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The Role of Sovereign Wealth Funds in the Global Economy and the Case for an Italian Model

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THE ROLE OF SOVEREIGN WEALTH FUNDS IN THE GLOBAL ECONOMY & THE CASE FOR AN ITALIAN MODEL

“Whenever you find yourself on the side of the majority,
it is time to pause and reflect"

— Mark Twain

TABLE OF CONTENTS

ABSTRACT

Sovereign Wealth Funds (SWFs) are the most influential financial institutions of the 21st century, revolutionising international investing with their long-term perspective, intergenerational mandate, and growing geopolitical weight. Initially designed as fiscal tools for the running of surpluses or natural resource revenues, SWFs are today at the intersection of state interest, international finance, and economic diplomacy. With assets of more than $13 trillion in more than 170 funds worldwide, they have become drivers of stabilising economies, diversifying income streams, and boosting development.

This thesis explores SWFs' role in transforming the world economy, investigating how investment priorities of leading funds — such as Norway's Government Pension Fund Global, Singapore's GIC, the Abu Dhabi Investment Authority and Saudi's Public Investment Fund — have balanced financial returns with strategic domestic projects. It considers the impact of SWFs on fiscal sustainability, infrastructure investment, innovation, and global capital markets, and how it responds to perceptions of opacity, political interference, and global economic imbalances.

This thesis also formulates the theoretical framework of an Italian SWF — The Fondo Risorgimento Italiano (FRI) — With its developed economy and industry capabilities, Italy lacks a sovereign tool that can invest long-term capital within strategic industries, support national firms, and strengthen the nation economically. The FRI aims to reinforce Italy's economic sovereignty and intergenerational balance in an increasingly competitive world. In this way, the thesis synthesizes the global SWFs saga with a national vision, proposing that Italian future competitiveness doesn't surrender to financial trends — but shapes them.

CHAPTER 1: SOVEREIGN WEALTH FUNDS OVERVIEW

1.1. SWFs Definition & Classification

The term Sovereign Wealth Funds (SWFs) was introduced by Andrew Rozanov in his article “Who Holds the Wealth of Nations?”, published in 2005 in the Central Banking Journal. Rozanov described SWFs as a by-product of national budget surpluses, accumulated over the years due to favourable macroeconomic, trade and fiscal positions, coupled with long-term budget planning and spending restraint.[1] Subsequently, the International Monetary Fund (IMF) defined Sovereign Wealth Funds as “special-purpose investment funds or arrangements, owned by the general government… [which] hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies, including investing in foreign financial assets.”[2] The Sovereign Wealth Fund Institute offers a broader definition: “A Sovereign Wealth Fund is a state-owned investment fund or entity that is commonly established from: balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, governmental transfer payments, fiscal surpluses, and/or receipts resulting from resource exports.”[3]

The creation of SWFs occurs typically in economies characterized by significant export revenues — especially from commodities such as oil, gas, diamonds, and copper — or from national budget surpluses driven by favourable macroeconomic conditions, strong trade performance, and fiscal discipline.
Countries such as Saudi Arabia, Norway, the United Arab Emirates, and China all have different plans for the creation of SWFs, each shaped by and tailored to the unique economic conditions and strategic policy goals of their respective countries.[4]

SWFs have existed since the 1950s, with the earliest example being Kuwait’s Investment Authority (KIA), founded in 1953 to manage oil revenues for future generations. At the

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[1] Rozanov: “Who Holds the Wealth of Nations”, 2005
[2] IMF: Sovereign Wealth Funds - A Work Agenda, 2008.
[3] Sovereign Wealth Fund Institute, 2023
[4] Megginson & Fotak, 2015

outset, approximately two dozen SWFs existed, with capital resources primarily derived from state-owned profits from fiscal surpluses or commodity exports. Global attention to, and growth in, the number of SWFs began to accelerate in 2003 — driven by a prominent uptrend in commodity prices (especially oil), a surge in China's foreign exchange reserves following its entry into the World Trade Organization (WTO), which exceeded $600 billion by 2004, and most notably during the period leading up to and immediately following the 2008 global financial crisis.[5] The surge in oil prices, along with persistent trade surpluses during the early to mid-2000s, generated considerable surplus revenues — particularly for resource-rich nations — which, in turn, stimulated the rapid expansion of SWFs. As of March 2025, there are over 170 SWFs operating globally, managing assets totalling over $13 trillion.[6]

During periods of economic stress, SWFs act as instruments of economic stability by providing liquidity and nurturing investor confidence, as evidenced by their role during the 2008 financial crisis. Within the global financial system, SWFs have evolved into influential players, shaping investment landscapes, affecting asset prices, and contributing significantly to international capital flows, thereby influencing global markets, economies, and geopolitics. Governments establish SWFs with objectives that include shielding national budgets and economies from revenue volatility — thereby safeguarding economic stability from fluctuating commodity prices — assisting monetary authorities in managing excess liquidity, accumulating financial reserves for future generations, diversifying revenue streams to ensure sustainable long-term growth, and supporting strategic economic and social development projects.

As SWFs have increasingly attracted public attention, they have also generated controversy. Critics have expressed concerns regarding their disproportionate influence on financial markets and questioned possible untransparent political agendas. On the contrary, supporters portray SWFs as cautious and sophisticated investors whose operations offer numerous benefits and contribute positively to the stability and efficiency of global financial markets.

SWFs can be broadly categorized into two primary types:
(1) *Commodity-based funds;* (2) *Non-commodity-based funds.*

[5] Shai Bernstein, 2013.
[6] Global Sovereign Wealth Fund, 2025.

1) Commodity-based SWFs are capitalised using the proceeds from the export, taxes and/or royalties from sales of natural resources, primarily oil and gas. These funds are established by countries rich in natural resources and used to manage the income generated from commodity exports. The primary objectives of such funds include stabilizing the national economy against volatile commodity prices (with the use of various and complex trading strategies such as futures, swaps, options and other derivatives), saving for future generations, and diversifying income sources to reduce dependence on a single commodity. Noteworthy examples include Norway's Government Pension Fund Global (GPFG) and the Abu Dhabi Investment Authority (ADIA), both of which utilize oil revenues to invest in a diversified portfolio of international assets. By 2008, the three largest oil funds made up 52% of total SWF assets.[7] Oil-based funds still make up the majority of funds — 57% of the largest SWFs by Assets Under Management (AUM) are oil-based.[8]

2) Non-commodity-based SWFs derive their funding from non-commodity revenues. These funds originate from foreign exchange reserves that have been built up as a result of persistent trade surpluses, fiscal surpluses, or profits from privatization of state-owned enterprises.[9] Such SWFs have been set up by China and Singapore, which have substantial manufacturing or service-oriented economies. Countries establish these funds to manage excess reserves and achieve long-term investment returns. For instance, the China Investment Corporation (CIC) and Singapore's GIC Private Limited (GIC) are leaders of the non-commodity-based SWFs that invest internationally across multiple asset classes to increase national wealth and support their economic objectives. Non-commodity-based SWFs are driven by the need to optimize reserve management and boost returns on foreign exchange holdings.[10] They typically pursue a broader range of investment strategies and tend to have a higher risk tolerance in pursuit of long-term growth.[11]

The IMF was the first institution to propose a goal-oriented classification of sovereign wealth funds, presented in its 2007 Global Financial Stability Report (GFSR). This report outlines

[7] Gintschel & Scherer, 2008.
[8] Gangi, Meles, Mustilli, Graziano, & Varrone, 2019
[9] Curzio & Miceli, 2010, (p. 24).
[10] IMF, 2008.
[11] Megginson & Fotak, 2015.

five distinct categories based on the primary objectives of each fund: (i) *stabilization funds*, aimed at protecting national budgets and insulating economies from volatility in commodity prices — (ii) *savings funds* for future generations, designed to transform non-renewable resource wealth into diversified investments and reduce vulnerabilities like Dutch disease[12] — (iii) *reserve investment corporations*, established to enhance returns on foreign reserves while still maintaining their status as reserve assets — (iv) *development funds*, intended to finance socio-economic initiatives or support industrial policies that enhance national economic growth potential — (v) *contingent pension reserve funds*, which cover potential future pension obligations recorded on government balance sheets, sourced independently from individual pension contributions.

1-Stabilisation funds (SPRFs) — also called rainy-day funds — are national investment funds commonly established by countries with abundant natural resources, these serve primarily to shield national economies and fiscal policies against volatile commodity price fluctuations, as well as falling production levels.[13] Their purpose is to provide capital in the event of market shocks. Liquidity is important for these funds, therefore, 90% of their portfolios are allocated into public stocks and bonds.[14] By strategically managing surplus revenues during periods of elevated prices, these funds provide financial stability during downturns, effectively smoothing economic cycles. Prominent examples include the Russian Reserve Fund (NWF), created to stabilize Russia's budget amid oil price volatility, and Kazakhstan's National Welfare Fund (Samruk-Kazyna; SK), created to mitigate the economic impacts of fluctuating oil revenues, held assets totalling $62.7 billion as of September 2024.[15] Stabilisation funds are a class of their own and stand out compared to all other fund types. The reason is that, while all other funds are managed primarily for long-term return and wealth maximisation, stabilisation funds have as their primary objective risk management.[16]. Morgan Stanley writer, Stephen Jen, addressed this topic at the Morgan Stanley Global Economic Forum in 2006, noted that with the permanent rise in oil prices, most oil stabilisation funds have

[12] The Dutch Disease refers to a situation where a country experiences a resource boom — usually from exports like oil or gas — that causes its currency to strengthen significantly. While this might sound positive, it can harm other parts of the economy. A stronger currency makes other exports more expensive and less competitive abroad, which leads to declining output and job losses in non-resource sectors like manufacturing and agriculture. In the end, the resource-rich sector thrives while the rest of the economy weakens, creating an imbalanced growth path

[13] Fotak, Bortolotti and Megginson (n.51) 24.

[14] Sovereign wealth funds in the post-pandemic era, William L. Megginson, 2023.

[15] Aiman Nakispekova - The Astana Times, 2024.

[16] Rozanov, 2005

evolved into 'wealth-accumulation' funds.[17] He observes that several Asian currency stabilisation funds have outgrown their liquidity requirements; as a result, Jen anticipates that many of these funds will shift their focus and prioritize wealth appreciation.[18].

2- Savings funds — also called future generations funds — aim to save current profits and are designed to preserve national wealth and facilitate its transfer across generations, ensuring that future citizens benefit from present-day resources. This is achieved by converting non-renewable resources into a diversified portfolio of financial assets. Strong governance frameworks, clear mandates, expert asset management, and a high degree of transparency, especially among OECD-affiliated states,[19] are all characteristics of these funds. They invest for the long term with portfolios heavily weighted toward equities, real estate, and alternative assets. Savings funds' allocation to private markets has increased by an average of 10% per year over the past decade; currently, 22% of their portfolios are allocated to private markets. Collectively, these SWFs control 70% of all private AUM globally.[20] The world's largest SWFs are mainly savings funds, including the Qatar Investment Authority (QIA), the ADIA, and the KIA.

3- Reserve investment corporations. Funds established as a separate entity either to reduce the negative cost-of-carry of holding reserves[21] or to pursue investment policies with higher returns.[22] While these reserves held by reserve investment corporations may be classified as official reserves, their distinction lies in being managed independently from the central bank. These firms are established to reduce the carry cost of foreign reserves and can lower the anticipated costs associated with sterilized foreign exchange interventions, potentially encouraging authorities to extend such interventions in order to postpone adjustments in the real exchange rate. However, this approach may lead to increasing currency mismatches — characterized by short positions in domestic currency and long positions in foreign currency — which, in turn, would raise the economic cost of any subsequent appreciation of the domestic currency. Compared to development funds, reserve investment corporations tend to

[17] Stephen Jen, "Currencies: Sovereign Wealth Funds and Official FX Reserves", 2006.
[18] Stephen Jen 2006.
[19] The OECD currently has 38 member states. These include countries from Europe, North America, Asia, Australia, and South America. The OECD aims to promote economic growth, prosperity, and sustainable development.
[20] BCG, "Sovereign Wealth and PPF Set to Reshape Private Markets", 2024.
[21] Carry costs reflect the financial losses incurred when the return on foreign reserve assets is lower than the cost of domestic sterilization operations. This cost can create incentives for governments to transfer excess reserves to SWFs, which seek higher returns by investing more broadly.
[22] IMF Report, 2007, (p. 46).

invest in higher performing firms. At the same time, they will need to consider the possible repercussions of balance of payments risks and will want to hold a portion of its portfolio in liquid assets. An example of a reserve investment corporation is the CIC.

4- Development funds — also called strategic funds — are SWFs that have been created to direct spending and investment toward their domestic economy.[23] These funds are utilized mostly for the allocation of resources for financing socio-economic development projects, as well as specific industrial projects. Development funds pursue social and growth objectives similar to mutual banks.[24] Unlike reserve investment corporations that prioritize return maximization, development funds often target investments with broader public policy goals, such as job creation, industrial diversification, or technological advancement. Such SWFs share characteristics with development banks but rely primarily on equity investments while development banks make loans to projects or firms. Development funds prefer underperforming and higher-risk firms that pay high dividends. These investments can offer high returns but are often pursued for their developmental impact rather than financial returns alone. Examples of such a fund include Temasek Holdings, which operates as an investment company owned by the Government of Singapore Malaysia's Khazanah Nasional.

5- Pension reserve funds — Public Pension Reserve Funds (PPRFs) — can defined as funds set up by governments or social security institutions with the objective of contributing to the financing of pension plans from sources other than individual pension contributions. Based on this definition, two sub-categories of pension reserve funds can be identified. I) Social Security Reserve Funds are set up as part of the overall social security system, where the inflows are mainly surpluses of employee and/or employer contributions over current payouts, as well as top-up contributions from the government via fiscal transfers and other sources. II) Sovereign Pension Reserve Funds refer to those funds which are established directly by the government (completely separated from the social security system), with financial inflows mainly coming from direct fiscal transfers. Unlike the first type of reserve fund, those within this category have been set up by governments to meet future deficits of the social security system. For example, The Pension Reserve Fund of Chile — Fondo de Reserva de Pensiones (FRP) — was created to provision for future pension liabilities of the government; the intention was to lock in its resources for 10 years so that they could help to

[23] Economics of Sovereign Wealth Funds, Udaibir S. Das, Adnan Mazarei, and Han van der Hoorn, 2010.
[24] Wilson, et al., 2010

cover a specific fraction of the increases in pension-related expenditures. Other examples include the Chinese National Security Fund (NSSF) and the NWF. The GPFG is a peculiar example of a pension reserve fund as it combines elements of pension reserve funds with savings funds.[25]

1.2. Origin & Growth

Between 2005-2008, SWFs experienced a rise in their founding and a fast expansion, largely driven by soaring oil prices, growing current account surpluses — especially in Asian economies — and the overall increase in global commodity prices. For example, the price of crude oil (WTI)[26], which averaged $19.25 per barrel in 1999 (recovering from a low of $14 in the same year) climbed sharply over the next decade, reaching $145 per barrel in 2008. This uptrend came to a halt with the outbreak of the Global Financial Crisis (GFC) later that year. When Lehman Brothers filed for bankruptcy on September 15, 2008, global oil prices crashed to nearly $30 per barrel by December 2008. However, the downturn was short-lived; by the summer of 2009, prices had rebounded to an average of $70 per barrel. These major developments enabled oil-exporting countries to build up significant financial reserves, which became the foundation for new investments abroad. In 1976, the Abu Dhabi Investment Authority was funded in the United Arab Emirates. In the same year, the Alberta Heritage Fund (AHSTF) was formed in Canada and, in 1981, the Libyan Investment Authority (LIA) in Libya. At the same time, Singapore witnessed the constitution of two of the most important non-commodity funds: Temasek Holdings (TH) in 1974 and the Government of Singapore Investment Corporation (GIC) in 1981.

At the same time, financial crises tied to reserve accumulation pushed many countries to set up non-commodity-based sovereign wealth funds, including some of the largest strategic pension reserve funds (SPRFs): the French Pension Reserve Fund (FRR) founded in 2000, the New Zealand Superannuation Fund (NZSF) in 2001, and the Irish National Pension Reserve Fund (NPRF) in 2000. The United Arab Emirates established the Mubadala Investment Company (MIC) in 2002 while in 2003 they established the Istithmar World (IW); the latter would eventually become one of the most important players in the making of

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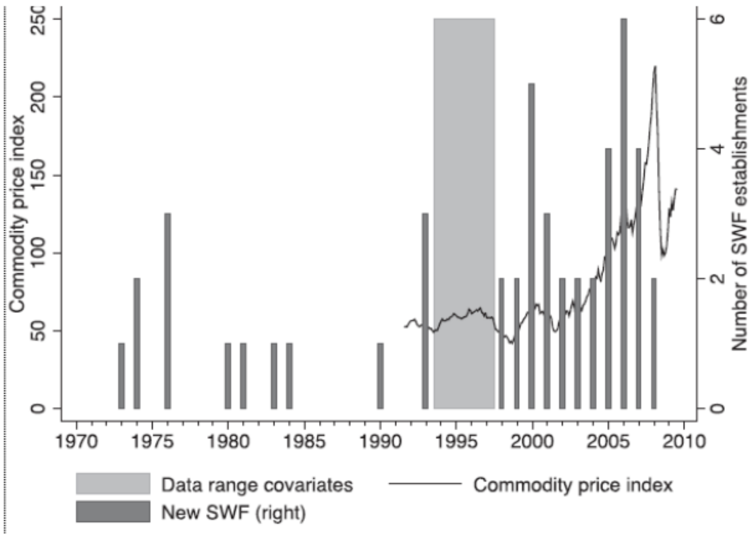
[25] Ciarlone & Miceli, 2013
[26] West Texas Intermediate

Dubai World, a sovereign wealth fund created in 2006 with the objective of promoting the economic growth of Dubai.
This extreme volatility highlighted the importance of SWFs in stabilising domestic economies and protecting national budgets against sudden and disruptive price swings. These price swings, however, did not lead to the collapse of SWFs; rather, they reinforced the idea that governments should not rely exclusively on oil or other raw material exports as their main source of income. Some experts interpret this period more as a phase of stagnation, marked by only a modest growth in AUM — particularly when focusing on SWFs from countries within the Organisation for Economic Co-operation and Development (OECD) block. For example, a 2019 report noted that the average return for SWFs was flat, with a weighted average return of -1.6% when considering AUM.[27] Despite this stagnation, other commodity-based SWFs were launched such as the State General Reserve Fund of Oman (SGRF) in 1980, the Brunei Investment Authority (BIA) in 1983, and the Norwegian Government Pension Fund Global in 1990. As for non-commodity-based SWFs, the most important one is the Malesian Khazanah Nasional (KNB) whose funding mostly comes from privatization operations of state-owned enterprises.[28]

Figure 1 below shows a pattern in which the frequency of establishment of SWFs coincides with a rise in the price level of many commodities (oil, metals and agricultural products).

Figure 1



Source: Carpantier & Vermeulen (2018)

[27] "Sovereign Wealth Funds" by Javier Capapé, PhD Director, Sovereign Wealth Research, 2019.
[28] Fernandez et al., 2008

Another crucial factor to the rapid growth of SWFs was the rise of globalisation; in fact, it contributed significantly by facilitating the international movement of capital and direct investments abroad. During this period, SWFs started to make world news and were at the centre of a growing interest, not only by institutional players but also by the general public. The rise of globalisation — especially when the Cold War ended and from the 1990s onwards — lead to a tearing down of many of the regulatory and geopolitical barriers that had made it difficult for capital to move interchangeably between countries. This made it a lot easier for SWFs to look beyond their own borders when investing. As financial markets became more accessible and became more connected, SWFs took advantage of new opportunities and began moving their surplus capital into foreign assets, mostly targeting developed economies because they offered more stable institutions as well as deeper and more liquid markets.
The rise of SWFs coincided with a shift in global economic power from the traditional Western economies to emerging markets (EM). SWFs became emblematic of this transition. As Bortolotti et al. (2015) note, SWFs were no longer passive repositories of national wealth, but active, strategic investors on the global stage, particularly in the post-2000 era.

The number of SWFs reached around 50–60 funds by the beginning of the GFC.[29] Following the Asian financial crisis of 1997–98, numerous countries in the region adopted successful export-driven economic growth strategies, resulting in considerable trade surpluses. Many nations benefiting from these economic conditions had economies or domestic financial markets too limited to efficiently exploit capital inflows or strategically chose to save surplus revenues for future periods of economic uncertainty. Consequently, these countries established SWFs to invest a portion of their export earnings in diversified foreign financial instruments including equities, government and corporate bonds, currencies, commodities, and alternative investments such as private equity and hedge funds. By the end of 2008, SWFs funded from petroleum and natural gas exports combined with those from Asian trade surpluses accounted for approximately 88% of total SWF-held global financial assets.

While it is challenging to find prior specific entities that resemble these types of funds. Some of the more interesting cases involve the East and West Indian Companies[30] in the 17th

[29] International Forum of Sovereign Wealth Funds (IFSWF) Reports.
[30] Chartered by European sovereigns (more notably English, French, and Dutch) in the 17th century, the East and West India Companies combined commercial activity with geopolitical and colonial ambitions.

century. Despite fundamental differences from contemporary SWFs, these early institutions similarly operated combining geopolitical strategy and economic expansion. Since the first industrial revolution, sovereigns[31] overseeing economies with surplus resources have often directed part of that wealth toward fostering national development — through infrastructure projects or efforts to accelerate industrialization. An example is the Russian Empire until 1914. Curzio and Miceli (2009) draw a provocative comparison between certain modern SWFs and earlier forms of "sovereign-held organizations." This resemblance is more prominent when the funds are under the administration of countries with high levels of centralized power for either dynastic or political reasons. However, contemporary SWFs remain historically unique in that their primary objective is profit. Unlike historical precedents, today's sovereigns allocate surplus capital with the exclusive (or prevailing) objective, to generate financial returns through global investment strategies.[32]

According to the WSJ, new information shows that approximately 59% of foreign SWF investments are derived from natural resource surpluses. This is a general trend of SWF funding towards diversified and diverse funding sources away from commodity revenue dependence. Through 2025, such funds have increased to manage trillions of dollars in assets worldwide, demonstrating unequivocally their rising contribution to funding economic development, financial stability, and long-term strategic thinking for resource-endowed as well as surplus-exporting countries. Still another reason for the growth of SWFs has been the deliberate policy by most emerging market countries to build up foreign reserve holdings through steady current account surpluses.[33] Many of these countries, especially within Asia, have accumulated reserves exceeding the levels required mainly for prudential or financial stability purposes. Consequently, efforts to diversify these excess reserves into assets offering higher potential returns have led governments to transfer control from central banks to treasuries or specialized entities, including SWFs. Their mandate focuses on executing investment strategies that target higher returns over an extended time horizon.
The growing prominence of SWFs warrants close attention for at least two significant reasons:[34] Firstly, as these funds keep growing in both size and influence, their effect on

[31] Refers to heads of state or ruling authorities — typically monarchs, emperors, or centralized governments — who held both political and economic control over their nations. These sovereigns made key decisions about public spending, investment, and economic strategy — often directing surplus funds toward projects that aligned with national interests or dynastic ambitions.
[32] Curzio and Micieli, 2009
[33] Aizenman, 2007
[34] Rozanov, 2005

different asset markets — and the possibility that they could sway or distort them — is expected to rise. Secondly, even though SWFs are more varied in nature than central banks or public pension funds, they still have a few key things in common: they're state-owned, tend to take a long-term view, and manage large amounts of capital. These qualities make them especially useful for governments trying to meet specific policy goals or manage broader economic challenges.

