BRIDGING THE CLIMATE FINANCE GAP: THE ROLE OF SOVEREIGN WEALTH FUNDS

RESEARCH PAPER

JIMENA MADRIGAL

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This research paper is written by Jimena Madrigal, a junior research fellow at IDRN. Jimena is currently pursuing a Master's degree in Economics and Public Policy at Sciences Po Paris's School of Public Affairs, and is particularly interested in questions pertaining to distributive justice, social security provision and economic policy.

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Bridging the Climate Finance Gap: The Role of Sovereign Wealth Funds

Summary

- In response to the growing impact of financialisation and globalisation, the channels through which sovereigns endeavour to shape economic outcomes has needed to evolve. This is epitomised by the rise and increasing influence of sovereign wealth funds, special purpose investment vehicles that allow states to play an active role in financial markets.
- The climate crisis calls for the unlocking and redeployment of trillions of dollars. As the world grapples with the enormity of the task and the scarcity of resources, attention has turned towards the potential of sovereign wealth funds as viable candidates for championing climate finance sustainable investment.
- This paper analyses the potential of SWFs in advancing climate finance by analysing the way the imperatives of sustainable change interact with their particular investment strategies and policy aims.
- In addition to their significant scale (11+ trillion assets under management), SWFs' commonly stated objectives of achieving stability and long-term economic benefits, align particularly well with the overall goals of sustainable development.
- There remains, however, room for scepticism regarding the alignment of the nature of sustainable investment opportunities with SWFs' profit seeking, policy neutral fiduciary responsibilities. Matters are further complicated by the post-covid global economy and investment landscape.

Introduction

The growing impact of financialisation and globalisation has presented sovereign entities with progressively complex governance challenges. As financial markets wield increasing influence and nations become more intricately connected on a global scale, the channels through which sovereigns endeavour to shape economic outcomes has also found a need to evolve (Monk, 2010). This transformative effect is epitomised by the rise of sovereign wealth funds (SWFs), defined by the Sovereign Investment Laboratory with the following characteristics:

- An investment fund distinct from an operational enterprise
- Fully owned by a sovereign government, operating independently from the central bank or finance ministry
- Engages in both international and domestic investments across diverse assets
- Primarily focuses on attaining a commercial return (Bortolotti et. al, 2017)

Governments have been using these special-purpose vehicles to invest in financial markets at an increasing rate, challenging conventional perceptions of states as passive financial actors confined within the boundaries of their administrative control (Bahoo et. al 2019).

Robust global growth in the early 2000s amplified energy and commodity prices, resulting in a notable upswing in foreign currency receipts for numerous energy and commodity-exporting economies. Many emerging economies started generating current account surpluses, leading to the accumulation of international reserve assets. As governments, either intentionally or due to prevailing circumstances, took on the role of safeguarding significant portions of their countries' financial assets, the

imperative for effective wealth management emerged as a crucial public sector responsibility (Lipsky, 2008). The term 'sovereign wealth fund' gained prominence when these funds endeavoured to recapitalise a significant portion of the Western banking system just before the onset of the Global Financial Crisis of 2008–2010. In the next decade, these funds not only proliferated in number but also expanded substantially in both individual and collective size, solidifying their status as influential participants in the global financial landscape (Megginson et. al 2023). Just twenty years ago, SWFs managed a mere USD 1 trillion in assets, a figure that as of February 2023 has surged to over 11.5 trillion, signifying an average annual growth rate of 11% from 1999 to 2018 (Megginson et. al, 2023).

In what has been deemed an era of "new state capitalism," SWFs represent, not only an acceptance of the influence of financial markets but also an attempt by the states' to leverage markets and channel the transformative effects of financialisation towards their preferred economic outcomes (Monk, 2010). Envisaging SWFs as points of convergence between the social goals embodied by a representative institution and the dynamic forces and incentive structures of the market, it becomes relevant to engage in a comprehensive exploration of the extent to which SWFs, within their unique mandates and regulatory frameworks, have functioned as social welfare actors and explore their potential in further doing so.

