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## Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management

*Abdullah Al-Hassan, Michael Papaioannou, Martin Skancke,  
and Cheng Chih Sung*

**IMF Working Paper**

Monetary and Capital Markets Department

**Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management**

**Prepared by Abdullah Al-Hassan, Michael Papaioannou, Martin Skancke, and**

**Cheng Chih Sung<sup>1</sup>**

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**Abstract**

This paper presents in a systematic (normative) manner the salient features of a SWF's governance structure, in relation to its objectives and investment management that can ensure its efficient operation and enhance its financial performance. In this context, it distinguishes among the various governing bodies and analyzes key aspects of the investment policy and setting of the risk tolerance level in order to ensure consistent risk-bearing capacity and greater accountability. Further, it discusses the important role of SWFs in macroeconomic management and the need for close coordination with other macroeconomic and financial policies as well as their role in global financial stability.

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Author's E-Mail Address: [aalhassan@imf.org](mailto:aalhassan@imf.org), [mpapaioannou@imf.org](mailto:mpapaioannou@imf.org), [martin.skancke@gmail.com](mailto:martin.skancke@gmail.com), and [sungchengchih@gmail.com](mailto:sungchengchih@gmail.com)

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## I. BACKGROUND AND MOTIVATION

Total assets under management by Sovereign Wealth Funds (SWFs) have been growing rapidly over the last few years and estimates of their total holdings vary considerably, depending on the used definition of a SWF. Upper-end estimates indicate total SWF assets of around US\$5 trillion. This figure, however, may double count some sovereign assets, by including central bank assets that are already captured in official reserves. Based on the definition of the International Working Group (IWG) of Sovereign Wealth Funds (2008), which excludes central banks and state-owned enterprises, the total assets of SWFs—with publically available data for thirty SWFs—are about US\$3 trillion (IMF 2012).<sup>2</sup>

SWFs have an important role in macroeconomic management and global financial stability. The operations of the SWFs are closely linked to public finances (through their funding and withdrawal rules), monetary policy (liquidity conditions), and external accounts (exchange rate variations). Furthermore, during the global financial crisis in 2008, sovereign investors, including SWFs, were affected by and responded to the changes in the global financial markets. For instance, SWFs (saving funds) that are heavily invested in equities experienced large losses from the sharp decline in equity markets, but they recovered most of the losses in the subsequent years by demonstrating their willingness to be long-term investors and riding out the financial turmoil (IMF 2011, and Papaioannou and others, 2013). This behavior was in tandem with that of official reserve managers that reduced substantially their exposure to commercial banks deposits (Pihlman and van der Hoorn, 2010).

This ultimate objective of sovereign investors can only be achieved if the SWFs are managed within a sound governance structure and with appropriate investment strategies. Close coordination with macroeconomic policies and the management of other assets and liabilities in the public sector is essential. The SWF objective(s) and consequent investment policy should be considered within macroeconomic policy setting and objectives, and the design of SWF mandates should take into account the implication for the broader economy. In addition, the governance structure must ensure a clear division of roles and responsibilities between the various governing bodies, as well as operational independence for the manager and a supervisory system with appropriate checks and balances. This is necessary in order to build legitimacy for sovereign investment, reduce risk of fraud and mismanagement, and build a competent investment organization.

The scope of this paper is to present in a systematic manner the salient features of a SWF's governance structure in relation to its objectives and investment management that can ensure its efficient operation and enhance its financial performance. In particular, this paper intends to be normative by providing broad recommendations and describing some good practices, taking

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<sup>2</sup> SWFs are defined by the IWG as: *Sovereign wealth funds (SWFs) are special purpose investment funds or arrangements that are owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies that include investing in foreign financial assets.*

into account the Generally Accepted Principles and Practices (GAPP) by the IWG. The paper distinguishes between different governing bodies and analyzes key aspects of a SWF's investment mandate, including the need to specify the risk tolerance level well in order to ensure consistent risk-bearing capacity over time and greater accountability, and the need to establish prudent and effective risk management frameworks. Further, it discusses the important role of SWFs in macroeconomic management and the need for close coordination with other macroeconomic and financial policies as well as in global financial stability. Though the key aspects of governance structures and investment management are discussed within the context of SWFs, they are also applicable to other sovereign investors, such as central banks, government pension funds, development funds, etc.

The paper is structured as follows: Section II discusses the objectives and governance structure of SWFs, including their legal framework and governance structure. Section III discusses the investment management framework, including investment objectives and mandates, key considerations for investment management implementation and risk management. Section IV analyzes key issues for SWFs' disclosure policies, including transparency, accountability and reporting, as well as implementation of the Santiago Principles (Appendix I).<sup>3</sup>

## **II. OBJECTIVES AND GOVERNANCE STRUCTURE**

*The policy objectives of SWFs vary, depending on the broad macrofiscal objectives that they aim to address. The organizational structure needs to have a clear separation of responsibilities and authority. As such, a well-defined structure builds a decision making hierarchy that limits risks by ensuring the integrity of and effective control over SWF management activities.*<sup>4</sup>

### **A. Characteristics of SWFs**

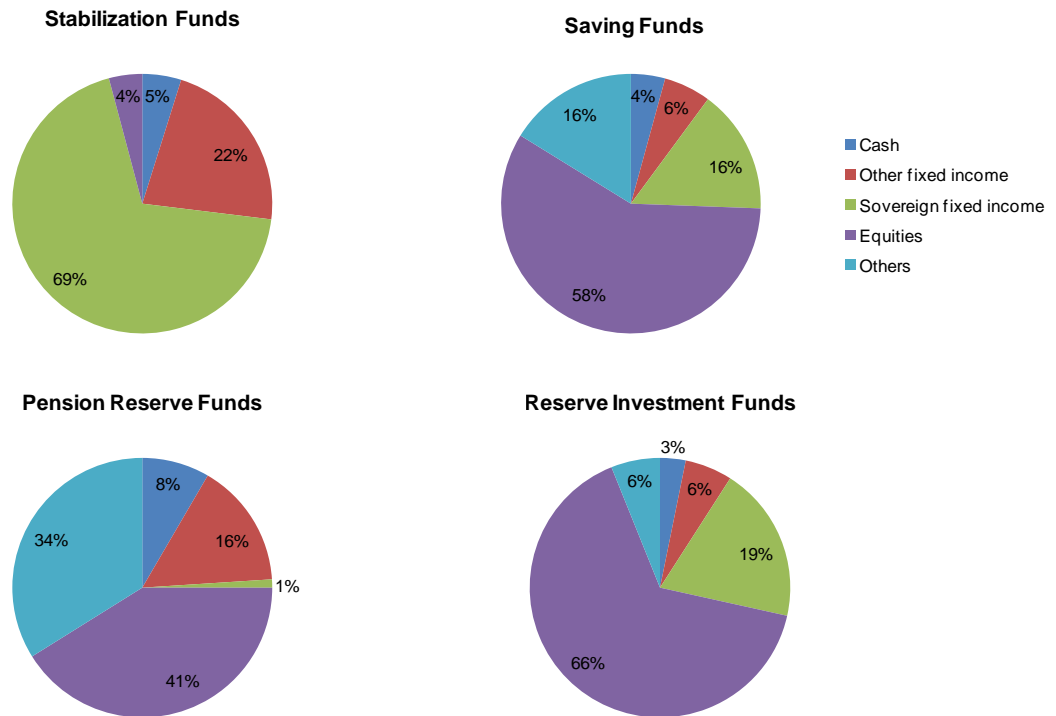
Sovereign wealth funds are usually distinguished based on their stated policy objectives and consequent asset allocation. Though there are many SWFs with multiple objectives, based on IMF and the Santiago Principles taxonomy, five types of SWFs can be distinguished (Figure 1 and Appendix II):

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<sup>3</sup> The Santiago Principles represent generally accepted principles and practices that properly reflect SWFs investment practices and objectives. The Principles are voluntary, which the members of the IWG support, and which they either have implemented or aspire to implement.

<sup>4</sup> See Santiago Principles GAAPs 1-16.

Figure 1. Asset Allocations at Sovereign Wealth Fund, by Type of Fund



Source: IMF, Global Financial Stability Report (April 2012).

- Stabilization funds are set up to insulate the budget and economy from commodity price volatility and external shocks (e.g., Chile (Economic and Social Stabilization Fund), Timor-Leste, Iran, and Russia (Oil Stabilization Fund)). Their investment horizons and liquidity objectives resemble central banks reserve managers, in view of their role in countercyclical fiscal policies to smooth boom/bust cycles. They tend to invest largely in highly liquid portfolio of assets (and sometimes in instruments that are negatively correlated with the source of risk being addressed with the fund) by allocating over 80 percent of their assets to fixed income securities, with government securities consisting around 70 percent of total assets.
- Savings funds intend to share wealth across generations by transforming nonrenewable assets into diversified financial assets (Abu Dhabi Investment Authority, Libya, Russia (National Wealth Fund)). Their investment mandate emphasizes high risk-return profile, thus, allocating high portfolio shares to equities and other investments (over 70 percent).
- Development funds are established to allocate resources to priority socio-economic projects, usually infrastructure (e.g., UAE (Mubadala) and Iran (National Development Fund)).
- Pension reserve funds are set up to meet identified outflows in the future with respect to pension-related contingent-type liabilities on the government's balance sheet

(e.g., Australia, Ireland, and New Zealand). They held high shares in equities and other investments to offset rising pension costs.