SWFs have continued to expand through the mid-2020s, alongside rising commodity prices and growing reserve holdings by various countries. By 2025, SWFs globally managed around $13 trillion in assets, a clear increase from earlier years. This growth positions SWFs ahead of hedge funds, which, despite their worldwide presence, manage an overall smaller pool of assets. When you compare SWFs to the total amount of global financial assets — estimated at somewhere between $300 and $400 trillion in 2024 — their share remains relatively small. Still, their impact goes beyond what their size alone would imply, particularly in shaping stock market valuations and influencing investment and debt flows in emerging markets. Looking ahead, it's likely that SWFs will grow more prominent in the world of global finance. In fact, Deloitte analysts estimate that Gulf-based SWFs alone could grow their assets to around $18 trillion by 2030, which suggests just how rapidly the industry is expected to grow.[35] In general, the growing importance of SWFs reflects the broader economic trends we're seeing, with governments placing greater emphasis and focus on investing their wealth in a strategic manner.

1.3. Size & Market Presence

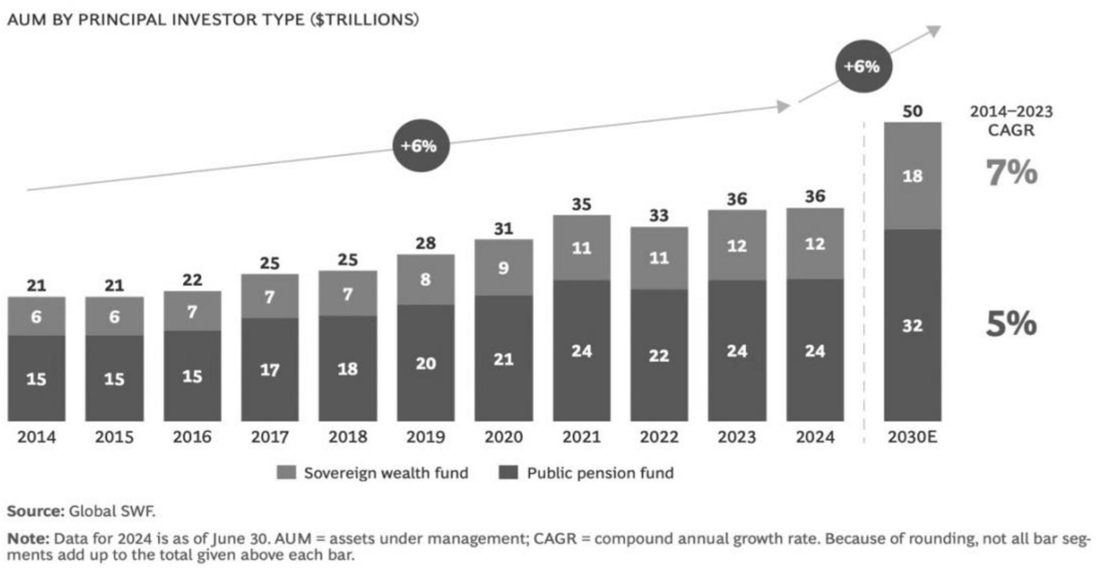
According to McKinsey Global Institute, total global financial assets (including equities, bonds, and other financial instruments) were estimated to be $400 –500 trillion in recent years. As of April 2025, SWFs globally manage approximately $13.4 trillion in AUM,[36] up from $11.6 trillion since last years' report (a 14% increase). Consequently, SWFs constitute roughly 3% of global financial assets. Given that 59% of SWF assets are from commodity proceeds, this segment represents about 1.8% of global financial assets.[37] In fact, the top five

[35] Deloitte Middle East report: Gulf Sovereign Wealth Funds lead global growth, 2025.
[36] IE University, Sovereign Wealth Funds 2024: (Madrid: IE Centre for the Governance of Change, 2024).
[37] Megginson, Malik, and Zhou, "SWFs in the Post-Pandemic Era." (2023).

SWFs alone control more than half of the global SWF assets, also covering 86% of the total deal value[38] with SWF participation from January 2023 to June 2024.

Growth was led by the world's largest SWF, the Government Pension Fund Global. GPFG's AUM rose $342 billion to $1.73 trillion (as of April 2025), from $1.4 trillion (a 24% increase). To put this into perspective, only 19 of the 195 countries in the world are above the $1 trillion threshold (in nominal GDP terms), and if GPFG were a country, it would be the 12th largest economy in the world, ahead of Mexico and just behind Russia. Two Chinese organizations, CIC and the quasi-SWF State Administration of Foreign Exchange (SAFE) — remained in second and third place for back-to-back years, with CIC holding $1.3 trillion, and SAFE with $1.1 trillion AUM. The 4th, 5th, and 6th positions are currently held by Middle Eastern funds: The ADIA, the PIF and the KIA. ADIA is now estimated at $993 billion, although the official figure remains unknown. The PIF, at $978 billion, is the fastest growing large fund, with a 34% growth year on year. On its part, the KIA remains not far behind, with an updated estimation at $969 billion AUM.

Figure 2



[38] Deal value is the total monetary worth of an investment transaction or a set of transactions in which an investor, such as a SWF, commits capital. It represents the financial size of a deal — typically expressed in USD — and includes equity stakes, acquisitions, co-investments, or capital injections into projects, companies, or funds. It might include direct equity investments into foreign, real estate purchases or development projects, infrastructure investments, such as airports, ports, or energy grids, private equity or venture capital co-investments with institutional partners. It reflects the scale and risk appetite of an SWF,

Figure 2 represents the growth of AUM by SWFs and public pension funds from 2014 to 2024, with an estimate to 2030. According to data from Global SWF, total AUM across both types of funds has increased from $21 trillion in 2014 to $36 trillion in 2024. This growth represents a 5% compound annual growth rate (CAGR), as SWFs expand at 6% CAGR. The graphic further forecasts that total AUM will be $50 trillion by 2030, comprising $32 trillion from SWFs and $18 trillion from public pension funds, which is a CAGR of 7% since 2014 to 2030.[39]

The steady growth of SWFs over the past decade highlights how much more important they've become — not just financially, but strategically — in global capital markets. Since 2014, they've moved beyond their original roles as stabilization or savings tools and have taken on a much more active investment presence, spreading across a wide range of asset classes including infrastructure, technology, healthcare, and private equity.[40] The faster growth rate of SWFs relative to public pension funds suggests that state-owned investment vehicles — especially those in surplus economies or resource-rich nations — are being used more aggressively as tools for economic diversification and long-term return generation. Moreover, the convergence of AUM between both groups of investors signals how public funds are being redirected to look more active, return-oriented styles, while SWFs continue to lead when it comes to foreign and strategic sector exposures. This growth trajectory points to the critical role SWFs will play in shaping investment flows, influencing asset prices, and positioning long-term capital in a more multipolar economic landscape.[41]

Middle Eastern SWFs are growing not only their AUM but putting this weight behind mega-deals. PIF and Mubadala are making splashes in this regard and have scaled the total deal value of the deals joined up 254% and 175%, respectively. ADIA and QIA are also doing more of the same, whose total deal value also jumped 93% and 84%, respectively.
On the contrary, the value of the deals joined by GIC reduced 30% although the deal count activity grew 24% with respect to the 2023 Report.[42]

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[39] Global SWF, Annual Report 2024, Mapping the Power and Reach of Sovereign Wealth Funds, Global SWF, June 2024.
[40] Bortolotti, Bernardo, Veljko Fotak, and William L. Megginson. "The Rise of Sovereign Wealth Funds: From Resource Stabilization to Global Asset Management." Journal of Economic Perspectives (2015):
[41] Megginson, William L., and Asif I. Malik. "Sovereign Wealth Fund Investment Behaviour in a Post-Pandemic World." Journal of International Business Policy
[42] IE University, *Sovereign Wealth Funds 2024*, p.11

Figure 3

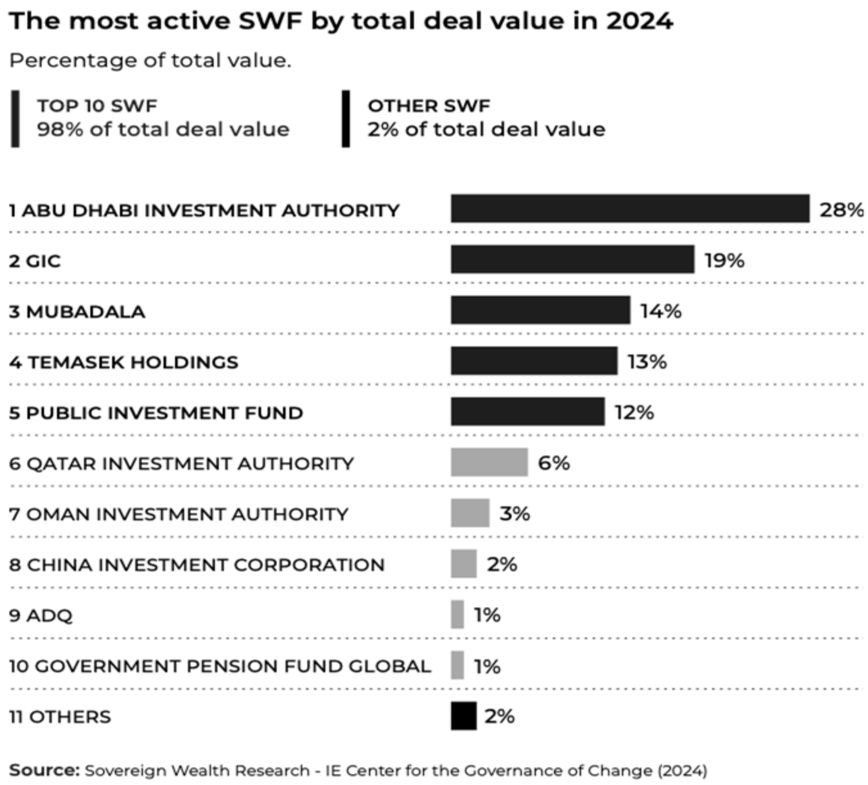
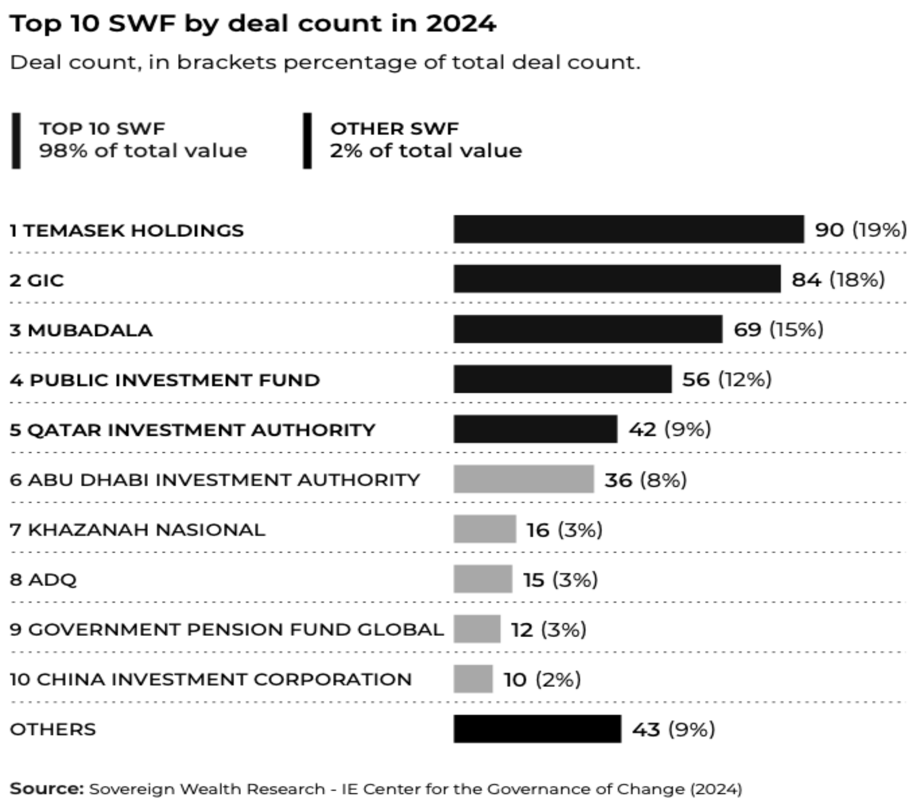


Figure 3 illustrates the concentration of SWFs activity in terms of total deal value for the year 2024. The data reveals a clear asymmetry in global SWF investment dynamics, with the top ten SWFs collectively accounting for 98% of the total deal value. All the above funds almost executed one deal per week, at average values ranging from $300 to $520 million. On this metric, the average value of the deals joined by ADIA is worth highlighting, as it reached $1.8 billion, participating in 36 deals in the Report period. Again, concentration at the top remains a central feature of the SWF industry. In terms of deal activity, the first five concentrated 72% of all deals, while the top ten were involved in 91% of the SWF deals.[43]

[43] IE University, *Sovereign Wealth Funds 2024*

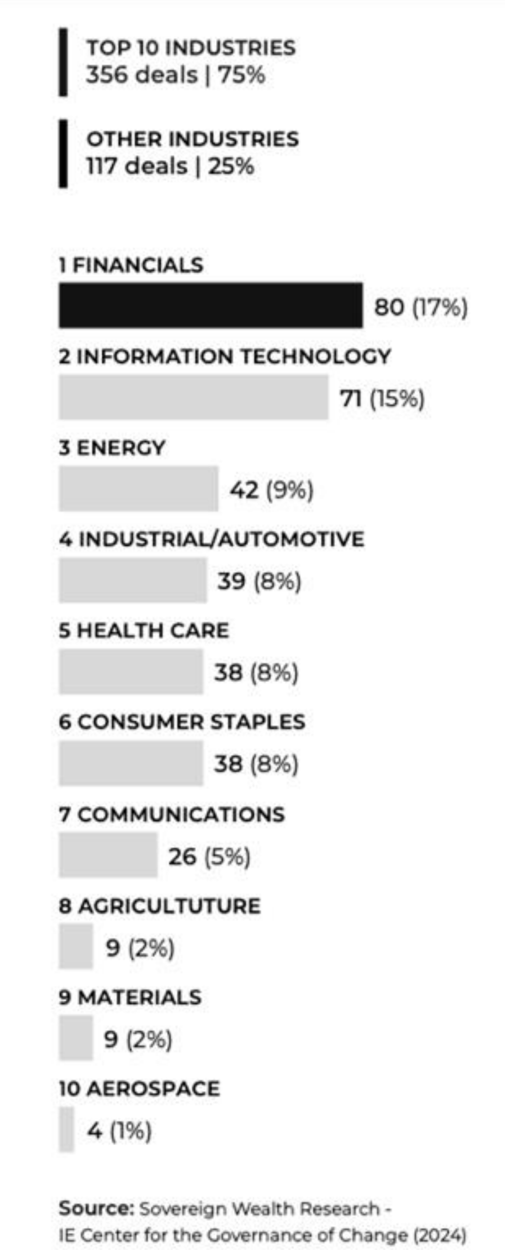
Figure 4



Leading SWFs have continued to dominate deal activity over the past year. Temasek was at the top in deal volume executed with 90 transactions, while total deal volume declined 26% — evidence of a more restrained investment strategy, particularly towards technology investments during the reporting period. GIC came in second for the second year running with 84 transactions, 24% more in terms of activity and demonstrating how individual funds under the same national flag can have dissimilar investment mandates and strategic priorities. Third was occupied by Mubadala Investment Company with 69 deals, as the PIF registered a record 155% surge in deal volume — its biggest ever in this report year — and moved into fourth place for the first time.[44] This increase by the PIF is part of a growing appetite for stakes in key sectors and also aligns with Saudi Arabia's broader Vision 2030 economic diversification policy.

[44] IE University, *Sovereign Wealth Funds 2024*

Figure 5



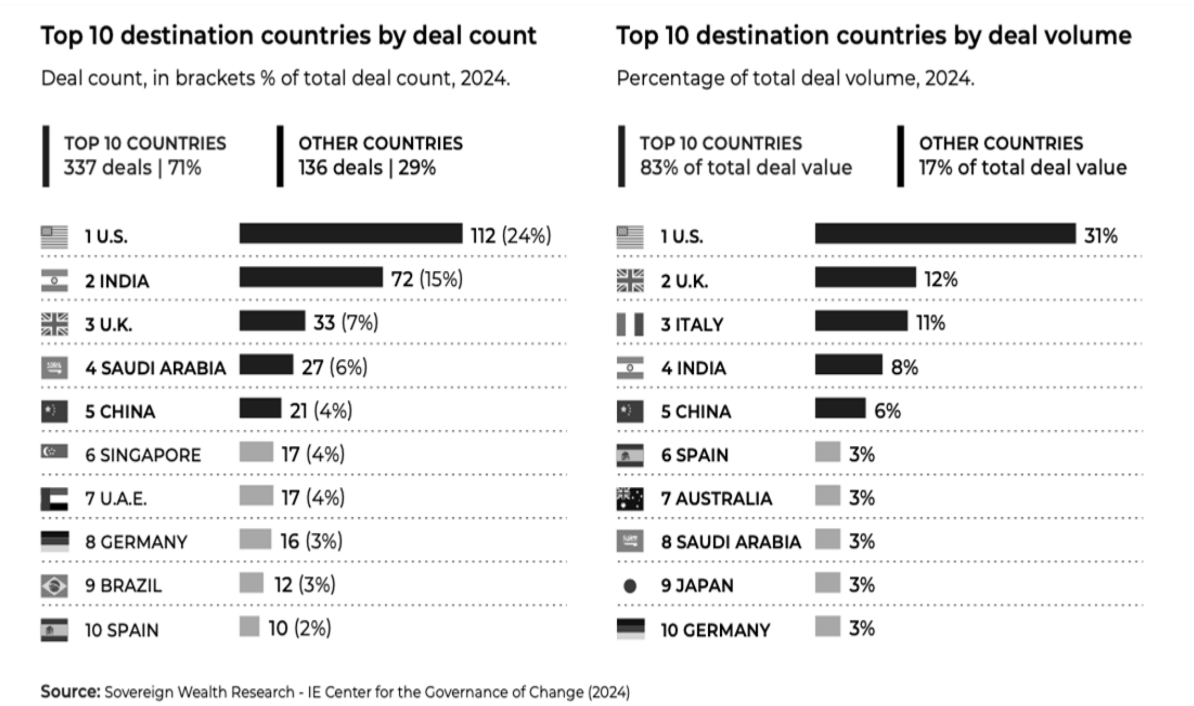
Temasek and GIC still tend to focus on sectors like technology, biotech, and finance. On the other hand, the Mubadala and the PIF seem to be putting more weight into infrastructure, manufacturing, and entertainment. This difference says a lot about how SWFs are evolving. In many cases, their investments are no longer just about financial returns — they're also being used to support domestic development plans and raise their countries' profiles on the global stage. We can observe a clear move away from more passive investing styles — many SWFs are now taking on a more active role, often making direct investments. On top of that, co-investing with private equity and other institutional players has become more common, showing how SWFs are using partnerships as part of their strategy in global markets. Such behaviour suggests SWFs are not only capital providers but also long-term policy instruments, adapting in real-time to both macroeconomic shocks and geopolitical realignments.

Figure 5 show that SWFs not only joined deals with much higher value but changed their industry preferences too. Sovereign investors focused on finance, dethroning technology (in total deal count and in total deal value) for the first time in 9 years. Energy came third in deal count and fifth by value. Communications went up the rankings with relevant transactions both in the infrastructure and services. The industrial & automotive sector remained attractive.

This shift in strategy shows that SWFs are starting to direct more of their investments toward sectors that are seen as more stable and better able to withstand economic downturns. The increased focus on financial and industrial assets might also be linked to growing worries

about rising interest rates, inflation, and the move to bring key industries back home. At the same time, the increased interest in areas like communications and digital infrastructure suggests that some funds are thinking long-term — especially when it comes to protecting digital systems and maintaining control over sensitive technology.
These shifts underline the adaptive role of SWFs as state-aligned investors that calibrate sectoral exposures in response to macroeconomic uncertainty and geopolitical realignment.

Figure 6



With regards to the geographic allocation of the funds, the distribution is not equal. The highest concentration of SWFs is in areas where oil and other natural resources are present. As shown in the graph below (Figure 7), the biggest percentages of SWFs are in the Middle East (21%) and in Asia (21%); in addition to having the largest number of funds, these regions also have the highest AUM.

The Temasek also heavily invested in India's technology industry while GIC and ADIA focused theirs on the country's renewable energy sources. The UK continued to remain one of the main targets of SWFs' investments, with 33 transactions concluded mainly centred on technology and life sciences, but also on the more traditional industries (finance, real estate and utilities/infrastructure).

Singapore, Russia and Ireland heavily benefited from investments made by their SWFs. Temasek, alongside GIC, invested in Singapore's technology industry while the Ireland Strategic Investment Fund (ISIF) focused on the regional development projects and small and medium enterprises in Ireland.

Figure 7

Source: Sovereign Wealth Research - IE Centre for the Governance of Change (2024)

Looking at where most SWF assets are located today, there's a clear regional concentration that seems to mirror broader economic strength. As shown in figure 7, Asia stands out with the largest share — around $18.7 trillion in assets — largely because of a few very large institutional investors that dominate the region such as CIC, GIC, and Temasek Holdings.[45] North America follows with $14.3 trillion, largely driven by large public pension funds and subnational SWFs, such as the Alaska Permanent Fund and the Canada Pension Plan Investment Board.[46] Europe holds $11.4 trillion, underscored by the dominance of GPFG, alongside robust European pension funds.[47]

In the Middle East and North Africa region (MENA), SWFs manage around $7.9 trillion in total. That number has been climbing steadily, mostly due to ongoing oil revenues and large-scale national strategies aimed at diversifying economies like Saudi Arabia's Vision 2030 and the UAE investment expansion strategies.[48] Meanwhile, Latin America (LatAm) and Sub-

[45] Global SWF, *Annual Report 2024: Mapping the Power and Reach of Sovereign Wealth Funds*, Global SWF, 2024

[46] Megginson, William L., and Malik. "Sovereign Wealth Fund Investment Behaviour in a Post-Pandemic World." Journal of International Business.

[47] IE Centre for the Governance of Change.

[48] Bortolotti, Bernardo, and Fotak. "The Political Economy of Sovereign Wealth Funds." 2021

Saharan Africa (SSA) display significantly smaller footprints, with $1.2 trillion and $0.5 trillion respectively, indicating both the limited scale of resource monetisation and a moderately developing stage of institutional progress in these regions. Oceania, led by Australia's Future Fund (AFF), accounts for $1.7 trillion, reflecting a more conservative and actuarially driven approach to sovereign investment.[49]

There are currently 20 countries are actively considering establishing a SWF. Debates over new SWFs are growing in Sub-Saharan Africa and the Caribbean.

Figure 8

Source: Sovereign Wealth Research - IE Centre for the Governance of Change (2024)

[49] Australian Future Fund. Annual Performance Overview 2024–2025,

1.4. Case studies

Case Study 1: Norway’s Government Pension Fund Global (GPFG) - 2024

The Government Pension Fund Global (GPFG), established in 1990, is the bedrock of Norway's management of the wealth generated by the country's petroleum sector. The GPFG is a Norwegian people-owned Sovereign Investment Institution, through the Government and the Storting (Parliament). The fund is managed by Norges Bank Investment Management (NBIM) on behalf of the ministry of finance. As of 2020, Nicolai Tangen serves as the Chief Executive Officer of the NBIM. Tangen had previously founded and managed the London hedge fund AKO Capital-one of Europe's biggest successes in asset management. With a background in finance and art history, Tangen is characterized by an analytical view applied to the areas of transparency, sustainability, and value creation over the long term.