In the epoch of escalating environmental crises, climate change stands at the forefront as arguably the most pressing developmental challenge of our time. The urgency to address this global phenomenon extends far beyond mere environmental concerns, encompassing economic, social, and existential dimensions. As the window for effective climate action rapidly narrows, the world grapples with the enormity of the task and the scarcity of resources. Recent studies and notably "The Global Stocktake" at the United

Nations Climate Change Conference (COP 28) have underlined the gap in financial resources currently being mobilised for climate mitigation and adaptation, particularly in developing countries (First Global Stocktake, 2023). What UN Secretary General Antonio Guterres calls an "adaptation emergency" calls for the unlocking and redeployment of trillions of dollars (UNEP, 2023).

Within this critical context, attention has turned towards the potential of sovereign wealth funds as viable candidates for championing climate and sustainable finance. In addition to their sheer scale, SWFs' commonly stated objectives of achieving stability and long-term economic benefits, align seamlessly with the overall goals of sustainable development. Moreover, their characteristically long-term investment outlook, ideally positions them as investors in sustainable projects that often require extended time frames to yield returns. Backed by state resources, many believe SWFs have the financial robustness to absorb the initial high costs and potential early-stage risks associated with green technologies and infrastructure projects. This is in stark contrast to the short-term profit focus prevalent in much of private sector investing.

This paper seeks to assess sovereign wealth funds (SWFs) as key climate and sustainable finance providers. It will critically analyse the distinct characteristics, investment strategies, and goals of SWFs that could make them effective catalysts in this sector, mobilising theory and surveying relevant examples. Moreover, it will also address sources of scepticism about their actual investment patterns, governance structures, and the degree to which environmental sustainability can truly be integrated into their investment decision-making processes. Overall, it seeks to provide a nuanced understanding of SWFs in the landscape of global financial strategies aimed at combating climate change. Ultimately

however, it entails the recognition that an appropriate response to the climate emergency will require a concerted effort from governments, international financial institutions, and the private sector towards an overall reform of the current financial architecture to better align global and domestic financial flows with the world's climate needs.

The Climate Finance Gap

The 2023 United Nations Conference on Climate Change (COP 28) was distinguished by the first "Global Stocktake," a critical assessment conducted every five years to measure progress against the Paris Agreement's objectives of climate change mitigation, adaptation, and finance. Notably, the stocktake revealed a substantial financial shortfall in climate action funding (First Global Stocktake, 2023). In 2022, a milestone was reached as global climate finance topped USD 1 trillion for the first time (Kaplan, 2023). Yet, Allen & Overy and Climate Policy Initiative's analysis shows that this figure falls short of future needs: by 2030, an annual investment of USD 6.2 trillion is required, escalating to USD 7.3 trillion by 2050, to successfully achieve Net Zero targets (Allen & Overy, 2023). The sectors with the greatest climate finance needs are transport (requiring 50% of the total estimated finance needs) and energy systems (requiring 32%) (Allen & Overy, 2023).

Similarly, adaptation finance, essential for enhancing climate resilience, remains low in both absolute and relative terms, despite being a paramount concern and priority area for numerous developing countries. Adaptation Gap Report 2023 released prior to COP28, highlighted that the financial needs for climate adaptation in developing countries have escalated to 10-

18 times the current international public finance flow. They are estimated to be in a plausible range of USD 215 billion to USD 387 billion per year this decade, surpassing prior estimates by 50% (UNEP, 2023). The report also underscores the severe impact of climate change on the 55 most vulnerable economies, which have incurred over USD 500 billion in losses and damages in the past two decades. Despite these needs, public multilateral and bilateral adaptation finance flows to developing countries declined by 15 per cent to USD 21 billion in 2021 (UNEP 2023).

Although the expense involved in decarbonisation and overall climate action is significant, the prospective rewards are even more substantial. Some suggest that concerted investment could add USD 43tn net to the global economy, entailing a rise of up to 4.4% in global GDP by 2070 compared to the status quo. Adaptation investments are also particularly cost-effective: for every billion dollars invested in coastal flooding adaptation, economic damages can be reduced by USD 14 billion, and an annual investment of USD 16 billion in agriculture could prevent the starvation or chronic hunger of approximately 78 million people due to climate impacts.