- Reserve investment corporations intend to reduce the negative carry costs of holding reserves or to earn higher return on ample reserves, while the assets in the funds are still counted as reserves (e.g., China, South Korea, and Singapore). To achieve this objective, they pursue higher returns by high allocations in equities and alternative investments—with up to 50 percent in South Korea and 75 percent in Singapore’s Government Investment Corporation.

The objectives of SWFs depend on country-specific circumstances, which may evolve over time. Many funds in resource-rich economies have multiple objectives, such as stabilization/savings (Azerbaijan, Botswana, Trinidad & Tobago, and Norway), saving/pension reserve (Australia), or stabilization/saving/development (Kazakhstan).

Investment decisions and portfolio allocation of SWFs are often closely linked to their stated investment objectives and governance structure. Table 1 shows the main asset allocation characteristics of stabilization and saving funds. Moreover, Figure 1 shows the asset allocation of various types of SWFs, indicating that equities, as a share in SWFs’ portfolio, tend to increase from 0–5 percent for stabilization funds to around 40 percent in pension reserve funds, and around 60 percent for saving funds and reserve investment funds.

**Table 1. Asset Allocation Characteristics of Stabilization and Savings SWFs**

	<b>Stabilization funds</b>	<b>Saving funds</b>
Investment horizon	Short term	Long term
Asset composition	Limited to highly liquid assets	Broader asset classes
Currency composition	Negatively correlated with commodity prices	Matching net import of the country
Performance benchmarks	Minimizing expenditure volatility and maintaining adequate liquidity	Achieving real expected returns for long-term periods to maintain the long-term purchasing of the wealth
Risk tolerance	Low risk-return profile	Active investment management with higher risk-return profile
Asset and liability management	Ensuring the sustainability of future fiscal expenditure	Maximizing net value of the fund taken into account the correlation between asset prices and liabilities

Source: IMF.

## B. Macroeconomic Role of SWF Institutions

SWFs have an important role in macroeconomic management and hence ought to be in close coordination with other government institutions. SWF assets—and the returns they generate—can have a significant effect on public finances, monetary conditions, external accounts and balance sheet linkages with the rest of the world. In particular:

- *Fiscal policy* might be affected by SWF funding and withdrawal rules that are usually derived from a fiscal rule, often based on Permanent-Income-Hypothesis considerations;<sup>5</sup>
- *Monetary policy* may be impacted by wide fluctuations in fiscal revenues and procyclical implications for aggregate demand that typically affect inflation and the real exchange rate; and
- *Exchange rate* variations could be mitigated by investing the SWF's resources abroad.

Therefore, the SWF should be considered within the context of the overall sovereign balance sheet. From the risk-return perspective, it is “sub-optimal” to optimize isolated balance sheets rather than the consolidated sovereign balance sheet (Das *et al.* 2012). Although asset-liability objectives and strategies might be optimal for each institution (e.g., central bank, pension fund, SWF, etc.) in terms of local risk-return profile, it may not be the case from the sovereign balance sheet perspective. Mismatches in the financial characteristics of sovereign assets and liabilities may expose the sovereign balance sheet to a wide range of risks, including interest rate and exchange rate risks. Therefore, to manage better these risks, there needs to be close coordination among the institutions involved in the management of sovereign assets and liabilities, with appropriate legislation that institute policy guidelines (to avoid substantial mismatches) and sharing of information.

Sound public financial management calls for limiting the procyclicality of fiscal policy. Policies and rules for an SWF's funding, withdrawal, and spending operations should be clear and consistent with the purpose(s) of the fund. A stabilization SWF usually has clearly laid-out rules for the deposit and withdrawal of resources to smooth the fluctuations in the government budget. Savings-type SWFs receive contributions from excess revenues, but their purpose is to help ensure that earnings or profits are spent—through the budget process—in a way that makes it possible to share wealth with future generations. For pension funds, the mandate is to match asset accumulation to the actuarial implication of the demographic profile, while having little scope to influence the business cycle or the revenue implications of commodity price fluctuations. To this end, the rules of transferring funds between an SWF and its owner should always be spelled out. Also, while fiscal processes often call for some flexibility in the withdrawals from these funds, so as to avoid borrowing, this approach will have to be taken into account in the strategic asset allocation (SAA).

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<sup>5</sup> This will be determined by the absorption capacity of the economy, which include needed public infrastructure, investment in human capital over the long term.



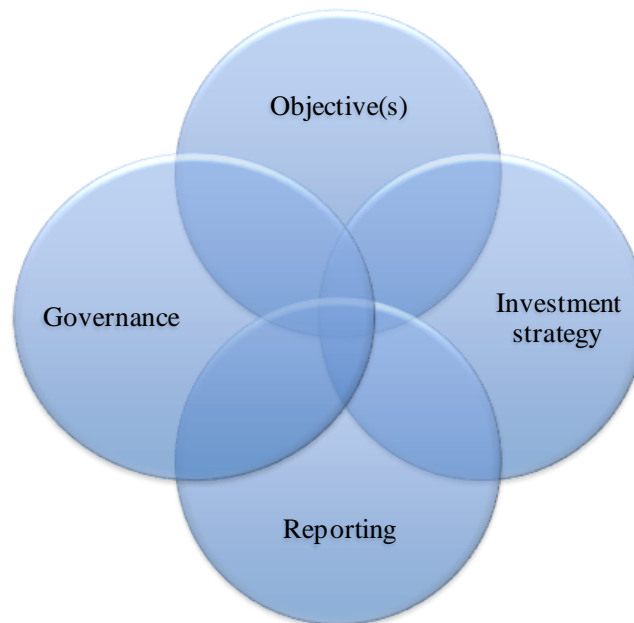
The investment objectives of the SWF also need to be consistent with the government’s broad macrofiscal objectives. Although investment objectives of SWFs vary according to the underlying purpose, they must be compatible with macrofiscal objectives and policy priorities. For instance, the investment strategies of commodity-based SWFs are frequently designed to fit closely the respective country’s policy framework by minimizing the distortions that large and volatile commodity flows might cause to the fiscal accounts, inflation, and the exchange rate and addressing possible sovereign explicit contingent liabilities.

In particular, the SWF’s investment strategies can help alleviate the “Dutch Disease” phenomenon and ensure external stability. In resource-based economies, upward swings in commodity prices tend to result in a boom in aggregate domestic demand, inflationary pressures, and thus an appreciation of the real exchange rate vis-à-vis trading partners. Those conditions, in turn, make non-oil sector less competitive in international markets—a phenomenon known as the Dutch Disease. By augmenting the country’s net external asset position in a way consistent with economic structure and fundamentals, the SWF would help maintain external stability over the long term. Furthermore, the accumulation of foreign assets in tandem with changes in hydrocarbon exports would help mitigate macroeconomic—and social—risks associated with the appreciation of the real exchange rate especially under the fixed exchange rate regime and loss of competitiveness in non-hydrocarbon sectors of the economy.

### C. Legal Structure and Institutional Framework

The optimal investment strategy for an SWF will have to reflect the objectives of the SWF. In most cases, these objectives will be directly interlinked to the governance structure, investment strategy, and transparency requirements (Figure 2).

Figure 2. Main Elements of SWF Policy



Source: Authors.

## Legal structure

A robust legal framework is required to promote sound institutional and governance arrangements for the effective management of SWFs. The SWF legal framework should among other things (i) provide clearly for the legal form and structure of the SWF and its relationship with other state bodies (including the ministry of finance (MoF), central bank); (ii) be consistent with the broader legal framework governing government's budgetary processes; (iii) ensure legal soundness of the SWF and its transactions; (iv) support its effective operation and the achievement of its stated policy objective(s), which should be economic and financial in nature; and (v) promote effective governance, accountability, and transparency.

In practice, there is a wide variety of legal frameworks for SWFs. This partly reflects the fact that different countries have chosen different legal forms for these funds. Generally, SWFs are established (i) as separate legal entities under law with legal identities and full capacity to act;<sup>6</sup> (ii) take the form of state-owned corporations also with distinct legal persona;<sup>7</sup> or (iii) as a pool of assets owned by the state or the central bank, without a separate legal identity.<sup>8</sup> All of these forms are compatible with recognized practices and principles, but the legal basis for a SWF must clearly establish which form the SWF has. In practice, the different legal forms may have implications for both the tax position and immunity of investments. Investments through central banks will normally be protected by sovereign immunity and may also enjoy tax privileges in recipient countries. Taxation of investments through corporate structures may depend on the extent to which these investments are viewed as an integrated part of the government's financial management. Tax treatment of SWFs investment can also depend on provisions in bilateral tax agreements (e.g., Norway has negotiated tax exemptions for its SWF investments in several bilateral tax treaties).

There is also a wide variety when it comes to the degree of granularity of primary legislation. This will partly reflect different traditions and/or constitutional requirements across countries. Some countries have very short primary legislation but more granular secondary legislation.<sup>9</sup> There are also differences with respect to how much delegation of authority laws in different countries provide for. Again, many levels of granularity may be compatible with recognized international practices. But, it is essential that the overall legal framework provides for real delegation from owner to manager and that it grants the operational manager independence within the guidelines set by the owner.

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<sup>6</sup> Australia, Kuwait, New Zealand, and UAE (ADIA).

<sup>7</sup> Temasek (Singapore).