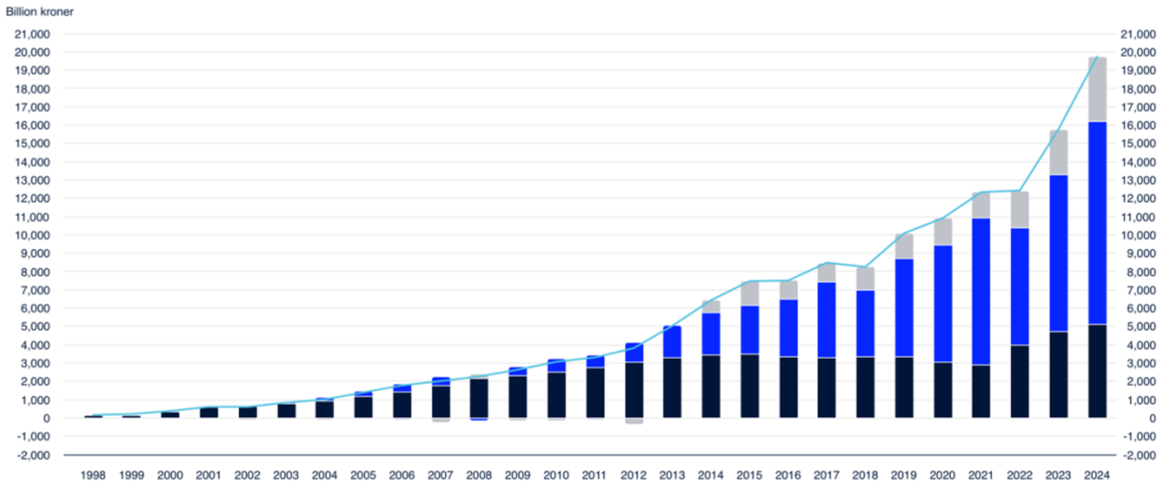
The fund's mandate is to ensure long-term intergenerational wealth transfer through a globally diversified investment portfolio funded by oil revenues.
The fund's stated mission showcases its dual financial and fiduciary objectives: *“Our mission is to safeguard and build financial wealth for future generations. The investment objective of the fund is to achieve the highest possible return after costs, given an acceptable level of risk. Within the scope of this objective, the fund shall be managed responsibly.”* However, a more honest and open goal was given: "*Our goal is to achieve the highest possible return*"
A defining feature of the GPFG is its prohibition on domestic investment. This policy serves to insulate Norway's mainland economy from oil price volatility and prevents Dutch disease by reducing pressure on the Norwegian krone. It ensures that oil revenues are absorbed into the economy in a measured, sustainable way.

Historic marks were hit by the GPFG at the end of 2024, with its total market value reaching NOK 19,742 billion (around USD 1.76 trillion), representing an annual gain of NOK 3,985 billion. The fund produced a return of 13.1% before management costs, with equities driving performance, especially technology sectors. The portfolio's year-end composition reflected the long-term diversified allocation strategy with 71.4% in equities, 26.6% in fixed income, 1.8% in unlisted real estate, and 0.1% in unlisted renewable infrastructure. Equities delivered a return of 18.2% whereas fixed income had a return of just 1.3%. Unlisted property and renewable energy investments lagged at least by -0.6% and -9.8%, respectively, due to the headwinds facing the sectors, including declining valuations and rising cost of assets. Despite such short-term decoupling, GPFG has had robust fundamentals of consistent performance over an extremely long timeframe. From 1998 up to 2024, the fund returned on average 6.3% annually, achieving a net real return of 4.1%.

Asset Allocation and Growth Trajectory

The fund's expansion over the past decade underscores both market-driven growth and Norway's disciplined fiscal policy. Between 2013 and 2024, the GPFG's value nearly quadrupled, as seen in Figure 9.

Figure 9



GPFG Annual Report 2024, Norges Bank Investment Management.

At the close of 2024, the fund's allocation was as follows:

- Equities: NOK 14,113 billion (71.4%)
- Fixed income: NOK 5,253 billion (26.6%)
- Unlisted real estate: NOK 364 billion (1.8%)
- Renewable infrastructure: NOK 25 billion (0.1%)

Strategic Focus and Governance

NBIM manages the GPFG according to a tripartite strategy:

1. Market Exposure - A cost-efficient, index-oriented investment approach,
2. Security Selection - Active investment in listed securities, both through internal and external managers,

3. Fund Allocation - Investments in unlisted assets such as property and infrastructure.

In 2024, the fund's overall relative return lagged its benchmark by 0.45 percentage points. While external active management contributed positively to performance, internal management underperformed. Additionally, the fund's slight underweight exposure to U.S. technology firms negatively affected performance.
Despite these challenges, the Executive Board assessed long-term results positively. The fund's historical average return of 6.3% demonstrates the robustness of its strategic portfolio. Forward-looking scenario analyses at Norges Bank communicates the importance of preparing for such risks. Simulated stress test scenarios such as that of a debt crisis or a market correction in AI-exposed equities estimate losses in the range of 18%-40% of the total fund value.

Ethical Investment and ESG Integration

The explicit commitment to ethical investment is one of the more distinguishing features of the GPFG. Guided by ethical guidelines laid down by the Ministry of Finance and enforced by the NBIM, the fund systematically excludes companies involved in activities such as violations of human rights, environmental damage, and corruption. By 2024, a total of 171 companies were excluded on either the recommendation of the Council on Ethics or by NBIM's own discretion.

Fiscal Role and External Resilience

In addition to being an important investor, the GPFG is a stabilizing instrument in Norway's fiscal architecture. The country observes a fiscal rule which caps the structural non-oil budget deficit at 3% of the expected real return of the GPFG.[50] This way, oil revenues are permanently absorbed into the domestic economy at a sustainable pace while conserving capital for future generations and giving room for counter-cyclical spending during economic downturns.

Indeed, at the very heart of it, the fund was able to demonstrate its potential when the Norwegian government resorted to financing public health and economic relief measures via

[50] The same proposal put forward by Warren Buffet to the Government of the United States of America: “I could end the deficit in five minutes. You just pass a law that says that any time there’s a deficit of more than three percent of GDP, all sitting members of Congress are ineligible for re-election. Yeah, yeah, now you’ve got the incentives in the right place, right? – July 2011.

the GPFG returns during the pandemic while avoiding any new debt burden acquisition. Accordingly, the fund has a role of stabilizing from external shocks while making possible prudent fiscal policy.

From an external balance perspective, the GPFG significantly enhances Norway's financial standing. Because all investments are allocated abroad, the fund helps mitigate upward pressure on the Norwegian krone, supports the competitiveness of export sectors, and contributes to the country's net international investment position, currently exceeding 300% of GDP.

To be precise, the GPFG translates non-renewable natural resources into a perpetually productive financial asset. Its cautious investment strategy, robust governance framework, and values-driven focus have enabled it not just to deliver stable returns, but also to be the key pillar of the macroeconomic stability of Norway. The 2024 fund performance, while marked by sector-specific volatility and relative underperformance relative to its benchmark, reaffirms its long-term value and strategic significance. As global economic and environmental challenges continue to evolve, the GPFG will likely continue to be an economic giant and a quiet force of global capital market norms.

Risk-Adjusted Performance and Evaluation Metrics

For a truly holistic assessment of the Government Pension Fund Global, one must go beyond comparing nominal returns to risk-adjusted performance figures. When analysed across the full investment period from 1998 to 2024, the SWF presents an interesting profile of consistency and risk management in global capital markets. The Sharpe Ratio — an exceptionally common measure of risk-adjusted returns — sits at about 0.57, suggesting a reasonable reward-to-volatility ratio. A score higher than 0.5 is usually interpreted as desirable in terms of allocation efficiency relative to risk, especially for large diversified institutional portfolios. The principle ensures that the GPFG has indeed delivered excess returns over and above the risk-free rate, risk-adjusted to the fund's volatility.

The Jensen's Alpha of the fund was estimated at 0.30%, meaning that the GPFG returned more than it would have on the basis of its market risk exposure (beta).

This can be evidence of the effects of tactical asset allocation and manager performance over time. The Morningstar Risk-Adjusted Rating, derived in this instance as return versus standard deviation, arrives at a 0.73 index, suggesting that, historically, the fund has on average, balanced performance against volatility fairly well. This index illustrates that, compared to the more complex landscape of institutional investors with similar mandates,

this fund has preserved a notably smooth return profile over time.
Perhaps most interestingly, when applying a modified version of the Otten and Schweitzer two-factor model, which introduces an additional dimension of performance attribution beyond market beta (such as market timing or security selection), the GPFG demonstrates an outperformance margin of 2.88%. This result, albeit based on simplified assumptions, indicates that the fund's returns cannot be fully explained by market movements alone. Instead, it implies added value derived from strategic decisions from Tangen and his team.

Overall, the GPFG has provided an average annual return of 6.96% over a period of almost three decades combined with a low standard deviation of 9.6%, thus confirming this fund as an example of disciplined, low-cost, and transparent sovereign wealth management. Those risk-adjusted indicators confirm that the fund is capable not only of capital preservation over time, but also of meaningful returns, always within a framework that considers sustainability and ethics.

Case Study 2: Abu Dhabi Investment Authority (ADIA) – 2023

The Abu Dhabi Investment Authority (ADIA) was founded in 1976, and it is among the first SWFs in the world and certainly one of the most powerful. It was established with a clear mandate: to keep and grow the financial reserves of Abu Dhabi for generations to come. The public statement by ADIA reads, *"to sustain the long-term prosperity of Abu Dhabi by prudently growing capital through a disciplined investment process and committed people who reflect ADIA's cultural values."* The fund manages capital on behalf of the Government of Abu Dhabi and invests across a wide range of asset classes and regions, always with a long-term perspective. One of the fundamental structural components of ADIA — and shared with Norway's GPFG — is the ban on domestic investment. The policy ensures that ADIA will be a true external buffer against shocks, without adding to domestic inflation or distorting the domestic economy.

Performance and Strategic Shifts in 2023

2023 was a challenging but opportunity-filled year for foreign investors as well, and ADIA weathered the trends with caution. As the year started with persistent inflation concerns and higher interest rates, investor sentiment changed by the middle of the year. Optimism about a soft economic landing, coupled with excitement surrounding the real-world applications of artificial intelligence, lifted global equity markets. The MSCI World Index[51] climbed 24% by year-end, and ADIA's equity positions, particularly in the U.S. and Japan, rode this wave to solid gains. Over a 20-year period, ADIA has posted 6.4% annualised returns, with the 30-year figure slightly better at 6.8%. Although these fell slightly from 2022 levels, they remain comfortably in line with ADIA's long-term capital growth mandate.

Importantly, ADIA has been moving away from traditional benchmarking strategies in recent years. Rather than measuring each asset class against specific indices, the institution has adopted a more holistic portfolio-level return strategy. This approach allows the fund to tactically allocate funds in areas where ADIA has a clear advantage, especially private equity, where its capital and ability to weather long economic cycles gives it a competitive advantage. As of 2023, the private equity allocation of the fund stood at between 12-17%, from a 10-15% range in the previous year. In-house asset management increased markedly as well, 64% of the portfolio is internally managed now, compared with 55% last year. This was primarily driven by ADIA's Core Portfolio Department, which has developed large capabilities in internal management of indexed equity exposure.

Portfolio Composition

ADIA has one of the most diversified sovereign portfolios in the world. The portfolio allocation framework is based on bands rather than percentage points, which ensures that the institution remains flexible in the face of shifting situations.

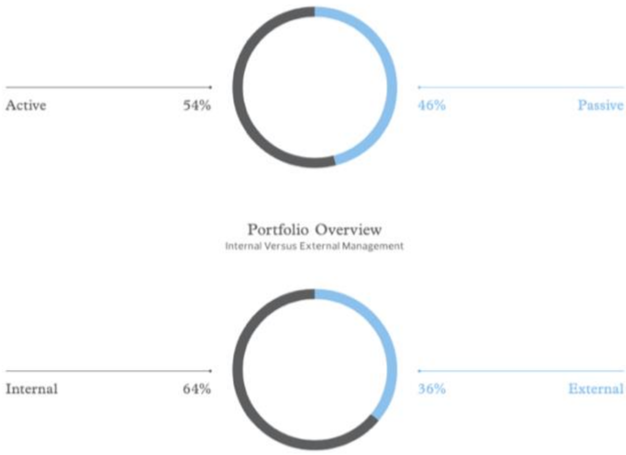
Long-term strategy allocation ranges:

- Developed Market Equities: 32–42%
- Emerging Market Equities: 7–15%
- Government Bonds: 10–20%
- Credit: 5–10%
- Private Equity: 12–17%
- Real Estate: 7–15%
- Infrastructure: 2–7%

[51] The MSCI World Index captures large and mid-cap representation across 23 Developed Markets (DM) countries, with 1,352 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

- Financial Alternatives: 5–10%

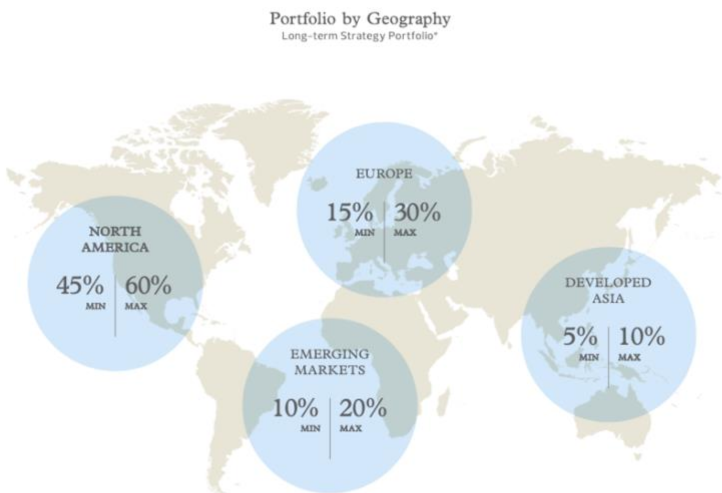
Figure 10



ADIA Annual Review 2023

Geographically, the portfolio is concentrated in North America (45-60%), followed by Europe (15-30%), Emerging Markets (10-20%), and Developed Asia (5-10%).
ADIA employs a hybrid management structure, with internal teams managing 64% of the portfolio and external managers overseeing the remainder. The fund management is 54% active and 46% passive. Its commitment to generate alpha while being mindful of cost is reflected in this allocation.

Figure 11



ADIA Annual Review 2023

Strategic Themes in 2023

1. Climate and the Energy Transition

ADIA has long signalled its interest in climate-aligned investments, but 2023 marked a step change. The fund played a prominent role at COP28, hosted in the UAE, and organised its own Energy Transition Summit. By the close of the year, ADIA's infrastructure investments had supported 23GW of renewable energy capacity, with another 29GW in development. It also launched a $100 million repo facility with Afreximbank and the Liquidity and Sustainability Facility to stimulate green bond markets in Africa.

2. Quantitative Transformation

The technological transformation inside ADIA is just as significant as its external investments. Its Quantitative Research and Development team has been central to shaping new investment models and risk frameworks. In tandem, ADIA Lab, the fund's independent research arm, completed its first full year and expanded into Europe through a new headquarters in Spain.

3. Deepening Private Market Exposure

ADIA was contrarian in private market dealmaking. The fund accelerated its secondaries and direct investment allocation, with large deals in healthcare (Dechra), fintech (Fullsteam), software (TeamSystem), and Indian retail (Reliance, Lenskart) sectors. These show ADIA's preference for complexity as also its speed of operations when there is dislocation.

Governance

ADIA's governance remains firm and hierarchical, reflective of its sovereignty. It is governed by a Board of Directors led by H.H. Sheikh Tahnoun bin Zayed Al Nahyan. Its management is carried out by H.H. Sheikh Hamed bin Zayed Al Nahyan, who also leads the Investment Committee. The main departments: Equities, Fixed Income, Alternatives, Real Estate, and Infrastructure, operate with clear autonomy under centralized guidance.

Risk-Adjusted Performance: 2023

Quantitatively, ADIA averaged 7.35% per annum over its history, with a standard deviation of 5.83%. Its Sharpe ratio as a measure of return relative to risk was 1.00, which depicted good management of capital. While Jensen's Alpha was marginally negative at -1.68%, depicting minor underperformance relative to a passive index, this was offset by a good Morningstar risk-adjusted rating of 1.26. The fund also performed well under the Otten and Schweitzer Two-Factor model with an excess performance of 2.09% — saying something about tactical skill and effective positioning strategy under volatility.

ADIA's 2023 venture is designed to underscore its evolution from a traditional sovereign wealth tool to a hyper-analytical, capital-investing powerhouse globally. By combining data science and climate-focussed methodology with a decades-long record of prudence, the fund is merely writing the next page in world finance. With a long-term portfolio built and a business plan designed to go at pace, ADIA is ready to thrive amidst shifting geopolitics and economic landscape.[52]

Evaluation Metrics

To quantify Abu Dhabi Investment Authority's performance over and above the top-line returns, we employ a suite of risk-adjusted measures which consider consistency of return and alpha generation. They indicate the strength and efficiency of the fund to endure volatility in the global broad asset classes.

ADIA has registered a Sharpe Ratio of approximately 1.00, denoting a good relation between return and volatility. A Sharpe ratio of more than 1 is viewed as being extremely strong in institutional finance, especially when applied in diversified portfolios across equities, private markets, and alternatives. This suggests that ADIA has effectively maximised returns per unit of risk.

However, the fund’s Jensen’s Alpha was recorded at -1.68%, indicating that — assuming a beta of 1 — ADIA underperformed relative to a passive benchmark (approximated by global equity indices) when adjusted for market risk. This shows that ADIA has succeeded in maximising returns per unit of risk. However, the fund's Jensen's Alpha of -1.68% implies that — under the assumption of beta of 1 — ADIA under-performed relative to a passive benchmark (approximated by global equities indices) on a risk-adjusted return basis for the market. This under-performance could reflect recent market dislocation, the effect of illiquid private asset valuations, or an active strategic bias in favour of non-benchmark holdings such as private credit and infrastructure. Overall, the Morningstar Risk-Adjusted Rating, herein computed as the return-to-volatility ratio, was 1.26. This is indicative of ADIA's ability to

[52] GPFG Annual Report 2024, Norges Bank Investment Management.

generate relatively stable returns amidst volatile macroeconomic conditions, given the extensive exposure of the portfolio to private and alternative investments. Applying a simplified Otten and Schweitzer Two-Factor Model that includes market exposure and secondary drivers such as selection and timing, the outperformance estimate of ADIA was 2.09%. This implies that although it had a negative Jensen's Alpha, the fund added a significant amount of value through the strategic provision of flexibility and access to specialized opportunities outside of normal benchmarks — particularly in times of market dislocation. Cumulatively, ADIA's 7.35% annualized return and 5.83% standard deviation place the fund in a good position relative to other large sovereign investors globally.
The higher Sharpe and Morningstar ratings confirm the fund's conservative portfolio management, while the results of the Otten and Schweitzer test capital deployment programs in private equity, infrastructure, and themes like energy transition and digitisation.

Case Study 3: Saudi Arabia's Public Investment Fund (PIF) - 2023

The Public Investment Fund (PIF) is the Sovereign Wealth Fund of the Kingdom of Saudi Arabia. Established in 1971 and revised in 2015 under the leadership of Crown Prince Mohammed bin Salman. Today, it is the foundation of Vision 2030, the Kingdom's post-oil development, growth, and economic diversification master plan. PIF's purpose is straightforward: *"to become the world's most effective investor, local economic change driver while creating sustainable returns on global capital allocation."*

By the end of 2023, the PIF had about SAR 2.87 trillion, (nearly $765 billion) in AUM, possibly among the largest and fastest-growing SWFs ever. In accordance with its mandate, the PIF now aims to create industries within Saudi Arabia, opening up new sectors while strategically eyeing foreign investments to make its efforts last virtually forever and eventually obtain geopolitical leverage.

Performance and Strategic Outlook

In a year marked by geopolitical volatility and uneven global recovery, PIF delivered strong results, advancing both financially and strategically. Average shareholder returns over the period since the Vision Realization Program (VRP) began in 2017 were 8.7% per annum, and AUM rose 29% from last year. This achievement is not only a testament to financial returns but also to PIF's achievement in driving non-oil GDP through sectoral diversification and investments. The fund invested capital into high-impact local projects and continued expanding its global reach. In the year 2023 alone, it opened new subsidiaries in aerospace, agritech, electric vehicles, healthcare, and logistics. At the same time, PIF strengthened its global image with fresh overseas investments in European hospitality (Rocco Forte Hotels), U.S. infrastructure (Blackstone Fund), and luxury auto (Lucid Group). Financially, the fund's investment income jumped to SAR 93.8 billion, covering the losses of 2022. The total revenue for the year was over SAR 331 billion, supported by a diversified revenue stream, efficient treasury management, and improved returns from its domestic equity pools.

Figure 12

Source: PIF Annual Report 2023

<u>Asset Allocation and Portfolio Structure</u>

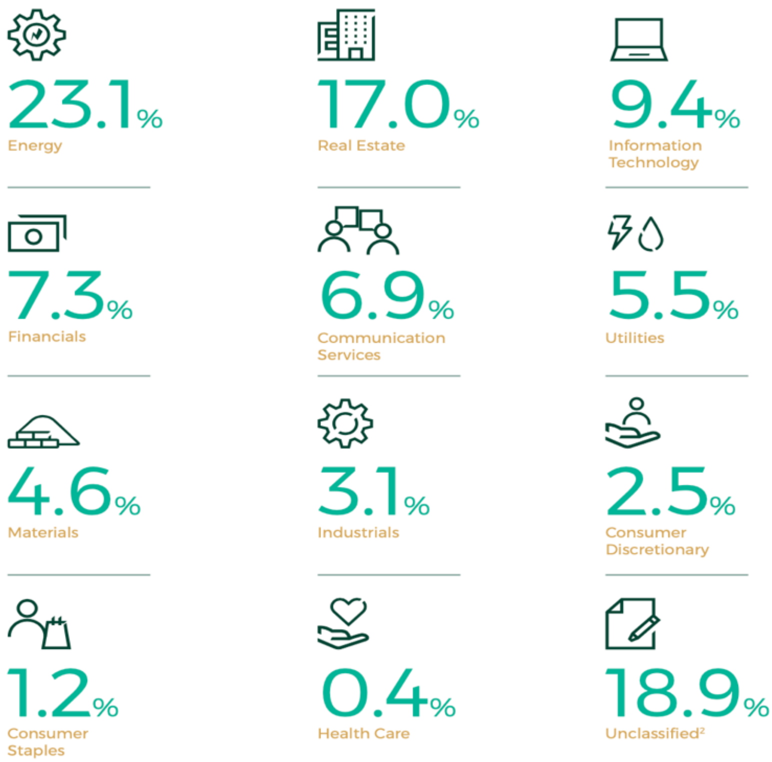
PIF's 2023 portfolio is composed of a mix of local and international holdings. Domestic investments make up the lion's share (79%), while 20% are allocated internationally, and the remaining 1% corresponds to receivables. The fund operates through six structured investment pools:

- Saudi Equity Holdings (SEH)
- Saudi Sector Development (SSD)

- Saudi Giga-Projects
- International Strategic Investments (ISI)
- International Diversified Pool (IDP)
- International Capital Markets Program (ICMP)

Key domestic allocations include real estate (through ROSHN), infrastructure (Diriyah Gate, Red Sea Global), and sectoral champions in aviation, tourism, healthcare, and energy. Internationally, PIF holds equity stakes in major listed and private firms, ranging from Newcastle United FC to Uber, SoftBank Vision Fund, Hapag-Lloyd, and Skyborn Renewables.[53] The fund's long-term strategic asset allocation privileges private equity, infrastructure, and innovation-led sectors, and it is increasingly shifting toward global capital markets to balance liquidity with returns.