Considering the limited availability of public capital, the strategic implementation of funding policies and frameworks becomes vital to attract private investments at the necessary scale. This urgency is particularly pronounced in areas where private public finance represents a larger portion of total climate finance. For instance, in Africa, public finance formed 86% of climate finance over the last decade, in stark contrast to only 4% in North America. Furthermore, projections show that private climate finance is expected to grow more significantly than public finance in the future, a trend influenced by the substantial private capital present in the global financial system and the ongoing scarcity of public funding.

Sovereign Wealth funds: Aims and Investment Strategies

Sovereign wealth funds are defined in various ways due to their differing origins and purposes. However, for the scope of this discussion, we will focus on those defined by the following characteristics: An investment fund distinct from an operational enterprise, fully owned by a sovereign government and operating independently from the central bank or finance ministry. It engages in both international and domestic investments across diverse assets, with a primary focus on attaining a commercial return. It's important to note that Sovereign Wealth Funds are just one vehicle for managing sovereign wealth. State-owned companies, particularly those active in making foreign acquisitions, are another increasingly important vehicle. Traditionally, central banks invested their reserve assets in highly liquid, safe instruments such as U.S. treasuries, while SWFs pursued a more diversified portfolio, but the distinctions between SWFs and other types of government investors are blurry.

Although SWFs generally aim to manage their country's financial assets efficiently, they also often have distinct economic policy roles (Lipski, 2008). Reserve funds and Stabilisation funds represent two distinct categories of SWFs, each with particular objectives and investment strategies.

Stabilisation SWFs are generally funded through the export of oil and other commodities. In countries that export non-renewable resources, SWFs are instrumental in converting these resources into a consistent and sustainable source of future income. They aim to offset the inherent volatility of commodity prices and the limited nature of these resources. Central to their role is the prevention of economic boom-and-bust cycles, and safeguarding the economy's sectors unrelated to commodities from the

destabilising effects of currency fluctuations (Lipski, 2008). These funds tend to adopt a more conservative investment approach, with lower risk-return profiles, shorter investment horizons, and a greater need for liquidity compared to reserve funds (Klitzing et. al, 2010)

Reserve Funds in contrast, are SWFs focused on achieving long-term financial return. They manage state reserves that surpass the amounts held by the central bank for monetary policy purposes. Typically, their investments are predominantly in foreign assets, distancing exposure from the domestic economy and thus mitigating associated risks. Owing to the lack of immediate expenditure needs or liabilities linked to these assets, reserve SWFs are characterised by long-term investment horizons and higher risk-return profiles compared to other sovereign investors. Their investment portfolios are extensively diversified, encompassing equities, fixed-income instruments, and alternative assets like hedge funds and private equity funds, mirroring the strategies of pension funds and endowments (Klitzing et. al, 2010).

Some countries operate multiple SWFs with different mandates. A notable example is the Russian Federation, which in 2008, split its petrodollar stabilisation fund into two separate entities: the Reserve Fund, designed to address budget deficits resulting from fluctuations in oil prices, and the National Wealth Fund, which focuses on achieving long-term financial returns. Additionally, certain SWFs operate under multiple mandates, enabling a more flexible and multifaceted approach to sovereign wealth management (Klitzing et. al, 2010).

Beyond their primary asset management functions, some SWFs are specifically oriented towards promoting broader economic growth. *Strategic Investment Funds* for instance, are domestically focused and

seeking to mobilise private capital for investment in priority sectors and regions. They invest in infrastructure, technology, and renewable energy, as well as supporting small and medium enterprises (SMEs) to foster economic diversification and entrepreneurship. They also engage in international partnerships and investments, to integrate domestic markets with the global economy and attract foreign expertise and capital. Some examples of SIFs, include Bpifrance, the Ireland Strategic Investment Fund, Khazakhstan's Baiterek, the Nigeria Infrastructure Fund (NIF), Senegal's *Fonds d'Investissement Stratégiques* (FONSIS), and India's National Investment and Infrastructure Fund (NIIF) (Halland, 2023).