<sup>8</sup> Botswana, Chile, Norway, and Timor-Leste.

<sup>9</sup> The law on the Norwegian SWF has nine short sections, giving the Ministry of Finance the power to manage the Fund. The Ministry, however, has issued a comprehensive and publicly available mandate for the management of the fund, which is carried out by Norges Bank Investment Management, the investment arm of the Central Bank of Norway.

## **Institutional framework**

The institutional frameworks across SWFs differ. Regardless of the governance framework, the operational management of an SWF should be conducted on an independent basis to minimize potential political influence or interference that could hinder the achievement of the SWF's objectives.

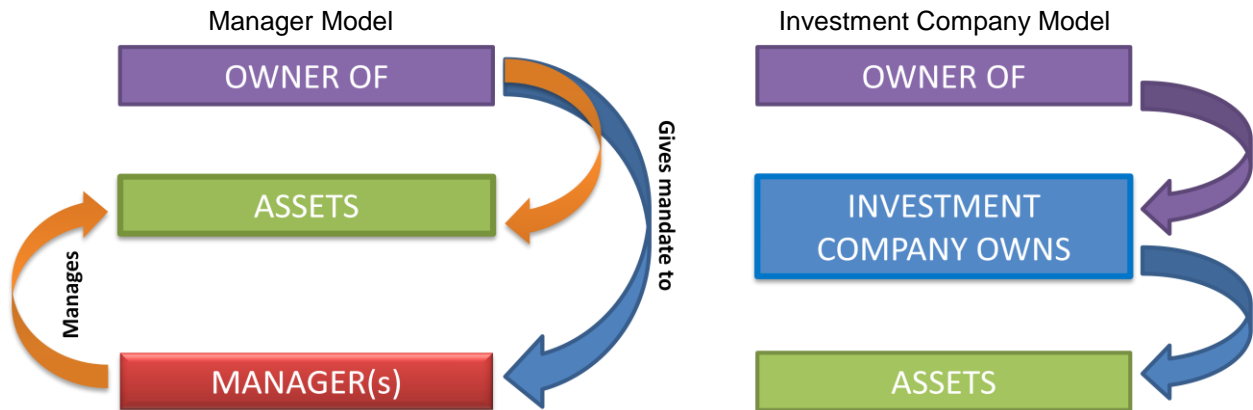
The “manager model” and the “investment company model” are the two dominant forms of institutional setup for SWFs. The models are illustrated in Figure 3.

In the manager model, the legal owner of the pool of assets constituting the SWF (usually the ministry of finance) gives an investment mandate to an asset manager. Within this model, there are three main sub-categories:

- a. The central bank manages the assets under a mandate given by the ministry of finance (e.g., Norwegian Government Pension Fund Global, Botswana, and Chile). In this case, the central bank may choose to use one or more external (private) funds for parts of the portfolio.
- b. A separate fund management entity, owned by the government, is set up to manage assets under a mandate given by the ministry of finance, such as the Government Investment Corporation (GIC) of Singapore. In this case, the manager may also have other asset management mandates from the public sector. For instance, GIC manages parts of the reserves of the Monetary Authority of Singapore.
- c. The ministry of finance gives mandates directly to one or more external (private) fund managers. This model is generally not recommended, since awarding contracts to external fund managers is in itself an investment decision that should be carried out at arm's length from a political body, and the evaluation, monitoring and termination of management contracts requires specialized skills more likely to be found in a dedicated investment organization. However, for countries with severe human capital constraints, it can be the only feasible solution.

In the investment company model, the government as owner sets up an investment company that in turn owns the assets of the fund. This model is typically employed when the investment strategy implies more concentrated investments and active ownership in individual companies (Temasek, Singapore), or the fund has a development objective in addition to a financial return objective.

Figure 3. Investment Models



Source: Authors.

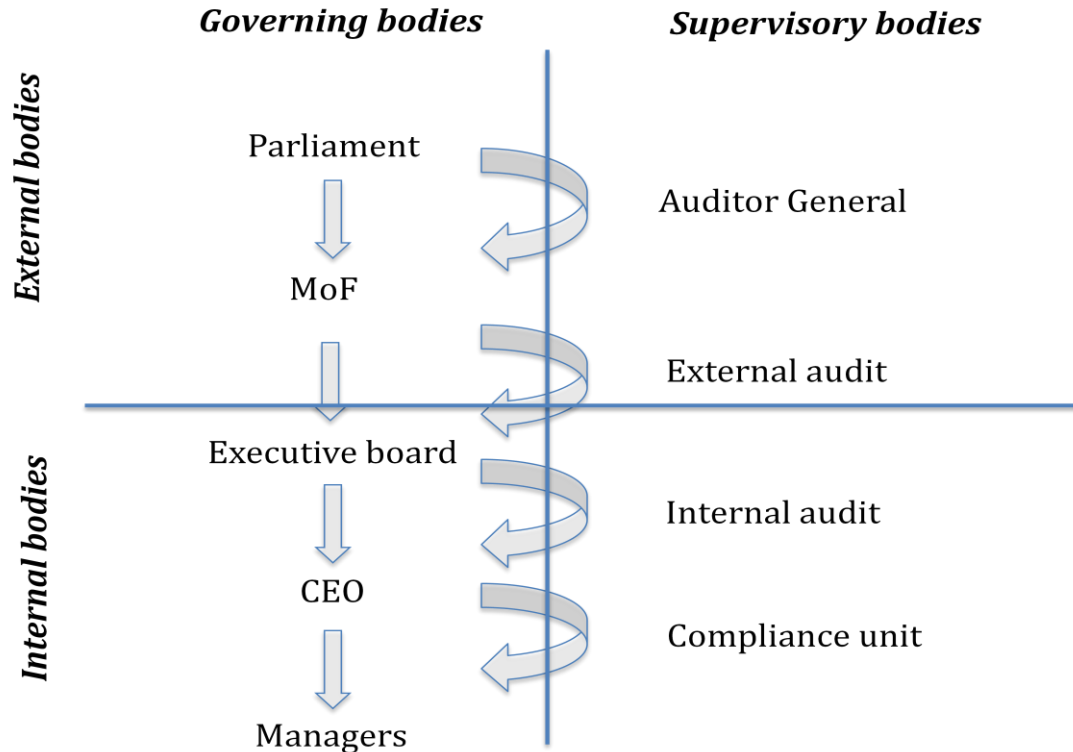
The institutional arrangements for a natural resource or other fund should be appropriate and commensurate for its objectives and the nature of its investments. Funds that function operationally as separate legal entities (e.g., Trinidad and Tobago and China) usually have a governance structure that differentiates an owner, a board, and the operational management of the SWF. Where the fund is a unit within the central bank (e.g., Saudi Arabia and Algeria) operational independence could be embedded in a clear legal foundation and internal governance structure in which the decision making framework and oversight functions are clear and the relationship between the principal (owner) and its agent (central bank) is well established. An important consideration in adopting either approach is the cost. Setting up a fund as a separate legal entity has costs, while a unit in the central bank makes use of existing infrastructure and human resources. Therefore, it could be more cost-efficient if a small size fund were to be managed within an existing institution.

The governance structure must be commensurate with the risks and complexities of the investment strategy. As funds move into riskier assets and more complex investment strategies, governance and risk management must be strengthened. This approach is not only applicable to SWFs, but also to large institutional investors as they have been moving toward adopting a risk factor based approach to portfolio construction.

In the organizational structure of a SWF, it is useful to distinguish between governing and supervisory bodies. The governing bodies constitute a system of delegated asset management responsibilities. The authority to invest is delegated from the top entity of the governance system, through the various governing bodies down, to the individual (internal or external) managers of assets. The delegation implies a gradual increase in the granularity of regulations pertaining to responsibilities as we move down the ladder of the organizational system. Each governing body should establish a supervisory body to assist in supervising the governing body directly below. The role of the supervisory body is to verify that the supervised unit is acting in accordance with the regulations set by the governing body immediately above it in the governance structure.

It is also helpful to distinguish between those bodies that are internal to the organization and those that are external. While the internal bodies are part of the legal structure of the SWF, the external bodies are (or belong to) other legal persons that have a clearly defined role in managing the SWF (e.g., as owner or external auditor). Figure 4 illustrates a general SWF structure that differentiates governance from supervision, and internal from external bodies.

Figure 4. An Illustrative SWF Government Structure



Source: Authors.

In a generic SWF setup, we can distinguish between five governing bodies at different levels with specific roles and responsibilities:<sup>10</sup>

- The **owner** of the SWF, which is typically the central government. The parliament approves the laws that establish the legal structure of the SWF and, thus, the legal basis for its operations. Depending on the general division of authority between the parliament and the executive branch of government, parliament may also have a role in determining the appropriate aggregate risk level of the SWF.
- In most cases, the **government** (i.e., the cabinet or the council of ministers) or the minister of finance will be carrying out the functions of the owner of the SWF. This

<sup>10</sup> This generic setup does not cover the special case where a ministry of finance has given a direct mandate to an external (private) asset manager, where there thus is no separate SWF management institution.

role implies inter alia the task of setting a mandate for the investment organization, within the general framework provided by parliament.