Figure 13



Source: PIF Annual Report 2023

[53] PIF Annual Report 2023

Strategic Focus Areas in 2023

1. Domestic Economic Transformation

Among the characteristics of PIF's strategy is its role as an economic engine. In 2023, PIF invested in over 200 portfolio companies, launched Lifera in the pharmaceuticals sector, started Riyadh Air, and funded giga-projects such as NEOM, Qiddiya, and Red Sea Global. The plans are not only meant to generate returns but to boost entire sectors in Saudi Arabia.

2. Global Capital Expansion

Globally, PIF diversified further, adding strategic offices in New York, Hong Kong, and London, and building significant stakes in industries for emerging trends globally: renewable energy, mobility, tourism, and AI. It remained focused on high-growth assets while maintaining a diversified platform in North America, Europe, and Asia.

3. Sustainability and Green Finance

PIF reiterated its green goals in 2023 with its second green bond issuance, which raised $5.5 billion to support clean energy, water treatment, green transport, and biodiversity projects. The issuance was six times oversubscribed, reflecting investor faith in PIF's Green Finance Framework and Saudi Arabia's net-zero ambitions. PIF was the first MENA SWF to pledge to net zero by 2050, and it placed 7th internationally (and 1st in the Middle East) in the Global SWF Governance, Sustainability, and Resilience (GSR) Index — a 64-place improvement from two years ago.

Organisational Structure and Governance

PIF’s governance is deeply embedded within the Kingdom’s political apparatus, chaired by HRH Prince Mohammed bin Salman, with H.E. Yasir Al-Rumayyan serving as Governor. The fund operates through a disciplined committee structure (Audit, Investment, Risk, Remuneration), and adheres to global standards such as GIPS reporting and internal ESG scoring protocols.

Its workforce has increased exponentially, with 812 additions in 2023 alone. PIF also completed over 50 large-scale digitisation projects, including the deployment of a Tier-4 data centre and AI investment platforms, further cementing its evolution into a modern financial institution.[54]

Risk-Adjusted Performance and Evaluation Metrics

The Public Investment Fund is a highly efficient allocator of sovereign capital. The Sharpe Ratio of the fund, which is approximately 11.17, demonstrates an incredible ratio of return per unit of risk. Although this ratio uses a fairly brief and stable sequence of returns (since 2017), it nonetheless indicates the capacity of the fund to create consistent returns aligned with its long-term objectives. Concurrently, Jensen's Alpha at +0.66%, demonstrates PIF's ability to outperform a market-like portfolio when adjusted for risk. This is a testament that the fund's strategic asset allocation choices — especially its combination of giga-projects, international equities, and private market investments — have created real alpha since Vision Realization Program start. Morningstar Risk-Adjusted Rating, set at 14.50, contributes to both quality and stability in PIF's returns as well. This factor proves the fact that the fund has managed to achieve return stability while investing funds in different asset classes that encompass long-term illiquidity and entailed complex development risks. Most compelling is the Otten and Schweitzer Two-Factor Result, which they place at 3.69%.

This model, which evaluates fund performance through both market exposure and selection skill, indicates that PIF generates excess returns not merely by riding market beta, but through targeted, high-conviction investments both at home and abroad.

With an average return of 8.71% and a standard deviation of just 0.60% over the observed period, PIF illustrates a rare combination of yield, stability, and strategic foresight. These figures support the fund’s profile as not only a financial instrument of state policy, but also as a sophisticated institutional investor.

The PIF is a combination of long-horizon investment and active national growth. Its role as the economic constructor of Saudi Arabia and global capital allocator confers on it the power to move with size, speed, and purposee. While it drives towards its SAR 4 trillion AUM goal by 2025, the ability of the fund to control risk, produce returns, and shape worldwide industries will continue to be its defining legacy as one of the prime examples of SWFs in the 21st century.

[54] PIF Annual Report 2023

Case Study 4: Government of Singapore Investment Corporation (GIC) – 2024

The Government of Singapore Investment Corporation (GIC) was created in 1981 to manage the country's growing foreign reserves. Most SWFs have a dual mandate of returns and domestic investment; unlike them, GIC's prime objective is to keep the real value of Singapore's reserves through time. In this, it is backed by a firm governance structure and professional investment management, which allowed GIC to build up a reputation of being methodical, conservative, and deeply strategic in its approach to investments.

GIC doesn't manage its portfolio to maximise short-term performance. Instead, its goal is to earn more than world inflation over 20 years. In international financial markets, GIC is generally thought of as the unflashy player: low-profile, high-conviction, and focused on fundamentals.

Performance and Investment Shifts in 2024

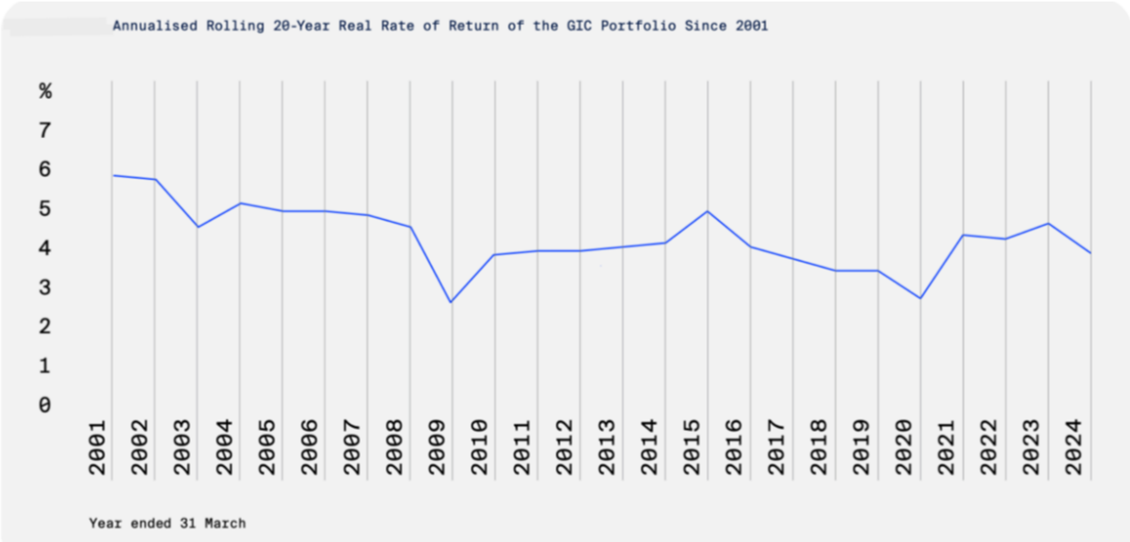
As of March 31, 2024, GIC had a 20-year nominal annualized return of 5.8%, and a real return of 3.9% adjusted for world inflation. The last 10 years have seen less stellar returns 4.6% for 10 years and 4.4% for 5 years because of universal challenges in fixed income and emerging market stocks. The fund has never hesitated to admit it's not trying to outperform peers or track benchmarks. Rather, it invests capital so that it can endure shocks and not lose money permanently. In 2024, that philosophy led GIC to reduce its exposure to developed market equities and add holdings in inflation-linked bonds and private equity, a strategy that mirrors the investment environment directly.

Asset Allocation and Regional Exposure

By the end of the reporting period, GIC's portfolio was spread across six main asset classes:

- Nominal Bonds and Cash: 32%
- Private Equity: 18%
- Emerging Market Equities: 17%
- Developed Market Equities: 13%
- Real Estate: 13%
- Inflation-Linked Bonds: 7%

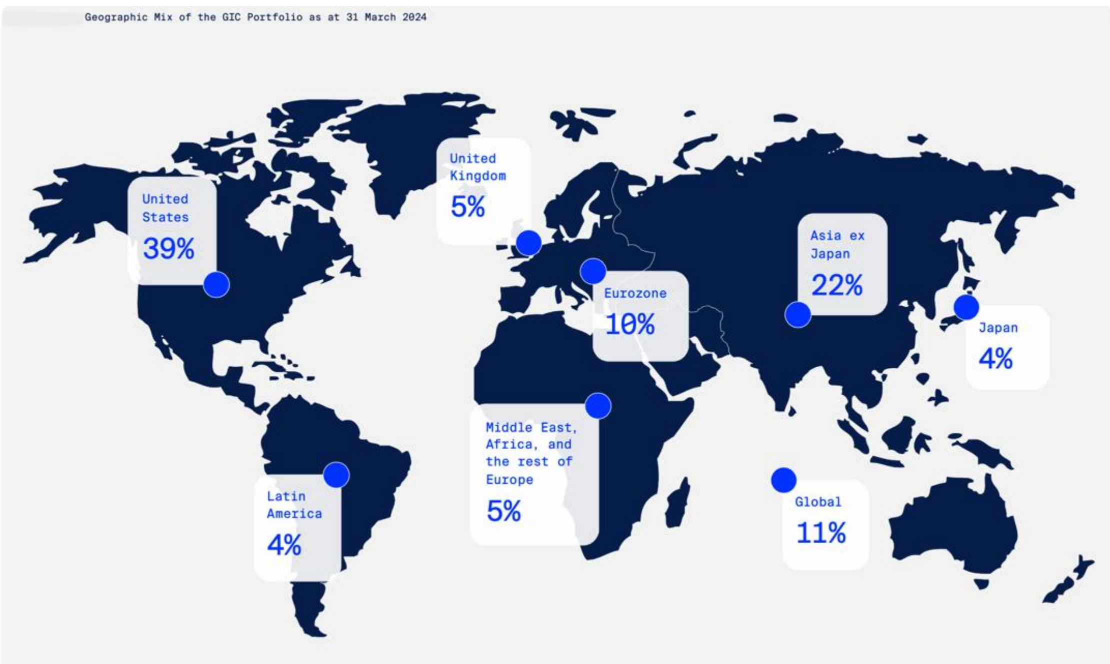
Figure 14



Source: GIC Report on the Management of the Government's Portfolio 2024

Regionally, the fund remained heavily tilted towards the United States, with 39% of its assets allocated there. The next largest allocation was Asia (ex-Japan) at 22%, followed by Europe (10%), and a general "Global" category (11%). Other exposures, to the UK, Japan, Latin America, and the Middle East, were smaller, typically in the single digits. As always, GIC maintains zero domestic exposure to avoid distorting local markets or competing with private enterprises.

Figure 15



Source: GIC Report on the Management of the Government's Portfolio 2024

Governance and Structure

GIC's organizational structure of GIC reflects the Singaporean state's firm separation of ownership from operational control. The fund has a Board of Directors chaired by the Prime Minister, but day-to-day investment decision-making relies on professional management in the hands of CEO Lim Chow Kiat. GIC's organization divides its capital into two levels: the Policy Portfolio, which it aims at long-term strategic allocation levels, and the Active Portfolio, in which managers seek to generate excess returns. There is a separate Investment Board for the latter. Their approach lets GIC achieve a balance between stability and innovation, keeping the core stable while other parts of the portfolio change based on market conditions. GIC depends mostly on in-house management of its funds but also uses external managers wherever local reach or specialist knowledge is required in the markets.

Risk Culture and Investment Style

If there's one feature that defines GIC's approach, it's caution. Risk isn't treated as a volatility number, or a performance drag — it's seen as the potential for permanent capital loss. That outlook drives everything from portfolio construction to governance.

The fund makes use of a "three lines of defence" risk architecture: exposure management rests with investment teams, independent risk units monitor and challenge them, and internal audit constantly monitors them. GIC also runs periodic stress tests and scenario analysis — not just to meet regulatory needs, but to observe how the portfolio would act under conditions of extremity. One characteristic feature of the GIC methodology is its Reference Portfolio: a hypothetical 65% global equities, 35% bonds. When GIC deviates from theis benchmark, it must explain why and what risk or return trade-offs are being made.

Above all, GIC does not seek returns, instead the fund believes in valuation: it invests when markets are cheap, disinvests when they're expensive, and waits for things to be interesting again. That discipline served it well in 2024, especially in a year when equity valuations rose rapidly even as macroeconomic risks increased.[55]

Risk-Adjusted Performance and Evaluation Metrics

GIC's long-term value creation and risk-avoiding investment strategy are best captured by its risk-adjusted performance indicators. While the fund does not aggressively pursue return maximization, its risk-return profile is characterized by discipline and consistency.

[55] GIC Report on the Management of the Government's Portfolio 2024

In the past 20 years, GIC has earned 5.8% annually with an estimated volatility of 8.7%, which gave its Sharpe Ratio of approximately 0.44. This indicates the fund has delivered moderate extra returns over the risk-free rate per volatility unit. On a risk-adjusted basis, Jensen's Alpha at -0.6% measures moderate underperformance against its benchmark portfolio (which returned 6.4% annually). Its negative alpha reinforces GIC's underweighting of high-growth public equities and tilt to downside protection. The Morningstar Risk-Adjusted Rating, estimated at 0.67 here, also suggests GIC's strong focus on risk management. The Otten and Schweitzer Two-Factor result at 1.6% that indicates GIC does record noticeable outperformance after adjusting structural position decisions and value-based strategies on top of market beta. This suggests that GIC is playing counter-cyclically by avoiding euphoria. Together, these figures constitute the foundation of GIC's role as a stable, thrustful investor. Its risk-adjusted record is one not befitting wildly spectacular returns but guarding national patrimony. Its returns can seem middle-of-the-road in comparative terms compared to aggressive funds, but its ability to preserve purchasing power and provide stable real returns demonstrates its strategic prudence.

These four case profiles underscore both the diversity and collective weight of SWFs. From Norway’s ultra-transparent equity giant to Saudi’s developmental powerhouse, from Singapore’s savvy global allocator to Abu Dhabi’s seasoned portfolio leviathan — each contributes to global markets in unique ways. But they all have some common features: long-term horizon, increasing thirst for private assets, increased emphasis on ESG and sustainable investing, and significant influence over cross-border capital flows. Their action today is in a world where SWFs are no longer passive aggregates but active, mature participants shaping market influences and even affecting the determinants of public policy outcomes.

CHAPTER 2: INVESTMENT FRAMEWORK

2.1. Structure & Organisation

The internal organization and governance structures form the basis of the credibility, efficiency, and delivery of long-term value by Sovereign Wealth Funds. The majority of SWFs that adopt a three-tiered governance model: (1) the owner or sponsor — usually the national government, which sets the fund's purpose and strategic guidelines; (2) the governing board — which supervises operations in enforcement of national objectives and in the appointment of key executives; and (3) executive management — which operates within a frame of investment risk and is mandated to conduct day-to-day investment operations.[56] This kind of approach allows for the separation of roles between political oversight and professional management of assets.

The composition of SWF boards varies in some funds, such as Singapore's GIC, the board includes current and former government officials, private sector professionals, and central bankers, ensuring technocratic continuity alongside public accountability. GIC's management reports to the Prime Minister, and all key appointments require the approval of the President of Singapore, a constitutional safeguard over national reserves.[57] Conversely, operating within a development-driven framework, strategic direction at Saudi Arabia's PIF is tightly linked to state policy. The fund is chaired by the Crown Prince; other board members include senior cabinet ministers and others. This setup allows Vision 2030, the agenda for national economic transformation,[58] to be directly embedded in the fund setting.
In contrast, Norway's GPFG is the paradigm of good governance and transparency.
A Ministry of Finance has ownership of the fund and sets the ethical and investment guidelines, but asset management is contracted out to the NBIM, a special arm of the central bank. The fund navigates investment decisions, publishes all portfolio holdings on a quarterly basis, and adheres to strict ethical exclusion criteria set by an independent ethics council.[59]

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[56] International Working Group of SWFs and IMF. Generally Accepted Principles and Practices – Santiago Principles, 2008.
[57] Al-Hassan, Abdullah, Michael Papaioannou, Martin Skancke, and Cheng Chih Sung. "Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management." IMF Working Paper WP/13/231, 2013.
[58] Kingdom of Saudi Arabia. Vision 2030 Strategic Framework. Riyadh, 2016.
[59] NBIM. Responsible Investment and Governance Reports 2022–2023. Norges Bank Investment Management.

Meanwhile, the ADIA reflects a hybrid approach. ADIA's board is appointed by the ruling family and sets broad strategic direction, but delegates full discretion to professional management, which is organized into asset class departments and supported by internal risk and research units.[60]

Operationally, most large SWFs are structured into internal teams aligned by asset class (e.g., equities, fixed income, real estate, private equity), geographic coverage, and strategic themes (e.g., infrastructure, technology). These are governed by Investment Committees that evaluate opportunities based on expected return, risk profile, ESG impact, and strategic alignment. Committees include tactical (daily operations), portfolio (cross-asset strategy), and executive (high-level allocation and policy) levels. Internal risk and compliance functions are embedded to monitor adherence to risk thresholds. Advanced SWFs also maintain in-house research units and scenario planning divisions, enhancing strategic foresight and market intelligence. Technology adoption, such as AI-driven analytics and portfolio simulation, is becoming common among sophisticated funds.
While organizational models differ — especially between oil-based funds, reserve-backed funds, and development-focused SWFs — several common best practices are emerging: (i) transparency in governance and reporting; (ii) institutional separation between state and management; (iii) adherence to long-term investment horizons; and (iv) alignment of performance incentives with intergenerational wealth preservation. These features, supported by frameworks such as the Santiago Principles[61], form the backbone of modern SWF integrity and operational excellence.[62]

SWFs are reshaping how they work internally to keep up with the demands of investing in newer and more complex asset classes. As they move further into areas like private equity, infrastructure, and other private market investments, they've had to rethink how they build teams and manage expertise. A lot of them still outsource the management of more standard investments like stocks and bonds, which are generally seen as easier to handle. But when it

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[60] Abu Dhabi Investment Authority (ADIA). Overview of Governance and Investment Framework. Abu Dhabi, 2022.

[61] The Santiago Principles are a set of 24 voluntary guidelines established in 2008 to promote transparency, good governance, accountability, and prudent investment practices among Sovereign Wealth Funds. Developed by the International Forum of Sovereign Wealth Funds (IFSWF) in response to global concerns over the growing influence of SWFs, the principles aim to ensure that these state-owned investors operate as economically and financially driven entities, rather than for political purposes. By adhering to the Santiago Principles, SWFs seek to build trust with recipient countries and maintain open access to global capital markets.

[62] Das, Udaibir S., et al. Sovereign Wealth Funds: Current Institutional and Operational Practices, IMF Occasional Paper No. 266, 2010.

comes to less liquid, less transparent assets, most prefer to work closely with specialist partners. Only a few SWFs reported creating new business units, which suggests they're more interested in scaling gradually than in major organisational changes.

2.2. SWFs Investment Megatrends

Sovereign Wealth Funds arise from multiple global pressures: the urgency of climate action, digital transformation becoming exponentially faster, and a changing geopolitical atmosphere. This chapter thus analyses the megatrends that impact the future of SWF strategies.

One of the largest changes in SWF behaviour is the gradual shift away from traditionally sufficient holdings in public equities and government bonds and towards less liquid, long-term investments, especially those in private markets: infrastructure projects, private equity, and real estate. This trend started to gather strength in the years following the GFC and has gathered much more muscle power in the post-pandemic world. According to the McKinsey Global Institute, SWFs are increasingly acting as "new power brokers" by channelling an ever-greater share of their capital into assets that yield good long-term returns and provide some cover against short-term volatility in public markets.

1- Embracing Artificial Intelligence in Sovereign Portfolios.

SWFs have increased exposure to Artificial Intelligence (AI)[63] and digital infrastructure. 33% of sovereign investors are using AI in their investment process, with 6% employing it extensively; nearly all believe AI will become an essential tool.[64]

Over the past few years, AI has stayed high on the radar for SWFs — even as broader interest in tech has cooled. While a lot of investors pulled back from the sector, SWFs seem to be thinking a little differently. They're taking a long-term view, and for them, AI is one of those areas that still looks like it could reshape entire industries. It's already happening in all sectors including healthcare, logistics and finance. And with the market expected to keep

[63] Artificial Intelligence (AI) is in this report as the application of advanced computer systems and algorithms, including machine learning, to automate, optimise and enhance various aspects of the investment process
[64] Invesco Global Sovereign Asset Management Study 2024

growing through the rest of the decade, many funds are clearly not going to sit on the sidelines.

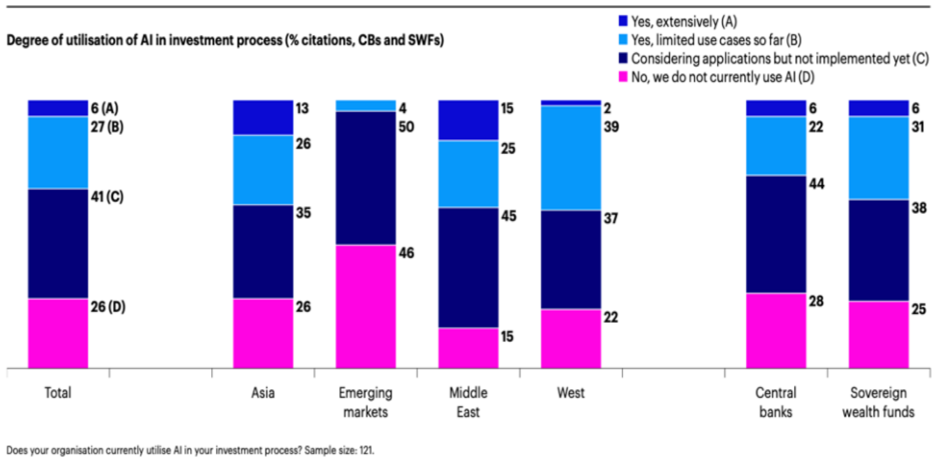
SWFs funds are spreading their exposure across a wider range of AI startups. Some are investing in infrastructure, like CoreWeave, which builds systems for GPU computing. Others are exploring open-source AI models through firms like Mistral or going into robotics with companies like Figure AI. Temasek has even taken an interest in the intersection between AI and healthcare — it has backed a company called Twin Health, which is trying to use machine learning to help people manage chronic illnesses in a more personalised way. For funds that care about both long-term returns and social impact, these kinds of investments check a lot of boxes. There's also a noticeable push to build local AI ecosystems — especially in places like Saudi Arabia. As part of its Vision 2030 strategy, the PIF has committed around $40 billion to AI and emerging tech. The goal isn't just to fund promising ventures abroad; it's also about building something at home. With initiatives like the Saudi Company for Artificial Intelligence and its partnership with Andreessen Horowitz, there's a clear effort to develop local expertise, form global connections, and create an industry that can stand on its own. What's becoming more and more obvious is that SWFs aren't just passive capital providers in the AI space — they're starting to act more like strategic investors — deciding not just where money goes, but what gets built and who builds it.

Funds such as GIC and QIA have participated in major AI-oriented funding rounds, including those involving Databricks and Mistral AI. The UAE's Mubadala and Saudi Arabia's PIF have committed billions to domestic AI development as part of their national innovation agendas. These moves are driven by the expected 30%+ CAGR in AI markets and the strategic need to remain competitive in an increasingly digital economy.[65]

Growing adoption and widespread interest This year's study reveals that a third of SWFs and central banks are already utilising AI in their investment processes, with 6% employing it extensively (figure 16). This adoption looks set to accelerate, as the rise of generative AI has prompted two-thirds of organisations to reevaluate their current strategies and explore new applications for this technology (figure 17).