Overall, SWFs strategies are not only to drive immediate economic growth but also to build a robust foundation for future generations. SWFs are generally meant to contribute to the equitable distribution of a nation's wealth across generations. A role that becomes increasingly vital in the context of ageing populations, which accentuates the necessity to finance future social commitments, and in countries that rely on income from exporting commodities that exist in limited supply (Lipski 2008).

SWFs' funding sources and the investment horizons stemming from their economic policy roles are vital in determining their strategic asset allocations (SAA) (Kunzel et. al 2010). Traditionally, a longer investment horizon is synonymous with a higher risk tolerance. This is because, over extended periods, the potential for higher returns often outweighs short-term volatility. Consequently, the conventional wisdom in SAA literature recommends a larger equity allocation for investors with extended horizons. These long-horizon investors are also better positioned to capitalise on the illiquidity premium associated with certain asset classes like infrastructure, real estate, and private equity. These assets typically require considerable time and planning for a profitable exit without significantly impacting the

asset's price. Therefore, it's expected that only SWFs with genuinely long horizons, which are less likely to require rapid divestment, would invest significantly in these "alternative assets". Conversely, SWFs with shorter or uncertain investment horizons, such as stabilisation funds, tend to have a larger proportion of their portfolios in cash and highly liquid bonds. This strategy is essential to meet potential and sometimes unforeseen outflows without incurring substantial losses (Kunzel et. al 2010).

For SWFs deriving funds from commodities like oil, the link between funding source and SAA is particularly apparent. Following modern portfolio theory, if a country's income is heavily reliant on one or a few real assets, diversifying this dependency by investing in financial assets with negative or low correlation to the real asset is prudent. For example, SWFs funded by oil resources must consider oil-price risks, cycles, and assets when determining their SAAs. Additionally, smaller countries might opt to hedge the commodity-price risk directly. Similarly, if a stabilisation SWF's source is fiscal surpluses, its investment objectives are likely influenced by government budget dynamics. SWFs sourced from international reserves may be affected by the dynamics of private capital flows and the composition of private external debt, depending on the institutional arrangement and the rules governing the SWF's funding and withdrawals (Kunzel et. al 2010).

In summary, the role of Sovereign Wealth Funds extends beyond traditional asset management to address unique national economic challenges and opportunities. From stabilising economies dependent on volatile commodities to investing in long-term growth assets and fostering broader economic development, SWFs can be crucial in shaping both national and international economic futures.

Bridging the climate finance gap?

Part of the significance of SWF in raising climate finance stems from their substantial scale. As of 2015, 16 sovereign funds managed assets amounting to over 50% of their respective country's GDP. As of February 2023 SWF manage around USD 11.5 trillion in assets. Capital, however, is heavily concentrated, with the top 20 sovereign funds controlling roughly 90% of the total assets (Halland, 2023).

One could also analyse the role of SWF's in climate finance leveraging an understanding of their investment strategies and the nature of their policy aims, and the extent to which they closely intersect with the imperatives of sustainable change. Reserve funds, for one, given their characteristically long-term investment outlook, are ideally positioned as investors in sustainable projects that often require extended time frames to yield returns, such as green technology research and infrastructure projects. Moreover, given their backing by state resources, reserve funds are perceived as having the financial robustness to absorb the initial high costs and potential early-stage risks associated with these sustainable ventures.

Even stabilisation funds, traditionally associated with fossil fuel revenues, can play a crucial role in advancing the transition to decarbonisation. While traditionally associated with managing volatility in commodity prices, these funds can also serve as instruments for diversifying a country's revenue sources away from fossil fuels. By investing in sustainable projects and technologies, stabilisation funds can facilitate the development of alternative forms of revenue, thus reducing reliance on fossil fuel extraction. This not only contributes to mitigating climate change but also helps mitigate the socioeconomic impacts of the transition away from fossil fuels. By providing an alternative source of income, stabilisation funds make the

transition more politically viable, as they cushion the potential economic shocks and disruptions associated with decarbonisation efforts. This is particularly important in view that the largest funds in terms of AUM, including the Norwegian Government Pension Fund Global, the Kuwait Investment Authority, and the China Investment Corporation are primarily funded by oil revenues (Sovereign Wealth Fund Institute, 2024).

