facilities, port facilities, public transit, sewage collection and treatment, solid waste collection and disposal, water treatment and distribution, defense conversion, public safety facilities, and power and communications facilities [but no housing]... [Eligible applicants are] any subdivision of a local government, including cities, counties, redevelopment agencies, special districts, assessment districts, joint powers authorities and non-profit corporations formed on behalf of a local government. (I-Bank 2011)

According to its website, the I-Bank provides loans of \$250,000 to \$10 million per applicant per year, with subsidized interest and up to 30 years to repay and, in 2010, it held about \$450 million in assets and \$184 million in liabilities (I-Bank 2010).

Another more interesting model is the 'Community Led Infrastructure Finance Facility' (CLIFF) established by Homeless International and funded primarily by the UK Department for International Development and the Swedish International Development Cooperation Agency, through the World Bank and Homeless International (CLIFF 2010). CLIFF is described as "a venture capital facility [that]...enables organisations of the urban poor to access greater public, private and civil society sector resources...used for sustainable housing and basic services projects for slum dwellers" (CLIFF 2011). CLIFF provides partial loans for slum development projects in order to leverage other sources of funding. According to its most recent annual report, "CLIFF supports 29 projects that together are projected to benefit over 800,000 slum dwellers. With the £7.8 million invested, CLIFF is projecting to leverage almost £53 million from government, the private sector and communities themselves" (CLIFF 2010, 3). It is difficult to find any criticisms of CLIFF in the literature, although its small level of capitalization clearly limits what it is able to finance and achieve.

Some combination of these elements in a single institution could act as a financial intermediary: call it the 'Public Service and Infrastructure Development Bank' (GapServe). This would be an



independent, non-profit, hybrid institution – perhaps but not necessarily affiliated with the United Nations or one of its programs – that would work with, but not be controlled or dominated by, existing public development banks, international organizations or international financial institutions. GapServe would be capitalized by funds from depositors or equity shareholders, comprised of international organizations and national development agencies, philanthropies, public pension funds and sovereign wealth funds, and even private donors. GapServe could function along the lines of an expanded CLIFF-type institution, providing seed and leverage funding for service infrastructure, matched by public funds and, potentially, users' sweat equity (making sure, of course, that this does not amount to exploitation of the poor and incorporates proper safety standards and practices). GapServe could also provide long-term, low-interest financing, with the specific rate dependent on the income level of the community to be supported. Repayments could be added to deposits and recycled to new investments, with a return of 5% per annum, to be guaranteed by a combination of governments and international financial institutions (note that the 10-year returns on high-risk investments are around 5.5%, as shown in Table 4). As receiver, disburser and manager of funds, GapServe would follow explicit principles of equity, access and non-commodification of public services. Staff would evaluate project proposals (their technical, social and economic design and viability), advise on financing and revenue generation, monitor financial matters and even assist in setting up local service delivery institutions.

If public pension funds and sovereign wealth funds were willing to invest as little as 1% of their assets in GapServe, its initial capitalization could be as great as \$100 billion, a sufficiently large sum to leverage government and development agency contributions as well as local funding for public service projects. While it may be unrealistic to expect such a high level of initial investments by SWFs and PPFs, especially due to constraints on institutional capacity, this sum is quite small in comparison to the capitalization of the world's larger private banks, such as CitiBank whose assets are almost \$2 trillion and whose shareholder equity is more than \$150 billion (Citigroup 2010, 8-9).

Based on the estimates of funds required for meeting the public services gap – on the order of \$50-125 billion per year – and assuming that after a few years it has established a successful record of operations, both PPFs and SWFs could find GapServe an attractive investment opportunity. In combination with its ability to leverage other public sources of financing, it is entirely possible that the annual requirements for funding public service infrastructure and provision could be made available. This level of funding is not an unreasonable one: the UN Secretary General has asked developed countries to commit 0.7% of their GDP to official development assistance (UN Secretary General 2005), which amounts to something close to \$250-300 billion per year. Recall that the current level of ODA is around \$125 billion, while global military spending is in excess of \$2 trillion.