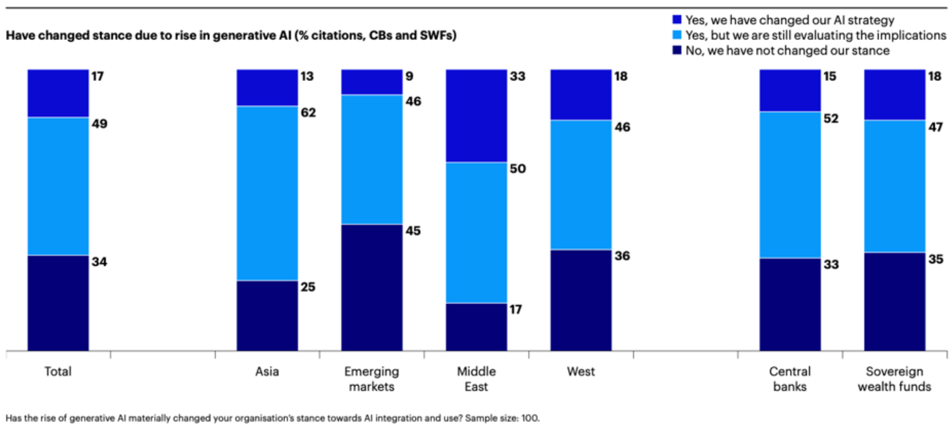
[65] Sovereign Wealth Fund Institute (SWFI), Annual Deal Flow Report 2024.

Figure 16



Source: Invesco Global Sovereign Asset Management 2024

Figure 17



Source: Invesco Global Sovereign Asset Management 2024

The rise of generative AI tools has triggered a noticeable shift in how SWFs and central banks approach innovation. In many organisations, AI adoption is happening from the ground up, with employees experimenting on their own to see how these tools can make their daily work more efficient. As one SWF based in an emerging market put it, "we're using these tools on the admin side to speed things up." At the same time, some institutions are taking a more deliberate route — developing structured plans and rolling out AI under the guidance of senior decision-makers. Regardless of the approach, AI is being applied widely across functions such as data processing, risk analysis, and forecasting.

Central Banks in the west have started using AI to support its portfolio managers in investment decisions by processing in-house research in combination with market data. The system identifies key themes and patterns, which help managers to make more informed investment choices. Similarly, a Middle Eastern SWF is piloting the use of AI to generate trade ideas, which are subsequently reviewed and refined by their investment teams. These examples show that AI is not just an aid tool — it's becoming a genuine source of strategic thought.

One of the key advantages of AI is its ability to handle huge amounts of data, making it easier for funds to identify opportunities and spot risks. The Canada Pension Plan Investment Board (CPP Investments) shared that they're already using AI for climate simulations and to improve how they aggregate due diligence findings. In private markets AI has become especially useful. While the Abu Dhabi's MGX Fund (in partnership with the Mubadala) mentioned that they've started applying AI to analyse their large datasets on early-stage companies, uncovering insights that were previously out of reach.

Figure 18

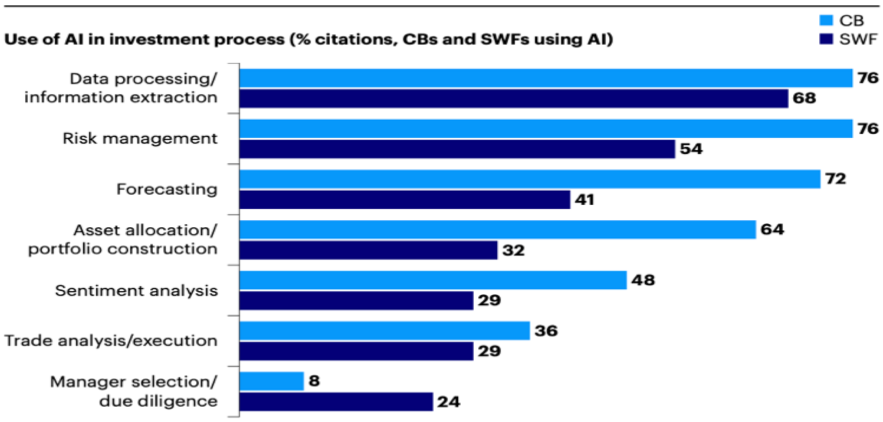
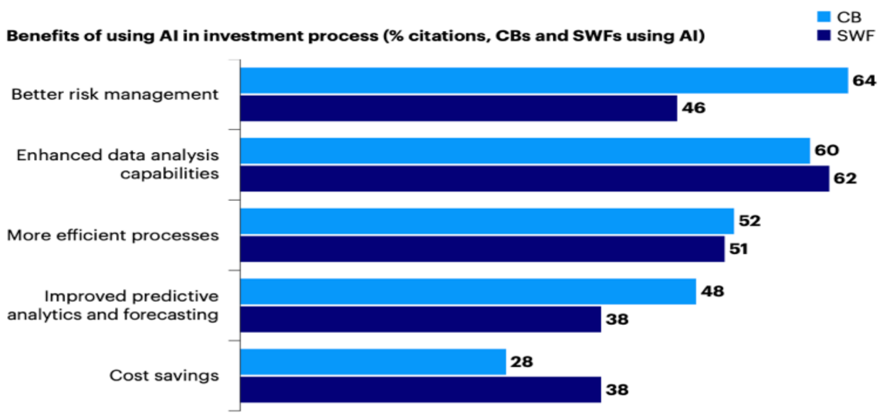


Figure 19

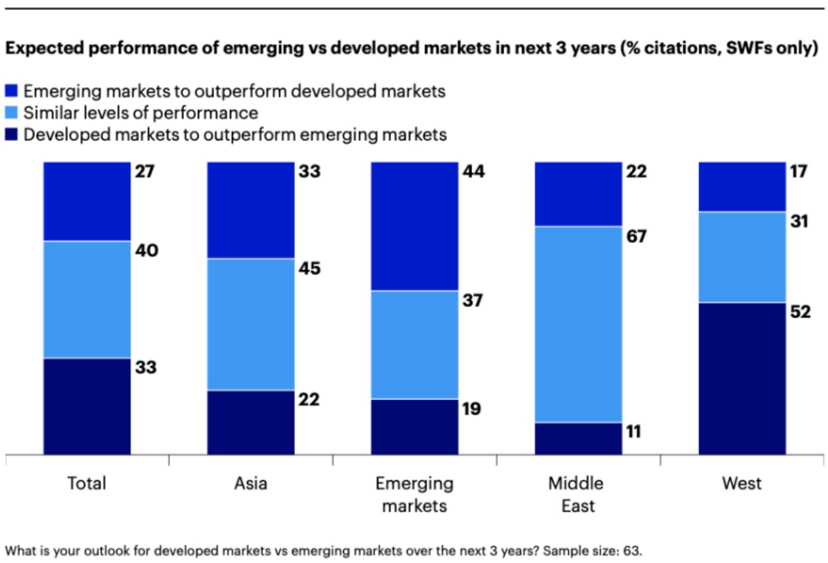


Source: Invesco Global Sovereign Asset Management 2024

1- <u>Geographic Rebalancing: From West to Emerging Markets</u>

While the United States remains the sweet spot for SWF investment (31% of the total), India has emerged a clear second and is well ahead of China in the number of deals for the second consecutive year. Middle Eastern SWFs increasingly focus on the MENA region and South Asia, with cross-Gulf investment flows accelerating. The UK, Italy, Brazil, and Singapore also remain key locations of investment activity.[66]
This rebalancing indicates a gradual shift away from a U.S.-Europe dominance toward a diversified investment strategy, influenced by growth prospects in Asia, favourable regulatory regimes, and rising cooperation.

Figure 20



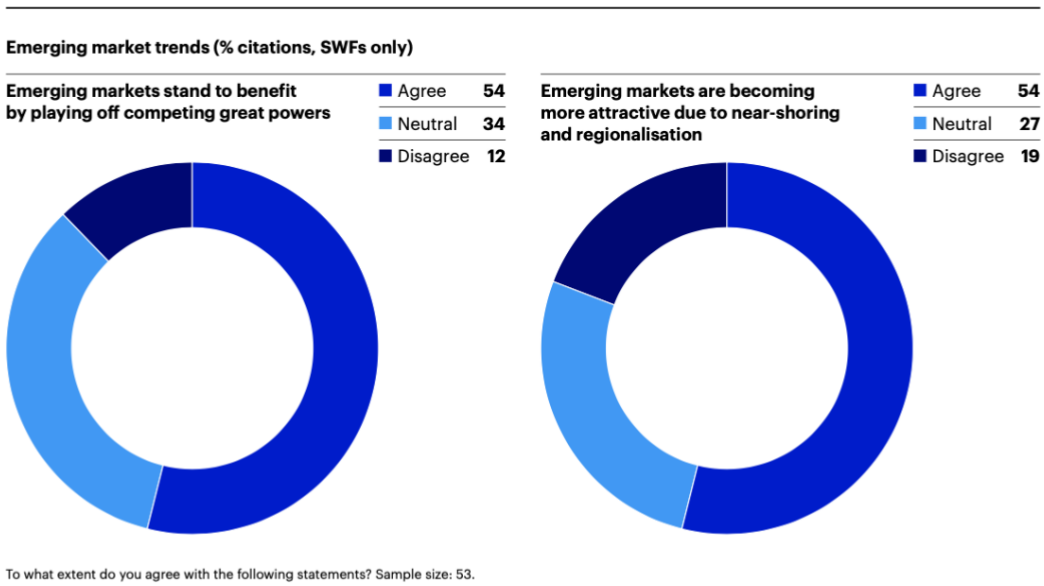
Source: Invesco Global Sovereign Asset Management 2024

In the latest round of research, it's become clear that SWFs based outside the Western world are increasingly optimistic about the potential of EM. They expect these markets to perform more strongly than developed economies over the next few years (figure 20). What's particularly interesting is that geopolitical tensions — which are usually seen as negative for investors — are now being viewed by some as a potential advantage for emerging regions. As

[66] SWFI Country Deal Heatmap, 2024.

power becomes more distributed globally, and with major players openly competing for economic influence, there's a sense that emerging markets could end up being key beneficiaries (figure 21).

Figure 21



Source: Invesco Global Sovereign Asset Management 2024

Figure 22

Priority emerging market regions (% citations, SWFs only)

>80% >60% >40% >20% >0%

	Region based				
	Total	Asia	Emerging markets	Middle East	West
Asia (ex-China)	83%	100%	58%	100%	83%
China	43%	75%	25%	43%	42%
Latin America	53%	75%	42%	71%	46%
Central & Eastern Europe	48%	88%	17%	57%	48%
Africa	43%	13%	77%	57%	32%
Middle East	51%	50%	50%	100%	36%

What are your top EM investment priorities? Sample size: 53.

Source: Invesco Global Sovereign Asset Management 2024

2- Geopolitical and Policy Drivers

I've grown increasingly sceptical of ESG — Environmental, Social, and Governance. At first, I bought into the idea — who wouldn't want to support investments that are environmentally responsible, socially conscious, and governed with integrity? But the more I read about it, the more I realized how general and contradictory the whole system actually is. Different rating agencies give totally different ESG ratings to the same corporation, so I do not know how meaningful any of these figures are. The number of corners being cut by companies and level of fraud and corruption is appalling. It feels like ESG has become more of a marketing tool than a genuine commitment — a way for big firms and funds to say the right things without changing much beneath the surface. In the case of SWFs, I've noticed how ESG rhetoric is often just a façade, while the real decisions are driven by politics or pure financial return. Now, though, ESG is more of a box-checking activity than a genuine force for change.

ESG investing has been on an upward trajectory for more than a decade, with sovereign investors progressively incorporating these principles into their investment approaches. Green Energy and Climate Finance Sustainable investments now occupy a central position in SWF strategies. In the year 2023 alone, SWFs have invested over $9.7 billion in 40 green deals, of which there is a strong emphasis on renewables, hydrogen, and water infrastructure. Over 67% of SWFs have the UN SDGs included in their mandates, up from a mere 48% in 2022.[67] Temasek and GIC have also invested in green hydrogen as well as sustainable agriculture, with the Middle Eastern funds investing in foreign and domestic renewable infrastructure.[68] Infrastructure and Digital Assets Infrastructure continues to be a safe haven for long-term SWF capital, spearheaded by transport, renewables, and digital services

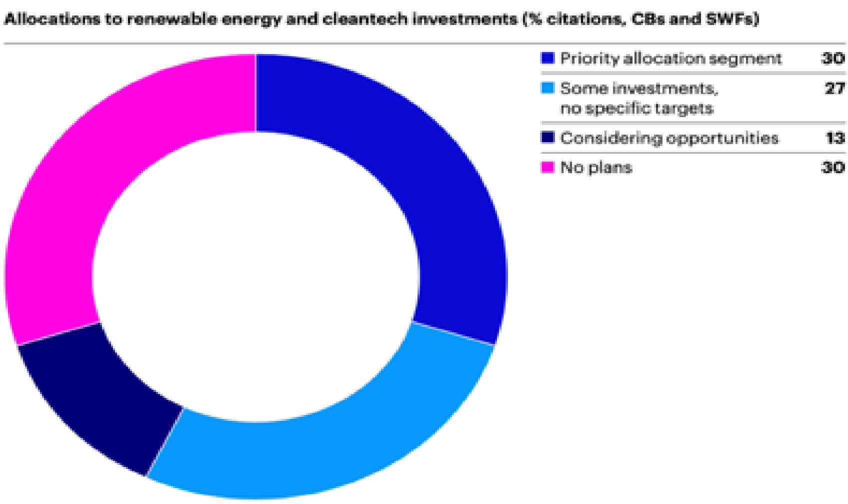
The PIF plans to invest approximately $40 billion annually in domestic infrastructure projects.[69] Simultaneously, SWFs such as GIC and ADIA have acquired stakes in telecom networks, data centres, and cloud infrastructure in the U.S. and Europe.[70]
SWFs have significantly increased their exposure to private equity, venture capital, and private credit.

[67] IFSWF & Invesco, Global Sovereign Asset Management Study, 2023.
[68] Temasek Annual Sustainability Report, 2023.
[69] PIF Annual Report and Vision 2030 documentation, 2023–24.
[70] GIC Infrastructure Briefing, March 2024.

They manage some 70% of global sovereign capital invested in private markets as of 2024.[71] Private credit also sees demand surge, with two-thirds of SWFs planning to raise their allocation.[72] This follows a broader institutional shift towards diversification and yield creation out of public market risk. Health, Food Security, and Strategic Sectors Certain of the more relevant themes in the post-COVID world are food resilience, healthcare, and strategic autonomy. SWFs have been investing in agritech, desalination, and biopharma. For instance, Temasek has invested in Pivot Bio, while PIF is investing in Saudi Arabian water security projects.[73] Transitions to low-carbon economies are going to need a lot of capital. That sounds potentially like a challenge, but to sovereign wealth funds, it presents real investment opportunities.

A lot of these funds see value in putting money into things like renewable energy, clean tech, and climate-focused infrastructure. It's not just about trying to do good — it's also about positioning their portfolios for where the global economy is heading. Many believe they can play a role in the transition while still meeting their return targets.
Recent data backs this up. Around 30% of sovereign investors now say renewable energy and cleantech are key areas they're focusing on. Another 27% have already made investments in the space (figure 23). Development-focused funds and those tied to long-term liabilities seem to be leading the charge.

Figure 23



Source: Invesco Global Sovereign Asset Management 2024

71 BCG Sovereign and Public Funds Report, 2023.
72 Invesco Sovereign Asset Survey, 2024.
73 Mubadala Investment Company Portfolio Report, 2023.

Data from 2024 suggest a shift in how SWFs are approaching ESG policies. While the number of central banks with formal ESG frameworks continues to grow, there's been a small drop in the percentage of SWFs with active ESG policies in place (figure 24). What seems to be happening is a broader reassessment of what ESG actually amounts to in reality. In some cases, outdated policies are being re-examined because they fail to meet the stricter standards that have evolved during the last couple of years.

Interestingly, even as this shift is taking place, the number of institutions with long-standing ESG policies — those in place for five years or more — has continued to climb. For roughly one in five central banks and around one in three SWFs, ESG isn't a new initiative. It's already embedded into their investment thinking and strategy (figure 25). One central banker put it simply: "*ESG has been around for almost 20 years. If you're serious about building a proper ESG programme, the tools and the data are there. You just have to use them.*"

Figure 24

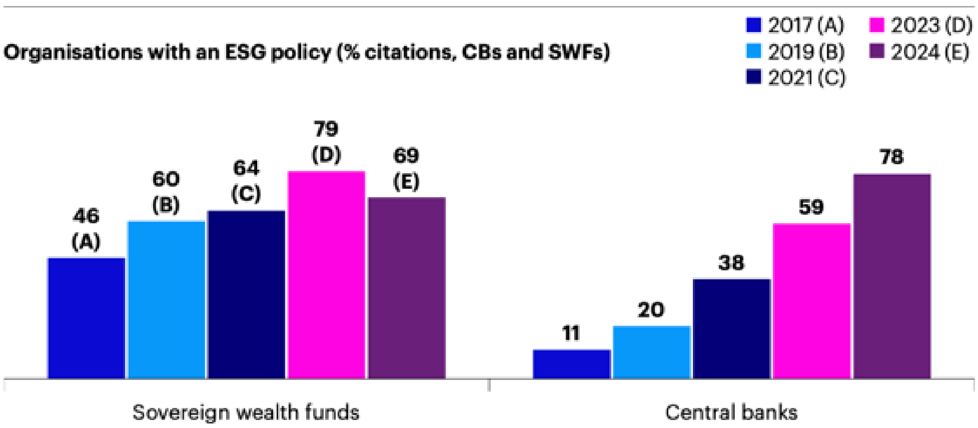
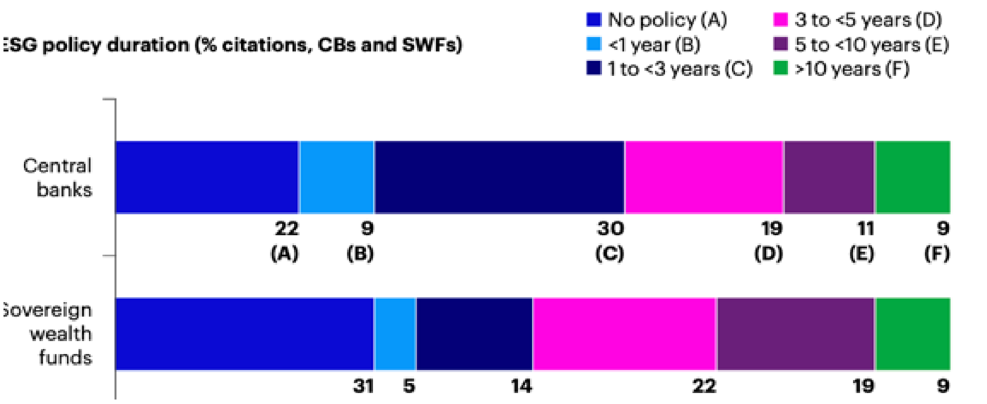


Figure 25



Source: Invesco Global Sovereign Asset Management 2024

Figure 26

Period	Key Features
Pre-2020	Globalization, technology-led growth, increasing allocation to alternatives, minimal ESG.
2020–2023	Pandemic shock, surge in private markets, early ESG integration, and opportunistic buying during market stress.
2024–2025	Thematic investing in AI/green tech, geographic diversification, domestic investment mandates, risk-conscious diversification.

Figure 26 shows a comparison of investment eras: Pre-2020 vs. 2020–2023 vs. 2024–2025. It highlights how sovereign funds have progressively shifted from globalization-driven diversification and passive asset accumulation to more proactive, thematically focused strategies.

Each stage is a response to key macroeconomic shocks and structural trends — from pre-2020 world growth, through post-COVID transition towards resilience, and now emphasis on technological leadership, ESG alignment, and domestic development imperatives. Oil-funded and non-oil SWFs have some common aims but ultimately seek to pursue different goals and therefore trend differently. Oil-funded SWFs (e.g. PIF, ADIA, QIA) are likely to perform two roles: national development agents and international investors. They have surplus revenues during commodity booms but face drawdown in adverse times. Non-commodity SWFs (e.g. GIC, CIC, KIC) are more likely to pursue more stable and internationally diversified return maximization and financial security-only strategies.[74] Overall, SWFs in 2024–2025 are no longer passive accumulators of capital. They are thematic allocators, geopolitical actors, and nation-builders. The future of AI, green infrastructure, and global development finance consolidates their position as centrepiece institutions in national and international economic arenas.

[74] OECD (2022). Governance of Sovereign Wealth Funds: A Comparative Analysis.

2.3. Investment Style & Objectives

The aftermath of the 2008 financial crisis marked a crossroads in the investment strategies of Sovereign Wealth Funds. Due to substantial losses coming from exposure to western financial institutions, many SWFs had to reconsider their risk profiles and portfolio allocations. Kern (2009) estimated that investments in Citigroup, Barclays, Credit Suisse, UBS, Morgan Stanley, and Merrill Lynch caused SWFs a loss between 60% and 90% in foregone gains, up to $57 billion by March 2009.[75]

Affected by the events, a major change arose, SWFs accepted to renovate their investment frameworks, where they would keep a sharper eye on asset diversification, risk management, and long-term sustainability. It completely shifted the image of SWFs, who were once considered politically motivated "barbarians at the gates" (Nugée, 2009) to a cautious strategic global investor.
Nevertheless, despite the adoption of the Santiago Principles, many funds continue to struggle with transparency issues, especially those based in undemocratic regimes. Research by Bortolotti reveals that firms receiving investments from authoritarian state-owned funds experienced a 20% decline in sales growth over three years, compared to those backed by more transparent SWFs.[76]

More recent data from the Sovereign Wealth Funds 2024 Report reveals a resurgence in SWF activity. Between January 2023 and June 2024, SWFs executed 473 direct investments — 50 more than the previous year — with a combined value of $211 billion, nearly doubling the $118 billion reported earlier. There has also been a shift in sectoral focus: finance overtook technology as the top investment sector for the first time in nine years. Meanwhile, energy, communications, and consumer sectors remained strong, with defensive sectors like healthcare and agriculture seeing increased allocations. The industrial sector also continues to attract interest, particularly in the context of supply chain uncertainty.[77]

Despite their growing influence, SWFs remain diverse in both their objectives and governance. As said in the previous chapters, SWFs are established to serve one or more of

[75] Kern, Steffen. SWFs: State Investments on the Rise, Deutsche Bank Research, March 2009
[76] Bortolotti & Fotak, "The Rise of SWFs From Resource Stabilization to Global Asset Management." Journal of Economic Perspectives, 2015.
[77] IE Centre for the Governance of Change. Sovereign Wealth Funds 2024 Report, Madrid: IE University, 2024.

the following goals: reserve management, economic stabilization, strategic investment, or intergenerational savings.