- The **executive board** is the highest governing body inside the legal structure of the SWF management organization. It sets internal rules and regulations (e.g., investment guidelines), within the mandate and legal constraints set by the owner. It also appoints the chief executive officer (CEO) of the investment organization.
- The **CEO** is the administrative head of the investment organization. He/she is responsible for day-to-day operations within the guidelines set by the executive board.
- The individual **managers** (internal and external) operate within risk limits set by the CEO and his/her staff. Normally, the CEO will delegate the running of the investment department to a chief investment officer (CIO) that operates within the investment guidelines, with each level down in the hierarchy having a narrower investment mandate until the individual manager level.

The governing bodies have supervisory bodies working for them to verify that the level immediately below them operates within the rules and regulations that have been set for them. These typically include:

- The **auditor general** is, in most countries, appointed by the parliament to audit and control the activities of the executive branch of the government. One of its roles is to verify that the ministry of finance (or any other body acting as formal owner) operates within the laws and regulations laid down by the parliament and that any associated reporting to the parliament is correct and relevant.
- The **external auditor** will usually be appointed by the governing body representing the owner (often the ministry of finance). The external auditor audits the accounts of the SWF and verifies that the SWF is managed within the rules and regulations set by the owner. The external auditor can also, on an ad hoc basis, perform other control activities (e.g., assess the quality of the internal control system)<sup>11</sup>.
- The **internal auditor** is appointed by the executive board and reports to it. The internal auditor supports the board in supervising the management of the SWF and verifying that internal regulations are adhered to.
- The **compliance unit** is established by the CEO and serves as a tool for the CEO to verify that all activities are in compliance with the rules and regulations governing the SWF's operations.

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<sup>11</sup> There are usually separate supervisory and audit arrangements for central banks, also when they are operational managers of an SWF.

While governance models may differ, inter alia due to differences in political institutions, there are some common principles that must be considered essential to any well-governed SWF. The starting point in establishing the governance structure of an SWF should be to recognize that the bodies established to manage the assets of the SWF are essentially trustees on behalf of the people. One fundamental concern is, therefore, to establish a structure that will underpin the legitimacy of the SWF's operations and ensure that the decisions taken in the management of the SWF reflect the best interests of the people as ultimate owners of its assets. This requires a solid legal basis for the SWF and the establishment of a chain of governing bodies from the legislature down to the individual asset managers with accountability at every level.

There must be a clear and transparent division of roles and responsibilities between the different governing bodies. This is a necessary condition for achieving accountability and legal certainty. When the role of a particular body is unclear, it will not be possible to hold it to account. Both gaps and overlaps in duties and responsibilities must be avoided. Overlaps give unclear division of responsibilities and undermine accountability. Gaps in regulations may create room for unchecked and unwanted risk taking. There must be appropriate delegation of investment decisions from the owner to the asset manager and within the management organization. Asset management is highly skill-intensive, and proper delegation to a professional staff is required for successful implementation of the SWFs investment strategies. Delegation also serves to focus the attention of each governing body to the issues that are critical for success at their level in the governance system. Too little delegation will risk overwhelming the top bodies of the system with operational issues that will distract from higher-level strategic issues. While a sound and robust strategy is necessary for successful management of the SWF, there must also be flexibility in the implementation of strategy to deal with changing market conditions. In many cases, this will require faster decision making processes than a highly centralized system can provide.

At the same time, the governance structure must allow the owner to determine the appropriate aggregate level of risk. While investment professionals can make qualified statements about the relationship between risk and expected return in financial markets, financial theory in itself cannot provide a definitive answer on the appropriate level of risk for a SWF. This level depends also on the level of risk aversion of the ultimate beneficiaries of the SWF—the people. The implication of this is that the level of risk in the SWF should be set by a process that allows political bodies like the parliament and/or the ministry of finance to establish at least a broad guideline for the appropriate level of risk for the SWFs investments.

### **III. INVESTMENT MANAGEMENT**

*A SWF's investment policy needs to set an explicit risk tolerance level when designing the investment strategy in order to ensure consistent risk-bearing capacity over time and promote greater accountability for the chosen investment strategy. The risk management framework should have sound operational controls and systems to meet the objectives of the SWF.<sup>12</sup>*

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<sup>12</sup> See Santiago Principles GAAPs 18-23.

## A. Investment Mandate and Investment Objectives

### Investment mandate

The owner of the SWF (usually, the ministry of finance) is responsible for setting the investment policy, after seeking an advice from the investment committee (or board). Also, consultations with the fund's stakeholders (i.e., the parliament, general public, nongovernment organizations, etc.) reduce the risk of unilateral decisions by any single party.

There are broadly two key determinants to the setting of an appropriate investment mandate: (i) the objective of the SWF and (ii) the risk-bearing capacity of the SWF. Both determinants will have a bearing on the investment universe and the proportion of the SWF exposed to "risky" assets. In general, the longer a fund's investment horizon is, the higher its capacity to take on investment risks is. A short investment horizon signals a lower scope for exposure to "risky" assets. Investment funds with a strong intergenerational savings orientation tend to view their long horizon and attendant ability to ride through market downturns as a key competitive advantage, and they allocate more aggressively to "risky" assets.

### Risk tolerance

Once the investment objectives for a particular pool of assets have been clarified, the next step in formulating an investment strategy is to set an appropriate risk tolerance. This is challenging for several reasons: first of all, "risk" is a complex concept, and the risk of an investment strategy cannot be fully captured by one single number or indicator. It is necessary to have a broader approach, and to use several indicators to assess the riskiness of a particular strategy. Moreover, there is no "right" level of risk because there is no "right" level of risk aversion. For sovereign assets, setting an investment strategy requires some way of ascertaining the risk tolerance of the (political) bodies that are designated as stewards of these assets. As the relevant risks may be difficult to capture by simple indicators, this is often a challenge in itself.

The most common indicator of risk is volatility of returns. This may be a useful indicator of risk, as most investors would be concerned about variation and unpredictability of returns, and in particular sudden losses in value. It is, however, not the only relevant measure of risk. It also has significant limitations as a measure of risk, since it implicitly assumes that returns are normally distributed. In reality, asset returns are generally *not* normally distributed—large losses occur much more frequently than one would expect based on an assumption of normally distributed returns. Measures of risk that are based on volatility should therefore be interpreted with great care.

For sovereigns, a more relevant approach to risk is defining it as the probability of failing to meet some predetermined policy objective. For an SWF set up to transfer wealth to future generations, it may be misleading to think in terms of "safe" low-volatility fixed income instruments and "risky" higher volatility equities. Short-term volatility is not the most relevant indicator of risk in this case. Higher expected returns from equities will make it



more likely that the fund will be beneficial to future generations. Locking in very low or even negative expected real returns in a fixed income portfolio would not be in the interest of future generations—in this sense, it is a “risky” strategy since it makes it unlikely that the principal objective of passing wealth on to future generations will be met. The same argument can be made for assets invested to meet future liabilities in a defined benefit scheme. If the investment strategy locks in low-returns fixed-income portfolio, the risk that future liabilities will not be met becomes high. This strategy is thus “risky,” even if the assets are “safe.”

The determination of the risk-bearing capacity of an investment fund is a key driver of the fund’s investment strategy. A formally articulated risk tolerance serves as a constraint in choosing among competing investment strategies. It also prepares stakeholders psychologically for potential large losses associated with the chosen strategy and helps to prevent knee-jerk reactions to adverse market movements against the fund. Countries such as Chile, New Zealand and Singapore have chosen to adopt such explicit risk tolerance for their sovereign funds.

Risk objectives are typically determined by the owner or the governing body of the SWF. Broad risk principles are generally established within the law governing the SWF or by the owner of the fund. Consistent with the SWF’s overall objective(s) that is whether the fund serves the objective of economic stabilization, saving for future generation or other), the owner of the fund would need to formulate and articulate consistent risk tolerance parameters, such as the fund’s investment horizon and its overall risk tolerance. Risk tolerance exemplifies the hypothetical line between acceptable and unacceptable investment outcomes, and should reflect the fund’s *ability* to take risk in the operating environment. Subsequently, the risk tolerance is translated into a quantifiable risk measure that could be expressed as a shortfall probability, probability of not achieving a certainty return target or worst case outcome at a certain confidence level. Other examples of specific risk parameters are, inter alia, probability of achieving a return in excess of domestic inflation rate, expected annual shortfall relative to long-term domestic inflation, probability of negative return at the end of three years, probability of achieving return target over twenty years, or probability of negative accumulated real return after fifteen years

Owners can also articulate a formal risk appetite statement that serves as a constraint in choosing among competing candidate SAAs or investment strategies. The manifestation of the owner’s risk tolerance can be the choice of an SAA from amongst the candidate SAAs. Or it can be an explicit risk tolerance statement. An explicitly specified risk tolerance raises the efficiency and consistency of investment strategy formulation by avoiding protracted debates on the fund’s risk-bearing capacity each time a change in strategy is being contemplated. It also promotes greater accountability for the chosen investment strategy and checks against procyclical tendency in the fund’s asset allocation in the face of either extended bull markets or sharp market sell-offs.

However, if explicit risk tolerance measures are too abstract for policymakers to relate to, setting broad guidelines for asset allocation—and thus an implicit risk tolerance—is sometimes a good alternative.