## Strategies for political success

All of the foregoing begs the following questions: What is to be done? How are fund managers to be convinced and get approval for investing in public service provision for those 1-2 billion people without adequate water, sanitation, energy and health care? How are governments, agencies and representatives to be persuaded that this need justifies political action in support of such investment? This section of the paper addresses several tactics as part of a larger strategy. First, the paper examines briefly how one PPF, CalPERS, – came to be regarded as an ‘activist’ fund, and what lessons its history might offer. In the case of CalPERS, a combination of regulatory changes and individual initiatives played a role, and some of these elements may be difficult to reproduce in other funds. Second, the economic and ethical logics of corporate social responsibility, socially responsible investment, and economically targeted investments are reviewed. While the economic arguments may be somewhat uncertain, there are solid ethical and political reasons for investing in provision of public services, not the least that it can be in line with managers’ and trustees’ fiduciary responsibilities. Third, civil society campaigns of pressure and shaming are discussed with a focus on ways to lobby for changes by funds and their boards of trustees, pension plan members and unions, and which the general public could promote. Finally, the possibility of modifying legal mandates and legislation covering both PPFs and SWFs is examined.

### Fund activism

As noted earlier, a growing number of funds are adopting investment policies that pay attention to corporate social responsibility of the companies in which they invest. Few have been as committed to this as CalPERS, which has long been regarded as activist in its investment policies and strategies (Hebb 2008; Postelnicu and Clarke 2007). But CalPERS has not always pursued these goals. Jacoby provides a short history of CalPERS activism in connection with a study of its activities in Japan (2006, 4-12). In 1984, the fund began to shift toward institutional investing when the state, in response to the booming market (and following the severe recession of 1982-1983), lifted the 25% ceiling on equity holdings. The following year California State Treasurer Jesse Unruh, influential politician and CalPERS trustee, founded the Council of Institutional Investors (CII) comprised of public pension funds with \$132 billion in assets. CII’s goal was to use its weight to influence corporate governance, and the fund played a major role in these efforts. In 1987, Dale Hanson became director of CalPERS and with the Board of Trustees’ support he pursued the philosophy that market-wide changes in corporate governance could raise returns on equity.

Since then, the fund has become less aggressive in its corporate governance strategies and more focused on returns (as a result of losses during 2008), although it remains strongly committed to pushing for CSR (Hebb 2008; Jacoby 2006). Today, CalPERS subscribes to the Global Sullivan Principles<sup>9</sup> that address corporate social responsibility. Furthermore, its corporate governance department votes on domestic and international equity holdings, in accordance with the Pension

Plan's Statement of Investment Policy for Global Proxy Voting and the Core Global Principles of Accountable Corporate Governance. In addition to its voting activities, CalPERS undertakes systematic engagements with companies where the equity is owned both internally and externally, which are pre-approved at board level by the CalPERS investment committee (UNEP 2007, 25).

CalPERS also engages in lobbying and legal action and pursues special initiatives in environmental and economically targeted investment (Hebb 2006, 2008; UNEP 2007, 28-30). More recently, the fund has begun to invest in "traditionally underserved markets" in California, through private equity funds that "create jobs and promote economic opportunity." The goal of the California Initiative is to "generate attractive financial returns, meeting or exceeding private equity benchmarks" (CalPERS 2010, 2).

What is not clear is whether fund activism such as CalPERS's has had a positive effect on returns. If the economic case for CSR appears somewhat weak, there are very strong ethical and fiduciary reasons for pursuing it, as suggested above. It is important to note the following caveat: while CalPERS and other funds have sought to ensure that the companies in which they invest follow CSR principles and practices, they have not, as a rule, sought to direct any funds directly into economically targeted investment or projects serving the 'public good' through public service provision. Nonetheless, the example of CalPERS suggests that state politicians, policy makers and agencies can be well-positioned to influence or change PPF and SWF investment strategies toward projects that may be more 'socially responsible' than others.