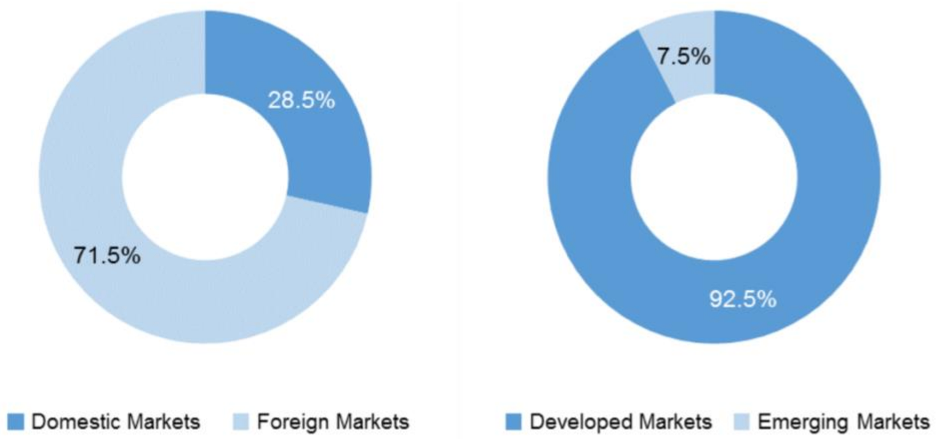
Investment strategies vary accordingly. Conservative SWFs prioritize principal protection and liquidity, usually allocating capital to fixed income instruments. Yield-seeking funds pursue higher returns through equities, hedge funds, and real estate, resembling pension or endowment portfolios. Strategic investors take large, often controlling stakes, driven by economic or geopolitical considerations. These funds are more likely to engage in corporate governance and form partnerships or joint ventures to secure technological or industrial benefits.[78]

Transparency and governance remain key differentiators. The GPFG sets a benchmark by disclosing monthly returns and quarterly holdings, operating under parliamentary oversight.[79] In contrast, there are the ADIA and the Chinese sovereign investors who keep the highest confidentiality regarding their holdings and governance practices.[80] In practice, most SWFs behave rather conservatively with their leverage profiles, distinguishing them from hedge funds or private equity. Some SWFs tend to outsource almost all of their management rights to external fund managers, while others can boast well-developed internal capabilities. In any case, the major trend is that they invest more and more in private markets, seeking diversification and yield.[81] Nevertheless, private assets, being less liquid, do offer higher-return prospects in the long term and are becoming the core of SWF portfolios.[82]

Geographically, the United States remains the leading destination for SWF capital, although its share of total deal flow has dropped from 58% to 24%, amounting to $66.5 billion. The United Kingdom follows with $26.1 billion, reflecting strong transatlantic investment ties.[83] Yet, SWFs are also expanding their reach into emerging markets (fugure 27) where higher risk is offset by stronger growth potential.

[78] Clark et al., Sovereign Wealth Funds: Legitimacy, Governance, and Global Power, 2013.
[79] NBIM, Annual Report 2023.
[80] Balin, Sovereign Wealth Funds: A Critical Analysis, Johns Hopkins SAIS, 2008
[81] Bernstein et al., "The Investment Strategies of SWFs," JEP, 2013.
[82] McKinsey Global Institute, The New Power Brokers, 2007.
[83] IE University, Sovereign Wealth Funds 2024 Report.

Figure 27



Source: IE Sovereign Wealth Research, Sovereign Wealth Funds 2024 Report

Figure 28

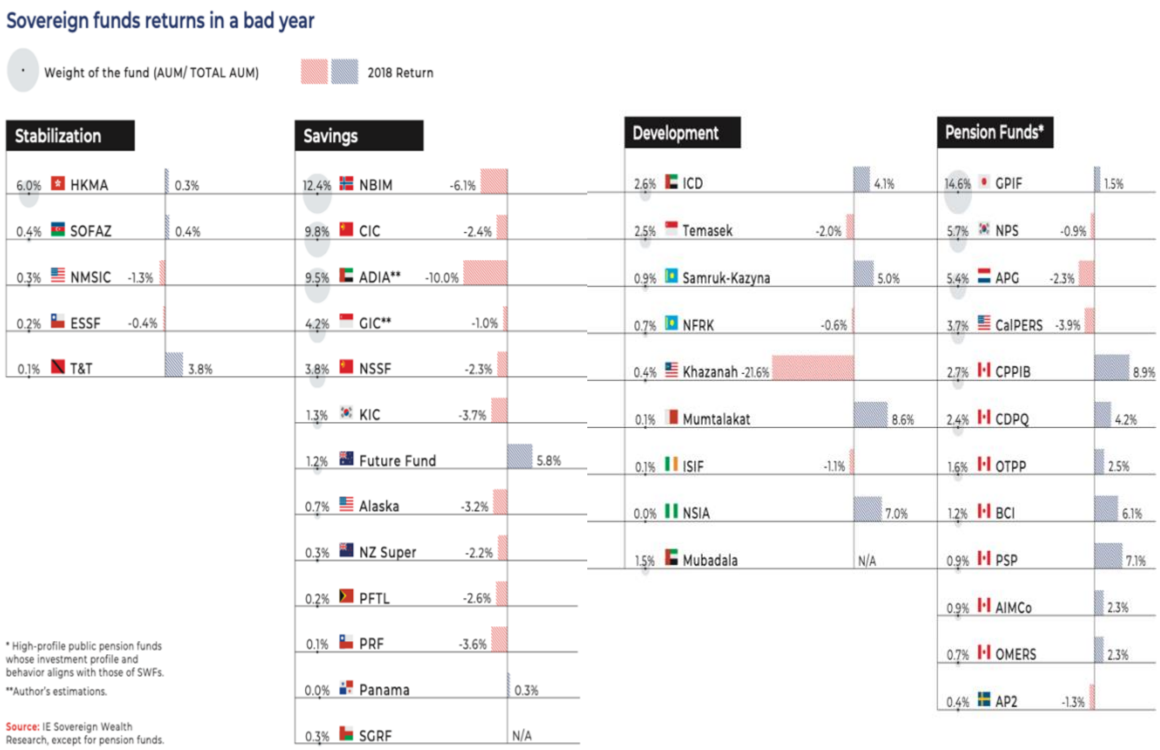


Figure 28 captures a performance snapshot of SWFs during difficult market times and displays their risk profile as well as investment discipline. The returns of 2018 varied significantly across funds, particularly between savings and stabilization SWFs.

The chart classifies the funds into four broad categories: Stabilization, Savings, Development, and Pension funds, each with distinct mandates, risk profiles, and investment approaches. 2018 was a year of market stress worldwide, and this stress test offers a useful glimpse into how different institutional investors weathered the heat and performed on downside risk. Stabilization funds, performed erratically; for example, Hong Kong Monetary Authority (HKMA) and Azerbaijan's SOFAZ produced marginally positive 0.3% and 0.4% returns respectively, while Chile's ESSF and Oman's NMSIC returned -0.4% and -1.3% respectively. Of note was the observation that Trinidad and Tobago Heritage stood out as the exception among stabilization funds, returning 3.8%, suggesting either diversification or less direct risk exposure to riskier asset classes. These results reflect the conservatism inherent in stabilization fund designs but also indicate that even such funds do not remain immune to international market bursts.

On the other hand, savings funds that typically had more positive investment timelines and expected returns did worse. Norway's GPFG lost 6.1%, attributing it to its high exposure to world equities.

The ADIA performed worse, returning a -10.0%, perhaps due to its investment in alternative and equity-linked investments. The other big savings funds such as the CIC and Singapore's GIC reported -2.4% and -1.0%, respectively. The AFF was however a standout exception, returning 5.8%, which is a function of its diversified approach as well as active risk management framework.

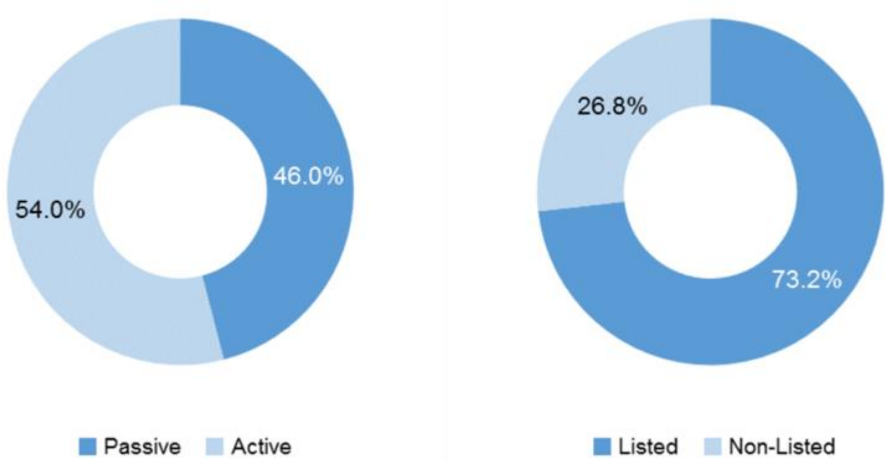
Development funds, which are prone to pursuit of national or strategic industrial objectives, were extremely varied in performance. Malaysia's Khazanah Nasional experienced a steep 21.6% decline, likely an aftermath of politically motivated restructuring and excessive local assets bias. The opposite occurred for Bahrain's Mumtalakat Holding Company (BSC), which posted strong 8.6% return, whereas Samruk-Kazyna (Kazakhstan) and Nigeria's NSIA posted decent returns of 5.0% and 7.0%, respectively. These figures tell us that whereas development funds are exposed to higher risk with direct exposures and strategic mandates, they also have the potential to ingest robust upside if invested well aligned to market cycles.

Public pension funds, which often invest in ways similar to SWFs generally held up better during market downturns. Canadian funds stood out — the CPPIB gained 8.9%, CDPQ rose by 4.2%, and PSP Investments returned 7.1%. These strong performances were largely thanks to solid governance, smart long-term planning, and broad diversification. In contrast, Japan’s

GPIF generated losses of 1.5%, showing how more cautious or traditional portfolios can lag behind during volatile periods. The difference in performance highlights how clear investment goals, good governance, and global diversification can help funds stay resilient. While more conservative stabilization funds had small losses, savings and development funds showed mixed results depending on how aggressively they were invested.
Overall, these results offer useful insights for fund managers and governments trying to strengthen the performance and stability of state-owned investment funds.

In summary, the investment styles and objectives of SWFs evolve as the global economic landscape, domestic needs, and institutional development also evolve. From conservative reserve managers to strategic state investors, these funds continue to shape financial markets while grappling with the challenges of transparency, governance, and geopolitical scrutiny. SWFs are significantly ramping up investments in technology, with a special focus on AI and digital innovation.

Figure 29

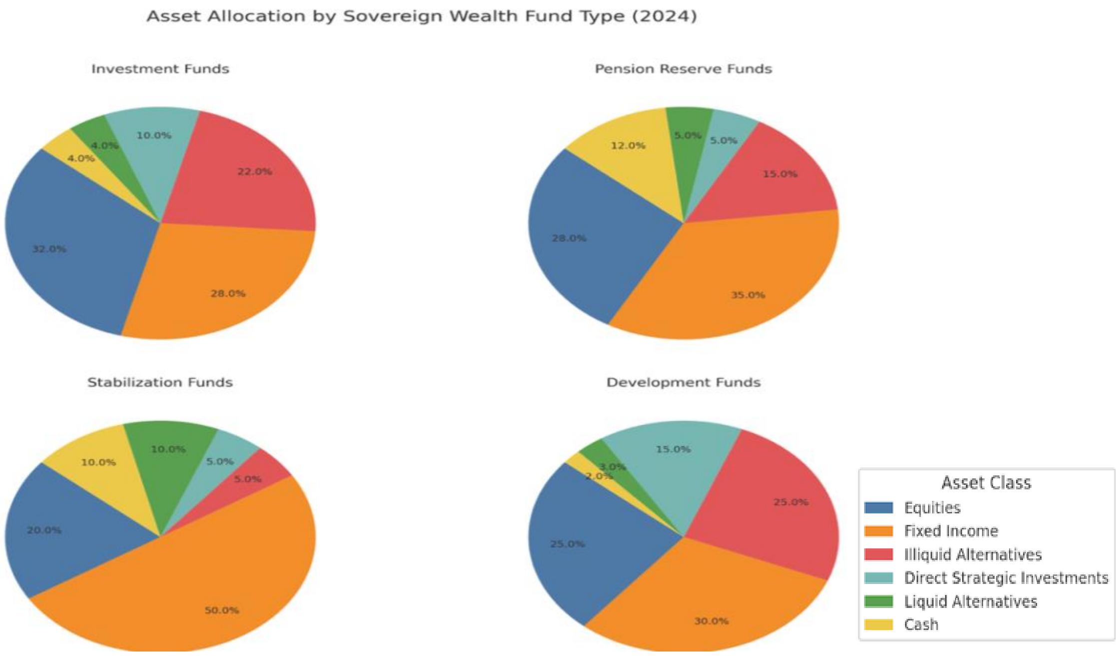


Source: IE Sovereign Wealth Research, Sovereign Wealth Funds 2024 Report

Figure 29 is a revealing snapshot of the dominant investment styles and asset classes of SWFs. The first pie chart indicates that 54% of SWF investment is passive and 46% active. This is nearly in balance between funds tracking market indices and those directed to strategic or discretionary investment. The passive corner is most often associated with long-term, low-cost approaches that focus on capital preservation and broad market exposure. In contrast, the vast majority of active investment — nearly half — reflects the growing influence of SWFs that invest huge blocks in firms, wield governance influence, or put money to work for political and strategic objectives. This is perhaps most pronounced in the kind of funds such as ADIA, Temasek Holdings, and Mubadala which make direct investment bets and invest in board-level participation.[84] The second pie chart illustrates the way in which the capital of SWFs is invested by asset types; 73.2% of investment is directed towards listed assets, such as quoted equities and bonds, and 26.8% investment is towards non-listed (private) markets, i.e., real estate, infrastructure, and private equity.

This reflects traditional conservatism of the majority of SWFs, which prefers liquidity, transparency, and reduced risk. However, the almost one-third private market weighting is a notable move toward private markets driven by higher returns, inflation hedging, and diversification. Notably, such institutions as the GPFG and GIC have progressively expanded their unlisted exposures over the last couple of years, following an industry-wide trend witnessed across pension funds and endowments globally.[85]

Figure 30



Source: Invesco Global Sovereign Asset Management Study 2024

Figure 30 shows asset allocations by type of SWF. There is varying investment behaviour of each type of fund, characteristic of their mandate, liquidity needs, and time horizons.

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[84] Bortolotti, Bernardo, and Veljko Fotak. "The Political Economy of Sovereign Wealth Funds." Harvard Business Review, 2021.

[85] Bernstein, Shai, Josh Lerner, and Antoinette Schoar. "The Investment Strategies of Sovereign Wealth Funds." Journal of Economic Perspectives, 2013

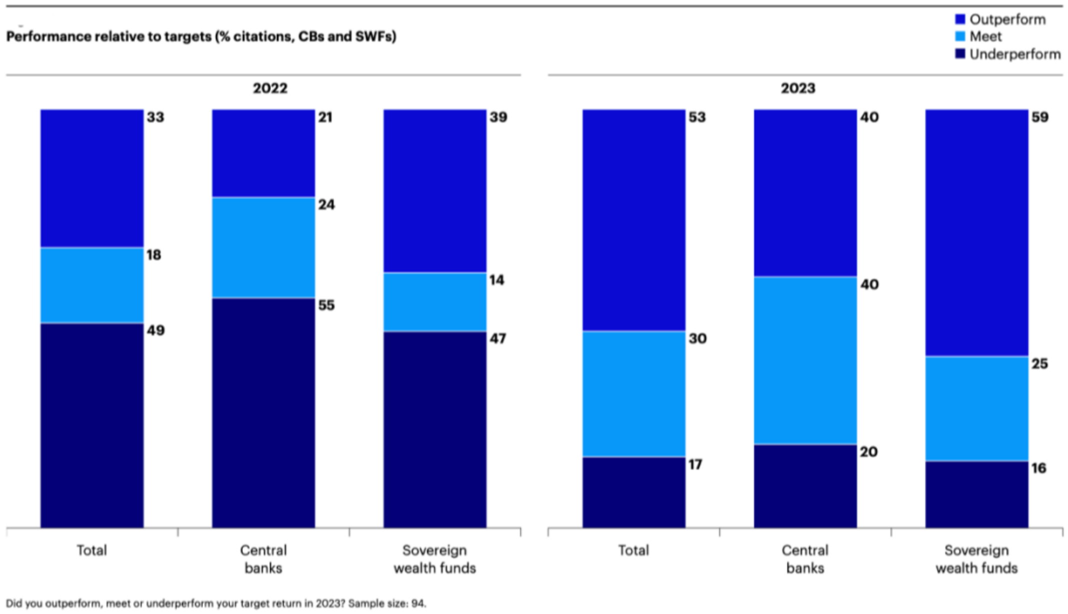
Savings Funds, whose major goal is to maximize long-term returns, show a diversified and growth-focused portfolio structure. With 32% in equities and 22% in illiquid alternatives such as private equity and real estate, such funds are designed to gain from capital appreciation over the long term.
On the other hand, Pension Reserve Funds that finance long-term fiscal liabilities like public pensions have more conservative portfolios. These invest 35% in fixed income securities for a safe and certain source of income, with moderate equity exposure (28%) and sizeable cash holdings (12%) to maintain liquidity. Such investment assets reflect their risk-reduced, liability-matching strategies.
Stabilization Funds — tasked with protecting the economy of their respective countries against budgetary shocks — are the most conservatively invested. At 50% fixed income and 10% cash, these funds prioritize liquidity and capital protection above all else. Their limited exposure to equities (20%) and alternatives (5%) is a testament to their very first priority: liquidity access over long-term return. Examples include Chile's Economic and Social Stabilization Fund (ESSF) and Russia's National Wealth Fund (pre-sanctions years).
Development Funds' profile is more mixed. While 25% and 25% are invested in equities and illiquid alternatives, respectively, development funds also invest a significant 15% in direct strategic investments — reflecting their double mandate of generating returns as well as catalysing national development. The PIF and Egypt's TSFE are perfect examples here, lending money to infrastructure, technology, and industrial projects in keeping with national economic strategies.

SWFs prefer a conservative leverage strategy compared to private equity and hedge funds, who are predominantly dependent on borrowed money to lever up returns. This is because SWFs are known for having long-term, risk-adjusted investment cultures that favour cautious behaviour. Further, with the funds putting more money in private financial markets, concerns have been raised regarding how far they can replicate the strategies and risk profiles of conventional institutional investors. Historically, private asset investments have fared better compared to public markets, with considerable diversification benefits. SWFs are established with highly diversified macroeconomic and policy agendas that forcefully shape their investment tactics.

A number of countries have multiple SWFs with varying mandates. For instance, Russia in 2008 divided its oil revenue fund into two parts: a Reserve Fund to cover fiscal deficits and a

National Wealth Fund for long-term strategic investment. Similarly, the majority of the Middle Eastern SWFs have adopted dual mandates, with a distribution of commercial investment returns on the one hand and strategic economic objectives such as technology transfer, skills acquisition, and local development on the other. Examples include Mubadala's $1.35 billion stake in Carlyle to invest across the MENA region, and Mumtalakat's stake in McLaren to support Bahrain's aluminium industry.

Figure 31



Source: Invesco Global Sovereign Asset Management 2024

Figure 31 presents a comparative view of performance outcomes relative to return targets across central banks and SWFs in 2022 and 2023. In 2022, performance was mixed, with only 33% of institutions overall outperforming their targets, while 49% underperformed. Central banks showed weaker results, with just 21% outperforming and a majority (55%) underperforming. SWFs fared slightly better, with 39% outperforming and 47% falling short of their targets.

By 2023 performance was much better. Overall, 53% of all institutions over-performed against targets, whereas just 17% were below target. Of most interest, SWFs made the best progress, with 59% over-performing compared with 39% a year earlier, and only 16% underperforming. These results also indicate evolving flexibility of SWFs in aligning performance plans with macroeconomic realities.

As Ciarlone and Miceli (2014) demonstrate through empirical modelling, SWFs are more likely to invest in countries facing temporary economic or financial turmoil.[86] This "contrarian" behaviour is one of the features that distinguishes SWFs from hedge funds or private equity vehicles, whose mandates tend to prioritise short-term performance and volatility avoidance.

What makes this behaviour particularly interesting is that it's not irrational, nor purely opportunistic. SWFs still operate according to fundamental macro-financial criteria. Their allocations remain heavily tilted toward economies that demonstrate high GDP per capita, strong legal systems, and liquid, well-developed capital markets. As Bortolotti et al. (2009) and Megginson et al. (2013) note, countries with robust investor protections and transparent governance are far more likely to attract SWF investment.[87] [88] However, what Ciarlone and Miceli find is that even when these fundamentals are momentarily under stress — as during a financial crisis — SWFs often interpret this as a discounted entry point rather than a reason to exit.[89] The probability and size of that investment are shaped by a combination of factors. Countries with higher GDP, deeper stock market capitalisation, and more active turnover are favoured. Castelli and Scacciavillani (2012) argue that these funds seek environments that balance opportunity with stability, often finding that equilibrium in large, semi-developed or reforming economies.[90] Meanwhile, variables such as trade openness, capital account liberalisation, and high institutional quality further increase a country's chances of attracting sovereign capital.[91] Perhaps the most counterintuitive finding from Ciarlone and Miceli's work is that a financial crisis not only raises the likelihood of investment but can also increase the amount invested. They introduce a "crisis dummy" variable in their regression analysis, which consistently shows a positive correlation between crisis episodes and SWF activity. In practical terms, this suggests that SWFs often see downturns not as moments of retreat, but as strategic openings to deploy patient capital.

In this context, SWFs behave less like short-term profit-seekers and more like long-term allocators of national wealth. Their capacity to absorb volatility, commit capital in down cycles, and operate independently of political elections or private shareholder pressures gives

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[86] Ciarlone, A., & Miceli, V. (2014). Are Sovereign Wealth Funds Contrarian Investors? Bank of Italy.

[87] Bortolotti, B., Fotak, V., & Megginson, W. L. (2009). The Financial Impact of Sovereign Wealth Fund Investments in Listed Companies. Globalization of Alternative Investments Working Papers, World Economic Forum.

[88] Megginson, W. L., You, M., & Han, J. (2013). Determinants of Sovereign Wealth Fund Cross-Border Investment. The Financial Review.

[89] Ciarlone & Miceli, 2014.

[90] Castelli, M., & Scacciavillani, F. The New Economics of Sovereign Wealth Funds. Wiley Finance, 2012.