The investment policy for the fund needs to take into account the country ability to bear risk. Although not uncommon, the absence of an explicitly specified risk tolerance introduces greater uncertainty and complexity into the portfolio construction process, particularly when major changes in asset allocation are being considered. Without an explicit specification, the risk tolerance has in practice to be inferred from the fund's approved investment universe and its current investment strategy. In general, the longer a fund's investment horizon, the higher its capacity to take on investment risks (Figure 1). Due to the cyclical nature of financial markets, investment funds with a strong intergenerational savings orientation tend to view their higher tolerance for risk and the attendant ability to ride through market downturns as a key competitive advantage.

Overall, there are several common ways in which an explicit risk tolerance can be specified, including stress loss or drawdown limit; shortfall probability; and limit on the fund's value-at-risk. For a public fund, the formal risk tolerance chosen not only needs to be analytically robust but must also be readily understood by the stakeholders. As such, a simpler formulation such as 'the *prospective losses* from the fund shall not exceed  $x$  percent over a period of  $y$  years may be appropriate. The emphasis on prospective losses estimated on an ex-ante basis at the point, where the fund's investment strategy is being decided, is an important one as it prevents automatic de-risking of the fund in knee-jerk reaction to severe market downturns and provides room for more critical reexaminations of the investment theses underlying the prevailing investment strategy. The process of calibrating the risk tolerance to the satisfaction of the stakeholders is typically a lengthy one.

## **B. Investment Policy**

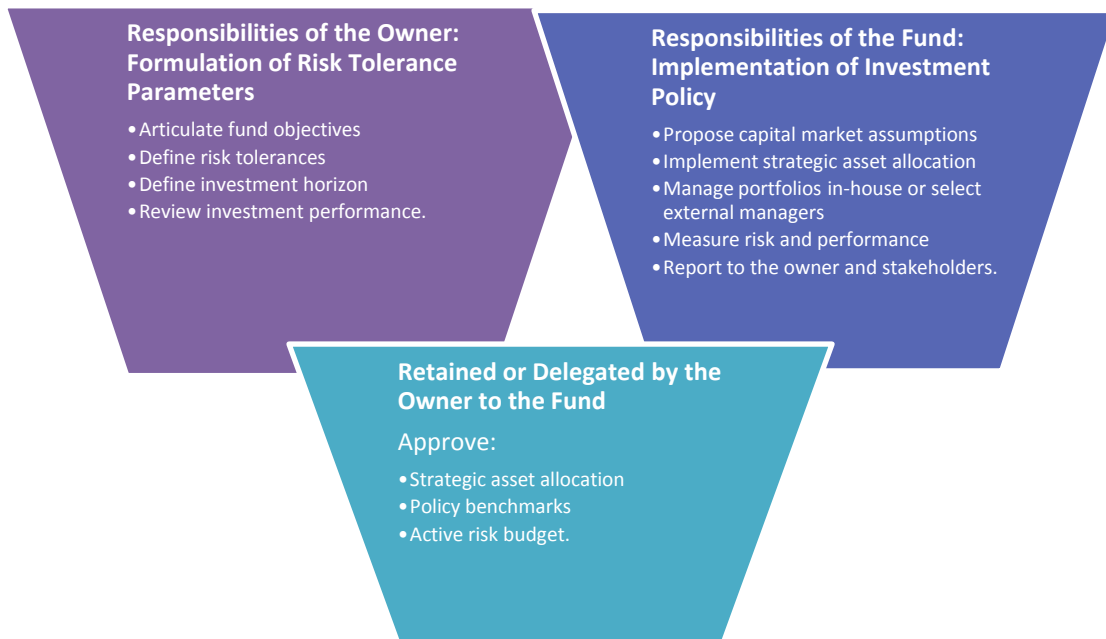
Consideration of investment beliefs, the risk-bearing capacity of the SWF and its objective will give rise to a number of candidate asset classes and combinations of those asset classes. These combinations are typically expressed as an SAA, which sets a target allocation to asset classes within the investment universe. The use of an SAA-based model to establish an investment mandate rests on the belief that the most important determinant of a fund's risk and return characteristics is its exposure to a chosen mix of asset classes. The SAA encapsulates the spectrum of investment risks that the fund is designed to take on, taking into account the expected diversification benefits of mixing different asset classes. An alternative to the SAA-approach, used by the Canada Pension Plan and New Zealand Superannuation Fund, is a reference portfolio approach. Under this approach the SWF owner grants more discretion to the SWF manager to determine the appropriate mix of assets, by providing only a hypothetical mix of listed equities/listed fixed income and the numeraire (together these comprise the reference portfolio) as guide to the owner's risk preference.

### **Setting of strategic asset allocation**

The SWF's expressed risk tolerance is typically articulated through an SAA. The SAA defines the target share of asset classes or risk factors, and should be derived from and be consistent with SWFs' objectives and the owner's risk tolerance. There are alternative approaches as to who "owns" strategic asset allocation decisions. In a more typical set-up approach, the owner of the fund, usually a ministry of finance, decides on the SAA, approves the benchmark portfolio representing the SAA and sets active risk limits for deviating from

the policy benchmark. Operationalization of the SAA and active management is then delegated to the fund manager.<sup>13</sup> In a less typical approach, the SAA decision is fully delegated to and owned by the fund manager.<sup>14</sup> In the former approach, the SWF's owner internalizes the total risk of the policy benchmark, which represents on average about 80–95 percent of the overall risk, while the fund manager is responsible for the residual risk arising due to active management, and is held responsible for excess returns relative to the benchmark. In the latter approach, the fund manager is ultimately responsible for the total return of the fund, as well as for potentially substantial deviations from the stated return targets for long periods of time, with the fund owner not having direct control over investment outcomes. Figure 5 represents separation of roles and responsibilities in *formulating* and *implementing* investment policy between a SWF's owner and the fund manager.

Figure 5. Roles and Responsibilities of Owner and Fund Manager



Source: IMF.

Usually, the investment model employed by SWFs is centered on the fund's SAA. Commonly adopted by institutional funds, the asset allocation-centric model rests on the belief that by far the most important determinant of a fund's risk and return characteristics is its exposure to a chosen mix of asset classes. The SAA encapsulates the spectrum of investment risks that the fund is designed to take on with due regard given to the principle of diversification. The constituent asset classes are subject to separate decisions on how these should be managed. When the constituent asset classes are assigned investable

<sup>13</sup> This approach is adopted by Norway and Russia.

<sup>14</sup> This approach is adopted by Singapore.

benchmarks, the SAA is represented by a theoretical portfolio forming the bogey against which the performance and risk of the fund are measured and managed.

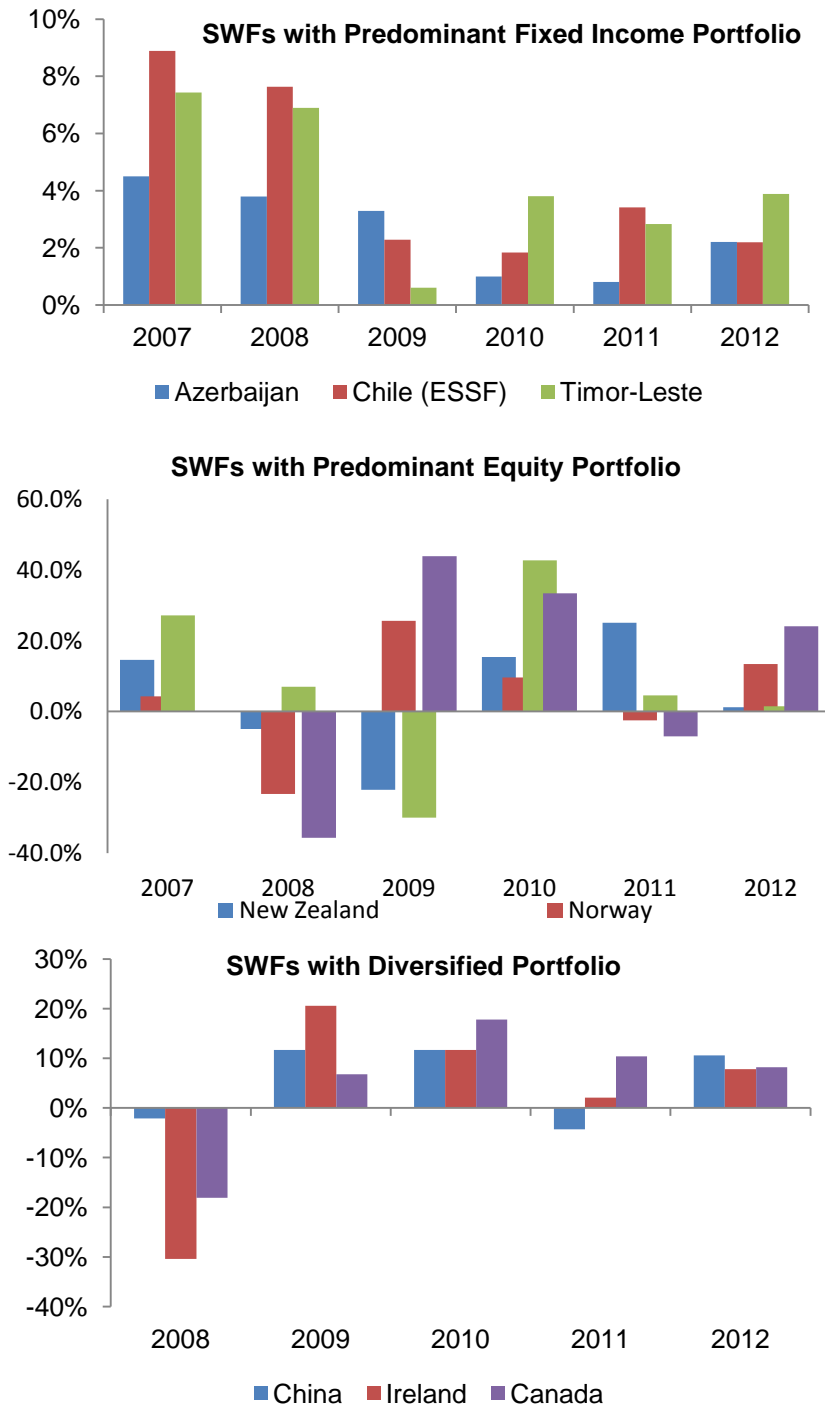
In general, the investment universe of newly established funds continues to place strong emphasis on liquidity and transparency. Such emphases are appropriate for a SWF at its early stage of development where expertise and resources for dealing with illiquid and nonpublicly traded investments are still lacking. Therefore, the financial performances of SWFs are driven by whether the investment portfolio is predominated by fixed income instruments, equities, or is diversified across broad set of asset classes (Figure 6).

