

The Institutional Design of Sovereign Wealth Funds in the Context of Macroeconomic Stability and Development:

A Comparative Analysis of Kuwait, Singapore, and Qatar

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Dr. Ahmad Al Sayed

Abstract

This thesis investigates how to design a Sovereign Wealth Fund (SWF) so that its operation is aligned with its country's macroeconomic objectives. The research includes a comparison of SWF design, implementation, and governance in Kuwait, Singapore, and Qatar. A key motivation behind this study is evidence suggesting that the institutional design of a SWF can fail to support, or may even undermine, the achievement of the broader macroeconomic development objectives of its host country. Such misalignments reduce social welfare for millions of people, and solving them could contribute to the economic transformation of the 21st century. However, the literature largely fails to provide roadmaps or models that could guide countries to develop SWFs based on their unique macroeconomic conditions and objectives. Therefore, this thesis explores how countries can develop and refine the design of their SWFs based on macroeconomic indicators that are in line with government objectives, such as creating diversified, stable, and sustainable economic development. The thesis comprises eight chapters. After a general introduction (Chapter 1) and detailed literature review (Chapter 2), a framing conceptual model is proposed (Chapter 3), followed by a presentation of the methodology employed for the country case studies (Chapter 4). The three countries Chapters – Kuwait (Chapter 5), Singapore (Chapter 6), and Qatar (Chapter 7) – are then examined in greater detail, based in part on new qualitative data from 21 semi-structured interviews with senior respondents from the three countries: four from Kuwait, seven from Singapore, nine from Qatar and one Other. The case studies represent SWFs based on commodities, particularly oil and gas (Kuwait and Qatar), and funds derived from the growth in overseas investments. These results reveal very clearly that many policymakers lack adequate guidance on how to establish SWFs based on their specific economic conditions. The contours of a new model (Chapter 8) are then outlined to guide SWF design so that macroeconomic objectives are aligned with the mandate of the SWFs. The potential positive impact of the SWFs on the economic development of the countries is also established. The recommendations from this thesis emphasise the importance of countries adopting SWFs as investment tools that can guide economic growth and contribute to further enhancement of the economy. Moreover, this thesis offers a guide for how the institutional design of SWFs can be formulated to maximise the positive economic impacts. Therefore, a clear mandate and effective governance and management approaches are essential to the success of SWFs.

Keywords: SWF, Kuwait, Singapore, Qatar, Economic Growth, Impact, Revenue, Performance

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Abbreviations

EDBI	Economic Development Board Investments
GCC	Gulf Cooperation Council
GDP	Gross domestic product
KIC	Kuwait Investment Company
KFTCIC	Kuwait Foreign Trading, Contracting and Investment Company
KIA	Kuwait Investment Authority
KIO	Kuwait Investment Office
MENA	Middle East and North Africa
SWF	Sovereign Wealth Funds

Chapter 1: Introduction

1.1 Background

Sovereign wealth funds (SWFs) are important institutional investors that underpin the performance of global markets (Clark and Monk, 2017). These funds have emerged as economic saviours that help cushion volatile financial markets across the world (Clark, Dixon and Monk, 2013). SWFs are also key geopolitical investment tools that help support countries' various goals and objectives (Clark and Monk, 2017). The term sovereign funds ownership refers to special-purpose investment funds or arrangements owned or controlled by governments or their agents that are separate from traditional foreign exchange reserves and are designed for the purpose of investing assets in the diversified portfolios of financial instruments (Clark, Dixon and Monk, 2013(. SWFs are investments created by a government for economic purposes, such as infrastructure development and social security funds (Lu,2021).

Over the years, SWFs have become an increasingly important financial tool that plays a crucial role in facilitating long-term economic development (Dixon and Monk, 2011). Johan, Knill, and Mauck (2013) report that both developed and developing countries have adopted SWFs as institutional investors to facilitate the achievement of the government's development objectives. Therefore, any analysis of financial market structures and their performance would benefit from dedicating significant attention to SWFs (Clark and Monk, 2017). Meng (2015) echoes this sentiment, stating that policymakers should pay particular attention to these funds, as they are planning institutions that act as important funding mechanisms, facilitate the allocation of capital and assets, and create investment strategies. Countries have devoted significant attention to assets under management (AUMs), which can be used to fund government objectives. Examples of AUMs include bank deposits, mutual funds, and cash in computation. As of 2021, the total global AUMs owned by governments around the world were more than USD 10.5 trillion, with Norway having the largest number of AUMs at USD 1.3 trillion, followed by China at USD 1.2 trillion (SWFI, 2022). Clark and Monk (2010b) add that the Norway SWF is also the most transparent of its kind in terms of operations and investments. One reason why SWFs are highly important is that they are used by governments during periods of crisis. For example, in the wake of the 2008 international economic crisis and the drop in commodity prices that has occurred over the past two years, governments have relied more heavily on SWFs, since they are used as a last resort to cover budget deficits that occur due to crises (Raymond, 2010). In addition, governments that are rich in resources have demonstrated interest in scaling up growth and boosting sustainable economic development in their home countries (Clark, Dixon and Monk, 2013).

For years, academic researchers have examined the topic of countries' use of SWFs to achieve a variety of macroeconomic objectives. Sovereign wealth refers to the money generated by a government from its surplus reserves (Cummine, 2016). SWFs are created by a government for macroeconomic purposes such as saving intergenerational wealth, developing infrastructure, and increasing social security (Lu et al., 2009). Dixon, Tufts, and Capapé (2022) also highlight that SWFs are state-sponsored institutional investors that are answerable to the state and that make their investments based on the mandate and interests of the state. Lu et al. (2009) and Dixon, Tufts, and Capapé (2022) emphasise that SWFs are created by governments to facilitate the mandates of the government and state. However, the International Monetary Fund (IMF; 2007) argues that institutional investors lack an understanding of how to design the funds and their management in such a way that complies with monetary and fiscal measures. Additionally, the influence of SWFs on national economic development in terms of diversification, stability, and sustainability remains underexplored (IMF, 2007). Kratsas and Truby (2015) report that many governments consider SWFs to be a valuable source of foreign investment for the global economy and a means to enhance the home country's economic well-being. However, it is important to ensure that SWFs comply with monetary, fiscal, and exchange rate policies, as these policies influence how money is accumulated and transferred from the funds (Wirth and Ramírez-Cendrero, 2016).

Therefore, the design, technical expertise, and knowledge involved in the selection and establishment of a SWF can have either positive or negative consequences for a country's economy. In particular,

cases in which there is a mismatch between economic conditions and the objectives of the SWF, such as developing a fund to stabilise the economy while the country lacks a source of excess revenues to sustain the budget, can lead to adverse outcomes. Therefore, policymakers must carefully evaluate the design and objectives of a SWF to ensure that they are aligned with the country's macroeconomic objectives and mitigate potential risks. Hanieh (2018) argues for a co-constitutive relationship between various scales of the political economy, including local and global economies, and emphasises the importance of policymakers guiding the design of SWFs to maximise the potential benefits of the funds and minimise potential risks to society and the economy.

PricewaterhouseCoopers (PwC, 2015) highlights the various macroeconomic objectives of SWFs, which include balancing intergenerational wealth, funding future liabilities, and investing reserves to maximise capital. SWFs also stabilise the macroeconomy by ensuring the stability of the exchange rate and facilitating fiscal stability (PwC, 2015).

The economic conditions influencing the establishment of a SWF are important in determining the mandate of the funds. A comparison of Norway and Singapore provides a relevant example. At the time of their SWFs' establishment, Norway was already a developed country with a stable economy, while Singapore was a rapidly developing country seeking to leverage its SWF to achieve its economic and social objectives. The different goals, economic conditions, and indicators of these countries at the time of their SWFs' establishment have influenced the design and investment strategies of their respective funds. Norway's SWF follows a wealth preservation strategy, investing primarily in fixed-income securities and stocks of established companies in developed markets with the aim of preserving the value of the country's oil wealth for future generations. By contrast, Singapore's SWF follows a wealth creation strategy, investing in a broad range of asset classes, including private equity, real estate, and emerging-market equities. Additionally, Singapore's SWF establishes a local champion, which refers to an important fund, with a goal to support the country's economic development and diversification. In developing economies such as Kuwait and Qatar, the configuration of SWFs is linked to underlying economic conditions. These nations leverage distinct strategies aimed at enhancing development, promoting stability, and safeguarding intergenerational wealth. Thus, the core inquiry of this study is a comparative analysis of the alignment between a SWF›s structural design and objectives and the country's macroeconomic conditions and indicators, specifically those of Kuwait, Singapore, and Qatar. Given the depth of their first-hand experience in the field, the DPhil candidate possesses a unique understanding of the complex issues that emerge from such alignments.

As a DPhil candidate at the Smith School of Enterprise and the Environment at the University of Oxford my research on sovereign wealth funds (SWFs) is enriched by a wealth of experience and expertise in the field. This has enabled me to identify crucial gaps in the existing literature, particularly regarding the effectiveness of different types of SWFs in achieving diverse economic and political objectives.

My extensive journey in the SWF community includes leadership roles as CEO of the Qatar Investment Authority and Qatar Holding, where I actively participated in the establishment and management of SWFs. Additionally, I have served as Chairman and Managing Director of the Qatar Free Zones Authority, Chairman and Managing Director of the Doha Venture Capital Fund, and a Board Member of Qatar Development Bank and Misherb Property Development. These roles have granted valuable insights into the dynamic interplay between SWFs and other investment vehicles, each with its own distinct economic objectives.

1. **Access Privilege:** Recent academic research emphasises the significance of direct access to key stakeholders and communities for obtaining unique insights and genuine data (Yin, 2014; Maxwell, 2012). The «Privilege as Practice» framework developed by Kolan and Sullivan TwoTrees (2014) further illuminates this perspective. Specifically, it underscores the interrelatedness of power, privilege, and access within the context of research and practice. By recognising and navigating these dynamics, the framework offers a comprehensive lens through which to understand and engage with complex social systems. In the realm of sovereign wealth funds (SWFs), this approach aligns with my extensive involvement in various national and international establishments

and projects, where I have developed unparalleled access to key stakeholders in the business landscape. This privilege provides me with a unique opportunity to engage in transformative dialogues and collaborations, enriching my research with real-world perspectives and practical insights. Interacting closely with influential and experienced individuals enables me to understand the intricate dynamics of SWFs and their interaction with other economic entities, as encapsulated by the principles of the «Privilege as Practice» framework Figure 1-1.

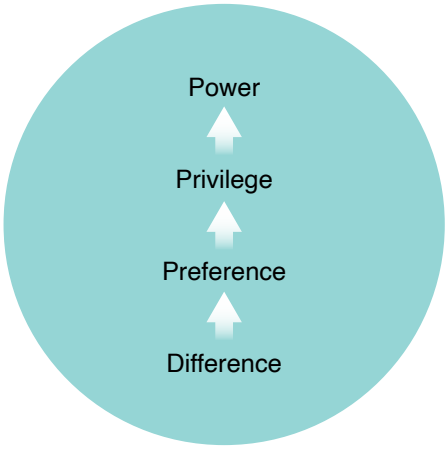


Figure 1-1: Privilege as Practice Framework
Source: Kolan & Sullivan (2014)

2. **Diverse Background and Deep Strategy/Management Roles:** A diverse background offers a rich perspective on understanding complex economic landscapes (Flick, 2018; Creswell, 2013). My unique blend of investment and legal expertise and in-depth knowledge of executive aspects aligns well with this academic understanding. As CEO of the Qatar Investment Authority and Qatar Holding, I actively participated in the establishment and management of SWFs, gaining hands-on experience in navigating complex financial, business, and legal landscapes. These substantial management responsibilities have enriched my practical insights and understanding regarding sovereign wealth funds.

3. **International Contribution:** Global engagement in policy and principles is considered vital for shaping international standards and practises (Castells, 2011; Giddens, 2013). My significant contributions to national and international projects, including my instrumental role in drafting and shaping the San Diego Principles, resonate with this academic perspective. These internationally recognised principles serve as a beacon for best practises, guiding policymakers and industry experts worldwide in the effective management and governance of sovereign wealth funds.

While my positionality offers evident advantages, including privileged access to key stakeholders and invaluable insights derived from my prior role as the CEO of a prominent sovereign wealth fund, it also introduces inherent sensitivities and limitations. This unique insider perspective has enabled me to establish connections and engage with individuals possessing profound insights into sovereign wealth funds (SWFs). However, it is imperative to acknowledge that this advantage is accompanied by trade-offs. My background as a former CEO of a prominent SWF might imposes potential constraints, particularly in the comprehensive discussion of sensitive political or financial nuances. It is noteworthy that I relinquished these positions eight years ago, and I no longer wield decision-making authority within these organizations. Furthermore, it is crucial to recognize that, due to confidentiality obligations related to my tenure, especially concerning the Qatar case, I am unable to discuss certain aspects of financial performance that are not publicly disclosed.Through this thesis, I am committed to making a meaningful contribution to the literature on sovereign wealth funds. My research aims to guide policymakers in making

informed decisions on the establishment and management of SWFs, emphasising the significance of tailoring SWF designs to achieve desired economic and political outcomes.

1.1.1 Definitions of Sovereign Wealth Funds

In this section, the DPhil candidate discusses the various definitions of SWFs that have been developed over the years. This thesis follows the definition by Blundell-Wignall, Hu, and Yermo (2008), who propose that SWFs are a pool of assets owned and managed directly or indirectly by the government to achieve a set of national objectives. DePamphilis (2015) defines SWFs as investment funds that are government-sponsored and whose main function is to invest in accumulated foreign currency reserves. Clark and Monk (2010b) echo DePamphilis' (2015) conceptualisation of SWFs in proposing that these funds are the representatives of nation-states in the global financial markets and have the potential to transform into nation-state development institutions that regulate both financial markets and the long-term commitments of sponsors (other countries). Glickman (2014) posits that SWFs are investment or institutional vehicles established by governments that are rich in natural resources as a mechanism to invest excess capital. However, as discussed in the next paragraph, some authors have refuted this notion. These various definitions reveal that scholars have differing conceptions of SWFs. While some authors view them as a pool of assets (Blundell-Wignall, Hu and Yermo, 2008), others consider them to be investment vehicles (Glickman, 2014). Buteica and Petrescu (2017) align with the former group but argue that, despite the varying definitions of SWFs, they are all characterised by three common aspects: They are owned by the state, they invest in a wide range of assets spread across the globe, and they act in alignment with government objectives.

Blundell-Wignall, Hu, and Yermo (2008) refute Glickman's (2014) argument that SWFs are created solely by governments that are rich in natural resources. Instead, according to the authors, SWFs may be funded from a variety of sources, such as foreign exchange reserves and revenue from general taxes. Aggarwal and Goodell (2017) also highlight that SWFs are funded not only by excess foreign reserves but also by public pension assets. These assets are important as surplus contributions and may be called earmarked fiscal provisions. For example, countries such as Singapore and China channel wealth into their SWFs through fiscal surpluses and the accumulation of foreign exchange reserves, whereas other countries – such as Kuwait, Saudi Arabia, Qatar, and Oman – channel the surplus from their natural resources into their SWFs (Fry, McKibbin and O'Brien, 2011). Fry, McKibbin, and O'Brien (2011) and Aggarwal and Goodell (2017) propose that SWFs can be grouped into two distinct categories based on the sources of the funds: commodity SWFs and non-commodity SWFs.