[91] Ciarlone & Miceli, 2014.

them a unique role in the financial system. As Al-Hassan et al. (2013) put it, their operational flexibility, combined with governance structures enables them to act not just as investors, but as economic stabilisers.[92]

2.4. Impact on the Global Economy

Sovereign Wealth Funds have become increasingly influential in global markets, managing a combined total of over $13.7 trillion in assets, a 6.1% increase from the previous year.[93] Most of these funds invest abroad. his marks a dramatic rise from just a few decades ago — in the 1990s SWFs collectively held only about $500 billion, meaning the sector has grown nearly 30-fold[94] To put this in perspective, SWFs now control investments equivalent to roughly 13% of world GDP[95] and, in the case of equities, ownership on the order of 1–2% of global stock market capitalization.[96]

No matter what goals a SWF was originally set up to achieve, governments have to be aware that these funds can end up affecting other parts of the economy. Depending on the size of the SWF, the economic profile of the country that owns it, and the strength of its broader institutions, shifts in a SWF's assets, investment strategies, or operations can have far-reaching effects. These can touch everything from public finances and monetary policy to the balance of payments, exchange rates, domestic financial markets, and may also affect public sector wealth and have implications for private sector behaviour.[97]

There have been growing concerns about how the growing size and composition of SWF portfolios could influence global financial markets. Research shows that when SWFs announce new investments, the share prices of the target companies usually go up — and even more so when the funds are relatively transparent.[98] This suggests that investors see voluntary disclosure by SWFs as a sign that they're doing serious due diligence before choosing where to allocate their resources. On the other hand, there are concerns regarding

[92] Al-Hassan, A., Papaioannou, M., Skancke, M., & Sung, C. C. Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management. IMF Working Paper, 2013.
[93] Global SWF Annual Report 2025 – Executive Summary
[94] Carnegie Endowment, April 2025.
[95] Mergermarket – SWF deal trends (Jan 2024)
[96] Carnegie Endowment, April 2025.
[97] Mazarei, Van Der Hoorn (eds.), Economics of Sovereign Wealth Funds: Issues for Policymakers, 2010.
[98] by Kotter and Lel (2008)

the growing size of SWFs matters and that sovereign fund management may be motivated by non-economic considerations, deviating from conventional wealth maximization. Worries about the influence of large funds — whether public or private — are not new. The fear is that when funds reach a certain scale, they might start using their market power in ways that could distort markets and possibly increase financial instability.
As already stated in the previous chapters, some SWFs make use of fiscal surpluses to get established; in recent times, even highly indebted countries running fiscal deficits like the United Kingdom and the United States, have either proposed or planned the idea of establishing a SWF.[99] Moreover, during the 2008 GFC, SWFs have been a source of new capital to foreign banks and investment firms, particularly in the United States. Between November 2007 and January 2008, SWFs from emerging markets injected more than $44 billions of capital into needy financial institutions in advance economies; these investments accounted for roughly 3/4 of the total capital raised by target companies over that period.[100]

Another significant trend is urban development and infrastructure in emerging markets. Strategic SWFs like Saudi Arabia's PIF and Abu Dhabi Developmental Holding Company (ADQ) are investing heavily in projects aimed at urban transformation and economic diversification, both at home and abroad. North America and Europe continue to attract a large share of SWF capital due to their connected markets and strategic assets. However, there is growing interest in Asia: Global SWF data shows China and India were especially popular targets in 2024 for sovereign investors.[101] These two emerging giants offer growth opportunities in technology, infrastructure, and new energy that SWFs find attractive. At the same time, overall investment into emerging markets dipped by about 12% in 2024[102] — a sign that some funds pulled back in other developing countries, possibly due to geopolitical risk or weaker macroeconomic prospects (e.g. concerns about China's property slowdown, or volatility in smaller economies). An interesting highlight was that the United Kingdom was dubbed "Region of the Year" for SWFs in 2024.[103] The UK saw significant SWF inflows, likely drawn by post-Brexit valuations and stable regulatory framework — from high-profile real estate and infrastructure deals in London to tech and life-science investments backed by

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[99] The President of the United States of America, Donald Trump pledged to create: "The greatest Sovereign Wealth Fund of them all." His advisers think one way to do it is a government agency they bet can help mobilise hundreds of billions from Wall Street. — Bloomberg.
[100] Aizenman, Glick: Sovereign wealth funds: Stylized facts about their determinants and governance, 2008.
[101] Global SWF Annual Report 2025 – Executive Summary
[102] Global SWF Annual Report 2025 – Executive Summary
[103] Global SWF Annual Report 2025 – Executive Summary

Qatar and Abu Dhabi funds. Meanwhile, domestic vs. foreign focus varies by fund. Notably, PIF is mandated to invest heavily at home: it planned at least $40 billion annually into the Saudi economy through 2025[104] (for megaprojects like NEOM city, tourism, and infrastructure) and is scaling up to as much as $70B per year by 2025.[105] (In practice PIF fell short in some years, investing roughly half the target domestically in 2023,[106] but the ambition reflects its dual role in economic development.) In contrast, funds like GPFG and ADIA invest almost entirely abroad. For instance, 100% of the GPFG investments are outside Norway (with its equity portfolio spread 57% in North America, 25% Europe, 14% Asia-Pacific, etc. by end-2024).

This outward flow of capital by SWFs has significant implications: SWFs have become a major group of cross-border investors, influencing asset prices from Silicon Valley start-ups to African infrastructure and European utilities.

Since Crown Prince Mohammed bin Salman became chairman of the fund in 2015, the PIF has dramatically diversified and increased its foreign investments, raising its foreign exposure from close to zero to 24% of its current $976 billion portfolio.[107] More recently, PIF has steered its focus back onshore, prioritizing domestic economic growth as oil revenues decline. The fund will invest at least $40 billion a year in mega-sized local projects, predominantly in infrastructure, to boost economic diversification into areas such as tourism, entertainment, and sports.

Not only are SWFs allocating more to private markets, but they are also deploying capital at record levels in direct investments. In 2024, sovereign funds made 585 direct investments globally, totalling about $216.6 billion in deal value. This represents a 5.3% increase in investment volume over the previous year, signalling that SWFs accelerated their deal-making. In fact, 2024 marked a new high in annual deployment by SWFs, surpassing even the pre-pandemic peaks. A few mega-funds drove this activity: the top spender was UAE’s Mubadala, which alone deployed $29.2 billion (85% of it in developed markets) in 2024. Collectively, the major Gulf funds (sometimes dubbed the “Oil Five” — ADIA, ADQ, Mubadala, QIA, and PIF) “broke every record” in 2024, ramping up investments as oil revenues and strong balance sheets empowered them to be aggressive buyers. This continues

[104] agsiw.org
[105] argaam.com
[106] aljazeera.com
[107] PIF Consolidated Financial Report, 2024

a post-2020 surge: Middle Eastern SWFs nearly matched their 2019 deal high in 2022 and 2023 (e.g. about €45–€56 billion annually in global deals)· after a drop in 2020. The investment programs have become more ambitious, with many SWFs shifting from being passive allocators (LPs in funds) to direct dealmakers,[108] leveraging in-house teams and local knowledge to source deals.

India has also done a great job pulling in global investors to back its big infrastructure push. The National Investment and Infrastructure Fund (NIIF), set up by the Indian government in 2015, has grown into the country's largest infrastructure and private equity fund manager, with over $4.9 billion in assets. Major investors like ADIA, Singapore's Temasek, and several public pension funds are on board. NIIF is putting serious money into areas like airports, ports, roads, logistics, power, green energy, and telecom, aiming to deliver strong returns while helping drive India's economic growth.

Influence on Global Financial Stability and Liquidity

The sheer scale and long-term horizon of SWFs give them a unique role in promoting stability — SWFs can act as "anchors" in global markets.[109] Because they are long-term investors with no immediate liabilities (unlike banks or some pensions), SWFs often remain invested during market stress, providing liquidity when others withdraw.[110] This counter-cyclical behaviour was evident during the 2008–09 financial crisis, when several SWFs injected capital into ailing Western financial institutions (for example, GIC and Temasek recapitalized banks like Citigroup and UBS in 2008).[111] Their patient capital helped stabilize the financial system when private capital was scarce. Similarly, during the March 2020 COVID crash, SWFs like PIF used billions to buy the dip — PIF used low valuations to acquire stakes in companies like cruise operators and oil majors, playing the role of a buyer of last resort.[112] Norway's GPFG also rebalanced into equities during the downturn, adhering to its long-term strategy, which provided support to market liquidity.[113] These actions emphasize the manner in which SWFs assist in mitigating market volatility by providing

[108] ION Analytics – Dealspeak EMEA (Feb 2025
[109] Global SWF Annual Report 2025, Executive Summary.
[110] OECD Sovereign Wealth Fund Risk Report, 2024.
[111] GIC Annual Report 2008; Temasek Review 2009.
[112] Bloomberg, "Saudi's PIF Spends Billions in COVID Crash to Buy Bargains," 2020.
[113] Norges Bank Investment Management (NBIM), GPFG Annual Report 2024.

stable demand during recessions.[114] Moreover, SWFs also support worldwide liquidity by adding considerable sums to financial markets.

Trillions of SWF dollars are invested in global equity and bond markets, supporting market depth. For instance, GPFG's holdings (1.5% of global equities) mean that it is a major shareholder in over 9,000 companies — its ongoing reinvestment of oil revenues and dividends adds liquidity to markets on a continuous basis.[115]
SWFs also hold significant government bonds, contributing to sovereign debt financing stability. Many funds, especially in Asia and the Middle East, have allocations to high-quality sovereign bonds (U.S. Treasuries, European government bonds), effectively recycling surplus capital into global bond markets and keeping yields lower than they might otherwise be.[116]
However, SWFs can also pose stability risks if their policies change abruptly. Because they are large, if multiple SWFs were to withdraw assets simultaneously (for example, to cover budgetary needs in a crisis or due to geopolitical sanctions), it could pressure markets.[117] A case in point is the drawdowns some countries made during oil price crashes — e.g. Russia tapped its National Wealth Fund and Gulf states drew on reserves in 2020, though most tried to avoid selling core foreign investments.[118] There are also concerns about pro-cyclical behaviour: while many SWFs buy on dips, some might also chase booming markets, adding to froth. The presence of SWFs as long-term investors will generally be stabilizing, but transparency at some of the funds conceals potential emerging risks. ADIA and PIF, for example, do not report all their activity in real-time; unexpected strategic choices (e.g. to change asset allocation or to repatriate funds) could surprise markets.

Overall, SWFs in 2024–25 have been a source of stability, not volatility. They bolster global financial stability by diversifying global capital flows. SWF investments are generally equity rather than debt-generating (reducing leverage risks), and they tend to be long-term "sticky" investments that are less prone to sudden exit. The IMF and other institutions have noted that SWFs can help stabilize economies by buffering fiscal deficits (saving in boom years, spending in lean years)[119] — for instance, the GPFG enables Norway to smooth government spending, preventing overheating or excessive contraction[13]. In terms of international

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114 Global SWF Annual Report 2025, Executive Summary.
115 IMF Global Financial Stability Report, April 2025.
116 OECD Working Paper: Sovereign Funds and Bond Market Dynamics, 2024.
117 IMF Staff Discussion Note, "Systemic Implications of Sovereign Funds," 2024.
118 World Bank Report on Sovereign Wealth Fund Responses to Oil Shocks, 2021.
119 IMF Fiscal Monitor, April 2025.

markets, the consistency of SWF capital provides a stabilizing counterweight to short-term speculative flows.

Geopolitical Investment Patterns and Strategic Influence

Because SWFs belong to the state, they carry with them geopolitical concerns. Their investment can be representative of strategic national interests and geopolitics consciously or unconsciously. Geopolitical tensions between the U.S.-led coalition and China/Russia are already affecting SWF flows.

Chinese state assets (such as CIC and SAFE) have scaled down some exposure to U.S. assets in recent years in the face of trade tensions and US investment curbs, turning attention to other places (Europe, Asia, and domestic investments)[120] [121] Conversely, Gulf SWFs have invested increasingly in Asia — e.g., UAE and Saudi funds are forging closer financial relationships with China (ADIA and CIC have cooperation agreements with each other)[122] and India (PIF and ADIA have been large investors in Indian tech and infrastructure).[123] This is partly to diversify out of the West and align with new strategic partners within a changing geopolitical order. However, Western markets remain core to returns for the majority of SWFs, so the realignments are drawn out rather than dramatic.

SWFs also look to invest in strategic sectors of concern to them, such as technology, defence, natural resources, and telecommunications. This invites geopolitical interest. For example, when Middle Eastern money or China's CIC attempt to buy holdings in defence-linked or semiconductor firms, the host countries can invoke national security reviews (CFIUS in the U.S. or even similar regimes in Europe). On the other hand, SWFs themselves are geopolitically risk-averse: Norway's fund sold Chinese telecom giant Huawei some years ago due to security concerns, and some funds avoided Russian assets after sanctions in 2022. U.S.-China decoupling continued in 2024, perhaps driving SWFs in friendly countries to avoid controversial Chinese tech investments, while Gulf and Chinese funds invest in each other increasingly.

In a rising number of cases, nations utilize their SWFs as an instrument of economic

[120] William L. Megginson, Asif I. Malik, and Xin Yue Zhou, Sovereign Wealth Funds in the Post-Pandemic Era, Journal of International Business Policy (2023)
[121] Global SWF Midyear Review 2024, "Investment Rebalancing Trends."
[122] Sovereign Wealth Funds 2019: Managing Continuity, Embracing Change, ed. Javier Capapé. IE Centre for the Governance of Change. (2019).
[123] Global SWF 2024 and the Indian National Investment and Infrastructure Fund.

diplomacy. Prestige investments can cement bilateral ties. As a case in point, the QIA made major investments in the UK (e.g. property, Barclays Bank, Heathrow Airport) in the 2010s,[124] coinciding with an improvement in Qatar-UK relations. Similarly, PIF and other Saudi investments have announced investment in Pakistan and Indonesia as part of extended economic and diplomatic relations with both countries.[125]

In 2023, China and Saudi Arabia launched a bilateral investment fund to target Saudi Arabian targets, a sign of increasing relations This is typically planned out on state visits and helps to further foreign policy aims (securing goodwill, leverage, or access to resources/market). This "sovereign deal-making as statecraft" phenomenon has become more robust — i.e., Gulf nations making investment pledges to Egypt and Turkey to bolster allies' economies, or China using its Silk Road Fund to push Belt & Road Initiative[126] ventures and pursue influence.[127]

In general, SWFs conform to investment patterns in the multipolar world order: capital is flowing not only West, but also increasingly East and South,[128] often geopolitically driven. Their strategic investments can be doubly enriching(development, returns, improved relations), but also sensitive detours through world politics.

Long-Term Capital Markets: Infrastructure and Sustainable Investment

One of the most important impact of SWFs has been their focus on long-term investment in assets like infrastructure, real estate, and recently, green energy projects. It is apparent from empirical data as well as industry reports that SWFs are increasingly major players in international infrastructure investment, particularly through direct investments in construction and industrial schemes, renewable energy, transport, and digital infrastructure.

Direct Strategic Investments comprise about 10% on average.[129] For instance, Norway's GPFG had around 25 billion NOK (approximately \$2.5 billion USD) invested in unlisted renewable energy infrastructure at the end of 2024; comprising equity stakes in offshore wind, solar, and onshore wind projects across Europe, as well as commitments to global

[124] Brookings Institution, "Investment Diplomacy and Sovereign Wealth Funds," (2023)
[125] Arab News, "Saudi PIF Launches Investment Fund with China," 2023
[126] The Belt and Road Initiative (BRI), also known as One Belt, One Road (OBOR), is a global development strategy launched by China in 2013 under President Xi Jinping. Its goal is to enhance regional connectivity and economic integration across Asia, Europe, Africa, and beyond by investing in large-scale infrastructure projects.
[127] Silk Road Briefing, "SWFs and the Belt & Road Initiative," 2024.
[128] OECD Economic Outlook, Chapter on "Multipolar Global Capital Flows," 2025.
[129] Invesco.com

infrastructure-oriented funds.[130] Moreover, across a broader 2018–2019 dataset (the most recent available global comprehensive review), infrastructure accounted for over 30% of direct SWF investments by deal value, the single largest sector by allocation among the deals.[131] Estimates by consulting firms such as McKinsey (2024) suggest that private capital — inclusive of SWFs — has invested over $1 trillion USD in infrastructure markets over the past decade, with SWFs being major contributors due to their long-term investment time frame and low tolerance for liquidity. In contrast to most private investors, SWFs tend to have decades-measured investment horizons, which fit well with the long-lividness of development and infrastructure projects.

Over the past few years, SWFs have poured capital into toll roads, ports, power grids, and telecommunications infrastructure worldwide.[132] This has enhanced global development and filled financing gaps in projects that require patient capital. For example, Ontario's highway system, London's Heathrow Airport, and utilities across Europe have significant SWF ownership stakes via various funds (Qatar's QIA, Abu Dhabi's Mubadala, etc.)[133]. In emerging markets, SWFs have co-funded major infrastructure initiatives: China's CIC has partnered on Belt and Road projects, and Gulf funds have invested in India's infrastructure investment trusts and Africa's logistics networks.[134]
According to industry data, infrastructure allocations among SWFs have been rising — now around 8% of SWF portfolios on average[135] as funds seek stable, inflation-linked returns.

In 2024, infrastructure was highlighted as a continued growth area for SWF investment, specifically, SWF's capital reached Australia and India in the last few years: ADIA invested in Australian toll roads and an Australian infrastructure fund, while in India ADIA and Temasek of Singapore underwrote the NIIF to construct highways and renewables.
These strategic infrastructure investments not only are generating economic returns but also spearheading international economic integration and development. SWFs are also spearheading the financing of the transition to clean energy and sustainable infrastructure. A number of funds have embraced clean energy investment as part of their long-term

[130] GPFG annual report 2024
[131] IE Centre for the Governance of Change.
[132] Invesco Global Sovereign Asset Management Study, 2024.
[133] Bloomberg, "SWFs in Global Infrastructure: Expansion and Energy Transition Focus," 2024.
[134] Bloomberg, "SWFs in Global Infrastructure: Expansion and Energy Transition Focus," 2024.
[135] Invesco.com, "Sovereign Wealth Funds and Infrastructure Allocations: Trends 2024."

strategy.[136] For example, Masdar (which is partly owned by Mubadala and ADIA) of Abu Dhabi is one of the world's top investors in renewable energy projects, from solar power plants in the UAE and Oman to wind farms in Britain and North Sea-based offshore wind farms. Singapore's GIC has also placed bets on clean energy start-ups. GIC invested in 2024 in a German hydrogen firm (Sunfire) and carbon capture firm (Storegga).[137] Even Saudi Arabia's PIF, despite the kingdom's oil wealth, is investing heavily in solar and wind domestically (e.g. the Sudair solar project) and has launched a dedicated unit for renewables, aligning with Saudi's goal to generate 50% of power from clean sources by 2030.

Beyond energy, SWFs fund other long-horizon sectors like transport infrastructure, water, and urban development. The long-term capital markets benefit from SWFs' willingness to accept illiquidity in exchange for stable returns. By investing in roads, ports, power plants, and even social infrastructure (hospitals, affordable housing via real estate arms), SWFs help modernize infrastructure and support economic growth in host countries. This can have spillover benefits such as job creation and improved productivity. For the funds, these assets provide portfolio diversification and protection against inflation — a particularly relevant hedge in the high-inflation environment of 2022–2023.[138] When a sovereign fund commits to a large infrastructure project, it often crowds-in other institutional investors (pension funds, insurers) to join the deal, thereby multiplying the impact. An example is the consortium led by GIC and ADIA in the acquisition of a stake in Gatwick Airport, which included other global investors.[139] In 2024, sovereign funds continued to co-invest actively, with an estimated 200 co-investment deals per year in private markets.[140] That said, SWF investment can also raise geopolitical sensitivities — host nations sometimes scrutinize critical infrastructure investments by foreign state-owned entities, concerned about control over ports, power, and major strategic centres.

<u>Technology and Industrial Policy Impacts</u>

Over the last few years, SWFs have undergone a dramatic shift toward investing in emerging technologies and strategic industries. Their growing presence is felt most strongly in areas like AI, semiconductors, biotech, and fintech, where long-term capital can fuel disruptive

[136] Invesco Global Sovereign Asset Management Study, 2024.
[137] Sifted.eu, "GIC Invests in Hydrogen and Carbon Capture Startups," 2024.
[138] Invesco Global Sovereign Asset Management Study, 2024.
[139] IFSWF.org, "Sovereign Wealth Funds Co-Investment Trends Annual Report," 2024.
[140] IFSWF.org, "Sovereign Wealth Funds Co-Investment Trends Annual Report," 2024.

expansion. This is not merely a pursuit of returns but broader national objectives to develop home industries and guarantee control over leading technologies.

Artificial Intelligence and Digital Transformation: Few topics have captivated SWFs in 2024 more than AI. Digital infrastructure has emerged as a leading investment category, with COVID-19-driven increased demand and the AI boom. SWFs are making more investments in data centres, broadband networks, cloud platforms, satellites, and undersea cables. World spending on digital transformation alone in 2023 was $2.15 trillion, and it will jump to $3.9 trillion in a couple of years.[141] Development of AI — with all its potential to boost productivity — is also fuelling investments on a massive scale into computing power and energy, to touch $200 billion in the coming year.[142] Although the full consequences of the AI boom are yet to be materialise and have a meaningful impact on society it is clear that it will disrupt virtually every industry and sector across the global economy.[143] Global SWF named 'Digitalization and AI' the standout investment focus for the year, a clear signal of where strategic priorities now lie. Temasek also made early bets in pioneering areas like AI chips and autonomous mobility, fulfilling Singapore's ambition to be a technology centre. In the Gulf, Saudi Arabia's PIF has invested huge sums in AI research initiatives locally and in Silicon Valley venture capital funds alongside. Mubadala is currently establishing further its tech footprint, investing in AI start-ups as well as digital infrastructure initiatives in Europe.[144] Mubadala's initial investment in GlobalFoundries placed Abu Dhabi squarely in a key strategic niche, though since reduced, the venture remains indicative of SWF vision. Saudi Arabia's PIF, set to diversify away from oil reliance, is considering joint ventures to develop onshore chip manufacturing.[145] These moves represent China's sovereign-driven industrial plans in general, where CIC and others have been channelling resources toward the aim of semiconductor independence.

Healthcare and Biotech: The pandemic reinforced the importance of healthcare infrastructure, with funds like Mubadala, GIC, and Temasek forced to raise exposure to biopharma, med-

141 Statista, 2024.
142 Goldman Sachs, 2023.
143 CNBC Article, April 2025: AI could affect 40% of jobs and widen inequality between nations, UN warns Artificial intelligence is projected to reach $4.8 trillion in market value by 2033, roughly equating to the size of Germany's economy, the U.N. Trade and Development agency said in a report.
144 Bloomberg Technology, "Mubadala, PIF Expand AI and Tech Investments Globally," April 2024.
145 South China Morning Post, "Gulf Sovereign Funds Emulate China's Industrial Investment Strategy," 2024.

tech, and healthcare real estate.[146] Mubadala made large investments in vaccine research and medical startups, while GIC and ADIA built quietly substantial portfolios in healthcare property. Locally, PIF remains committed to Saudi Arabia's efforts to locate pharmaceuticals manufacturing domestically and strengthen its healthcare infrastructure.

Native Industries to Build: SWFs are no longer content with seeking returns abroad; increasingly, they are drivers of native innovation. Saudi Arabia's PIF, as part of Vision 2030, has launched new companies across sectors from aerospace to electric vehicles, including starting Ceer, Saudi Arabia's first EV brand. ADQ in Abu Dhabi has taken the same template, making investments in agritech, pharma, and logistics companies to diversify the economy of the emirate beyond hydrocarbons.[147] These are informed by a growing understanding that sovereign funds can catalyse entire industrial ecosystems.

In conclusion SWFs are investors and industrial policy facilitators, seizing opportunities for development everywhere and creating new industries domestically. These four funds in question are the benchmark: GPFG invests mostly in exposure to tech as a massive public equities investor (it benefited from the surge of U.S. tech stocks — the "Magnificent Seven" — which accounted for most of its 2024 gains); The PIF actively fosters domestic tech and industrial ventures (from NEOM's smart-city technology to local EV production); GIC actively invests in cutting-edge firms around the world to secure Singapore's future; and ADIA/Mubadala invest money in global tech while also planting industries in the UAE (such as semiconductor production and AI research facilities in Abu Dhabi).
Through such initiatives, SWFs are not only influencing financial markets but also determining the real economy's technological trajectory.

[146] Mubadala Healthcare Portfolio Overview 2024.
[147] Arab News, "PIF, ADQ Leading Domestic Innovation Drive," January 2024.

CHAPTER 3: ITALIAN SOVEREIGN WEALTH FUND

Fondo Risorgimento Italiano

F.R.I.