It is not uncommon for funds seeking to enhance returns to shift out of publicly-traded bonds and equities into alternative assets such as private equity, real estate, and hedge funds. However, a shift into alternative assets requires significant enhancements in the SWF's resources, capacity and capability to cope with the added risks and complexity. Investing in alternative assets requires not only highly specialized investment expertise but also strong governance, managerial and operational capabilities. Such was the case with the Government Pension Fund–Global (GPF) in Norway. Despite having developed considerable internal management capabilities in bonds and listed equities, it took Norges Bank Investment Management (NBIM), the manager of GPF, more than twelve years before it made its first investment outside of the public markets, or four years after the Norwegian Parliament approved a 5 percent allocation to global real estate.

The use of derivatives has become prevalent in investment management. When employed appropriately, derivatives can raise the efficiency of portfolio management (such as in the passive replication of market exposure), implementation of active strategies, and hedging of unwanted risks. However, due to the inherent leverage and complexity of such instruments, derivatives also hold the potential for causing spectacular financial and reputational losses, if misused or abused. Counterparty risk could be a significant risk embedded in the use of derivatives. Thus, much more so than for traditional assets, the use of derivatives needs to be carefully enumerated, controlled, and monitored.

With the likely growth in the use of derivatives, a comprehensive derivatives policy should encompass some key components. The policy should: (i) enumerate explicitly the permissible range of derivatives by the purpose and type of the submandates; (ii) impose appropriate limits on the size of derivative transactions by instrument type to control the associated liquidity and basis risks; and (iii) require separate monitoring and reporting of derivatives use and their risk and performance impact on the fund.

Figure 6. Selected SWFs' Performance Based on Asset Composition<sup>15</sup>



Source: Authors' estimates based on annual reports from SWFs.

<sup>15</sup> The investment performance of the individual SWF may not necessarily be based on the same basket of currencies.

### C. Investment Implementation

Investment implementation involves the management of the assets of the SWF in accordance with the SAA. This management can take two forms: (i) exposure to various asset classes deviating from the target SAA weight; and (ii) active management of assets within an asset class. Deviations from target weights can be made actively or can occur passively when one or more asset classes outperform others.

A real return objective is particularly well-suited to the SWFs with the long investment horizon implied by their investment policy. This naturally leads to the question of the appropriate measure of purchasing power for the fund as the effect of inflation becomes more dominant over longer horizons. The choice of the numeraire currency not only affects the future purchasing power of SWF assets, but also it has a direct bearing on how the currency risk is perceived and managed. Any investment not denominated in numeraire currency is deemed to pose a currency risk to the fund. Depending on how seriously such risk is taken, a numeraire may impede the fund's diversification into a broader mix of international currencies.

Therefore, in choosing numeraire currency, it is important to ensure that the most relevant measure of purchasing power is used to drive the fund's investment strategy going forward. Ideally, the numeraire should comprise a basket of currencies that best approximates the procurements that fund assets are expected to finance in the long run. Should that prove to be too difficult to effect in practice, other alternatives such as broad GDP-weighted or market capitalization-weighted baskets can be chosen as proxies. This will help to promote greater diversification of the fund's asset and currency risks, and reduce the reliance on a single numeraire currency as the sole measure of store of value.

The SAA, along with the chosen numeraire, is the benchmark for SWF risk and performance. When the constituent asset classes of an SAA are assigned investable benchmarks with appropriate numeraire, the SAA is represented by a theoretical portfolio forming the benchmark against which the performance and risk of the fund are measured and managed.

The investment mandate should establish the degree to which the day-to-day allocations to asset classes in a SWF can differ from the chosen SAA, and therefore at what deviations the portfolio must be rebalanced. It will also establish how actively assets within each asset class can deviate from their benchmark weights. When asset prices change, the portfolio weights will drift away from the (static) SAA weights. The rebalancing policy will determine when and how the actual portfolio weights will be brought back to the SAA weights. Rebalancing can add value to the portfolio by systematic buying of assets that have fallen in value and sale of assets that have increased in value—especially in volatile markets with no strong trend. Infrequent rebalancing implies a high tolerance for drift away from the SAA allocation, whereas frequent rebalancing increases transaction costs. This trade-off should be reflected in the rebalancing policy.

Benchmarks for each constituent asset class of the SAA should be chosen on the basis of their objectivity, completeness, replicability, investability, and acceptance by investors.

An effective benchmark for a constituent asset class is a neutral (i.e., unbiased) representation of the universe of securities from which a rational investor could be expected to select portfolio holdings. It should reflect the passive alternative. When multiple indexes are available for benchmarking, an index is chosen that is consistent with investment objectives and also, to the extent possible, constructed with objective selection criteria, complete, replicable, investable and accepted by investors. It is not always possible to find benchmarks that have all of these characteristics.

Developing an active risk budgeting framework for a SWF in anticipation of increases in active management activities is critical. Based on the same principles of diversification and risk efficiency underlying Modern Portfolio Theory, a formal active risk budget seeks to optimize the expected excess return by allocating more active risk discretion to managers who are better at generating risk-adjusted returns, while controlling for the fund's total tracking error risk relative to the SAA. The effectiveness of such a framework will be enhanced when complemented by detailed attribution analysis that is able to analyze manager skills along the same set of risk factors or decision variables used for risk measurement.

The choice between internal versus external management needs to be clearly defined. It is essential that SWF managers have clear rules with regard to what investment functions are to be outsourced and what can or must be managed internally. Selection, appointment and monitoring procedures for external managers are also essential, ensuring that due process is followed.

#### **D. Risk Management**

The risk management framework should build on the same principles as the rest of the governance system. This implies a framework for risk management characterized by clearly delegated mandates, defined roles and responsibilities, accountability, transparency, and professionalism.

As a global investment fund, a SWF is exposed to a wide range of risks. The scope of risk management should cover all material aspects of risks: market risk, credit risk, operational risk, liquidity risk, legal risk, regulatory risk, agency risk, governance risk, and reputation risk (Appendix III). Also, services provided by third parties could be demanding and challenging especially for low-capacity institutions; and thereby, there is a need to examine the aggregate risk from all third parties.

A SWF needs to have a strong risk management culture, where top management is engaged in developing and enforcing the risk management process. Adherence to high standards in risk management with sound operational controls and systems are necessary to meet the objectives of the SWF, and to preserve legitimacy domestically. It will also be seen by the international community and markets as necessary in achieving the aim of preserving international financial stability, as well as maintaining a stable, transparent, and open investment environment. This risk management process would typically consist of the following components:

- *Risk policies and procedures*: a set of written principles that are endorsed by the board, implemented by the CEO, and disseminated within the institution.
- *Risk identification*: the process by which a SWF defines and understands the nature of the risk that it faces, and is an essential part of a risk management process.
- *Risk measurement*: a measurement methodology that allows comparison across the different dimensions of risks, and enables risk considerations to be factored into performance measurement and investment management decisions.
- *Risk monitoring*: the operational process by which the SWF ensures that it operates within its defined risk policies and procedures.
- *Risk reporting*: typically refers to an internal reporting process.
- *Risk verification and audit*: the component of the risk process to ensure that the risk management systems and techniques are effective.

### **Financial risks**

In assessing appropriate risk levels, it is helpful to distinguish risks that are rewarded or desirable, and risks that are not. In particular, financial risks generally have a positive relationship between the risks and expected return, as they carry a premium for assuming those risks. For example, more risky and/or less liquid asset classes, such as alternative investments, on average tend to generate higher returns than safer more liquid assets over medium to long-term investment horizons. The so-called consequential risks, such as operational and legal risks, are the risks that inevitably arise as a result of being in the financial/investment management industry.

Given the asset allocation-centric investment model, the ex-ante market risk of a SWF can be broken down into two components: SAA risk and active risk. SAA risk refers to the risk inherent in the fund's asset allocation strategy without the intervention of active management, while active risk (also known as tracking error risk when measured in volatility terms) captures the risk brought on by active management of the fund relative to the SAA. The active risk comes from two sources: (i) the marginal deviation in the fund's actual asset allocation exposure versus the SAA due to imperfect rebalancing; and (ii) active management of the fund's submandates against their respective benchmarks.