A further review of the literature indicates that SWF objectives are aligned with the macroeconomic development of the relevant country. For instance, Blundell-Wignall, Hu, and Yermo (2008) reveal that SWFs are associated with achieving various objectives: (1) diversifying assets, (2) enabling governments to obtain better returns on their reserves, (3) ensuring that the government can cover its pensions, (4) providing for future generations if natural resources are depleted, (5) stabilising prices, (6) promoting industrialisation, and (7) advancing strategic and political objectives. Al-Hassan et al. (2018) echo Blundell-Wignall, Hu, and Yermo (2008) in arguing that SWFs play a key role in macroeconomic management and financial stability, as their operations are associated with public financing. This alignment with government objectives is ensured through the SWFs' financial and macroeconomic objectives, funding and withdrawal rules, monetary policies – including liquidity conditions – and external accounts through variations in exchange rates. Exchange rates are important in aligning SWFs with government objectives, since they influence the value of exports and imports and, as a result, the level of foreign exchange reserves. Chhaochharia and Laeven (2008) also report that, as investment vehicles, SWFs focus on diversification away from the home country, predominantly by investing in foreign countries with the aim of maximising available profits. Bachher, Dixon, and Monk (2016) reiterate the work of Chhaochharia and Laeven (2008) in demonstrating that SWFs are essential to the investment of capital and wealth that governments have accumulated from the sale of natural resources such as oil.

1.1.2 History of Sovereign Wealth Funds

Fry, McKibbin, and O'Brien (2011) argue that although SWFs have existed for several decades, they became popular only in the 1990s. Kuwait was the first country to establish a SWF in 1953 with the Kuwait Investment Authority (KIA; Bazoobandi, 2013), while additional countries created SWFs over time. The Sovereign Wealth Fund Institute (SWFI) revealed that, as of 2022, more than 100 countries had established SWFs, with the top 100 largest funds valued at more than USD 10 trillion in assets (SWFI, 2022).

Moreover, within the Gulf Cooperation Council (GCC) region, a notable emphasis on SWFs is evident. For instance, Kuwait efficiently manages KIA, while Qatar effectively oversees Qatar Investment Authority (QIA). Extending this trend, other GCC nations have taken proactive steps; Oman which has established the Oman Investment Authority and is set to launch the Oman Future Fund, a significant SWF focusing on developing SMEs valued at USD 5.2 billion, in 2023 (SWFI, 2023). The United Arab Emirates (UAE), on a federal level, operates the Emirate Investment Authority, while the key Emirate of Abu Dhabi operates some of the most prominent SWFs, including the Abu Dhabi Investment Authority (ADIA), Mubadala, and the Abu Dhabi Development Holding Company PJSC (known as ADQ). Dubai similarly boasts the Investment Corporation of Dubai, further highlighting the region's strategic engagement with SWFs (SWFI, 2023). Norway and China are relevant to this thesis because they exemplify countries that have built sovereign funds from surplus natural resources (Norway's commodity SWF) and non-commodities (China). An analysis of commodity and non-commodity SWFs is undertaken in this thesis through a further examination of the case studies of Kuwait, Qatar, and Singapore. Kuwait and Qatar developed their SWFs from the surplus of sales from fossil fuels such as oil and natural gas due to the large deposits available in GCC countries (Bazoobandi, 2013). In Kuwait, for example, oil extraction and processing account for 50% of the country's gross domestic product (GDP), 95% of its export earnings, and 75% of government revenue (United Nation Development Programme (UNDP), 2022). However, other countries lack large deposits of oil and rely on non-commodities to fund their SWFs. For example, in Singapore, non-commodities are important funding sources for SWFs due to the lack of large deposits of minerals or fossil fuels (Elson, 2008). Chapter 6 discusses Singapore's SWF in more detail.

Additionally, countries such as Norway, New Zealand, and Abu Dhabi have established multiple SWFs to support their economies (Buteica and Petrescu, 2017). For example, China has two SWFs: the Chinese Investment Corporation (CIC) and the State Administration of Foreign Exchange Investment Company (SAFEIC; Thomas and Chen, 2018). The CIC was founded in 2007 to diversify China's foreign exchange assets by investing in long-term global assets (Thomas and Chen, 2018). The SAFEIC is also a foreign currency reserve aimed at reducing China's exposure to fluctuations in the value of the dollar (Thomas and Chen, 2018).

The history of SWFs can be understood as occurring in three waves. The first wave occurred in the 1950s and 1960s, the second from the 1970s to the 1980s, and the last from the 1990s to the present (Fry, McKibbin, and O'Brien, 2011). These three waves mainly align with the historical periods in which many countries established their funds. For example, in the first wave in the 1950s, Kuwait created the first-ever SWF to invest surplus oil revenues on behalf of future generations (Das, Mazarei and Van der Hoorn, 2010). The fund was established as a government strategy aimed at reducing Kuwait's reliance on finite oil resources. GlobalSWF (2023) further reveals that, in 2023, Kuwait aims to launch a new SWF – the Ciyada Development Fund – as part of the government's 2023–2027 economic development programme. This SWF would allow the government to develop private-sector partnerships that facilitate the creation of giga projects, infrastructure or capital investments of such scale and ambition that they can be considered "once in a generation" in terms of what they deliver to the world and the way in which they deliver it. The Ciyada Development Fund is associated with 107 major projects, including the completion of the newly proposed T2 terminal at Kuwait International Airport and the construction of three runways (GlobalSWF, 2023).

In 1956, Kiribati established the Revenue Equalisation Reserve Fund (RERF) to receive government surplus revenues from phosphate mining (Buteica and Petrescu, 2017). Taupo (2019) added that, similar to Kuwait's SWF, the RERF was aimed at ensuring inter-generational wealth as well as fiscal stabilisation

against shocks arising from the price volatility of its revenue resources. In 2022, the RERF had a total value of current assets worth USD 608.5 million, which is a relatively large sum considering the country's size (SWFI, 2022). The third SWF to be created was the New Mexico State Investment Council (SIC) in the United States in 1958. In contrast to the Kuwait and Kiribati SWFs, this SWF was based on non-commodities (Buteica and Petrescu, 2017). The SIC (2022) reports that the SWF manages investments for New Mexico's four permanent funds: the Land Grant Permanent Fund, the Severance Tax Permanent Fund, the Tobacco Settlement Permanent Fund, and the Water Trust Fund. The SIC serves as an institutional investor, maximising the government's revenue for royalties, taxes on natural resources, and income from the sale and lease of public lands and minerals (SIC, 2022). In 2021, the SIC reported that it managed assets were worth USD 34 billion and the assets of related clients were worth more than USD 1.5 billion (SIC, no date).

In the second phase of the SWF wave, from the 1970s to the 1980s, two SWFs were founded: Singapore's Temasek Holdings Ltd. in 1974 and the ADIA in 1976 (Buteica and Petrescu, 2017). In 2021, Abu Dhabi's SWF was ranked as the fourth-largest such fund after those of Norway, China, and Kuwait, with a total AUM of USD 697 billion (SWFI, 2022b).

In the third phase, many countries established SWFs based on commodities, such as natural resources, and non-commodities, including foreign exchange reserves (Buteica and Petrescu, 2017). These countries include Norway, which established its fund in 1990; New Zealand, China, and Abu Dhabi, which set up their funds in the 2000s; Qatar, in 2005; Iran, Senegal, and Ghana, in the 2010s; and Turkey, in 2016 (Buteica and Petrescu, 2017). Qatar's current SWF was also established during this wave in 2005 by an Emiri decision (Qatar Investment Authority (QIA), 2022), following the actual initiation of the SWF in 1972 following the creation of the State Reserve Investment Board. The chronology of the various SWFs emphasises the growing importance of these funds as investment vehicles that enable countries to diversify their economies and minimise their reliance on key natural resources.

Additionally, investing and managing resource revenues are important for the national economic development of all countries (Van der Ploeg, 2017). Moreover, SWFs contribute to the local economic development of non-resource-rich countries, such as Singapore, which do not have the natural resources that would enable them to maximise their SWF performance (Steigum, 2012). The contribution of a SWF to its home economy may take different forms, such as a development fund, a savings fund, or a diversification fund. These types of funds contribute to economic development and the achievement of government objectives in various ways (Gelb et al., 2014).

In this context, countries adopt diverse objectives influenced by their macroeconomic objectives and needs (Wirth and Ramírez-Cendrero, 2016). SWFs are institutional investors tasked with investing and managing the state's investments (Martínek, 2021). As such, the design of SWFs has changed over the past few decades to ensure that the funds can maximise the state's investments (Martínek, 2021). Gelb et al. (2014) argue that although SWFs are linked to the achievement of macroeconomic objectives such as stabilisation and intergenerational equity, many countries have yet to link their funds to macroeconomic indicators within their home countries. Macroeconomic indicators represent aspects of the economy that describe its performance, such as GDP, balance of payments, and inflation rates, among others. Subsequently, various SWF models assume specific roles and functions within their home countries' economies. Sometimes, this requires a country to have multiple SWFs (Van den Bremer, Van der Ploeg and Wills, 2016). Thus, a well-designed SWF should be coordinated with a country's fiscal and monetary policies to encourage the most efficient use of the funds.

Further discussion of the impact of sustainability and climate change on SWFs is necessary to reveal important insights into the evolution of these funds. However, an in-depth examination of this topic is beyond the scope of this research. Some developed countries – including Australia, France, Norway, New Zealand, and Ireland – have implemented climate-related investment strategies (United Nations Environment Programme (UNEP), 2017). Additionally, developing economies such as Singapore and Saudi Arabia have invested in green infrastructure assets or have acted as limited partners of green infrastructure funds with a reduced focus on climate-specific strategies (UNEP, 2017). A recent report by the United

Nations Conference on Trade and Development (2023) revealed that, in 2022, developing economies such as Brazil, Vietnam, India, and Chile were increasing their investments in climate-related strategies such as renewable energy. Cacioli (2023) also observes that in Singapore, the Government Investment Corporation (GIC) and Temasek funds are investing in sustainability practices. For example, Temasek has established the GenZero investment platform company to deploy decarbonisation technologies. The evaluation revealed that most countries are focused on decarbonising their SWF portfolios.

Further work by Bortolotti, Loss, and Robert (2023) indicates that, over the past five years, SWFs have significantly increased their investments in the United Nations' Sustainable Development Goals. As a result, the climate and energy industry has been gaining momentum in terms of investment. The United Nations Environment Programme UNEP (2017) revealed that SWFs in the Gulf countries, such as Mubadala in the UAE, have invested more than USD 2.7 billion in clean energy projects totalling 1 GW of installed capacity with another 0.7 GW under development. In Qatar, QIA is actively participating in global climate initiatives that ensure that sustainability principles are integrated across the investment portfolio. Additionally, QIA no longer supports hydrocarbon investments in an effort to build an environmentally friendly future. Moreover, the QIA (2023b) announces that it has invested in sustainability initiatives in which 50% of the generated power investments had zero carbon emissions while the infrastructure power generation was expanded by 46%. QIA is also a member of the OPSWF Working Group, which developed diverse guidelines to integrate climate change analysis into strategic investment decisions. Another report by QIA Services (2023) revealed that QIA has begun to support environmental, social, and governance (ESG) investments to minimise destruction to the environment resulting from the emission of harmful greenhouse gases. Kuwait's KIA also demonstrates a commitment to sustainability in its initiatives to improve sustainability scores through improvements in the publication of ethical standards and the appointment of dedicated teams to undertake responsible investments (GlobalSWF, 2022). KIA is also a member of the One Planet Sovereign Wealth Fund (OPSWF) and has demonstrated a commitment to sustainability reporting (GlobalSWF, 2022).

1.2 Problem Statement

The problem identified in this thesis is that few studies have conducted an empirical investigation into the association between a country's SWF design, as specified by its mandate, and its strategy, operational model, and macroeconomic objectives. A further problem is that minimal exploration has been conducted to establish how SWF design can be aligned to address the macroeconomic objectives of the home country in the context of economic development. Some countries have attained their macroeconomic objectives through commodity and non-commodity SWFs. With non-commodity SWFs, an example is Singapore, in which foreign exchange reserves were considered the source of funds for the SWFs (Krishnadas, 2013). Other countries – particularly those from the GCC, such as Saudi Arabia, Kuwait, and Qatar – have also achieved their macroeconomic objectives using commodity-based SWFs in which oil rents contribute to the various funds (Wills, Senbet and Simbanegavi, 2016). Other countries, such as some of the Gulf states and African countries, are still evolving by changing their SWF designs often (Wills, Senbet and Simbanegavi, 2016). Dixon (2016) supports Wills, Senbet, and Simbanegavi (2016), who reveal that many African countries are considering the establishment of SWFs, some of which are part of a broader natural resource revenue management strategy. As a result, the SWFs in African countries help reduce overreliance on natural resources.

In some countries, SWFs play an effective and vital role in scaling up economic development, while in other countries, the impacts of these funds may be slight (Lu et al., 2009). However, Krishnada's (2013) and Wills, Senbet, and Simbanegavi's (2016) analyses demonstrate that it remains unclear how a country's portfolio design can help it scale up its economic development and, thus, achieve its objectives. Dixon and Monk (2016) also observe that SWFs are essential to enhancing economic development in various countries despite constraints such as financial or political obstacles.

Nevertheless, the shortcoming of such funds is that they fail to comply with the overall objectives of economic development. To address such issues, countries adopt sophisticated tools and models to

facilitate macroeconomic development, such as public financial funding management systems (Hardt and O'Neill, 2017). However, the tools focus on the operating model of the fund as opposed to its effectiveness in achieving objectives. The implication is that the use of these tools reduces the impact of the fund on the macroeconomic objectives of the home country. Despite these shortcomings, governments have decided to create funds for a number of reasons. These reasons typically include diversification when a country does not have commodities or natural resources to support the economy, as in Singapore (Krishnadas, 2013). However, when explaining the details of their plan, such as the type of fund needed or the investment strategy required (Krishnadas, 2013), countries must determine the optimal operating model that must be adopted (Krishnadas, 2013). To answer such questions, the government must be aware of its current economic condition and establish macroeconomic objectives with clearly defined objectives that align with its overall policy directions and national values. Since SWFs are an important player in governments' economic policies where countries have developed such funds to support their economies, both from commodities and non-commodities, it is of vital interest to fully integrate SWF design into this policy (Wills, Senbet and Simbanegavi, 2016).

There is a need to understand the most relevant macroeconomic indicators that influence and inform SWF design to achieve and realise the home country's economic development objectives. As such, the focus of this thesis is to establish the links in the existing literature between macroeconomic objectives, development, and SWFs. Subsequently, since SWFs are institutional investors, their design strategy should be consistent with the home country's economic condition.

1.3 Thesis Aim

This thesis aims to investigate how to align a SWF's design to the country's macroeconomic objectives through a comparison of SWF design, implementation, and governance in Kuwait, Singapore, and Qatar. Doing this can help develop a model to facilitate the establishment of SWFs to promote economic growth.