## Ethical arguments

In making the case for socially responsible investing (SRI) and economically targeted investments (ETI), the ethical aspects usually get short shrift. Most of the time this question is addressed in terms of whether returns to ethical investment practices are lower than non-ethical strategies rather than whether ethical questions alone ought to be considered. After all, many funds think nothing of putting their money into defence contractors, tobacco companies and other enterprises whose products and activities may detract from general global security and well-being. As noted earlier, fiduciary responsibilities require that fund managers and trustees not engage in investment practices that might reduce returns to fund members. Yet, fiduciary responsibility may require attention to environmental, social and governance issues, especially as these may affect long-term returns.

Corporate social responsibility campaigns and programs usually focus on 'doing no harm' to workers, consumers, the environment, etc. Few argue, however, that business has an ethical responsibility to engage actively in 'doing good'. While enterprises tend to be quite zealous about protecting their property rights and prerogatives in communities in which they operate, they rarely acknowledge that commercial success rests on the social, human and literal capital made available by the

community. Even utilities are dependent on the well-being and welfare of their clients. A failure to take into account the public good can be disastrous for a company's bottom line, its reputation and its "social license to operate" (Raman and Lipschutz 2010, 1-24). But such considerations of profit and shareholder benefit should not be the only or even primary ones on which corporations and funds exist and operate. Business is enabled politically based on the contributions it makes to society as a whole, not simply for purposes of accumulation and economic interests. Recognition of human dignity demands that ethical needs come before profit, and this must be central to political activism in regard to provision of public services to all.

### **Public pressure campaigns and politics**

Over the past few decades, activist application of pressure on corporations and governments to change their policies has been developed into a fine art (Keck and Sikkink 1998). Such campaigns have taken two basic forms. First, corporate shareholders have used their voting rights to introduce resolutions asking for changes in company purchasing, operating, labour and environment practices, and to oppose board-approved slates of directors and resolutions (Langley 2006). This is basically the approach taken by CalPERS during its early years of fund activism and is one element in many CSR programs. The second is to shame and pressure public institutions and governments and, where appropriate, threaten the 'brand value' and market shares of corporations through negative publicity and consumer boycotts (Gillies 2010; Keck and Sikkink 1998). One of the most successful of such campaigns was that pressuring states to endorse and ratify a ban on landmines (Williams, Goose and Wareham 2008), but there have been many other initiatives, especially with respect to the apparel industry, some very successful, and others less so (Lipschutz and Rowe 2005).

The record of trying to influence PPFs and SWFs to target assets toward specific sectors is somewhat more limited. Both types of funds are well-insulated from direct public pressure, inasmuch as they do not operate with governance structures that involve even infrequent member or citizen participation. Organized activist campaigns appear to be rare. One recent example, which has only met with limited success, has been the attempt to pressure the Ontario Teachers' Pension Plan to disinvest from private Chilean water utilities. This effort led by activist Maude Barlow and the Council of Canadians has sought to pressure OTPP and the Ontario Federation of Teachers (OTF) to recognize that water is a human right and that it is unethical to seek to profit from provision of essential services (Council of Canadians 2011; Daw 2010). OTPP and OTF have rejected the Council's demands (OTF 2010) and, indeed, OTPP recently announced that "the controlling group led by Teachers increased its ownership in Essbio S.A. to 89.6 percent from 51.1 percent and now holds 94.2 percent of Esval S.A., up from 69.8 percent" (OTPP 2011).<sup>10</sup>

A study by Ellipson AG (Sturm and Badde 2001, 8-9), a Swiss consulting firm specializing in corporate governance, sustainability management and benchmarking for the International Labour Organization, discusses how trade unions can pressure pension fund managers to engage in socially

responsible investing:

- Target pension plan members and the public: raise public, plan members and trade union awareness through investment information, ranking of pension funds and SWFs according to their SRI record; address the 'public' nature of PPFs and SWFs, their ethical obligations to foster public well-being through investment strategies, and the opportunities, both ethical and economic, of supporting provision of public services to those lacking them.
- Target pension fund trustees, managers and intermediaries: raise awareness of the need for investing in public service infrastructures, how it might be done, what kinds of models are available, economic returns, ethical obligations, and plan member and public demands, and providing training and research support for SRI.
- Target legislatures and domestic and international agencies and public international financial institutions: build a coalition of NGOs, sympathetic governments, and relevant national and international development agencies for new strategies to meet the public service gaps, and creation of an intermediary organization to accept pension and public funds and invest and monitor them; inform, lobby and pressure legislators at all levels on the importance of service infrastructure investment, at home and abroad, and propose appropriate legislation.

Again, these tactics are intended to pressure funds to avoid investments in companies who do not meet SRI criteria, and would need to be modified in order to pressure funds into financing public service provision.

## Changing and modifying legal mandates and covering laws

From our literature review it appears that the legislative route to pressuring funds has not yet been tried. There is a case reported in the literature of the passage of a statutory amendment to the US state of Oregon corporation law (HB 2626) that allowed Oregon corporations to include in their articles of incorporation a "provision authorizing or directing the corporation to conduct the business of the corporation in a manner that is environmentally and socially responsible" (74th Oregon Legislative Assembly 2007). Another statutory amendment, which was tabled in the Oregon House, proposed that evaluation of corporate purchase and merger offers be allowed to include consideration of, among other matters, "the social, legal and economic effects on employees, customers and suppliers of the corporation and on the communities and geographical areas in which the corporation and its subsidiaries operate" (75th Oregon Legislative Assembly 2009, §1.5). Both pieces of legislation were, apparently, introduced at the behest of Oregon Lawyers for a Sustainable Future (Illig 2010).

Given the global efflorescence of CSR and corporate sustainability legislation, it seems safe to say that, in the future, more and more jurisdictions will establish legal stipulations mandating 'good' corporate behaviour (Meisling 2004). Whether these will actually force effective corporate social responsibility remains to be seen. In particular, both ESG issues and public regulation of corporate practices are likely to become increasingly important. There will be numerous opportunities to take into account the social and environmental costs in making investment decisions – through legislative hearings and even with lobbyists in support of CSR and modifications to fund obligations.

### **Education, pressure and lobbying**

Any effort to pressure PPFs and SWFs to direct a fraction of their assets to the provision of essential public services must include all of the elements described above and take account of political conditions and opportunities. To this end, a strategic campaign should be launched to:

- Make the case for the need for public provision and social benefits: Although the lack of access to basic services is well-known in development circles, the fact that privatization has not worked, and is of benefit to limited numbers of corporations, is not widely recognized, especially in North America. This is an opportune moment to make the case for public investment in the public welfare, and to tap into SWFs and PPFs as sources of supplementary capital to a larger public program.
- Make the ethical case: There is considerable support for corporate social responsibility, but this is largely cast in terms of private corporate policies and practices and relies significantly on the threat of consumer apathy. Public needs require public support and investment, and the long-term well-being of the very poor should be a concern around the world.
- Make the pragmatic case: Failure to address matters pertaining to the social good and public well-being might well result in a loss of the social license to operate. In situations in which funds hold shares in poorly performing utilities and service providers, it is entirely possible that the latter will be stripped of ownership and lose their entire investment (as happened in Cochabamba, Bolivia). This argues strongly for investment in public provision arrangements that are not vulnerable to nationalization or expropriation due to poor performance.
- Inform and educate pension plan members and the public: For the most part, plan members and the public are unaware of how their PPFs and SWFs are investing in assets or how current investment strategies can contribute to diminished social welfare and long-term social costs.