3.1. Introduction

For too long, Italy has lagged behind the world's leading economic powers, victim of economic stagnation and declining competitiveness. During 2000-2023, Italian pay has fallen dramatically in real terms, an alarming departure from that which is now being experienced by peers. According to precise data provided by the OECD, Italy is the only one of the G7 countries whose average yearly compensation in 2022 is lower than what it was some two decades before.[148] This is a reality that serves only to confirm the stagnant nature of the Italian economy, which is burdened by the modest growth of productivity, mean technological advancement, and structural inefficiencies. An Italian Sovereign Wealth Fund — called the Fondo Risorgimento Italiano (FRI) — is a solution that would help mitigate all the risks that we are now facing and have been facing since the 2000s. In the following chapters I am going to analyse the multiple problems Italy experiences and then lay out the possible solutions to these.

3.2. Problem Analysis

Wages

Among the prime causes of this stagnation is Italy's industrial system, which is still largely represented by small and medium enterprises (SMEs). SMEs have always found it difficult to scale their activities and have always been constrained by their size in offering competitive wage levels to their workers in competition with larger firms.[149] Therefore, with many SMEs being family-owned and operating in relatively low value-added sectors, wage growth from the fiscal perspective remained suppressed.

An Italian SWF would hence assume paramount strategic importance to help redress these structural imbalances and breathe life into Italy’s economy. The FRI will be able to channel investments into strategic sectors so as to improve competitiveness and create an atmosphere

[148] OECD Economic Surveys: Italy 2023, OECD Publishing, Paris, 2023

[149] Bank of Italy, Annual Report 2022, Rome, 2023.

fostering sustainable wage growth and economic revival. In Italy wages increased from €27,264.29 in 2000 to €32,450 in 2023 (nominally). Yet, the nominal increase has not translated into real wage growth. In 2023, inflation-adjusted wages were 4.4% lower than in 1990, signifying a protracted period of wage decline.[150]

Pensions

In addition to the economic challenges, pension issues threaten to cause an immediate collapse as demographic pressures and fiscal obligations weigh heavily on the current situation. Italy is experiencing rapid aging, with extremely low fertility rates. The working population is thus sharply dropping in proportion to those it must take care of, laying enormous pressure on the pension system.

Furthermore, with an old-age dependency ratio among the highest in Europe, it is set to rise to 68% by 2050.[151] The dilemma posed by demographic aging and more or less generous pension entitlements built during the past decades, thus, has created a huge fiscal imbalance that casts serious doubts about the long-term sustainability of pension funding. The pay-as-you-go system, i.e. one that collects taxes from an ever-shrinking working population, no longer is up to the task and needs to be overhauled immediately to avoid fiscal crises.[152]

The establishment of the Italian SWF would help the pension system with incomes from diversified investments and fiscal stability. Such a shield would lessen public finances, provide sustainable pensions, and assure pension incomes for future generations, thereby steering long-term economic and social stability.

"*Fuga di Cervelli*" — Brain Drain & Loss of talent

Italy also faces a rising human capital flight crisis. This event is usually described using the term "brain drain," ('fuga di cervelli' in Italian). It reflects the increasing trend of young, educated Italians emigrating from Italy to seek better economic opportunities, professional recognition, and higher living standards. According to ISTAT, over 30,000 graduates left Italy in 2022 alone.[153] In in 2024, approximately 156,000 Italian citizens emigrated abroad, a 36.5% increase compared to the previous year. This surge contributed to a total of 191,000 people leaving Italy in 2024, marking the highest emigration level in 25 years.

[150] Trading Economics, OECD.
[151] European Commission, Ageing Report: Economic and Budgetary Projections for the EU Member States (2021-2070), Brussels, 2021.
[152] Ragioneria Generale dello Stato, Italy's Long-Term Fiscal Sustainability Report, Rome, 2022.
[153] STAT, Migration Report 2023, Rome, 2023

Young graduates and professionals have most commonly given as their motivation a lack of career choices, inflexible labour markets, and bureaucratic inefficacies to emigrate. Italian research institutes and universities struggle to keep qualified professionals in fields of science, technology, and medicine, as many of them prefer to build a career in better paying nations and with superior infrastructure for innovation.[154]

The outflow of this higher-skilled population drains the nation's talent pool, undermining innovation and hoisting the banner of an even lesser competitive Italy. Public expenditure is significantly higher on these students than on others — the higher expenditure ultimately goes towards foreign labour markets.
An ecosystem in Italy must be created fostering and nurturing talent to counteract this trend. An Italian SWF can contribute valuably to the investment in centres of excellence, research centres and start-up incubators with competitive wages and world-class facilities.

Population Collapse
Another pressing demographic issue that erodes the economic sustainability of Italy is the ongoing decline of its population growth. Italy has one Europe’s lowest birth rates, and it is going through a profound demographic shift that will disrupt the socio-economic environment. As of 2023, Italy's fertility rate remains still at around 1.24 children per woman, far from the replacement rate of 2.1.[155] ISTAT estimates have shown that by the year 2050 the population of Italy would decrease by over 6 million, reducing the workforce significantly while the number of older citizens increases exponentially.[156] This is going to bring a socio-economic earthquake. A shrinking working-age population means fewer payers to the treasury and to the pension system, and the expenses to the pensioners continue to increase. Italy's pay-as-you-go pension system, already on the precipice, is not designed to respond to this demographic turnaround. Short of drastic reforms, the system is headed toward a crisis where benefit outflow far exceeds contribution inflow.[157] The costs extend beyond fiscal sustainability. A smaller, aging population risks eroding domestic demand, reducing consumption, slowing innovation, and increasing health and long-term

[154] OECD, International Migration Outlook 2023, Paris, 2023
[155] ISTAT, Annual Demographic Report 2023, Rome, 2023.
[156] Eurostat, Population Projections for EU Member States (2023 Revision), Brussels, 2023
[157] OECD, Pensions at a Glance 2023, Paris, 2023.

care costs. In fact, the Italian economy risks falling into a low-growth trap driven by demographic forces and institutional delay.

Addressing this complex challenge requires structural solutions. While policy incentives to boost birth rates such as childcare support, housing assistance, and tax credits are necessary, they often yield effects only in the medium to long term. In the meantime, creating a SWF could serve as a strategic cushion, generating intergenerational capital reserves to fund future pension obligations and critical social infrastructure — much like the GPFG's mandate.
By reallocating part of today's public and private resources into a professionally managed investment vehicle, Italy can build a financial defence capable of supporting its aging society. The FRI would not only serve as a hedge against demographic decline but also as a policy tool to finance youth employment, education, and family.

<u>Investments</u>

Italy's investment climate is seriously deficient and in urgent need of reform. It is burdened by excess-bureaucracy, vague rulebooks, and inadequate infrastructure, while an organizational setup exists that actually discourages foreign direct investment (FDI) and domestic entrepreneurship.[158] According to the World Bank Ease of Doing Business Index, Italy ranks far lower than Euro area peers, which is a measure of widespread issues such as prolonged approvals, complexity of the tax code, and judicial system failures.[159] These impediments to progress reduce Italy's attractiveness as an investment destination and slow innovation and productivity growth. Furthermore, the poor application of technology and poor support for innovation are among the determinants reducing Italy's competitiveness. Public and private sector investment in research and development (R&D) remains well below the EU average, severely limiting Italy's scope for technological upgrading and economic updating. With global economies consistently shifting to knowledge and digital industries, Italy's failure to invest significantly in these sectors risks leaving it with an ever-growing economic gap from developed nations.[160] With these self-evident shortcomings, swift and decisive action must be taken to transform Italy's investment climate. Establishment of the FRI would answer these issues directly by providing a more effective investment regime, inducing innovation through sophisticated R&D allocation, and

[158] European Investment Bank, Investment Report 2022/2023: Resilience and Renewal, EIB Publishing, Luxembourg, 2023.
[159] World Bank, Doing Business Report 2020, Washington, D.C., 2020.
[160] Eurostat, Research and Development Expenditure, European Commission, Brussels, 2023.

inducing overall market efficiency. Such swift and decisive action must be initiated to turn Italy around from its current trajectory and position it properly in the highly competitive global economic order.

Italy's SWF formation presents a potential resolution of these challenges through the provision of stabilization to fiscal policy, economic risk diversification, and wealth preservation rapid intergenerational equity. Untethered from its economic and financial issues, fiscal unsustainability, and weak economic growth, the creation of an Italian SWF might easily be imagined as one such strategic move toward overall economic stability, fiscal responsibility, and intergenerational equity. Mitigating the above challenges is essential to the improvement of living conditions and the sustenance of economic growth in Italy.

3.3. Funding Sources

One of the most significant issues in planning the Fondo Risorgimento Italiano is to determine sources of appropriate finances. Diversified funding sources, aside from initial capitalization, also allows for long-term operating independence and strategic discretion.

A potential funding source is the reallocation of pension contributions collected by the National Social Security Institute (INPS). Instead of making recurring payments to that pension system, income taxes would be directly paid to the FRI as contributions. Each tax-paying Italian citizen would have an account with the FRI and would keep track of all contributions made and their future pension amount. However, this approach must be taken with caution due to the existing burden on the pension system. Any diversion of resources from INPS would require political reforms to ensure the solvency of pension payouts in the short term.[161] Instead of making traditional contributions to INPS in exchange for a fixed pension, workers could have those funds invested into the FRI. The returns generated would then be paid out as dividends or pensions to the contributors themselves.

Italy has a portfolio of state-controlled units operating in areas of transport, energy, and postal. The sale — with a possible option to buy it back in the future — of minority interests

[161] INPS Annual Report 2023, Rome, 2023

in these organizations can mobilize sizeable capital for funding. The greatest advantage in such an instance is the value unlocking of suboptimal public assets. Such initiatives are subject to public protest and political pressure, particularly in the case of strategic sectors. Italy's over 2,400 metric tonne gold reserves, among the biggest in the world, are a theoretically appealing but contested option. Securitizing some of these reserves would give a SWF short-term liquidity but could drain away the symbolic and financial stability potency of gold during periods of crises.[162] Therefore, this source of funds can be more effective as a collateral or reserve backstop rather than a direct input of capital.

Foreign exchange reserves and trade surpluses can also fund SWFs, as practiced by export-heavy nations like China and Singapore. However, Italy's relatively weak current account performance and low trade surplus limit the feasibility of this model in the short term. Still, gradual accumulation from future surpluses could become a longer-term funding stream.[163]

Direct government budget contributions are an easy but difficult to implement answer in terms of Italy's already high public indebtedness over 140% of GDP — as calculated by the IMF. Fiscal resource allocation to FRI would need to be weighed against other competing priorities such as debt redemption and welfare expenditure. Symbolic early start-up contributions would, however, establish a foundation and serve as proof long-term economic restructuring.[164]

Private sector participation under public-private partnerships (PPPs) or co-investment arrangements can enhance the FRI's reach and impact. Allowing Italian institutional investors, banks, and insurers to co-invest with selected SWF projects could amplify capital contribution without undermining accountability. The key downside involves ensuring transparency and avoiding potential conflicts between public objectives and private profit motivations.[165]

Another potential — although politically sensitive — source of funding for the Fondo Risorgimento Italiano lies in selective tax increases or new tax mechanisms specifically earmarked for long-term investment purposes. People who earn between €29,000 and

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[162] Banca d'Italia, Annual Gold Reserve Report, 2023.
[163] IMF Balance of Payments Statistics Yearbook 2023.
[164] Eurostat, Government Finance Statistics, 2024.
[165] OECD, Public-Private Partnerships: Governance and Monitoring Frameworks, Paris, 2022.

€75,000 (21% of the taxpayers) account for more than 40% of the fiscal revenues, as shown by the Ministero dell'Economia.[166] This still leaves a lot of space for tax code realignments, which would create a more spread-out and balanced tax bracket. Although this option must be carefully calibrated so as not to deter economic growth or disproportionately harm vulnerable populations, it is still an open policy vehicle for generating steady and predictable revenue. A dedicated sovereign wealth surcharge could be introduced on high-income individuals, large corporations, or sectors that have benefited disproportionately from globalization and digitalization, such as big tech and banks. Such contributions can be modelled after solidarity taxes in countries like France during periods of financial crises. Such taxes, if transparently linked to long-term national investment goals, could be more widely acceptable.[167]

Another possibility would be an increase in capital gains taxes or in financial transaction taxes, in particular against speculative activities. Revenues could be channelled directly into the FRI. Similarly, better tax administration and lower evasion levels could put hundreds of billions of lost revenues yearly on the table. At about 10-12% of GDP, Italy's shadow economy could be harnessed with some good digitization of tax collection, harsher sanctions against tax evaders, without having to increase tax rates per se.[168]
The biggest challenge to tax-financing is political: tax rises are unpopular, especially in a country already subject to high taxation. But framed as an act of patriotism to secure long-term national wealth, with the promise of tangible returns, this could be a tool that would gain the consensus of citizens and institutional actors alike.

An additional funding possibility would be the incorporation and merger of the CDP equity (which I will address later) into the Fondo Risorgimento Italiano. Where all assets would automatically be part of the SWF, further augmenting the AUM of the fund.

A hybrid model of financing — with a mix of privatization proceeds, fiscal transfers, and private sector investment backed by phasing in reserve drawings and pension reform — could offer the most enduring path forward. The hybrid model would avoid over reliance on one

[166] Internazionale, numero 1593 del 13 dicembre 2024
[167] OECD, Tax Policy Reforms 2023: Special Feature on Taxation of High-Income Earners, Paris, 2023.
[168] European Commission, Report on Tax Evasion and the Shadow Economy in Italy, Brussels, 2023.

risky source and borrow from best practice witnessed in high-performing SWFs around the globe.

3.4. Institutional governance system

There would have to be appropriate regulation and an explicit legislative mandate that protect an Italian SWF's transparent, independent, and accountable governance framework. World experience indicates it would be wise to embrace the Santiago Principles. It is an immediate and vital action which can be done at one time which is very much geared to instil credibility and acceptability globally. Clear mandates, robust oversight provisions, and a defined working framework separate from any attempt of political interference are needed for FRI to operate credibly and execute its long-term directive.

Legal Status and Autonomy:
The FRI must operate as an independent legal entity 100% owned by the state but separate from their control. This case would be similar to the GPFG with the NBIM or the GIC, the Italian SWF should be governed by a board of directors with fiduciary responsibilities, not political appointees without relevant financial experience.

Checks and Balances:
For accountability purposes, there should be a three-level hierarchy so as to ensure accountability and avoid conflicts of interest:

1. Supervisory Authority: This authority consists of a senior committee in the Ministry of Economy and Finance or in the office of the Prime Minister, charged with setting policy directions, overseeing long-term strategic plans, and the appointment of the Board.
2. Independent Board of Directors: Comprised of financial experts, economists, and industry specialists that have to monitor executive decisions, approve investment policies, and oversee performance.
3. Executive Management: Executive management carries the day-to-day operations of the fund and implements the investment mandate under the leadership of a CEO who is granted full operational freedom but is answerable to the board.

Transparency and Public Accountability:
The FRI should be accountable for mandatory annual reporting to the Senate, providing audited financial statements, portfolio allocation breakdowns, risk analysis, and performance review.

Ethical and Political Safeguards:
To avoid political capture and corruption, there must be rigorous conflict of interest rules, cooling-off periods for politicians transitioning into SWF officials, and procurement standards for co-investments. Domestic investment must be on economic grounds, not political convenience. There should absolutely be no set party or set coalitions of parties in charge of the management of FRI. The decisions taken would need a majority of consensus from both parliament and senate with the final approval of the Bank of Italy.

Judicial and Regulatory Oversight:
Apart from in-house auditing procedures, there should be a publicly independent watchdog, such as Italy's Corte dei Conti,[169] with the power of investigation on cases of corruption, audit procedures, and confirm the fund's adherence to its legislative charter. The same would be implemented in the U.S., where federal funds would be audited by a publicly independent oversight agency such as the Government Accountability Office (GAO) to maintain transparency. With the institution of legal strictness, autonomy of operations, and transparency as the pillars of the Italian SWF's governance system, the fund can gain public trust and international respectability. An autonomous management board under parliamentary oversight of some form could be instituted for guaranteeing transparency, accountability, and insulation against short-term political movements. The international reputation of economic experts on the advisory board would additionally strengthen the fund's credibility and performance.

A relevant example to the case in question is the CDP Equity S.p.A. — formerly Fondo Strategico Italiano — Cassa Depositi e Prestiti (CDP) investment fund, Italy's state promotional body. Established in 2011, CDP Equity invests medium-long term in very highly

[169] The Corte dei Conti, or Court of Auditors, is a constitutional court in Italy with functions of both control and jurisdiction in matters of public accounting and public administration. It's responsible for auditing government spending, reviewing the legality of government actions, and adjudicating cases related to public financial accountability.

national-interest companies with the aim of promoting Italy's economic growth and competitiveness. The most significant features are:

1. Strategic Investment Focus:
   - CDP Equity is interested in sectors that are critical to the Italian economy, including infrastructure, energy, digital communications, and healthcare.
   - Investments are focused on companies that are financially and economically sound, with healthy balance sheets and high growth expectations.

2. Investment Portfolio:
   - As of December 31, 2024, CDP Equity holds stakes in companies such as Autostrade per l'Italia (88.1%), Ansaldo Energia (99.6%), Fincantieri (71.3%), Open Fiber (60%), and others across different industries.[170]

3. Role in National and European Programs:
   - CDP Equity was an Implementing Partner for the handling of EU programs in the Multiannual Financial Framework 2021-2027, highlighting its role as a representative of transforming local investments into European aims.[171]

4. Governance and Ownership:
   - CDP Equity is 100% owned by CDP, which in turn is owned by the Italian Ministry of Economy and Finance (82.77%) and by Banking Foundations — "Fondazioni Bancarie" (15.93%), and own shares as Treasury stock (1.30%).[172]

5. International Collaborations:
   - CDP Equity cooperates with international institutions to attract foreign capital and support Italian companies.

[170] Cdp.it
[171] Cdp.it
[172] Cdp.it

In the context of establishing the FRI, CDP Equity provides a practical model demonstrating how state-backed investment can be structured to support national economic objectives while maintaining financial sustainability and governance standards.

3.5. Investment objectives of the FRI

Objectives would be clearly focused on solving all of the issues listed in section 3.2, as the FRI's asset allocation and investment policy would need to be consistent with the economic realities of Italy and strategic intentions. Diversification would be most important, attempting a balanced portfolio of equities, fixed-income securities, real estate, and alternative investments such as infrastructure and private equity. To provide instant growth and jobs, investments can initially be made in local infrastructure, and for long-term appreciation of capital as well as diversification benefit, international investments can be considered later on. Keeping in view the industrial capabilities of Italy, some industries such as high-tech production, technology, and healthcare can be the areas of focus, with the hope of stimulating domestic sectors and generating enough revenues. A clearly articulated investment mandate is the basis of any SWF's success and legitimacy. In the case of the Fondo Risorgimento Italiano, the investment objectives have to be articulated in terms of a two-objective mission: achieving long-term financial returns to ensure the pension scheme and developing Italy's strategic economic and social interests.

1. Intergenerational Wealth Preservation and Growth

The FRI has to aim to preserve and grow national wealth for future generations. This requires a globally diversified, risk-weighted investment strategy. With investments across international equities, bonds, real assets, and alternative investments, the SWF will achieve stable growth that is insulated from domestic economic cycles and political whims. Thus, it will achieve the objective of intergenerational equity.

2. Macroeconomic Stabilization and Fiscal Buffering

The FRI must also act as a stabilization tool during economic volatility. By maintaining sufficient liquid reserves and counter-cyclical assets, it would need to be in a position to provide fiscal stimulus in periods of recession or market collapse, reducing the need for sudden tax hikes or austerity. This is best practice followed by stabilization funds in Chile, Kazakhstan, and Norway.[173]

3. Strategic Domestic Development

A decent portion of capital within the FRI would have to go towards national priorities. These include investment in infrastructure, digitalization, healthcare innovation, and advanced manufacturing. The fund is able to co-invest alongside private sector players or special purpose vehicles that invest capital in strategic projects with long-term economic multipliers.

4. Support for Innovation and Human Capital

For a reversal of the brain drain and maximum productivity, the FRI needs to invest in research institutes, industry-university partnerships, and high-growth startups. Investment in educational tech, biotech, AI, and green tech on a strategic level can make Italy the leader in frontier industries.

5. ESG and Green Transition Objectives

As already mentioned before, ESG is not a macro area that I would personally focus on too highly, it’s a second-order policy objective obeyed primarily due to regulation and environmental bureaucracy set forth by the EU. Whatever the situation may be, no one really knows what the future holds, so I'll just go on and briefly describe the sustainable goals.
Italy's EU Green Deal national climate targets can be financed directly by the FRI. A portion of the portfolio should be used for ESG-compliant investments, climate-resilient infrastructure development, and renewable energy projects.

6. Investment Discipline and Transparency

Every investment decision must be directed by well established guidelines regarding asset allocation, risk tolerance, and performance expectations. Such guidelines must be ratified in an investment policy statement and periodically updated by an independent investment committee.

The Fondo Risorgimento Italiano with an equilibrium of foreign diversification and onshore investments can offer both economic sustainability and nation-changing contribution that will serve as a foundation for Italy's long-term renewal strategy.

[173] World Bank Group, Sovereign Wealth Funds and Long-Term Development Finance, Washington, D.C., 2022.

CONCLUSION

Sovereign Wealth Funds have come a long way from being dubious fiscal tools to being the pivots of international finance. In the midst of this trend of volatility, supply chains disruption, changes in monetary and fiscal policy, economic uncertainty and geopolitical risks, these sovereign investors have become emblems of not only financial power but also strategic superiority. Their global footprint — today more than 170 funds managing over $13 trillion — demonstrates a structural shift: countries are not just concentrated on lending or borrowing, but they are political and economic architects.

The global presence of SWFs is increasingly diversified. They act as crisis liquidity suppliers, stabilize state finances, and facilitate intergenerational equity. From Norway's Government Pension Fund Global acting as a cushion to oil-income volatility to the Government of Singapore Investment Corporation investing in global innovation, SWFs have successfully balanced long-term returns with the needs of country development. Their capacity to bear risk and deploy capital across borders also facilitates the deepening of capital markets, stimulates investment in infrastructure, and facilitates financial stability, particularly in emerging markets that are starved for financing.

SWFs in the current geopolitical context are vehicles of economic diplomacy. Gulf funds like the Abu Dhabi Investment Authority and Saudi Arabia’s Public Investment Fund have entered into strategic partnerships in Asia and Africa for the purpose of diversification but also to form alliances that express the new global power relations. On the contrary, funds of China and Russia increasingly project state preferences into some critical or sensitive sectors, which produce policy responses and sometimes outright protectionism from the Western recipient countries. This interactions of capital and power shows how SWFs move between financial markets and international law.

In this changing scenario, theorizing an Italian SWF comes at the right time. Considering its strong manufacturing base, its regional imbalances, its pressing need for industrial renewal and the imminent pension and population crisis, the country could greatly benefit from a sovereign vehicle that invests with clear purposes. An Italian SWF could work against fiscal volatility and assist with the growth of small and medium-sized enterprises while fostering the transition to an AI world, and furthering Italy’s own strategic autonomy within the

European Union. The Fondo Risorgimento Italiano would have to be designed away from mere adoption of foreign models and would need an explicit orientation toward Italy's peculiar institutional and economic landscape, emphasizing governance, transparency, and clearly defined development objectives.

Ultimately, the rise of SWFs reveals that in a world where capital travels faster than ideology, nations that save and invest strategically exert a quiet, but formidable power. As I make the case for Italy to join the Sovereign Fund club one is reminded of an old Roman proverb: "*Audentes Fortuna Iuvat"* — "Fortune Favours the Bold".
And in today's world, boldness just might take the shape of a Sovereign Wealth Fund.

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