1.4 Thesis Objectives

The primary objectives of this thesis are:

(1) To critically examine and compare macroeconomic objectives in Kuwait, Singapore, and Qatar;
(2) To critically evaluate the impact of SWFs on supporting the economic growth of Kuwait, Singapore, and Qatar;
(3) To critically examine the influence of macroeconomic objectives on the design of SWFs in Kuwait, Singapore, and Qatar; and
(4) To evaluate the effectiveness of currently available SWF models.

1.5 Thesis Questions

i. The principal thesis question is as follows: What is the impact of macroeconomic objectives on the institutional design of SWFs in Kuwait, Singapore, and Qatar, and what principles can be identified to guide the establishment of SWFs in other countries?

The sub-questions informing this thesis are formulated to correspond with the thesis objective and are stated as follows:

(a) What are the SWFs and macroeconomic objectives applicable to Kuwait, Qatar, and Singapore?
(b) How effective is each country's current SWF type, and how is it integrated into government economic policies?
(c) What is the impact of SWFs in Kuwait, Qatar, and Singapore on facilitating and promoting the country's economic growth?

1.6 Thesis Rationale

This study seeks to make a vital contribution to the research community, as it generates insights into the institutional design of SWFs and their roles in the macroeconomic development of the selected countries. Kuwait, Singapore, and Qatar were adopted for analysis for the following reasons:

Firstly, Kuwait has the oldest SWF in the world; as stated, the first version of the fund was established in 1953 by the government to invest surplus oil revenues on behalf of future generations (Das, Mazarei and Van der Hoorn, 2010; SWFI, 2022). Kuwait was chosen as a case study by virtue of having the oldest SWF and because of the large size of the fund, USD 700 billion in 2021. Chapter 5, Section 5.1 details the various reasons leading to the selection of the Kuwait case study. Kuwait manages two funds: the General Reserve Fund (GRF) and the Future Generations Fund (FGF). Exploring how SWFs have affected the fulfilment of macroeconomic objectives and examining the institutional design and success of the oldest commodity-based SWFs can provide important insights for other countries seeking to develop commodity-based SWFs. Kuwait's main focus was diversifying the economy away from the oil sector. Analysing the Kuwait SWF can help determine how strategic planning contributed to attaining the country's macroeconomic objectives.

Secondly, Singapore was selected due to its SWF's long-standing history and unique model, as the SWF is funded by non-commodities such as foreign exchange reserves (Steigum, 2012). Countries that lack oil deposits or minerals may look to Singapore's SWF to improve the design of their own funds, as Singapore has successfully implemented SWFs that are not funded by commodities.

Moreover, Singapore has a large SWF (USD 744 billion in 2021) and has been effective in using non-commodities to facilitate macroeconomic development. Furthermore, the country serves as an example of how SWFs could be infused into a country's economy to advance growth and development, even in nations lacking commodities such as natural resources. Chapter 6, Section 6.1 further outlines the reasons for selecting the Singapore case study. Singapore has three SWFs: Temasek Holdings Ltd., the GIC (Elson, 2008), and the Economic Development Board Investments (EDBI; Delaney, 2017). Temasek was founded in 1974 with the aim of managing the equity investments of the state in local firms (Elson, 2008), while the GIC was established in 1981 and is tasked with the management of the Singaporean government's reserves (Krishnadas, 2013). Lastly, the Economic Development Board Investments (EDBI) was established in 1991 as an independent equity investment arm of the Singapore Economic Development Board (EDB; Gwendolyn, 2010). Singapore's SWFs are discussed further in Chapter 6.

Finally, the third case study, Qatar, was chosen due to its representation of a new version of commodity-based funds. Having emerged in the 2000s, the Qatar SWF marks a distinct era, enabling researchers to conduct a comparative analysis between the older and newer iterations in aspects such as governance, design, strategy, mandate, and effectiveness. This selection holds immense value in comprehending the evolution and advancements within the realm of SWFs. Moreover, Qatar's case is of special interest due to its role in diversifying income sources and reducing dependency on hydrocarbon economies. The country's remarkable growth trajectory positions its SWF as one of the most rapidly expanding funds in existence. Chapter 7, Section 7.1 elaborates on the rationale behind the selection of the Qatar case study, providing a comprehensive overview of the considerations involved. The Qatar SWFs were initiated in 1972 following the creation of the State Reserve Investment Board Council of Ministers decision 1/1972. Later, in 2000, the Supreme Council for State Reserve Investment was created, followed by the Supreme Council for Economic Affairs and Investment (SCEAI) in 2001, after expanding its power to economic policy, including energy and investment. In 2005, the QIA was created to run the country's investment operations, which continue to be reported to the SCEAI. The Qatar SWFs are discussed further in Chapter 7.

Qatar is the DPhil candidate's country of residence, which influenced their decision to include it in this thesis. Moreover, Qatar and Kuwait both aim to reduce their reliance on commodities to support their economies. Thus, the DPhil candidate chose to examine Qatar to determine whether two countries with the same aim are developing unique policies and strategic plans to meet these aims and which are more effective. Although Norway's SWF (USD 1.3 trillion) is the largest in the world (Buchholz, 2021), it was not considered in this thesis, as numerous studies have already examined this fund. Moreover, Norway

is a politically and economically advanced European model; therefore, it is not optimal for comparison with countries in Asia and Africa as well as other developing nations. However, it is important to examine SWFs across various geographical regions, particularly in the Middle East and Asia, to enhance the understanding of how the macroeconomic indicators addressed by the SWFs differ between diverse geographical regions. The selected order for examining the SWFs in this paper – first Kuwait, second Singapore, and last Qatar – echoes the order in which the SWFs were established and follows the thesis' aim to examine the development of SWFs from the 1950s until 2022. Such insights will benefit the primary targets of the study, namely, countries with developing and emerging markets that seek to design one or more SWFs. Thus, the findings from this study will be applied to a broader context discussing the institutional design of SWFs and how to align the design with the country's macroeconomic objectives.

This study argues that an examination of SWFs in different geographical regions provides important generalisable insights into the establishment of the funds and how these funds can be designed to achieve different macroeconomic objectives. Additionally, the comparison of case studies from Kuwait, Singapore, and Qatar reveals interesting perspectives on the institutional design and strategic plans for each type of SWF, providing insights into the differences between benchmarks adopted for commodity-based and non-commodity-based SWFs. However, different countries have diverse macroeconomic factors, and their processes for creating their SWFs may fail to align with those of other countries, since they rely on unique macroeconomic resources. The decision to consider commodities versus non-commodities as the source of SWF funds can provide relevant insights into the impact of macroeconomic indicators on the alignment of SWFs to the economy. Therefore, this thesis is not limited to commodity or non-commodity funds; instead, the core goal is to develop a model that is applicable to any country, regardless of its commodity-based or non-commodity-based nature.

The volatility of oil prices is also acknowledged as one of the elements that reflect and affect the process of SWF design. This variable serves as a benchmark that facilitates the design process, given the impact of volatile oil prices on its macroeconomic indicators. In their study, Xiuzhen, Zheng, and Umair (2022) demonstrated that the volatility of oil prices contributed to economic uncertainty and was likely to trigger interest rate increases. Henriques and Sadorsky (2011) also indicated that oil price volatility had an impact on strategic investment decisions because uncertainty over prices reduced the incentive to invest. Therefore, oil prices are anticipated to influence the design of SWFs in countries that consider commodity-based alternatives for the funds. However, it is worthwhile to emphasise that the current thesis does not focus on commodity prices as the primary objective. Instead, the focus shifts to developing clear steps and generic principles that can aid policymakers in selecting the appropriate design for SWFs and objectives. The proposed conceptual SWF model developed in this thesis aims to generate a long-term impact on the design of the funds.

The outcomes of this thesis also contribute to the economic transformation of the 21st century by elaborating on the role of SWFs in economic contexts. This thesis reveals how countries can consistently develop SWFs based on macroeconomic indicators that are in line with government objectives of creating diversified, stable, and sustainable economic development. Furthermore, an examination of case studies from contrasting geographical regions broadens insights on the links between the design of a SWF in terms of its mandate, strategy, capital allocation, and operational model and the home country's macroeconomic factors that facilitate long-term economic development. Subsequently, the successful completion of this study aims to bridge the gap between macroeconomic objectives and the establishment of a SWF. This thesis is also important to policy design, as it assists policymakers with any potential diversions in decision-making that pertain to the SWF's type, mandate, operating model, and capital allocation. Thus, it helps with the effort required to more efficiently integrate a SWF, as an institutional investor, into government policies in a more formalised fashion.

The current thesis adopts an analytical approach which is consistent with management studies where there is a focus not only on the success obtained in the study, but also on the critique of methods used. The thesis focuses on the underlying reasons of success and not failure hence, when asking questions to the participants, there will be a focus on ensuring they can reflect on success in relation to outlined

problems. Skrzek-Lubasińska and Malik (2023) observe that critical thinking skills are essential to support business development and in-depth study within academic research. Scholars in management disciplines need to adopt critical thinking to solve problems by examining large amounts of information (Indrašienė et al., 2021). Therefore, in the current thesis, it was essential to employ critical thinking skills to identify the reasons for success of Sovereign wealth funds in the selected case studies by asking appropriate questions.

1.7 Thesis Contribution

This study contributes to the literature in several ways. This section elaborates on the benefits of the thesis outcomes and their implications for research and practice.

1.7.1 Conceptual Model of Sovereign Wealth Funds

Firstly, this thesis contributes to practice by developing a model for a new sovereign wealth fund design and by linking the design to economic conditions and indicators that dictate a country's economic capabilities. The economic condition – including GDP growth, inflation, unemployment, and public deficits – is a key indicator of economic governance (Mügge, 2015). The model also elaborates on how the SWF's objectives and mandates are determined, as well as how capital is allocated through governance mechanisms that determine how assets are apportioned (Megginson and Gao, 2019). The conceptual model outlines a five-step process for use when determining whether SWFs are appropriate for a given country: (1) analysis of the current economic condition, (2) establishment of the key objectives of the SWF, (3) definition of the type and mandate of the fund, (4) establishment of the structural design of the fund, and (5) evaluation of the impact of the fund. As a result, the model specifies a guideline for how to establish SWF and align it to the economy as well as how to select key performance indicators (KPIs) to evaluate the funds. The proposed model seeks to guide policymakers in making decisions regarding the most appropriate SWF to meet their country's macroeconomic objectives. Likewise, the model aims to help with decision-making regarding the choice of KPIs used to evaluate SWF performance, especially given that SWFs can differ between commodity-based and non-commodity-based funding sources.

Secondly, this thesis also generates practical insights into the relationship between SWF design and each country's economic condition, providing guidelines on the impact of economic development on the design of a SWF. In particular, this thesis develops a set of principles and proposes an appropriate model to guide decision-making concerning the SWF type, mandate, and capital allocation a country should choose based on these principles. This thesis further facilitates the development of criteria for selecting SWFs to effectively achieve a variety of macroeconomic objectives.

Furthermore, insights gained from this thesis can help develop guiding principles for the governance and management approaches of SWFs in different countries. This thesis also undertakes a comparative analysis of governance procedures adopted in commodity-based and non-commodity-based SWFs to assess the differences and similarities between the two. The establishment of principles for setting up a new SWF fund will assist policymakers in deciding what type of fund they should create and how they should allocate capital in accordance with the home country's macroeconomic objectives. Additionally, this set of principles may serve as a benchmarking mechanism to create the SWF and measure its performance against established objectives, thus highlighting the significance of the thesis.

1.7.2 Contribution to the Literature on Sovereign Wealth Funds

The second contribution of this thesis is that it adds to the existing body of literature on the institutional designs of SWFs and their impact on a country's macroeconomic development through insights obtained from case studies of Kuwait, Singapore, and Qatar. This study also seeks to provide scholars with insights into the functions of SWFs in Kuwait, Singapore, and Qatar; the underlying decisions

that guided the development of these funds; and the roles the funds play in attaining macroeconomic objectives. Additionally, this study aims to allow scholars to comparatively assess the effectiveness of commodity-based funds (Kuwait and Qatar) versus non-commodity-based funds (Singapore) in attaining macroeconomic objectives. Few studies have been undertaken in this area. Thus, the current thesis fills this knowledge gap and highlights how SWFs align with macroeconomic objectives. Additionally, this thesis adds to the literature on governance processes adopted in the design of SWFs in Kuwait, Singapore, and Qatar.

1.7.3 Highlighting Existing Gaps in the Literature

Finally, this thesis contributes to advancing scholarly work in SWF institutional design, as it highlights existing gaps in the literature concerning the design of SWFs and the alignment of this design to the country's macroeconomic objectives. In particular, it underscores research gaps in the context of Kuwait, Singapore, and Qatar. Other scholars interested in studying SWFs and how to align them with a country's macroeconomic objectives can focus on the gaps highlighted in the study. Likewise, scholars interested in undertaking similar comparative studies that evaluate SWFs across different countries can rely on the methodology adopted in this study and replicate its design.

1.8 Thesis Methodology

The main objective of this study is to identify the impact of macroeconomic indicators on the design of SWFs in Kuwait, Singapore, and Qatar and to identify principles for guiding the establishment of SWFs in other countries. Thus, an interpretivist philosophy is adopted to examine the lived experiences of each member country. Interpretivist philosophy (Chapter 4) facilitates knowledge development by examining countries' individual experiences with the design and implementation of SWFs. Therefore, the adopted approach considers the relationship between the SWF in each country and its individual macroeconomic indicators. This study also adopts a comparative case-study method, in which analyses of similarities, differences, and patterns across the three selected case studies are performed. The adoption of a comparative case study enables this thesis to establish the macroeconomic factors that were highly relevant in the design of the SWFs. Likewise, the comparison facilitates identifying factors that were influential in the development of each fund's investment strategies. Primary and secondary methods were used for the comparative case study, as detailed further in Chapter 4. Semi-structured interviews were undertaken as the primary research method, and close dialogue was used as the main data collection technique. Clark (1998) argued that close dialogue relies on the intimacy or closeness of authors with industry respondents, which is a level of personal commitment quite at odds with the conventional notions of scientific disassociation and objectivity. By adopting a close dialogue, first-hand information regarding the design and establishment of SWFs in the three selected countries was obtained.

Furthermore, as the thesis aimed to develop a comprehensive understanding of the design of SWFs within macroeconomic and development contexts, unstructured and in-depth interviews were deemed appropriate for the data collection. The interviews were appropriate for the type of data required for the topics due to the level of detail required to understand how SWFs are designed and implemented. In-depth interviews were undertaken in the form of conversations during which the interviewees discussed their ideas regarding the thesis topic and their experiences with it (Mears, 2009). The interviews were used to gain qualitative information on the design of SWFs that is consistent with the economic condition of each selected case-study country – Kuwait, Singapore, and Qatar.

To obtain primary information about the SWFs used in the three countries, interviews were organised with senior officials and policymakers. Close dialogue and in-depth interviews on SWFs offered the best opportunity to gather information and exchange ideas and thoughts. A SWF workshop was scheduled to organise interviews and focus group discussions with SWF managers, experts, officers, academics, and other stakeholders from SWF institutions, such as central banks, ministries of finance and economic planning, and other institutional investment organisations. Secondary data was also collected through

document analysis obtained from a variety of sources, such as government and international institutions. Other secondary sources detailing a wide range of information on economic development and the SWFs in Kuwait, Singapore, and Qatar were also reviewed, including websites, economic statistics and reports, press releases, and policy analyses.