- Inform and educate fund personnel: The managers and trustees of funds with active CSR programs are likely to believe they are doing as much as is necessary by exercising shareholder rights. The public nature of the funds demands that greater attention be paid to the social impacts of investment and the need for ETIs, including those in the global South.
- Make the case for meeting fiduciary responsibilities: Fund managers and trustees should recognize that their obligations to plan members and publics are broader than ensuring high returns, and that social and environmental externalities will impose long-term costs on investments that could well exceed returns from them. There is a growing trend toward making such a case and more careful economic and social analysis and alternative analytical techniques that take into account social and environmental externalities would make clear the fiduciary implications of such investment.
- Inform and educate governments, legislators and international institutions: Those in governing roles pay attention to matters of social responsibility, but tend to treat the funds as independent entities. There is a strong case to be made that PPFs in particular should have responsibilities to publics beyond merely ensuring high returns, and that more attention to broad social needs can be a 'win-win' strategy (Hayden 1989).
- Make the case for economic viability: The numbers presented in this paper are both rough and preliminary. It is essential to demonstrate, from both particular cases and more comprehensive analyses, that such investments can meet a return benchmark of 5% over the longer term, comparable to 10-year returns from higher risk investments, such as equity and real estate.
- Make the case for financial viability: Financing mechanisms must be developed as independent of both public and private IFIs and ensure that investments are directed to vetted, reliable intermediaries and projects. Documentation of various real-world examples of financing service infrastructures and delivery can help support this case.
- Make the case for practical feasibility: Several pilot projects, in carefully selected locations in the global South, should be launched. Ideally, these would be funded through collaboration with an activist fund, although the financial support from a private foundation, a UN agency or a state development agency could facilitate the creation of an institution such as GapServe.
- Make the case for ethical and political necessity: It is nothing short of criminal that so many of the world's people are denied basic needs and dignity, especially as a consequence of governments' unwillingness to act and the mindless pursuit of profit by business. Failure to act is not an option.

## Conclusions and recommendations

One of the most pressing global needs is to improve the social welfare and health of the one to two billion people across the world that lack access to clean water, adequate sanitation, electricity and health care. Ten years after presentation of the Millennium Development Goals, disappointing progress has been made on this front. Governments have shown little inclination to fund such services, preferring to put money into sectors that will attract private investment and 'grow the economy'. Privatization of public services has proved a boon for some corporations and a disaster for others but, in any event, the very poor have seen little improvement in their well-being. There is ample evidence that large pools of public monies are available to finance public services, but these are being directed toward large-scale, capital-intensive projects whose benefits are preferentially directed toward well-off urban residents and the private sector. Responsibility for the urban and rural poor is given lower priority and many hundreds of millions are left without.

This paper has sought to make the case that public pension funds and sovereign wealth funds have obligations that go beyond ensuring a match between assets and liabilities and that they represent a form of public capital that can, and should, be tapped into to meet obligations such as provision of essential services to the world's poorest people. While there remain many challenging questions to be answered about the viability of such investments, even small commitments to a program of economically targeted investments (ETI) in the Global South could help to draw in other sources of public funds, including that of governments and IFIs, especially if the latter can be shamed and pressured into recognizing their shortcomings. The case for such ETIs can and should be made in the strongest terms, ethically, politically and economically.

In policy terms, the following steps are recommended:

- Launch a collaborative project to educate and inform various parties about the pressing need for basic public services, the failures of privatization and the availability of public capital for these purposes.
- Publicize the nature of current investments and strategies of PPFs and SWFs in order to pressure them into commitments to ETIs in the global South.
- Identify sympathetic and supportive legislators, lawyers and financial analysts who can make the legislative, legal and fiduciary cases for ETIs by PPFs and SWFs, and who may be willing and able to introduce legislation supporting such programs.
- Network with supportive NGOs in the North and South to create a global coalition that can pressure funds, governments, the UN and IFIs to commit to a set of development goals and targets and allocate funds to an institution for this purpose.



It is also proposed that a major collaborative research and analysis project be launched to synthesize the very disparate literatures and their findings, to prepare a new set of economic and financial analyses in support of this project, and to publish a series of academic, gray literature and popular reports and articles about the pressing need for public finance for public services, and the many opportunities available to address that need.