As Halland (2023) argues, the more obvious candidate to spearhead climate investment however, are strategic investment funds, whose mandate is to invest directly in priority sectors of national and regional economies to foster economic diversification. This has historically entailed investment in sectors like infrastructure and energy, and a direct allocation of resources towards innovation, research, and sustainable development. They also thus contribute to job creation and economic growth in sectors aligned with decarbonisation goals. However, SIFs are very small compared to sovereign funds, and would need far larger amounts of capital to contribute meaningfully to the low-carbon transition. The largest infrastructure-focused SIF, India's NIIF, seeks a capitalisation of USD 6 billion, whereas the largest sovereign fund, Norway's Government Pension Fund Global (GPFG) holds assets worth nearly USD 1 trillion, or about 170 times more than the NIIF. The exception to this rule is highly diversified sovereign funds with a strategic (SIF) component (Halland, 2023).

It is also important to acknowledge that while the actions of SWFs have an impact on climate change, climate change has an impact on SWFs as well. Climate change and the shift towards a low-carbon economy present SWFs with significant risks that underscore their vested interest in climate action (Caldecott, 2022). First, there's physical risks, where climate-induced events such as floods and heatwaves can directly damage assets and disrupt operations, leading to potential losses in market valuations. Second,

transition risk looms large as the economy transitions away from fossil fuels, especially in high-emission sectors, which could result in significant revaluations of assets and alter market dynamics, posing threats to financial stability. Lastly, liability risk arises from legal and financial consequences faced by companies failing to manage or disclose climate risks effectively or contributing substantially to carbon emissions (Halland, 2023).

The International Forum on Sovereign Wealth Funds published a report, based on a survey and interviews with 40% of the world's sovereign wealth funds, offering a comprehensive insight into how these investors perceive and address the impacts of climate change. Firstly, an overwhelming majority (91%) now view addressing climate change as consistent with their mandate, with 74% actively incorporating it into their objectives. Moreover, there is a growing understanding of the financial implications of climate change, with 60% of respondents acknowledging its potential to improve long-term returns. The report also highlights increased engagement with environmental issues, as evidenced by a rise in engagement with portfolio companies on environmental matters from 50% in 2020 to 65.7% in 2022. Importantly, sovereign wealth funds are not merely expressing intentions but taking tangible steps to combat climate change, with carbon foot printing adoption increasing from 23% in 2020 to 51.8% in 2022. Finally, there is a trend towards greater transparency and structured reporting, with a significant decrease in funds not reporting on their climate change strategy, from 11 in 2020 to only three in 2022 (IFWS, 2023).

Sharing in this general viewpoint, The One Planet Sovereign Wealth Funds (OPSWF) initiative aims to mobilise the capital of sovereign wealth funds towards the implementation of the Paris Agreement. Initially launched as a working group of six founding SWF, it has evolved into a robust network

comprising 46 members, including 18 sovereign wealth funds, 18 asset managers, and 10 private investment firms, collectively managing over USD 37 trillion in assets. The OPSWF initiative published a voluntary framework on 6 July 2018, consisting of 12 recommendations to guide SWFs in integrating climate-related risks and opportunities into investment management. Committed to actively collaborating to implement the principles outlined in the Framework, the OPSWF Network has also facilitated peer exchanges on critical new technical competencies such as carbon foot-printing and the implementation of the Task Force on Climate-related Disclosure (TCFD) recommendations. Moreover, the OPSWF Companion Document, published annually at the OPSWF CEO Summit, serves as a valuable resource for documenting progress towards their main objectives (One Planet SWF Network, 2022).

There are however reasons to be sceptical about SWF's climate finance potential. Indeed, despite talks and surveys pointing to increasing awareness and commitment to sustainability and energy transition, thus far, SWFs have allocated under USD 10 billion to support climate initiatives. "With the notable exception of Singapore and New Zealand, the commitments so far have been lacklustre, accounting for less than 5% of total sustainable investments, said Bernardo Bortolotti, director of the Sovereign Investment Lab at Bocconi University" (George & Al Sayegh, 2023).