1.9 Thesis Outline

This thesis is organised into nine chapters, which are structured into two main parts: Part I presents the desk research, while Part II presents the field research. Figure 1-2 elaborates on the adopted structure of the thesis.

PART 1: DESK RESEARCH	Chapter 1: introduction Chapter 2: literature review and evaluation Chapter 3: conceptual framework Chapter 4: Thesis Methodology
PART 2: FIELD RESEARCH	Chapter 5: Kuwait SWF Case Study Chapter 6: Singapore SWF Case Study Chapter 7: Qatar SWF Case Study Chapter 8: Conclusion and Recommendations

Figure 1-2: Thesis Structure
Source: DPhil Candidate (2023)

As detailed in Figure 1-2, Part I of the thesis comprises four chapters that outline the desk research undertaken for this study.

Chapter 1 introduces the thesis background of this thesis, describing SWFs as institutional investors and their roles and functions in macroeconomic and development contexts. This chapter also further details the thesis aim, objectives, and thesis questions. Finally, it discusses the significance and justification of the thesis and indicates the methodology adopted. Thus, the first chapter outlines the overall objectives addressed in the thesis, and this background lays the foundation for the second chapter, which discusses literature related to the objectives.

Chapter 2 presents the literature review and evaluation, which elaborate on the available literature on the history, evolution, and definitions of SWFs. This chapter also discusses challenges related to the successful alignment of SWFs with macroeconomic objectives and details the literature gaps addressed by the thesis. Moreover, this chapter provides insights into the available knowledge pertaining to the thesis themes as specified in the objectives. Additionally, the literature reviewed in Chapter 2 sets the foundation for Chapter 3, which highlights existing gaps in the governments' models for SWFs. Chapter 2 also evaluates the literature regarding the establishment of SWF roles and the challenges preventing governments from establishing funds such as these. The four-quadrant model is adopted to assess the literature and identify existing research opportunities. The chapter also identifies the existing gaps in the literature and facilitates the development of the proposed model. Thus, Chapter 3 directly uses the findings from Chapter 2 to develop the proposed model.

Chapter 3 explores different governments' models for implementing SWFs in two distinct parts. The first part of Chapter 3 (Section 3.1) presents the conceptual foundations of the study and identifies existing gaps in the reviewed models. The second part of Chapter 3 (Section 3.2) then presents the proposed conceptual model for achieving the thesis objectives. The insights from Chapter 3 are important in developing the thesis methodology, as they help identify appropriate data collection and analysis decisions.

Chapter 4 presents the thesis methodology by discussing the various decisions made when collecting and analysing data. The chapter also delineates and justifies the thesis philosophy, approach, and design; it also examines the procedures adopted for collecting and analysing the data to meet the thesis objectives. The methods outlined are then used to examine the individual case studies detailed in Chapters 5–7.

Part II comprises four chapters detailing the empirical work obtained from a review of empirical studies and an analysis of the primary data collected in the thesis. Chapter 5 presents the rationale of the Kuwait SWF, examines how it was integrated into monetary and fiscal policies, and considers the impact of the SWF on Kuwait's economic development. Interviews are discussed and incorporated into the chapter. Chapter 6 details the rationale of Singapore's SWF, examines how the fund was integrated into monetary and fiscal policies, and explores the impact of the SWF on the country's economic development. Interviews are incorporated into the chapter and are discussed. Chapter 7 presents the rationale of Qatar's SWF, explores how it was integrated into monetary and fiscal policies, and examines the impact of the SWF on Qatar's economic development. Interviews are incorporated into the chapter and are discussed. The discussion in Chapters 5, 6, and 7 links the findings from the study to the thesis topic, addresses the formulated thesis objectives, and begins identifying key conclusions.

Chapter 8 provides a conclusion to the thesis and outlines recommendations for practice and future work. The chapter also summarises the key conclusions drawn from this study and highlights its limitations.

1.10 Thesis Limitations

The core limitations of this study are limited time and resources and the need to focus on the specific key questions and scope of the thesis, as detailed in the sub-sections below.

1.10.1 Scope Limitations

One of the limitations of this thesis arose from the selected research design, in which only three case studies were evaluated to address the formulated questions. However, the focus is justified because of the significant depth achieved for each country when addressing each of the questions, as Kuwait and Qatar have adopted commodity-based SWFs while Singapore uses a non-commodity-based SWF. Furthermore, this thesis sought to examine the similarities and differences between the macroeconomic indicators within Kuwait, Singapore, and Qatar; the institutional design of their respective SWFs; and information about how funds were allocated. This narrow research approach limited the scope of the thesis, its key questions, and its logic regarding how governments with economies that are rich in resources define their macroeconomic objectives. The second limitation is that the thesis did not explore portfolio management and, as such, did not determine differences and similarities in the allocation of the SWF asset classes. The model focuses mainly on the design of SWFs, in which an emphasis is placed on identifying the interrelationship between the state as the owner of the SWF, the SWF as an organisation, and its management by selecting the appropriate type of SWF that will affect the mandate and strategy. As such, this thesis does not explore the internal governance within the SWF itself.

A third limitation involves the broad definition of the term "development", which was not captured effectively when examining how SWFs influenced macroeconomic development. Giugale (2014) and Stiglitz (2007) define development as involving the application of certain economic and technical measures to use available resources to create wealth and improve the well-being of states. No development strategy can achieve all of its objectives (Rabie, 2016). Therefore, this thesis narrows the definition of economic development to the aims of diversification, stability, and sustainability. Thus, this thesis is limited by its narrow focus on how SWFs affect stability, sustainability, and diversification.

A further limitation in the current thesis is the absence of discussing the political economy within the Arabian world. The research admits that a lot of policy choices, specifically in the identification of different socio-economic objectives emerge from the political process and can vary across countries. As such, the objective of the developed model is to adopt the political choices as given and probe that, once the

political incumbents have determined what they want to select in terms of their objectives, what will be the appropriate institutional design. The implication is that the entire analytical exercise is built on a model that considers politics as given and makes it relevant for most countries despite the current politics. This thesis is focused on the design of an SWF institutional model and as such, there is an assumption that the political economy will be general to any country despite their political objective. The developed model will be comprehensive and applicable in the commodity SWF such as the KIA and QIA or non-commodity which is in Singapore. Clark (2012) emphasizes that political economics are already embodied in SWFs given the role of the government in allocating appropriate organisations to manage the funds. Malik (2015) argues that in the Arab world, the private sector is identified as an appendage of the state where businesses survive when they are close to the state. The implication is that private sector development is not a function of technocratic policy reform although it is an important imperative. Businesses are therefore provided with autonomy as they are close to the state hence, relaxing barriers to regional trade (Malik, 2015). The businesses may invest in foreign assets which may lead to political issues that affect the positions of Gulf countries as rental states. The current thesis avoids focusing on political aspects in the research interviews as they make individuality more difficult as the participants are likely to remain biased in the issues. The decision to avoid political focus is to ensure alignment of the study to other management studies that focus on lessons of success within management.

1.10.2 Time and Resource Limitations

This thesis is also limited in terms of the time and resources available when collecting data, as detailed below. However, it is worth noting that the literature resources were sufficient in supporting the actual research process, as detailed in the Appendix. The DPhil candidate observed that many published sources, ranging from books to journal articles and industry reports, highlighted insights regarding the design of SWFs and how they were used by different countries in attaining macroeconomic objectives.

Furthermore, there were limited data resources, such as publicly available information, to facilitate the actual research process. This thesis involves data collection from multiple stakeholders sourced from diverse departments in different countries, namely, Kuwait, Singapore, and Qatar, and conducting in-person interviews with senior government officials involved in the formulation of economic strategies was challenging. The logistics associated with travelling to different countries, printing the interview questions, and transcribing the audio recordings were expensive, limiting the extensiveness of the data collection.

Chapter 2: Literature Review and Evaluation

2.1 Introduction

The analysis presented in Chapter 1 revealed that, over the years, a number of countries have established SWFs due to their usefulness in helping diversify their economies (Buteica and Petrescu, 2017). The review of background information further established that SWFs have grown in popularity as institutional investments over the years, with countries typically adopting them as an investment vehicle to diversify their economies and support their country's budgets. This chapter builds on the insights established in the previous chapter by discussing the evolution of SWFs and the challenges that countries face in establishing and using the funds.

The discussion regarding SWF evolution identifies important insights regarding the number of countries that have adopted SWFs and their geographical locations. These insights address the thesis objective of determining how SWFs help address macroeconomic objectives in different countries. Chapter 2 also elaborates on the differences between commodity and non-commodity SWFs, and countries that rely on commodities such as oil and minerals to support their funds are identified. Likewise, countries that use non-commodities such as foreign exchange reserves to build their SWFs are specified as well. The role of governance principles and models is discussed by highlighting principles that support transparency, accountability, good governance, and prudent investments. To illustrate these principles, this chapter presents a case example of the Santiago Principles that were drafted in 2008.

Further into the review, the different types of SWFs are examined, including stabilisation funds, savings funds, development funds, pension reserve funds, and reserve investment funds. Drawing a clear distinction between the roles of these funds and their advantages and disadvantages guides the decision-making regarding the type of SWF that is appropriate for a given economic condition. Additionally, challenges that hinder the development of SWFs within certain countries are elaborated; these challenges encompass the difficulties that policy experts encounter in determining whether SWFs are appropriate for their countries and how the SWFs can be embedded to facilitate macroeconomic development. Finally, existing gaps in the development of SWFs are discussed, highlighting issues such as a lack of knowledge, technical expertise, and clear roadmaps in establishing the funds. The findings from this chapter address the thesis objectives by highlighting existing knowledge on various topics, such as the types of SWFs and challenges regarding their development, thereby facilitating the conceptualisation of the SWF model that guides this thesis. This chapter is organised into five sections covering the evolution of SWFs, the different types of SWFs, the challenges facing the development of SWFs, an evaluation of existing literature, and the chapter's key insights.

2.2 Changing Economic Conditions and the Evolution of Sovereign Wealth Funds

The review of the changing economic conditions and evolution of SWFs presented in this section illuminates how countries throughout the world are designing and implementing their funds to facilitate economic growth. In recent years, the number of countries with SWFs has increased, the types of SWFs have become more varied, and their mandates have evolved.

2.2.1 Growth in the Number of Countries with Sovereign Wealth Funds

In the 1950s, only two countries – Kuwait and Mexico – had established SWFs, whereas in 2021, up to 70 countries maintained these types of funds (IE University, 2022). These 70 countries have maintained 98 active SWFs with direct investments in 450 operations (IE University, 2022). Therefore, the SWFs have continually evolved to include more countries, and the size of the AUM in the SWFs has also expanded significantly. Current reports also indicate that several African countries, including Zimbabwe and Botswana, have begun establishing their own SWFs (African Development Bank, 2021). The African Development Bank (2021) revealed that up to 24 African countries had either established or were in the

process of creating their own SWFs, although the process was not advanced in some governments. Ackah (2021) observed that many African countries that have established SWFs – such as Nigeria, Libya, Angola, and Algeria – are supporting the funds using surplus from the sale of hydrocarbons. The implication here is that African countries are considering SWFs as institutional investments to support the achievement of macroeconomic objectives and to provide a cushion against the volatility of market prices. Gouett (2020) reiterated Ackah's (2021) finding, reporting that the conventional wisdom about the countries that hold SWFs is no longer valid, although resource dependence remains the most predictive indicator of their creation. Thus, countries that were not expected to establish SWFs began considering them. African countries relied on other nations with established SWFs, such as Norway, as models for developing their own funds. Additionally, while more countries are establishing SWFs, some governments are creating multiple funds; for example, the United States has 23 SWFs, China has six, and Australia has five (GlobalSWF, 2022). This indicates that the SWF concept has evolved substantially, as countries have also considered establishing multiple funds to support their economies. Table 2-1 details the 10 countries with the greatest number of SWFs.

Table 2-1: Top 10 Countries With the Highest Number of Sovereign Wealth Funds

#	Country	SWFs	AuM($b)	PPFs	AuM($b)	SWFs+PPFs	AuM($b)
28	Others	31	17	33	98	64	115
1	USA Inc.	23	319	94	10,844	117	11,163
2	China Inc.	6	3,081	3	173	9	3,254
9	Australia Inc.	5	356	15	900	20	1,256
4	Canada Inc.	4	17	16	1,698	20	1,715
8	UAE - Abu Dhabi Inc.	4	1,266	2	33	6	1,299
24	Kazakhstan Inc.	4	137	1	31	5	168
61	Ghana Inc.	4	2	1	2	5	4
14	Malaysia Inc.	3	115	4	285	7	400
16	UAE - Dubai Inc.	3	379	0	0	3	379
41	Nigeria Inc.	3	4	1	32	4	36

Source: GlobalSWF (2022)

2.2.2 Growth in Non-Commodity-Based Sovereign Wealth Funds

Fry, McKibbin, and O'Brien (2011) revealed that although the focus of many first-wave SWFs established during the 1950s and 1960s was to save the surplus funds generated by sales of commodities such as oil and minerals, over time, countries have also begun investing in non-commodities. The authors reported a shift in SWFs from the commodity-based entities prevalent in the 1950s, as exemplified by Kuwait, to non-commodity-based SWFs in countries such as China and Singapore, which have relied on foreign exchange reserves to build inter-generational wealth. IE University (2022) further reported that, in 2021, technology was the main focus of SWFs, with 42% of all SWF transactions associated with technology companies and products. That report aligned with a study by Lu (2021), which observed that countries that had invested in commodities such as oil had ventured further into technology. For example, Norway's SWF, which was established after the discovery of oil in the North Sea, is one of the largest shareholders in the technology giant Apple, with a stake of USD 27 billion as of June 2021 (Lu, 2021).

Among the commodity SWFs, the Norway SWF is the largest, with a total AUM valued at USD 1.33 trillion, followed closely by China, with a total AUM valued at USD 1.22 trillion (SWFI, 2022). As the largest SWF, Norway's wealth fund generates high returns; for example, in 2021, the fund reported a 14.5% return, equivalent to USD 176 billion (Taraldsen and Ummelas, 2022). In line with Taraldsen and Ummelas (2022),

Klesty (2022) revealed that Norway's SWF invests the surplus of its revenue from oil and gas in more than 9,100 companies and, as a result, owns more than 1.4% of listed stocks worldwide. Norway's SWF focuses on four key investment areas: equities, bonds, real estate, and renewable energy infrastructure (Norges Bank Investment Management (NBIM), no date). Temasek, Singapore's SWF, has a similar investment structure, as it has invested in technology and financial companies across Europe and the United States (Temasek Foundation, 2021). In terms of investment structure, countries often consider investments in companies that display exemplary global performance, such as Barclays and Apple. Doherty (2013) reported that SWFs such as the QIA also invested in blue-chip companies that are associated with large market capitalisations, including Porsche, Barclays, and Suisse.

2.2.3 Growth in Sovereign Wealth Fund Governance Models and Principles

The evolution of SWFs has led to the establishment of governance models and principles that governments must follow due to the increased pressure for transparency and regulation in managing SWFs (Alhashel, 2015). Alhashel (2015) explained that the importance of regulation stems from the need to reduce any national threat and industrial espionage.