## Endnotes

- <sup>1</sup> Throughout this paper, 'near-term' is used to denote a period of one to three years into the future; 'medium-term', four to 10 years; and 'long term', 11 and more years.
- <sup>2</sup> A 'defined benefit' plan pays out pensions dependent on a contributor's years of work and final salary, regardless of how much may have been paid into the fund by that contributor. A 'defined contribution' plan pays out pensions whose amount depends on how much contributors have put into the fund. See Mitchell and Husted 2001.
- <sup>3</sup> If foreign exchange funds are invested or spent domestically, an equivalent quantity of domestic currency must be injected into circulation, which increases the total money supply and can stimulate inflation. A rising currency can make domestic products more expensive relative to imported ones, and undermine local industries and agriculture. Hence, 'sterilization' is intended to isolate foreign exchange from the domestic economy.
- <sup>4</sup> According to recent news reports, CalPERS lost as much as \$18 billion due to market volatility in July and August 2011 (Associated Press 2011).
- <sup>5</sup> Individual investors in private, direct benefit retirement funds hardly anticipated their massive losses as a result of the 2008 economic crisis; they were assured that their money was 'safe' and, although warned that markets could go down as well as up, generally believed what they were told.
- <sup>6</sup> Note, however, that CalPERS does not support such activism by its own pension plan members.
- <sup>7</sup> In some respects, this resembles a common property regime, in which common pool resources are collectively owned and used and can even be incorporated (see Frischmann 2005; Ostrom 1990).
- <sup>8</sup> While KfW promotes 'sustainability' in the projects it finances and the business it supports (KfW Bankengruppe 2009), there is no indication that it preferentially invests in the public sector (see for example KfW Bankengruppe 2011).
- <sup>9</sup> Note that the Sullivan Principles are often regarded as fairly weak, suggesting that effective CSR is more difficult than often claimed (Leon H. Sullivan Foundation n.d.). For a general critique of CSR, see Lipschutz and Rowe 2005.
- <sup>10</sup> At almost the same time, OTPP has sold its holdings in a British water company, Northumbrian Water Group (Sourbes 2011).

## ABOUT THE AUTHORS

**Ronnie D. Lipschutz** is Professor of Politics and a member of the Sustainability Engineering and Ecological Design working group at the University of California, Santa Cruz. Lipschutz conducts research on a range of topics related to global political economy, changing conceptions and practices of security, global governance, global civil society and corporate social responsibility, and environmental politics, among others. His most recent publications are *The Constitution of Imperium* (Paradigm, 2008) and *Globalization, Governmentality and Global Politics: Regulation for the Rest of Us?* (Routledge, 2005, with James K. Rowe), *Global Environmental Governance – Power and Knowledge in a Local-Global World* (Routledge, 2009, co-edited with Gabriella Kütting) and “Getting out of the CAR: DeCARbonization, climate change and sustainable society” published in 2012 in the *International Journal of Sustainable Society*. He can be contacted at [rripsch@ucsc.edu](mailto:rripsch@ucsc.edu).

**Sarah T. Romano** is a PhD candidate in the Department of Politics at the University of California, Santa Cruz. Her research centers upon questions of access to resources, water in particular, and the politics of participation surrounding resource governance. She will be completing her dissertation, *From Resource Management to Political Activism: Civil Society Participation in Nicaragua’s Rural Water Governance*, in 2012. Before beginning graduate studies at UCSC, Romano worked with the Center for International Policy’s Cuba Project and the Institute of Cultural Affairs in Washington, DC, and with the OMNI Institute in Denver, Colorado. She is the author of “From Protest to Proposal: The Contentious Politics of the Nicaraguan Anti-Water Privatization Social Movement” to be published in the *Bulletin of Latin American Research*, and of “No to the Privatization of Water” a report released in January 2005 by Food and Water Watch. She can be contacted at [sromano@ucsc.edu](mailto:sromano@ucsc.edu).

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### **Canadian office**

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Global Development Studies  
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CANADA

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School of Government  
Private Bag X17  
Bellville 7535  
SOUTH AFRICA