A comprehensive credit risk management framework is critical. The framework should encompass all sources of credit risk to the fund, including issuer credit risk, counterparty risk and deposit default risk, and impose appropriate limits and monitoring procedures. This will allow the SWF to better manage how and where credit risk is to be assumed. Such unified approach to credit risk management is of particular importance when it comes to banks and other financial firms which may simultaneously pose issuer, counterparty, and deposit default risks to the fund.

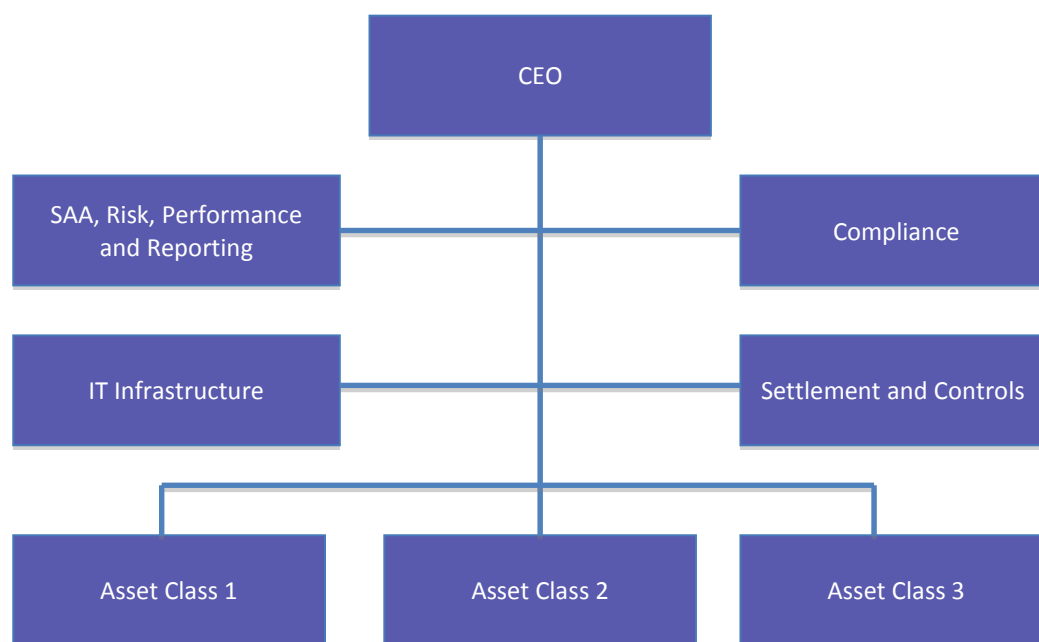


## **Operational risks**

Unlike financial risks, operational risks will not be rewarded, so the objective of operational risk management is to mitigate (residual) risks to an *acceptable* level. While exposure to financial risks leads to greater volatility in the market value of investment assets, but is expected to lead to higher returns over time, operational risks could potentially lead to significant losses of principal or even to the failure of the firm. Operational risk is largely endogenous to the SWF. Apart from external events such as natural catastrophes, it is linked to the business environment, nature and complexity of the investment activities, the processes and systems in place, and the quality of the management and of the information flows. Operational risks cannot be completely avoided or eliminated, and even if operational risk has no expected return, there will be costs associated with reducing it. There is thus a trade-off to be made between costs of accepting risk and costs of mitigating it, which should be made explicit in risk policy documents and is often based on an impact and likelihood analysis.

The most important operational risk management tool is appropriate internal organizational structure with clear segregation of duties. The organizational structure should be designed to achieve appropriate segregation of duties between execution of portfolio transactions and operations, including compliance monitoring, performance measurement and reporting, and settlement and accounting. This could be achieved by setting up separate departments with the head of each department reporting directly to the CEO, who would then delegate specific and clearly defined roles and accountabilities to each group and position (Figure 7). Public disclosure of the SWF's approach to its risk management policies and key actions related to governance and the soundness of its operations helps in reassuring domestic and international stakeholders that the SWF adheres to a high standard of managing operational, regulatory, and reputational risks.

Figure 7. An Illustrative Example of Internal Organizational Chart



Source: IMF.

Moreover, the operational risk management capabilities should include a structured process for the introduction of new markets and instruments. When venturing into new investment markets and instruments, there is a general tendency for investment organizations to rush through implementation by devising ‘work-around’ procedures to circumvent any deficiencies in the existing operational systems and processes. Often, these temporary measures end up staying in place for much longer than originally expected, while scenarios that had not been anticipated earlier would start to appear, leading to potentially costly operational errors. A structured ‘new product’ process will help to instill greater discipline in ensuring sufficient forethought, time and resources are devoted to the introduction of new investment activities. If these operational considerations are to put constraints on the actual investments of the SWF, the mandate from the owner must also give the operational manager latitude to exclude certain potential investments that are part of the investment universe as defined by the owner.

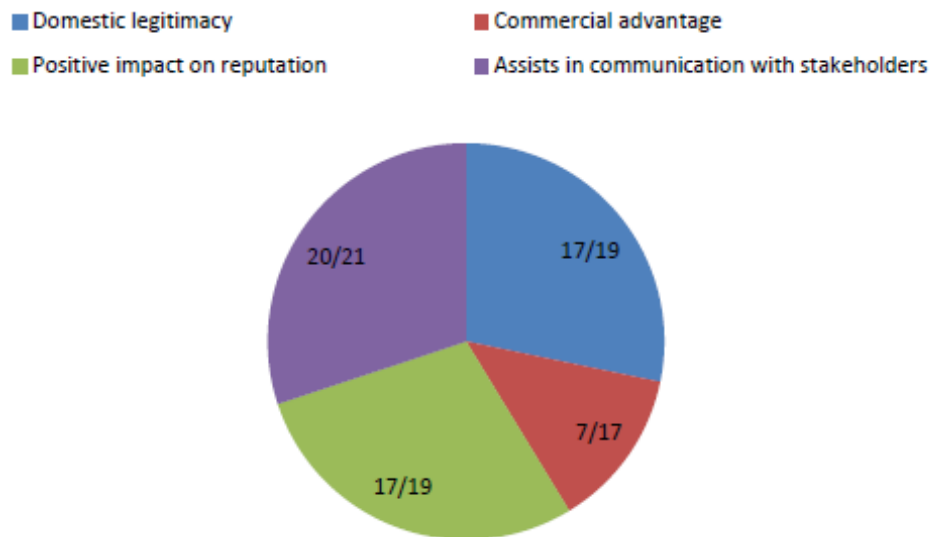
#### IV. DISCLOSURE AND TRANSPARENCY

*To strengthen the accountability and oversight framework, communication with the key stakeholders (general public, parliament, NGOs, financial markets, etc.) is critical in order to maintain legitimacy domestically and credibility abroad.<sup>16</sup>*

<sup>16</sup> See Santiago Principles GAAP 17 and GAAP 24.

Reporting and transparency are important elements of governance. In addition to contributing to legitimacy, and thus to building trust in policies based on saving public assets in a fund, transparency can improve and discipline management and reduce the risk of corruption and mismanagement. In applying the principle of transparency, SWFs have engaged in broader consultation with other government entities and civil society. These outreach activities increase the legitimacy of the fund, reduce the reputational risk, and require much effort in explaining key investment decisions and management principles to various stakeholders. For example, the IFSWF members' perception of value of transparency is high in terms of enhancing domestic legitimacy, communicating with stakeholders, and having a positive impact on their reputation (Figure 8).

Figure 8. SWFs Perception of Value of Transparency



Source: IFSWF.

It is useful to distinguish between procedures for internal and external reporting. Internal reporting can be defined as reporting that is part of the governance structure of the SWF, while external reporting is reporting to the entities outside the governance structure and to the general public.

- *External reporting supports transparency to maintain the SWF's legitimacy.* It also demonstrates the SWF's economic and financial orientation, which contributes to stability in international financial markets and enhances trust in recipient countries. External reporting requirements should reflect reporting requirement by the international legislation, as well as domestic legislation of the host country that SWF invests in. For example, many countries require that investors disclose their holdings to financial regulators, if ownership shares pass certain thresholds.
- *Internal reporting is an integral part of the governance structure.* In a system of delegated asset management, the internal reporting is the reflection of delegated authority. It is an integral part of the system by which governing bodies supervise

the bodies below them in the governance structure. As such, it is important for decision making, risk management and controls at various levels of the SWF, and should be an integral part of the risk management and investment management frameworks.

Communication with the general public is a critical part of maintaining legitimacy domestically, as well as for credibility internationally. Informing the general public about the characteristics of the investment strategy and the risks that are taken should contribute to making the implementation of strategy more robust in times of high market volatility. To this end, it is usual for many SWFs to organize educational seminars, engage with the media, carry self-assessment against GAPP, publish annual reports, and maintain an active website with up-to-date information on the SWF's activities.

The majority of SWFs publish annual reports that include the evolution of asset allocation and investment strategy over time as well as the financial statements. The scope of these reports can be enhanced by including some forward-looking aspects and analytical features relating to the investment strategy and asset allocation. In the reporting of returns, the investment horizon of the fund should be emphasized by reporting returns over longer rolling periods (e.g., 10 or 20 years) in order to de-emphasize short-term fluctuations in the financial markets. This would provide a better and broader basis for an informed public debate on important strategy decisions.