2.2.3.1 Santiago Principles

Diverse solutions have been proposed to address the need for transparency, including the Santiago Principles, which are a set of 24 generally accepted principles and practices voluntarily endorsed by members of the SWFI (IFSWF, 2022). The principles focus on promoting transparency, accountability, good governance, and prudent investments while enhancing in-depth dialogue and a deeper understanding of the SWF's activities (IFSWF, 2022). Al Suwaidi and Caruana (2008) explained that the Santiago Principles were drafted in 2008 by the International Working Group of SWFs and encompass four core objectives:

(1) Facilitating the maintenance of a stable global financial system and the free flow of capital and investments,
(2) Ensuring compliance with all regulatory and disclosure requirements applicable to the countries in which SWFs invest,
(3) Ensuring that the developed SWFs consider financial and economic risk as well as returns, and
(4) Ensuring that the SWFs have implemented transparent and sound governance structures that have adequate accountability, risk management, and operational controls.

Al Suwaidi and Caruana (2008) further highlighted that the Santiago Principles represent a framework of generally accepted principles and practices that reflect appropriate governance and accountability arrangements in addition to investment practices by SWFs. As such, they are identified as a set of bylaws that govern SWFs around the world and are essential in promoting understanding of the funds both within the nation's boundaries and in international financial markets (Al Suwaidi and Caruana, 2008). Further insights reveal that the Santiago Principles generate economic and financial benefits for their home countries, recipient nations, and the international financial markets (Al Suwaidi and Caruana, 2008). In line with Al Suwaidi and Caruana (2008), Norton (2010) argued that the Santiago Principles represent a set of international best practices that ensure that SWF investments do not affect the stability of the global financial system and thereby ensure that a stable investment climate is maintained. The principles are voluntary and achievable by countries at all levels of economic development, as they are subject to the applicable laws in the home country. The studies analysed in this thesis emphasise the importance of a governance structure that facilitates SWF investments and ensures the stability of the financial system.

The structure of the Santiago Principles is subdivided into three main areas: (1) the legal framework, (2) the institutional framework, and (3) the investment and risk management framework (Al Suwaidi and Caruana, 2008). Under the legal framework, the Santiago Principles focus on ensuring the soundness of the SWF and its transactions, in which public disclosure is expected for the association between the SWF and other state agencies (Al Suwaidi and Caruana, 2008). Within the institutional framework, the Santiago Principles

advocate for governance frameworks that establish an effective division of roles and responsibilities to guarantee accountability and transparency (Al Suwaidi and Caruana, 2008). Governance and operational management should also act in the best interests of the SWF, while public disclosure should be ensured for all operational and management data. The investment and risk management framework emphasises the identification, assessment, and risk management of the operations (Al Suwaidi and Caruana, 2008). The principles also recommend that the investment decisions by the SWF focus on maximising risk-adjusted financial returns in a manner that is consistent with the investment policies. Therefore, it is clear that compliance with the Santiago Principles ensures legal soundness, facilitates governance and management processes, and reduces the risks inherent in investing in the SWF.

These guidelines for the governance and management of SWFs help ensure transparency and accountability in the operation of the funds (Bernstein and Lerner, 2009). Based on the propositions of agency theory, conflicts may arise due to differing interests regarding the management of SWFs between the citizens of the country who own the resources and the government agencies that act as the custodians that help manage them (Bendickson et al., 2016). Therefore, adopting proper management is important to ensure minimal conflict. Investment authorities may be established to help manage SWFs. In Kuwait, for example, KIA is the current legal independent authority responsible for the stewardship of the nation's assets in the GRF (Bazoobandi, 2013). In Qatar, QIA board of directors and the Supreme Council influence the governance of the SWFs (IFSWF, 2020). Similarly, in Singapore, institutions such as Temasek and GIC have been created to manage and govern the funds.

2.2.4 Investment Strategy and Design

SWFs help businesses remain competitive and expand their operations in the long term (Gelb et al., 2014). Additionally, financial capital can be used to establish infrastructure and ensure large-scale development (Hamilton and Hepburn, 2014). Therefore, investment strategies are pivotal in guiding the institutional design of the SWFs. In Qatar, for example, among other goals, QIA's strategy focuses on long-term investments, flexibility, and the construction of strategic external partnerships. A similar strategy has been adopted in Australia, where an estimated USD 90 billion of the SWF could be invested in international financial markets that comprise fixed income, real estate, and private equity, among other assets (Treasury, 2019). In Canada, the SWF was authorised to purchase common shares worth USD 205.9 million, which represented a 2.4% stake in the provincial electric utility Hydro One Company (SWFI, 2018). Norway's SWF is also integral to supporting the investment strategy in the country, where it adheres to a wealth preservation strategy and invests in the securities and stocks of established companies in four key investment areas: equities, bonds, real estate, and renewable energy infrastructure (NBIM, no date). Buteica and Petrescu (2017) add that Norway has implemented multiple SWFs to support its commodities-based economy.

Saudi Arabia's SWF is commodity-based, meaning it relies on oil and natural resources to support the fund. The country has established a Public Investment Fund (PIF) to diversify its income, in which it maintains assets of up to USD 607.4 billion (Arab News, 2023). The oil rents generated from the natural resources are channelled towards the SWF (Fry, McKibbin and O'Brien, 2011). A similar case is observed with Oman, which aims to launch a new SWF – the Oman Future Fund – which was valued at USD 5.2 billion in 2023 in addition to its main SWF, the Oman Investment Authority (SWFI, 2023).

2.2.5 Investment in Sustainability

Among the most important initiatives supporting the ESG principles of SWFs are the sustainability investments promoted through the OPSWF (OPSWF, 2023). In the report, the OPSWF (2023) reveals that the One Planet Fund was launched in 2017 at the One Planet Summit to help integrate financial opportunities and risks associated with climate change into the management of large and long-term asset pools. The objective of the OPSWF framework is to facilitate the integration of climate change analysis into the management of large, long-term, and diversified asset pools. As a result, the One Planet Fund contributes to best practices in the industry and fosters shared understanding among the asset owners on various climate-related issues. The OPSWF builds on the growing body of practices within the investor community to increase the efficiency of global capital allocation and contribute towards a transition to a low-carbon economy that is more sustainable (OPSWF, 2023). Currently, the OPSWF network has grown to more than 45 of the largest institutional investors in the world, comprising SWFs, asset managers, and private equity houses that, collectively, have more than USD 37 trillion in assets (Mansoori and Calily, 2022). The OPSWF network focuses on core areas such as private equity, clean hydrogen, and investment in renewable energy (Mansoori and Calily, 2022). As a result, the OPSWF network emphasises the attainment of sustainability goals through approaches such as establishing stewardship programmes to rate ESGs across the performance of companies and fund managers as well as developing tools to enable companies to measure their carbon footprint.

Another report OPSWF (2022) highlights three guiding principles that govern the OPSWF. The first is the alignment principle to build climate change considerations in which funds such as QIA have 50% of their power generation investments focused on zero emissions. Additionally, KIA is focused on transitioning to 100% ESG compliance in its investments. The principle emphasises on ensuring that SWFs contribute to sustainability investments with USD 40 billion being co-invested in green hydrogen projects (OPSWF, 2022).

The second principle is the ownership principle, which encourages companies to address material climate change issues. For example, the Mubadala SWF supports the production of green hydrogen production through investments of EUR 7–8 billion by 2030, with 60% being directed towards businesses that are sustainable (OPSWF, 2022). The report also indicates that more than 135 KIA asset managers monitor the implementation of the OPSWF framework (OPSWF, 2022).

The third principle is the integration principle to embed climate change-related risks and opportunities into investment management. This strategy enhances the resilience of long-term investment portfolios, for instance, by committing EUR 400 million to climate-related projects. As an example, Mubadala has committed to generate 50 GW of energy by 2030 through collaboration with the Abu National Oil Company (OPSWF, 2022). A timeline of climate change-related activities associated with the OPSWF is detailed in Figure 2-1 below.

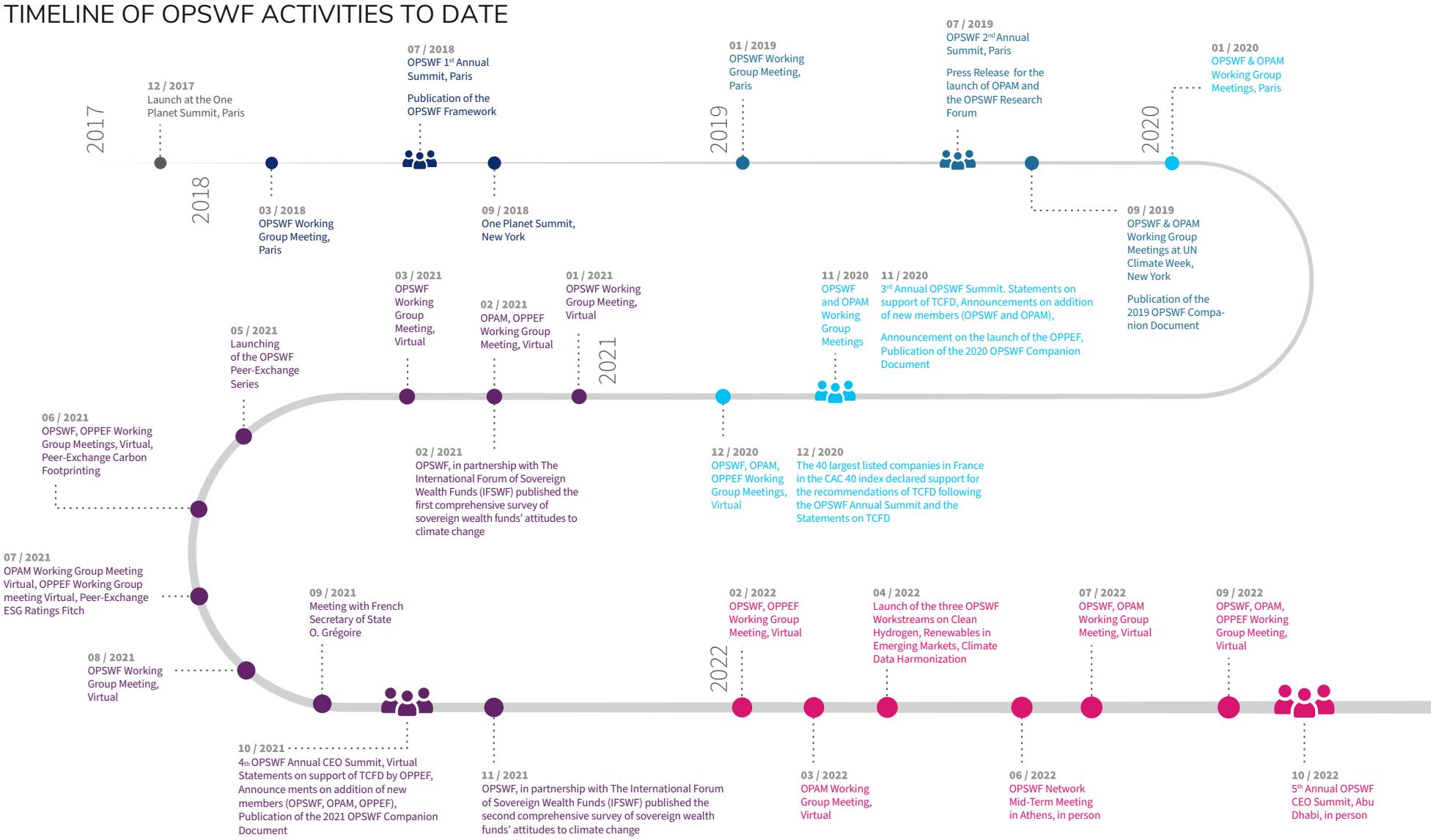


Figure 2-1: Timeline of One Planet Sovereign Wealth Fund activities from 2017 to 2022
Source: OPSWF (2022)

From Figure 2-1, the launch of the OPSWF occurred in 2017 at the One Planet Summit in Paris. The OPSWF Working Group Meeting in Paris published the OPSWF framework later in 2018. Throughout the years 2019–2022, the OPSWF has supported diverse sustainability initiatives, including workstreams on clean hydrogen, renewables in emerging markets, and the harmonisation of climate change data.

2.2.6 Wealth Creation Versus Wealth Preservation

In developing a SWF, it is worthwhile to establish whether the fund will be employed for wealth creation or preservation. Investors interested in wealth creation focus on increasing the size of their assets and are able to tolerate high levels of risk. By contrast, wealth preservation investors are interested in diversifying their assets into a variety of investments (Jennings, 2021) to protect themselves from risk. Therefore, differences emerge in the size of the risks that investors will tolerate as well as the diversification levels of their portfolios. In the context of SWFs, both wealth creation and wealth preservation have been identified as relevant strategies. Wealth creation or generation prioritises the diversification of the economy to increase earnings through stabilisation funds, which ensure that the economy is isolated from price volatility and external shocks (Al-Hassan et al., 2018). In such cases, the SWF is mandated to invest in overseas countries where higher risks are experienced (Lu et al., 2009). Conversely, SWFs that adopt a wealth preservation ideology focus on savings in which the funds accumulate savings for future generations (Van den Bremer, Van der Ploeg and Wills, 2016). A similar case of wealth preservation is identified in pension reserve funds, including social security reserve funds (SSRFs) and sovereign pension reserve funds (SPRFs; Dreassi, Miani and Paltrinieri, 2017).

2.3 Types of Sovereign Wealth Funds: Integration Into Government Policies

According to the IMF, there are five main types of SWFs: stabilisation funds, savings funds, development funds, pension reserve funds, and reserve investment corporations (Al-Hassan et al., 2018). Over time, jurisdictions have adopted various types of SWFs to realise contrasting sets of objectives. For example, development funds aim to support the growth of infrastructure (Wills, Senbet and Simbanegavi, 2016). Van den Bremer, Van der Ploeg, and Wills (2016) reported that SWFs were originally used as savings funds that enabled countries to diversify their income sources. However, over the years, SWFs have developed other functions, such as sheltering the economy from price volatility (Al-Hassan et al., 2018) and helping fund the development of infrastructure (Clark and Monk, 2015). An in-depth comparison of the various types of SWFs and a summary of these types are presented in Table 2-2 below.

Table 2-2: Summary of Sovereign Wealth Fund Types

Type	Function	Advantages	Disadvantages
Stabilisation funds	These are established to ensure that the economy is isolated from price volatility and external shocks.	They protect the economy against price fluctuations. They smooth government expenditures by reducing the volatility of national expenditures and enhancing fiscal management, thus positively affecting growth strategies.	Establishing stabilisation funds is disadvantageous due to their additional cost implications to society, as the funds are redirected away from the achievement of macroeconomic objectives.
Savings funds or future generation funds	These are established to diversify portfolio assets from the excess income of a country accrued through non-renewable natural resources, which will eventually be depleted.	Savings funds are developed by a given country to cover the emerging costs of the elderly population, thereby easing the pressure on the government's budget for several years.	When government revenue declines, maintaining a steady savings rate may lead to reduced funds for undertaking development projects in the country.
Pension reserve funds	These are established by the government and social security systems with the objective of financing relevant pension plans.	The funds play an important role in supporting the country's annual budget by financing pension plans.	Requirements for governance and management are additional costs that the government must assume to manage the funds.
Reserve investment funds or corporations	These are established to reduce the negative carrying costs of holding reserves or as an attempt to obtain higher returns on ample reserves.	They ensure lower costs of accessing foreign currency from a country's exchange reserves compared to seeking assistance from financial institutions such as the IMF. The foreign exchange reserves provide higher returns.	Assigning a dedicated organisation to maintain foreign exchange reserves can be costly and unsustainable for the government, as the funds are not used in the achievement of macroeconomic objectives.
Development funds	These are established to increase a country's potential economic growth by funding infrastructure projects.	They facilitate further development of infrastructure and fund projects that enhance economic growth.	They come with high management costs, as institutions must be established. Projects may not have a stable rate of return. The creation of the funds involves redirecting money away from other macroeconomic objectives in the country.