A likely explanation is the difficulty in aligning the nature of sustainable investment opportunities and the mandates and fiduciary responsibilities of SWFs. For instance, as of 2016, 30 SWFs formally adhere to the Santiago Principles, a widely recognised framework aimed at promoting transparency, accountability, and good governance within SWFs to foster international confidence in their operations. A fundamental aspect of these principles is the commitment of SWFs to making independent investment

decisions, free from direct government influence. Similar to pension funds and other institutional investors, SWFs are bound by fiduciary duties that prioritise generating returns and ensuring the predictability of investment outcomes, rather than actively pursuing the policy objectives of their respective governments (Udaibir et. al, 2010).

Many sustainable industries, like clean energy or eco-friendly technology, are still nascent, facing uncertainties in technological advancements, market adoption, and competition. Investors also grapple with challenges in accurately assessing performance and risks due to limited historical data and standardised metrics. Moreover, the evolving regulatory landscape aimed at addressing environmental concerns adds another layer of uncertainty, with changes in relevant regulations, subsidies, or policies potentially affecting profitability and project viability. Additionally, the longer timeframes required for sustainable projects to generate returns introduce further risk factors, such as changing market dynamics or unexpected challenges during execution (Boffo & Patalano, 2020). SWFs, like other institutional investors, have thus been cautious about allocating significant capital to these areas. "We're looking for deals where there is a meeting of ESG and returns, and we don't accept lower returns just to comply with ESG targets," David Morley, managing director and head of Europe at Caisse de Dépôt et Placement du Québec, said (George & Kamadal, 2023).

The post pandemic context complicates the situation further. According to a survey conducted by OMFIF, 62% of the 50 largest pension funds and nearly half of the largest sovereign wealth funds experienced losses last year (OMFIF, 2023). Investors are now grappling with a macroeconomic environment entrenched in a prolonged period of elevated interest rates. Analysts note that caution has heightened during and after the pandemic, with a deteriorating global economic outlook prompting investors to

gravitate towards safer assets, while diminishing appetite for investments in unpredictable green technologies. As a result, a Reuters report suggests that climate finance from sovereign wealth funds has stagnated in the wake of the pandemic. This is supported by research conducted by the Center for the Governance of Change at IE University, which revealed that global SWF sustainable investments, from renewable energy to recycling and sustainable agriculture, amounted to USD 9.3 billion in 2022. Despite the mounting needs, this figure falls below the peak of USD 9.6 billion recorded in 2018 (George & Al-Sayegh, 2023).

Conclusion

This paper has highlighted the potential of SWFs in advancing climate finance by analysing the way the imperatives of sustainable change interact with their particular investment strategies and policy aims. Reserve funds, with their long-term outlook, can play a pivotal role in supporting green technology development and climate adaptation projects, while stabilisation funds have the opportunity to diversify revenue sources away from fossil fuels, contributing to both environmental and socioeconomic sustainability. Strategic investment funds (SIFs) emerge as promising actors, albeit needing larger capitalisation to significantly impact the low-carbon transition. Despite these opportunities, challenges persist, including the alignment of sustainable investment opportunities with SWFs' fiduciary responsibilities. The post-pandemic landscape further complicates matters, with SWFs exhibiting caution amidst economic uncertainties, potentially impeding climate finance progress. Nevertheless, initiatives like the One Planet Sovereign Wealth Funds (OPSWF) highlight a growing recognition of climate-related risks and opportunities among SWFs, underscoring the importance of collaborative efforts in integrating climate

considerations into investment management. While scepticism remains regarding SWFs' climate finance potential, ongoing dialogue and efforts towards aligning financial strategies with climate imperatives are essential for addressing the urgent challenges of climate change. Reforming the current financial architecture to prioritise climate needs requires coordinated efforts across sectors to mobilise resources effectively and drive meaningful change.

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International Development Research Network

30 Rue Vauvenargues
Paris, 75018
+33 6 78 66 56 26

www.idrn.eu.
info@idrn.eu.
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