In recent years, several SWFs have also conducted and published self-assessments to confirm the degree of adherence to the Santiago Principles. These assessments help to assure home and recipient countries that SWFs' activities are solely based on economic and financial considerations. This understanding aims to contribute to the stability of the global financial system, reduce protectionist pressures, and help maintain an open and stable investment climate. The self-assessments also have enabled those SWFs to develop, review, and strengthen their organizations, policies, and investment.

## **V. CONCLUDING REMARKS**

SWFs have increasingly assumed important roles in their domestic economies and global financial markets. The assets under management by SWFs have grown rapidly over the last few years, driven by balance of payment surpluses and commodity prices. Based on the country-specific circumstances, the policy objectives of SWFs vary based on the broad macrofiscal objectives; therefore, warranting close coordination with macroeconomic policies and the management of other assets and liabilities in the public sector.

The institutional arrangements for a SWF should be appropriate and commensurate for its objectives and the nature of its investments. An SWF's organizational structure should establish a clear separation of responsibilities and authority. A well-defined structure creates a decision making hierarchy that limits risks by ensuring the integrity of, and effective control over SWF management activities. The governance structure should thus provide for real delegation to an independent operational manager within overall limits on risk and/or asset allocation set by the owner.

Also, the investment mandate should be aligned with the objective of the SWF and the risk-bearing capacity of the SWF. The investment policy needs to adopt an explicit risk tolerance level when designing the investment strategy in order to ensure consistent risk-bearing capacity over time and promote greater accountability for the chosen investment strategy. The strategic asset allocation tends to be the benchmark for SWF risk and performance. Most importantly, the risk management framework should build on the same principles as the rest of the governance system, through clearly delegated mandates, defined roles and responsibilities, accountability, transparency, and professionalism.

For the successful performance of a SWF, asset management skills are of paramount importance, and a good HR policy is critical for attracting and retaining competent staff. Professional asset management requires a skill set that is usually in scarce supply in the public sector. At the same time, access to these skills is a necessary condition for successful management of an SWF. Hence, HR policies must be a central part of the overall policy framework for the SWF.

**APPENDIX 1. SANTIAGO PRINCIPLES<sup>17</sup>**

**GAPP 1.** The legal framework for the SWF should be sound and support its effective operation and the achievement of its stated objective(s).

**GAPP 2.** The policy purpose of the SWF should be clearly defined and publicly disclosed.

**GAPP 3.** Where the SWF's activities have significant direct domestic macroeconomic implications, those activities should be closely coordinated with the domestic fiscal and monetary authorities, so as to ensure consistency with the overall macroeconomic policies.

**GAPP 4.** There should be clear and publicly disclosed policies, rules, procedures, or arrangements in relation to the SWF's general approach to funding, withdrawal, and spending operations.

**GAPP 5.** The relevant statistical data pertaining to the SWF should be reported on a timely basis to the owner, or as otherwise required, for inclusion where appropriate in macroeconomic data sets.

**GAPP 6.** The governance framework for the SWF should be sound and establish a clear and effective division of roles and responsibilities in order to facilitate accountability and operational independence in the management of the SWF to pursue its objectives.

**GAPP 7.** The owner should set the objectives of the SWF, appoint the members of its governing body(ies) in accordance with clearly defined procedures, and exercise oversight over the SWF's operations.

**GAPP 8.** The governing body(ies) should act in the best interests of the SWF, and have a clear mandate and adequate authority and competency to carry out its functions.

**GAPP 9.** The operational management of the SWF should implement the SWF's strategies in independent manner and in accordance with clearly defined responsibilities.

**GAPP 10.** The accountability framework for the SWF's operations should be clearly defined in the relevant legislation, charter, other constitutive documents, or management agreement.

**GAPP 11.** An annual report and accompanying financial statements on the SWF's operations and performance should be prepared in a timely fashion and in accordance with recognized international or national accounting standards in a consistent manner.

**GAPP 12.** The SWF's operations and financial statements should be audited annually in accordance with recognized international or national auditing standards in a consistent manner.

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<sup>17</sup> <http://www.iwg-swf.org/pubs/gapplist.htm>

**GAPP 13.** Professional and ethical standards should be clearly defined and made known to the members of the SWF's governing bodies, management, and staff.

**GAPP 14.** Dealing with third parties for the purpose of the SWF's operational management should be based on economic and financial grounds, and follow clear rules and procedures.

**GAPP 15.** SWF operations and activities in host countries should be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which they operate.

**GAPP 16.** The governance framework and objectives, as well as the manner in which the SWF's management is operationally independent from the owner, should be publicly disclosed.

**GAPP 17.** Relevant financial information regarding the SWF should be publicly disclosed to demonstrate its economic and financial orientation, so as to contribute to stability in international financial markets and enhance trust in recipient countries.

**GAPP 18.** The SWF's investment policy should be clear and consistent with its defined objectives, risk tolerance, and investment strategy, as set by the owner or the governing bodies, and be based on sound portfolio management principles.

**GAPP 19.** The SWF's investment decisions should aim to maximize risk-adjusted financial returns in a manner consistent with its investment policy, and based on economic and financial grounds.

**GAPP 20.** The SWF should not seek or take advantage of privileged information or inappropriate influence by the broader government in competing with private entities.

**GAPP 21.** SWFs view shareholder ownership rights as a fundamental element of their equity investments' value. If an SWF chooses to exercise its ownership rights, it should do so in a manner that is consistent with its investment policy and protects the financial value of its investments. The SWF should publicly disclose its general approach to voting securities of listed entities, including the key factors guiding its exercise of ownership rights.

**GAPP 22.** The SWF should have a framework that identifies, assesses, and manages the risks of its operations.

**GAPP 23.** The assets and investment performance (absolute and relative to benchmarks, if any) of the SWF should be measured and reported to the owner according to clearly defined principles or standards.

**GAPP 24.** A process of regular review of the implementation of the GAPP should be engaged in by or on behalf of the SWF.

## APPENDIX 2. SELECTED SOVEREIGN WEALTH FUNDS

Fund Name	Country	Fiscal Stabilization	Savings	Pension Review	Reserve Investment
Fund Soberanu de Angola*	Angola	✓	✓		
Australian Future Fund	Australia			✓	
State Oil Fund	Azerbaijan	✓	✓		
Future Generations Reserve Fund	Bahrain	✓	✓		
Pula Fund	Botswana		✓		
Brunei Investment Authority	Brunei		✓		
Alberta's Heritage Fund	Canada		✓		
Economic and Social Stabilization Fund	Chile	✓			
Pension Reserve Fund	Chile			✓	
China Investment Corporation	China				✓
Fund for Future Generation of Equatorial Guinea	Equatorial Guinea		✓		
Oil Stabilization Fund	Iran	✓			
National Development Fund*	Iran		✓		
Oil Stabilization Fund	Ireland			✓	
Kazakhstan National Fund*	Kazakhstan	✓	✓		
Korea Investment Corporation	Korea				✓
Kuwait Investment Authority	Kuwait	✓	✓		
Libyan Investment Authority	Libya		✓		
Khazanah Nasional Berhad	Malaysia		✓		
Mexico Oil Stabilization Fund	Mexico	✓			
Fiscal Stability Fund*	Mongolia*	✓	✓		
New Zealand Superannuation Fund	New Zealand			✓	
Nigeria Sovereign Investment Authority*	Nigeria	✓	✓		
Government Pension Fund-Global	Norway	✓	✓	✓	
Papua New Guinea SWF*	Papua New Guinea	✓			
Qatar Investment Authority	Qatar		✓		
National Welfare Fund	Russia			✓	
Oil Stabilization Fund	Russia	✓			
Government of Singapore Investment Corporation	Singapore		✓		✓
Temasek	Singapore		✓		
Timor-Leste Petroleum Fund	Timor Leste	✓	✓		
Heritage and Stabilization Fund	Trinidad and Tobago	✓	✓		
Abu Dhabi Investment Corporation	UAE		✓		
Abu Dhabi Investment Authority	UEA		✓		
Alaska Permanent Fund	USA		✓		
Stabilization Fund	Venezuela	✓	✓		

Source: Authors.

Note: \*It also includes developmental objective.



### APPENDIX 3. BASIC PRINCIPLES OF RISK MANAGEMENT

**Fiduciary Responsibility:** The investment manager needs to be conscious at all times of its fiduciary responsibility to the fund's owner in safeguarding the fund's interests and reputation.

**Risk Tolerance:** The investment manager needs to have a clear understanding of the fund owner's risk tolerance and act accordingly in discharging its investment responsibilities.

**Risk Conscious Culture:** The investment manager needs to promote a risk conscious culture within the organization with senior management setting the tone.

**Risk Ownership:** The ownership of risk should be clearly established within the investment management entity and between the fund's manager and owner.

**Risk Governance:** There needs to be a well-defined governance structure for risk management within the investment management entity and for the fund.

**Risk Identification and Assessment:** All material risks for the fund must be identified, assessed and accepted through structured and systematic processes *prior* to investment.

**Diversification of Risks:** Risks should be diversified systematically to limit concentration of exposures and reduce overreliance on individual systems, processes, providers and people.

**Check and Balance:** Investment and operational processes should have in-built checks and balances, with clear segregation of responsibilities, to minimize errors, avoid conflict of interest and reduce possibility for collusion.

**Risk Measurement:** All material risks for the fund should be measured, either quantitatively or qualitatively, without overreliance on any single metric, and monitored with appropriate frequency.

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