Source: Adapted from the IMF (SWFI, 2022)

2.3.1 Stabilisation Funds

The first type of SWFs discussed here, stabilisation funds, are established to ensure that the economy is isolated from price volatility and external shocks (Al-Hassan et al., 2018). Raymond (2010) described stabilisation funds as a last resort during any national financial or economic crisis because they stabilise the fiscal impact of fluctuating commodity prices. Lu et al. (2009) demonstrated that many countries invest overseas to alleviate so-called Dutch disease, which is a phenomenon in which good news such as oil discovery harms the broader economy and creates related macroeconomic consequences. However, as the authors argued, SWFs may grow when commodity prices are higher; later, the funds must be redesigned and transformed, for example, from stabilisation to savings funds, as they align with different types of macroeconomic objectives.

Landon and Smith (2015) added that stabilisation funds aim to address volatility in revenue due to the difficulty of predicting the prices of resources such as petroleum and natural resources. Thus, stabilisation funds have been adopted in GCC countries that rely on natural resources to support their economies (Steigum, 2012), including Saudi Arabia, where the PIF maintains assets of up to USD 607.42 billion (Arab News, 2023). Likewise, Qatar maintained assets worth USD 450 billion in 2022 via QIA and 68 subsidiaries (SWFI, 2022). The UAE also held assets worth USD 708.75 billion through its ADIA (Arabian Business, 2022) in addition to other funds.

in addition Sharma (2017) argued that stabilisation funds are designed to isolate the economy and budget against price and commodity fluctuations and volatility. For example, when government budgets must be restricted in terms of crises, stabilisation funds are used to steady the budget and protect against any type of shortfalls. One advantage of stabilisation funds is their positive impact on protecting the economy against price fluctuations (Sharma, 2017). A second advantage is their contribution to smoothing government expenditures, as the funds can reduce the volatility of national expenditures and enhance fiscal management to improve growth strategies (Sugawara, 2014). However, Sharma (2017) argued that establishing a stabilisation fund can be disadvantageous, as monies are redirected away from macroeconomic objectives, thereby creating additional cost implications for the society in which they are established.

2.3.2 Savings Funds or Future Generation Funds

The second category of SWFs is savings or future generation funds, with an eye towards perpetuity. These funds are established to diversify portfolio assets and protect against the depletion of a country's non-renewable natural resources (Van den Bremer, Van der Ploeg and Wills, 2016). As Van den Bremer, Van der Ploeg, and Wills (2016) argued, the central objective of savings funds is to accumulate savings for future generations. Karametaxas (2019) echoed this sentiment, stating that the core objective of creating a savings fund is to move wealth from non-renewable assets into a diversified portfolio and, thus, facilitate wealth transfer from one generation to the next. However, it is important to highlight that the SWFs in most countries focus on ensuring the welfare of future generations of the country's citizens through perpetuity, where they are used to pay pensions for the older generations.

Karametaxas (2019) has indicated that since the state manages the savings funds, the beneficiaries of the SWFs are the current and future generations of a country. Affuso, Istiak, and Sharland (2022) have supplemented this point by arguing that a country establishes savings funds to cater to the emerging costs of the elderly population, thereby easing the pressure on the government's budget. Thus, Van den Bremer, Van der Ploeg, and Wills (2016); Karametaxas (2019); and Affuso, Istiak, and Sharland (2022) have agreed that savings funds are important in supporting a government's macroeconomic targets through portfolio diversification and by easing pressure on the government's budget in the future when it will be required to support the ageing population. However, Affuso, Istiak, and Sharland (2022) have highlighted a disadvantage of such funds, as they redirect funding from the national economy to a savings fund for future use. As such, projects that would benefit from national funds, such as those dedicated to infrastructural growth, are stalled as money is directed to the savings funds (Wills, Senbet and Simbanegavi, 2016). Elaborating on this, Wills, Senbet, and Simbanegavi (2016) reported that while

savings funds make sense for developed countries – because they can overcome the transience of resource revenues by replacing a finite revenue stream with a permanent foreign income stream – a disadvantage is that when government revenue decreases, the maintenance of a steady savings rate may direct funds away from development projects (Wills, Senbet and Simbanegavi, 2016). Sharma (2017) added that savings funds may be directed to supplement foreign exchange reserves and, as a result, are used by the country's central bank. Thus, the funds are temporarily held abroad until useful opportunities for investments arise (Sharma, 2017).

2.3.3 Pension Reserve Funds

Blundell-Wignall, Hu, and Yermo (2008) described pension reserve funds as funds that are established by the government and social security systems with the objective of financing relevant pension plans, including pay-as-you-go plans. Dreassi, Miani, and Paltrinieri (2017) added that the funds are further categorised into two broad types: SSRFs and SPRFs. The main sources of funding or inflows to SSRFs are employee surpluses, contributions by employers, and contributions by the government via fiscal transfers. Countries that use SSRFs include Japan, Denmark, the United States, and Canada (Blundell-Wignall, Hu, and Yermo, 2008). By contrast, SPRFs are established by the government and are completely separate from the social security system (Dreassi, Miani and Paltrinieri, 2017). Governments create this latter type of fund to finance public pension expenditures at a future date rather than directly financing pensions as is done with SSRFs (Blundell-Wignall, Hu, and Yermo, 2008). Countries that use SPRFs include Ireland, Norway, and New Zealand (Blundell-Wignall, Hu and Yermo, 2008).

A close inspection of research by Blundell-Wignall, Hu, and Yermo (2008) and Dreassi, Miani, and Paltrinieri (2017) underscores the functions of pension reserve funds as SWFs that governments create to finance their pension plans. Therefore, the funds play an important role in supporting the countries' annual budgets, which leads to their conceptualisation as SWFs. Clark (2019) added that, as pension funds, the SWFs use their long-term time horizons and scale as a comparative advantage that facilitates access to financial markets on better terms while aligning the SWFs' interests and those of the beneficiaries with the external service providers. Yermo (2008) supported these arguments, pointing out that pension reserve funds are pre-funded by the government and that the government adopts appropriate governance procedures to manage the funds. For example, internal and external governance mechanisms and investment controls isolate the funds from political influences and establish managerial requirements for accountability, transparency, and stability. Therefore, there are several parallels between pension reserve funds and SWFs: (1) They are both funded by the government, (2) They require accountability and transparency in management, and (3) They use governance procedures to isolate the funds from political influences. The requirements for governance and management are additional costs that the government incurs to manage the funds.

2.3.4 Reserve Investment Funds or Corporations

The final category of SWFs is reserve investment funds or corporations, which are established to reduce the negative carrying costs of holding reserves or to attempt to obtain higher returns on ample reserves (Al Hassan et al., 2018). Clark, Dixon, and Monk (2013) argued that to understand the functions of reserve investment funds, it is important to assess their emergence during the Asian financial crisis of 1997. The authors posited that many Asian countries began maintaining reserve investment funds to protect themselves from a reoccurrence of the financial crisis through the perpetuation of balances. However, over time, the foreign reserves accumulated by the countries grew to a point at which they exceeded what was necessary as insurance against eventual crises (Al Hassan et al., 2018). Therefore, the funds began to assume different functions, including minimising domestic inflation by sterilising or stabilising the local currency issued to purchase foreign currency. For example, China established reserve investment corporations to improve returns by minimising the carrying costs of holding the reserves (Ellyatt and Bishop, 2017).

One of the main advantages of the reserve investment corporations is their positive impact on resolving crises at a lower cost than if the country did not have these funds because of self-insurance. Research on these funds has found that countries that established dedicated reserve investment corporations benefit from the lower costs of accessing foreign currency from their exchange reserves when compared to seeking assistance from financial institutions such as the IMF (Clark, Dixon and Monk, 2013). However, Bortolotti, Fotak, and Hogg (2015) argued that a disadvantage of assigning a dedicated organisation to maintain foreign exchange reserves is that it could be costly and unsustainable for the government, because the funds are not used to attain macroeconomic objectives. Instead, the funds are directed to different goals of self-insurance and reducing the negative carrying costs of holding reserves.

2.3.5 Development Funds

Development funds are established to fund infrastructure projects in a country and, thus, increase its potential economic growth (Clark and Monk, 2015). Elaborating on this, Clark and Monk (2015) argued that sovereign development funds (SDFs) are advantageous when compared with traditional financial institutions because of the impact of its investment returns from local opportunities. Noteworthy examples of SWF agencies that focus on financial returns include the GIC in Singapore, KIA in Kuwait, and QIA based in Qatar. Conversely, SDFs include Temasek in Singapore, the Investment Corporation of Dubai, and the Russian direct investment fund. The insights gathered from the literature indicate that development funds are beneficial to countries by facilitating the further development of infrastructure and other projects that enhance economic growth. Wills, Senbet, and Simbanegavi (2016) argued that the rate of return from SDFs is not as important as the sustainable economic development of the country. This implies that when countries create development funds, their core focus is not to obtain returns but to enhance the growth of their economy.

Al Hassan et al. (2018) further suggested that development funds are the most popular choice of SWF among governments because they combine both economic missions and financial goals, thereby leading to further development within the country. The Mubadala project in the UAE is an example of a socio-economic project financed by development funds that has led to notable economic growth through the development of diverse infrastructure in the country (Al-Hassan et al., 2018). The literature indicates that development funds are unique in that they are focused on increasing development within a country, and, as a result, the funds can be established by seeking equity from other state-owned investors (SOIs).

In summary, many countries can adopt development funds to enhance economic growth through socio-economic undertakings, including infrastructure projects. However, as Al Hassan et al. (2018) argued, SDFs may be viewed as disadvantageous, especially if the funds are redirected away from other national macroeconomic objectives, such as development and infrastructure growth.

2.3.5 Comparison of Sovereign Wealth and Development Funds

This sub-section presents a comparison of SWFs and SDFs to establish their similarities and differences. Table 2-3 details the comparison of SWFs and SDFs in Qatar.

Table 2-3: Comparison of Sovereign Wealth Funds and Sovereign Development Funds

Focus area	Sovereign Development Fund (SDF)	Traditional Financial SWF
Objective	Dual objectives: • Financial: long-term capital appreciation • Economic: promotion of local economic development according to targeted goals and metrics • Note that given the dual objectives, financial returns can be lower and compensated for by the economic gains	Purely financial: long-term capital appreciation and growth
Constraints	Financial: Risk appetite limit measured in terms of volatility of net asset value and probability of default Economic: Targeted goals and metrics • Impact on GDP • Size of local investment and foreign direct investment • Generated employment • Sector diversification impact • Technology and intellectual property acquisition	Risk appetite limit measured in terms of volatility (short-term and medium-term), value at risk, expected shortfall, probability of instrument default, etc.
Instruments	Essentially, direct equity or debt	All asset classes, including indirect alternatives
Performance measures	• Long-term rate of return • Economic metric achievements over the long term vs. expectation and commitment at time of investment	• Long-term rate of return • Short-term return adjusted to risk taken (Sharpe ratio)

Source: DPhil Candidate (2023)

Table 2.3 highlights the differences between various types of SWFs, as seen in examples from a number of countries. In Singapore, Temasek Holdings is an example of an SDF, while the GIC is a classic financial SWF. In Qatar, QIA serves as a classical SWF, while Mubadala, based in the UAE, is an example of an SDF. A comparison of these funds indicates that aspects such as objectives, constraints, instruments, and performance measures are unique to each type of fund. Additionally, both economic and financial aspects are considered in the assessment of the funds for the SDF. Figure 2-2 illustrates the various examples of SDFs and SWFs.



Figure 2-2: Transformative Trends in State-Owned Development Holdings
Source: DPhil Candidate (2023)

In Figure 2-2, the differences between SWFs and SDFs are established, with a clear distinction identified between financial return and economic return. A number of agencies are also identified, wherein SWFs include GIC, ADIA, and KIA, while SDFs include Temasek, Mubadala, and PIF. Figure 2-3 illustrates the various categories of SDFs.

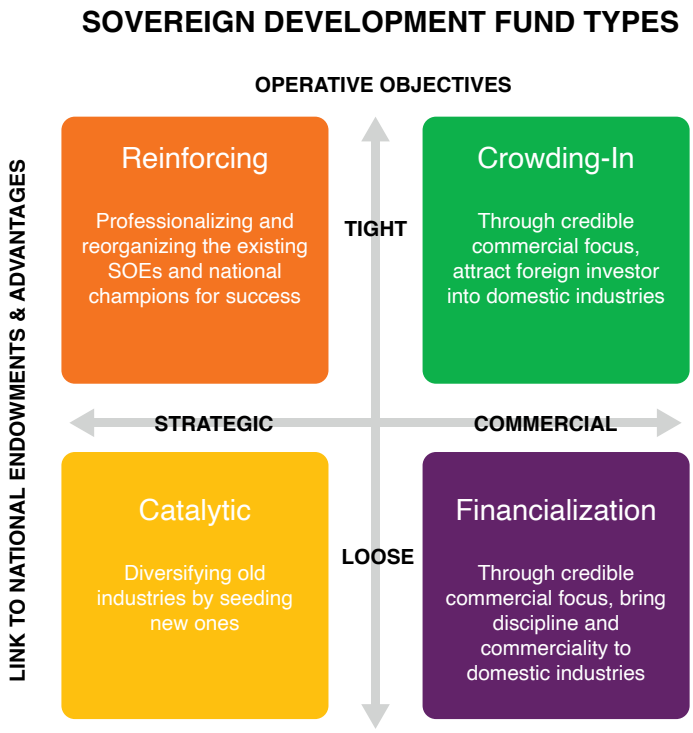


Figure 2-3: Sovereign Development Fund Categories
Source: Clark and Monk (2015)

In Figure 2-3, the different categories of SDFs are further divided into reinforcing, crowding-in, catalytic, and financialisation types. A comparison of the categories also reveals that the reinforcing SWFs are used to reorganise existing national champions for success, while the catalytic funds are used to diversify industries. Financialisation is employed to introduce commerciality in domestic industries, while crowding-in funds are designed to attract foreign investors into domestic industries. Therefore, the focus of SDFs is to create growth and diversity in the economy.

2.4 Challenges of Designing of Sovereign Wealth Funds in Macroeconomic and Development Contexts

This section discusses the challenges of developing SWFs and the existing gaps in the literature that have not yet been addressed. Identifying the challenges in the development of SWFs facilitates the attainment of broader thesis goals, including the development of a model to align SWFs to the macroeconomic objectives of their respective countries.

2.4.1 Challenges Affecting Sovereign Wealth Fund Development

As discussed, SWFs offer significant benefits, such as stabilising the economy and providing savings for future generations. However, governments must confront several challenges that affect their successful establishment. This sub-section identifies and discusses these challenges to develop a relevant conceptual model.

2.4.1.1 Challenges in Decision-Making When Developing Sovereign Wealth Funds

Das, Mazarei, and Van der Hoorn (2009) reported that one of the issues policymakers face when developing SWFs is deciding whether they should establish such a fund to meet their policy objectives or whether it is feasible to opt for a different alternative. Expanding on this, they argued that policymakers must determine whether their countries have adequate or optimal international reserves and whether they can use SWFs to meet the balance of payments. A report from GlobalSWFs (2021) provide similar insights, underscoring the lack of technical expertise in establishing SWFs to serve future generations in developing countries such as Papua New Guinea. The report (2021) further argued that, in addition to the inability of developing countries to define a clear purpose and mission for the SWFs, those countries with fewer resources also face obstacles such as political interference. Wills, Senbet, and Simbanegavi (2016) argued that countries can counter a lack of expertise by simply modelling their SWFs after those operating successfully in countries such as Norway. However, they also acknowledge that not all countries have similar resources or macroeconomic objectives, which can hinder the establishment of SWFs.

2.4.1.2 Political and Economic Influence in Managing Sovereign Wealth Funds

An additional challenge that arises involves political influence over how allocations are made to the SWF and how withdrawals are made (GlobalSWF, 2021). Hildebrand (2008) reported that political motivations may emerge when making these decisions, especially when the government focuses on investing large sums in private companies. If this type of investment occurs, resistance may emerge from political actors regarding the allocation decisions of SWFs, especially where different agendas may motivate the selection of foreign companies in which to invest (Hildebrand, 2008). This issue also underscores the importance of having a model and principles to guide the allocation and withdrawal of funds from a country's SWF. Hanieh (2018) explained that it is critical to understand the political economy in the Gulf region to understand the shift in centres of accumulation from existing political focuses in Europe and the United States towards emerging concentrations such as China and East Asia. However, SWFs are important in the Gulf region, where they serve as a symbol for the region and as a gesture towards modernity among nation-states that have longstanding traditions (Clark and Monk, 2012). As such, SWFs are transforming Gulf states and introducing a new global order of financial capitalism.

Dixon and Monk (2016) also have observed that constraints such as financial and political obstacles hinder the development of SWFs. As such, there is a need for a conducive political environment and supportive leadership to ensure the success of the funds.

Additionally, the literature indicates that independence, transparency, and accountability are necessary to build legitimacy for sovereign investments that help reduce risk mismanagement. In terms of the performance of the economy and how well it supports the SWF objectives, economic influence is also an important aspect that influences the growth of the fund, as it will determine how the funds' assets are invested and what macroeconomic objectives should be pursued (Martínek, 2021). Other macroeconomic factors, such as GDP growth, have a direct impact on the success of SWFs by increasing exports and investments (Divya and Devi, 2014). However, the recent rise in inflation levels has led to an increase in consumer uncertainty, reduced spending, and, subsequently, low economic growth (Batayneh, Al Salamat and Momani, 2021). These factors negatively affect SWFs, as a lack of economic growth is reflected in diminished contributions to the funds. The challenges discussed in this section are somewhat generic, as many countries face such issues. For example, the impact of political powers and their influence on the agenda and mandate of the funds, which are pivotal in the management of SWFs, is a common issue. However, the governance in each of the selected countries is different, and, thus, political powers will exert different levels of influence over SWFs between countries. Therefore, the current thesis focuses on the various governance systems that affect how political power challenges the effectiveness of SWFs in achieving economic objectives.

2.4.1.3 Integration of Sovereign Wealth Funds in Macroeconomic Development

Another challenge in SWF design is the integration of SWFs into a country's macroeconomic development policies. Le Borgne and Medas (2007) posited that SWFs are useful when they are well-designed and integrated into the general budget. Among all identified challenges, the integration of SWFs in macroeconomic development policies is the most relevant to the current thesis. This need for integration arises because many countries fail to adequately consider the integration of economic needs during the design stage of their SWFs, which increases the complexities of employing these funds to improve the economy and the annual budget. This challenge is discussed in greater depth in the next section, which facilitates the creation of a model guiding the integration of SWFs into macroeconomic development.

2.4.2 Existing Knowledge Gaps in Sovereign Wealth Fund Development

This section elaborates on various knowledge gaps related to the development of SWFs, particularly regarding the creation of models to guide the establishment of SWFs. Highlighting these specific gaps is important in achieving the formulated thesis objectives, as it facilitates the development of the conceptual SWF model to address the specific issues.

2.4.2.1 Integration of Sovereign Wealth Funds into Macroeconomic Development

Various studies – such as those of Das, Mazarei, and Van der Hoorn (2009) and Wills, Senbet, and Simbanegavi (2016) – signal the need to develop a roadmap or model that allow countries to answer core questions regarding the establishment of their SWFs. One important factor to consider at the outset is whether the country has the optimal level of foreign reserves (Lu et al., 2009; Aizenman and Glick, 2009). Another key consideration is whether the central bank and the government agree on the need to create a fund. Das, Mazarei, and Van der Hoorn (2009) added that policymakers are required to decide on the macroeconomic objectives that an SWF should accomplish, such as stabilising fiscal revenue, addressing pension liabilities, and improving returns on international reserves. Therefore, it is beneficial in the long run to develop a roadmap, as this allows policymakers to address important questions regarding the management of SWFs. These questions ask: (1) whether the country should create a SWF based on the level of international reserve funds in the government; (2) what the governance mechanisms of the SWFs will be with regard to funding, withdrawal, and spending rules; and (3) what the institutional arrangements will be, namely, what institutions will determine the objectives of the SWF policies and guidelines (Das, Mazarei and Van der Hoorn, 2009). Eldredge (2019) echoed Das, Mazarei, and Van der Hoorn (2009) in their observation that models are also important for understanding why countries establish SWFs and how they use them to enhance their position in the global economy. Adler (2019) further argued that SWF models are beneficial in assessing policies related to the attainment of macroeconomic objectives. However, the question of how to align the allocation of funds to achieve macroeconomic objectives emerges upon addressing the aforementioned questions. A review of the literature establishes minimal findings, as few studies have examined how SWFs align with countries' economic realities.

2.4.2.2 Lack of Knowledge in the Development of Sovereign Wealth Funds

A lack of technical expertise in establishing SWFs also complicates whether the government can ensure that such a fund is aligned with the country's economic conditions. Wills, Senbet, and Simbanegavi (2016) noted that SWFs affect public sector wealth and may subsequently affect private sector behaviour. Since the investment goals and objectives of SWFs can influence public sector wealth, they may also affect expansionary and contractionary fiscal policies that react to the change in wealth levels. Das, Mazarei, and Van der Hoorn (2009) emphasised that policymakers must consider broad questions regarding their countries' macroeconomic conditions before deciding on a suitable type of SWF. One important question is whether the country should create a SWF to meet the broad objectives of government policy or whether other alternative institutional investment vehicles, such as government bonds, can be adopted

(Das, Mazarei and Van der Hoorn, 2009). Martínek (2021) also underscored the difficulty in organising institutions to manage the SWFs, determine where the funds' assets will be invested, and decide what macroeconomic objectives the funds ought to address. As these questions are technical and require comprehensive data, one obstacle hindering the establishment of these funds is a lack of experience and technical expertise regarding this process. Martínek (2021) further argued that even when policymakers have experience in the process of establishing SWFs, a lack of direct data may reduce the accuracy of their development. To address this issue, it is beneficial over the long term to identify and develop a model to guide the integration of macroeconomic objectives into the SWF decision-making process. The lack of standards and guidelines that policymakers can use to develop SWFs has been further identified in the literature (Das, Mazarei and Van der Hoorn, 2009). Therefore, the aim of this thesis is to provide insights into the processes that should be followed to choose the most appropriate SWF and offer guidance on how institutions can be developed to manage the funds.

2.4.2.3 Lack of Models and Theory on Institutional Design of Sovereign Wealth Funds

The examination of the available literature also reveals a lack of studies that describe the theory and models used to facilitate the institutional design of SWFs. Insights from the literature describe aspects such as the governance structures of SWFs (Al Hassan, 2018), the need for SWFs (Eldredge, 2019), optimal asset allocation (Bodie and Briere, 2013), and SWF regulation (Barbary and Bortolotti, 2011). However, few studies have been conducted to develop a model to guide the institutional design of SWFs. As such, this study aims to develop a theory and establish knowledge on the institutional design of SWFs by linking both macroeconomic indicators and objectives.

2.5 Literature Evaluation

The findings reviewed in this chapter indicate that SWFs are highly valuable economic institutions of any given country, as they offer support for the annual budget through diversification of the portfolio assets. As the funds have evolved over time, their mandates have also transformed. SWFs can serve several functions, whether as stabilisation or savings funds, pension reserves, or development funds. The review of the literature indicated that as more countries have adopted SWFs as part of their economic budgets, they have also used them to facilitate diverse goals, such as infrastructure development and pay-as-you-go pensions.

This section aims to further advance the discussion by critically examining the literature reviewed in the chapter to identify the existing knowledge gaps. Then, these gaps are addressed through the proposed conceptual model outlined in Chapter 3. Thus, this section aims to synthesise the findings, identify the key thesis gaps, and provide the basis for developing the conceptual model that is the main outcome of this study. This section uses the four quadrants framework to evaluate the existing research by organising it into distinct categories to identify knowledge gaps. Some of the prevalent gaps have already been identified in this chapter, including the lack of technical expertise in designing SWFs and aligning them to a country's macroeconomic objectives. Additionally, few roadmaps guide the establishment and management of SWFs. The motivation of this study is to address these gaps and the lack of models in other social science studies.

An evaluation of the literature is beneficial, since it clearly identifies existing knowledge gaps that the thesis can address. The scope of the literature survey focuses mainly on the social sciences, including economics and political science, as the fields that shed light on the development and implementation of SWFs. For example, economic studies are important in understanding how SWFs are developed and employed to achieve macroeconomic objectives. Likewise, political science studies elaborate on the political factors that affect the governance of SWFs in different countries.

To guide the literature review process, the available models were investigated first. Identifying a model allows for a critical assessment of the literature findings and an outline of the knowledge gaps that the

conceptual model would address. Several models were reviewed to assess their appropriateness for the current thesis. The first is the chart method or concept matrix, which allows an evaluation of each source in the thesis using pre-defined categories (Müller-Bloch and Kranz, 2015). Müller-Bloch and Kranz (2015) used the model to assess the literature by highlighting diverse topics or concepts. This approach could be adopted in this thesis to synthesise the literature and extract findings from the raw data. Figure 2-4 below details how to apply the concept matrix diagram to evaluate a number of studies.

Source	Concept			
	Concept 1	Concept 2	Concept 3	...
Source 1	X			
Source 2		X	X	
Source 3		X		
...				

Figure 2-4: Concept Matrix Evaluation Model
Source: Müller-Bloch and Kranz (2015)

Figure 2-4 details the concept matrix approach to evaluating the literature. Authors can use the gaps identified in the matrix to determine the existing gaps in the literature. In this manner, Müller-Bloch and Kranz (2015) argued that the matrix allows authors to address concepts that have not been examined frequently in previous studies. However, the concept evaluation matrix model was not adopted in this thesis, since it focuses on the assessment of literature that has been grouped into categories, while this thesis aims to examine all reviewed studies to understand the gaps that are unresolved.

The second model identified is the four-quadrant framework, which examines the literature based on its purpose and outcome (Althonayan, 2003). Althonayan (2003) reported that the four quadrants are based on the study's adopted approach, its main outcomes, and the formulated recommendations. In another study, Keith (2014) found value in using the four-quadrant framework, since it allows one to achieve a clear categorisation of the literature by determining the specific category into which each study falls. The four quadrants in this framework are divided as follows: (1) visionary and descriptive, (2) visionary and prescriptive, (3) execution-based and descriptive, and (4) execution-based and prescriptive. The framework categorises studies as being either visionary or execution-based, where visionary approaches focus on a high-level description, while execution-based approaches are concerned with in-depth details on how to implement key concepts (Althonayan, 2003). The studies may be further structured according to the thesis outcomes, which are divided into descriptive or prescriptive categories depending on whether the proposed outcomes have already been implemented (descriptive) or are recommended (prescriptive; Alsaggaf and Althonayan, 2018). Table 2-4 illustrates the four quadrants in this framework.

Table 2-4: Four-Quadrant Framework

Thesis Philosophy			
Thesis Outcomes		Visionary	Execution-based
	Descriptive	Quadrant I Visionary and descriptive studies: detailing SWF definitions and their objectives	Quadrant III Execution-based and descriptive studies: elaborating on how SWFs are implemented and aligned to macroeconomic objectives
	Prescriptive	Quadrant II Visionary and prescriptive studies: discussing ideal approaches to designing SWFs and their goals in achieving macroeconomic objectives	Quadrant IV Execution-based and prescriptive studies: discussing the ideal approaches to implementing SWFs and aligning them to macroeconomic objectives

Source: Adapted from Althonayan (2003)

As Table 2-4 details, the visionary and descriptive studies (Quadrant I) analysed in the literature review mainly discuss the definitions of SWFs and their macroeconomic objectives, while the visionary and prescriptive studies (Quadrant II) outline the links between SWFs and the achievement of macroeconomic objectives. The execution-based and descriptive studies (Quadrant III) detail the guidelines for designing SWFs and linking them to macroeconomic indicators. Finally, the execution-based and prescriptive studies (Quadrant IV) describe clear models for implementing the intended outcomes. Several adaptations were made to the framework to fit the needs of this study, including aligning the various quadrants to the objectives of the thesis.

The four-quadrant framework is used to assess the effectiveness of the literature in organising the studies into distinct categories, such as visionary and execution-based categories. Furthermore, as Althonayan (2003) argued, the main benefit of this framework is that it facilitates a clear understanding of the reviewed literature and identifies possible paths that the thesis could take. Thus, there is a need to easily identify existing gaps in the visionary or execution-based aspects of the literature. A number of empirical sociological studies undertaken in GCC countries have adopted the four-quadrant framework (Althonayan and Sharif, 2010; Althonayan and Althonayan, 2017; Alsaggaf and Althonayan, 2018). For example, Althonayan and Sharif (2010) used the four-quadrant framework to synthesise their findings on the alignment of business and technology strategies within the airline industry. Althonayan and Althonayan (2017) also used the framework to assess enterprise resource planning (ERP) systems in higher education, while Alsaggaf and Althonayan (2018) used it to investigate customer intentions and service quality. These examples reveal that the four-quadrant framework has been widely adopted in empirical studies in the social sciences; as such, it is considered a relevant framework for this thesis.

As Table 2-4 details, the studies discussed in this literature review can be categorised according to whether they are visionary or execution-based. The studies that falls into the visionary thesis category focuses on understanding the concept of SWFs, while studies that falls into the execution-based thesis category examines the practical implementation of SWFs in detail to facilitate macroeconomic development. Visionary and execution-based studies can be further subdivided into prescriptive and descriptive studies. Those that fall into the prescriptive category detail how SWFs should interact with the economic conditions of a country, while those that fall into the descriptive category discuss the actual interaction of SWFs with the country's economic conditions. Visionary studies provide a high level of conceptual description, while execution-based studies focus on the underlying execution details. For all of these reasons, the four-quadrant framework is adapted for this thesis to allow for a comprehensive evaluation of the studies reviewed and to facilitate the identification of any knowledge gaps in the

literature. The literature evaluation framework is also detailed in Table 2-5 below, which focuses on the investigation of the relationship between the design of SWFs and macroeconomic indicators in Kuwait, Singapore, and Qatar.

Table 2-5: A Literature Evaluation Framework

<table>
<tr><th colspan="4">Thesis Philosophy</th></tr>
<tr><td rowspan="3">Thesis Outcomes</td><td rowspan="2">Descriptive</td><td>Visionary</td><td>Execution-based</td></tr>
<tr><td>Quadrant I

Describes SWF definitions and details their objectives
• Definitions of SWFs from published work
• Objectives that each type of SWF ought to achieve</td><td>Quadrant III

Describes the execution processes for establishing SWFs and aligning them to macroeconomic objectives
• Evaluates existing processes for establishing SWFs to guide economic development
• Details challenges or issues in establishing SWFs
• Provides recommendations to facilitate the alignment of SWFs and macroeconomic objectives</td></tr>
<tr><td>Prescriptive</td><td>Quadrant II

Presents prescriptive approaches to SWFs
• Provides a prescriptive discussion of the impact of SWFs on economic development
• Introduces theories on the alignment of SWFs to macroeconomic objectives</td><td>Quadrant IV

Discusses prescriptive approaches to aligning SWFs to macroeconomic objectives
• Discusses how SWFs can be aligned with macroeconomic objectives
• Identifies issues and challenges that may affect the alignment of SWFs with macroeconomic objectives
• Discusses models, frameworks, and principles to guide the design of SWFs</td></tr>
</table>

Source: Adapted from Althonayan (2003)

Table 2-5 details various concepts that guided the evaluation of the examined studies. Studies outlined in Chapters 1 and 2 were placed in the framework as part of the literature analysis and to identify existing gaps in the literature, as discussed in the sections below. Quadrants I and II include studies that examine the visionary aspects of the SWFs, namely, how SWFs are defined and their associated uses. Quadrants III and IV include studies that evaluate the descriptive and prescriptive approaches to aligning SWFs with the macroeconomic objectives of a country.

2.5.1 Quadrant I Analysis

The studies placed in Quadrant I elaborate on the definitions of SWFs and their objectives. The literature analysis revealed that SWFs are viewed as revenues generated from the surplus of government reserves (Cummine, 2016). Thus, SWFs are based on the excess revenues that a government generates from a number of economic activities. Lu et al. (2009) defined SWFs somewhat differently, describing them as special-purpose investments created by the government. Dixon and Monk (2011) further emphasised that SWFs are tools that aim to improve economic development over the long term. The studies have classified SWFs as institutional investors designed to facilitate the achievement of government developmental

objectives (Johan, Knill and Mauck, 2013). As institutional investors, SWFs rarely face competition in the flow of funds, although they compete with one another to achieve target rates of return in the international financial markets (Clark, 2014). The literature emphasises that SWFs are planning tools adopted by governments to sustainably support the achievement of development objectives (Johan, Knill and Mauck, 2013). In addition, the funds are also institutional vehicles that contribute to the achievement of the government's financial goals (Wagner, 2014).

Further evaluation of the literature indicates that, theoretically, SWFs are designed to achieve one or a combination of four objectives: economic stabilisation, development funds, pension funds, and savings (Blundell-Wignall, Hu and Yermo, 2008). The first objective of some SWFs is to support the local economy with the aim of enhancing the diversification of assets (Al-Hassan et al., 2018). In turn, the SWFs seek to stabilise the economy and ensure that it is isolated from volatility and price shocks (Raymond, 2010). The evaluation further indicates that SWFs are also designed to enable governments to achieve better returns on their reserves, particularly by reducing the negative carrying costs of holding reserves or obtaining higher returns on ample reserves (Al Hassan et al., 2018). Moreover, some SWFs aim to facilitate the provision of pensions for future generations via SSRFs or SPRFs (Dreassi, Miani and Paltrinieri, 2017). This success of SWFs in supporting macroeconomic objectives demonstrates that governments can rely on them to fund social security systems and, thus, relevant pension plans, including pay-as-you-go plans (Blundell-Wignall, Hu and Yermo, 2008). Wills, Senbet, and Simbanegavi (2016) also argued that, in the case of SDFs, the rate of return is not as important as the sustainable economic development of the country. In other words, SDF growth may not be as highly prioritised as growth in economic development. However, governments can rely on SDFs to promote industrialisation and achieve strategic and political objectives.

The analysis of literature that falls into Quadrant I indicates that the visionary and descriptive approaches to SWFs describe the funds as tools of institutional planning or as institutional investors that enable governments to meet a variety of development objectives. The evaluation also indicates that different types of SWFs have particular objectives, including economic stabilisation, development funds, pension funds, and savings.

2.5.2 Quadrant II Analysis

Quadrant II includes those studies that took a prescriptive approach to SWFs. These studies explain how governments and policymakers design SWFs to achieve the desired macroeconomic objectives. The literature review examined studies on the history of the funds and how they evolved over time to understand how SWFs are designed. The studies discussed in Section 2.2 demonstrate that although the governments are the owners of the SWFs, these funds are managed directly or indirectly by governmental or external agencies (Blundell-Wignall, Hu and Yermo, 2008). Thus, when designing SWFs, the government can choose to either manage the funds directly via an agency or assign a private company to oversee the operations. These studies further categorise SWFs as being active or passive investments (DePamphilis, 2015). SWFs are considered active investments if governments rely on them to fund development projects within the country, such as infrastructure. By contrast, they are viewed as passive investments if the government views the funds as savings pools that can be accessed during periods of crisis, including global financial crises (Aggarwal and Goodell, 2017).

Similarly, governments can adopt direct and indirect investment approaches to SWFs. In direct approaches, the state directly invests in economic development, using the funds as financial resources (Fry, McKibbin and O'Brien, 2011). In indirect approaches, the government purchases shares or equity in firms that are performing well economically. In the case of indirect investments, the government does not control the investment decisions implemented by the firms; instead, the investments provide only a source of revenue. Therefore, there is a sharp contrast between direct and indirect investments, with the government having an influence on the type of SWF investment being made in direct models.

However, regardless of whether SWFs are managed by private corporations, the studies further indicate

that all of these funds aim to achieve similar objectives, such as investing in foreign currency reserves in different countries (Glickman, 2014; DePamphilis, 2015). This objective also indicates that the government can decide whether to invest foreign reserves in the country or across different geographical regions.

Further studies indicate that diverse sources can be used to fund SWFs, such as excess foreign reserves, public pension assets, and surplus contributions (Fry, McKibbin and O'Brien, 2011). This finding implies that, when designing the SWFs, governments should determine the financial sources of the funds. In many cases, the availability of natural resources, such as oil, influences the design of SWFs, as many are funded with surplus contributions from the sale of commodities. Nonetheless, as Fry, McKibbin, and O'Brien (2011) and Aggarwal and Goodell (2017) emphasised, governments are not restricted to natural resources as the main source of financing for SWFs. Therefore, when designing SWFs, governments must consider several aspects: (1) whether the funds will be managed by state or private entities; (2) what the sources of the funds will be, namely, commodities or non-commodities; (3) what the objectives of the funds are; and (4) whether the government can establish multiple SWFs to support the economy.

2.5.3 Quadrant III Analysis

Studies that fall into Quadrant III focus on descriptively establishing how SWFs could be aligned with a country's macroeconomic objectives. Therefore, the studies discuss the guidelines that countries use to align SWFs to the macroeconomy and issues that emerge in this process; they also provide recommendations to address these problems. Studies reviewing the history and evolution of SWFs have indicated that, in many countries, SWFs were aligned to different macroeconomic objectives after they were established without using any type of guiding model. For example, Kuwait established the first SWF in 1953 to create a stabilisation fund against price volatility and shocks in the oil market (Das, Mazarei and Van der Hoorn, 2010). Moreover, Buteica and Petrescu (2017) noted that Kiribati designed its SWF to invest the surplus revenue from phosphate mining rather than fund it. Thus, both SWFs were established to align with the governments' objectives of stabilising their economies. However, the alignment of the SWFs to these objectives was not achieved via formal models or theoretical foundations; instead, the governments simply considered the SWFs as a source of revenue to support their macroeconomic objectives. As a result, the SWFs were unable to fulfil these objectives.

Examining non-commodity-based SWFs, Buteica and Petrescu (2017) discussed the New Mexico SIC, founded in 1958 as the third SWF to be created with the goal of stabilising the economy. The SIC (2022) indicated that the New Mexico SWF manages investments for the state's four permanent funds, handling monies from land grants, severance taxes, the tobacco settlement, and the water trust. However, many countries have not followed models when establishing their SWFs and deciding how to align them to their macroeconomic objectives, regardless of whether the SWF is commodity- or non-commodity-based.

The studies also reveal that governments face challenges when explaining the details of their plans, including the type of funds needed or the investment strategy they require (Krishnadas, 2013). However, although governments may lack models to follow when designing SWFs, they are required to adhere to ethical standards. A prominent example of such standards is the Santiago Principles, a set of 24 generally accepted practices endorsed voluntarily by members of the SWFI (IFSWF, 2022) to guide the investment and governance of SWFs. These principles aim to ensure the stability of the global financial system and maintain a steady investment climate (Norton, 2010). Studies have argued that the Santiago Principles have been beneficial in enabling governments to achieve transparency in managing and regulating SWFs and ensuring that these funds do not affect the stability of the global financial system. Dixon (2013) observed that compliance with the Santiago Principles guarantees transparency for different sponsors and external analysts, thereby ensuring that SWFs are managed appropriately. However, as studies such as that conducted by Hildebrand (2008) points out, there is still a risk that political agendas may negatively affect the transparency of SWFs. For example, political motivations may play an important role in a government's decision to invest large sums in private companies (Hildebrand, 2008).

Therefore, the evaluation of the studies in Quadrant III reveals that many governments lack a model by which to align their SWFs with their macroeconomic objectives. As a result, they may adhere to the Santiago Principles and follow the models of countries that were successful in establishing their SWFs, including Norway, China, and Singapore (SWFI, 2022). However, these models are often relevant only to the countries that use them, and other nations often fail to consider the internal issues affecting the allocation and withdrawal of funds from the SWFs when they adopt these models. One key finding of these studies is that generic rules such as the Santiago Principles do not account for the unique conditions within the various countries adopting them. For example, Al Suwaidi and Caruana (2008) reported that, according to the Santiago Principles, SWFs should consider financial and economic risk as well as return-related considerations. However, a close inspection of the principles reveals that countries adhering to the guidelines are not further advised on how to invest the SWF funds for economic development. For instance, there is no indication of which sectors of the economy to invest in. The lack of guidelines that are specific to the economic conditions within a given country creates challenges when aligning SWFs with macroeconomic objectives. However, the multiplicity of SWFs in diverse countries provides leeway for countries to select models that they could use to create their own SWFs. For example, models for commodity-based SWFs could take inspiration from funds in countries such as Qatar, Kuwait, and Saudi Arabia.

2.5.4 Quadrant IV Analysis

The studies that fall into Quadrant IV take a prescriptive approach to aligning SWFs to macroeconomic objectives, discussing possible prescriptive challenges and models to guide the alignment of SWFs to the objectives and potential approaches for doing so. In discussing the economic problems that governments face, such as unemployment and high inflation rates, Gelb et al. (2014) argued that although SWFs are linked to the achievement of macroeconomic objectives such as economic stabilisation and intergenerational equity, many countries have not aligned their funds with national macroeconomic indicators. Furthermore, Wills, Senbet, and Simbanegavi (2016) found that many countries have adopted the wrong type or the wrong mandate and operational model for their SWFs, leading to a vast reduction in the ability of the fund to achieve the country's macroeconomic objectives. Thus, these studies argued that governments should align their SWFs with their individual macroeconomic indicators to enhance their effectiveness.

In addition to arguing that SWF objectives should be aligned with macroeconomic indicators, the studies also emphasised the importance of using a country's fiscal and monetary policies to encourage the SWF's efficient use of money (Hamilton and Hepburn, 2014). For example, Krishnadas (2013) observed that governments often were unable to explain the details of their plans in terms of the type of fund needed or the investment strategy required. Therefore, this study argues that governments must be aware not only of their countries' current economic conditions but also have clear macroeconomic objectives with specifically defined objectives that are based on empirical values and statistical results. Furthermore, the GlobalSWF (2021) indicated that many countries lack the technical expertise to develop SWFs and align them to their macroeconomic objectives. The study indicated that countries that are beginning to adopt SWFs, such as African nations or Papua New Guinea, lack technical expertise in designing funds that could serve future generations. Consequently, the reports emphasise the need to develop a roadmap or model that countries can use to answer core questions regarding the establishment of SWFs. Additionally, these guidelines should address political influences and decisions by outlining the appropriate way to make withdrawals from and allocations to the SWF (GlobalSWF, 2021).

The studies in Quadrant IV indicate that when developing SWFs, governments should prioritise the following specific issues: (1) understanding how to link their SWFs to their macroeconomic indicators, (2) ensuring that SWFs are well-coordinated with fiscal and monetary policies, (3) adhering to roadmaps that link their SWFs to macroeconomic indicators, and (4) providing controls to minimise or alleviate political influence in establishing SWFs.

2.6 Gap in the Literature Regarding Designing Sovereign Wealth Funds in Macroeconomic and Development Contexts

Table 2-6 below details the results of the literature evaluation using the quadrant framework.

Table 2-6: Results of the Literature Evaluation Framework

Thesis Philosophy			
Thesis Outcomes		Visionary	Execution-based
	Descriptive	Quadrant I *Describes SWF definitions and details their objectives* Cummine (2016) Lu et al. (2009) Dixon and Monk (2011) Johan, Knill, and Mauck (2013) Johan, Knill, and Mauck (2013) Wagner (2014) Blundell-Wignall, Hu, and Yermo (2008) Al-Hassan *et al*. (2018) Raymond (2010) Al Hassan *et al*. (2018) Dreassi, Miani, and Paltrinieri (2017) Clark and Monk (2015) Wills, Senbet, and Simbanegavi (2016)	Quadrant III *Describes the execution processes of establishing SWFs and aligning them to macroeconomic objectives* Das, Mazarei, and Van der Hoorn (2010) Buteica and Petrescu (2017) State Investment Council (2022) Ackah (2021) Krishnadas 2013) International Forum of Sovereign Wealth Funds (2022) Hildebrand (2008) Sovereign Wealth Fund Institute (2022)
	Prescriptive	Quadrant II *Presents prescriptive approaches to SWFs and their macroeconomic objectives* Glickman (2014) DePamphilis (2015) Fry, McKibbin, and O'Brien (2011) Aggarwal and Goodell (2017) GlobalSWF (2022)	Quadrant IV *Discusses prescriptive approaches to aligning SWFs to macroeconomic objectives* Gelb *et al*. (2014) Wills, Senbet, and Simbanegavi (2016) Krishnadas (2013) Hamilton and Hepburn (2014) GlobalSWF (2021)

Source: Adapted from Althonayan (2003)

An examination of the studies detailed in Table 2-4 reveals several gaps in the literature in Quadrants II, III, and IV. The findings in Table 2-4 indicate that the majority of the studies analysed fall under Quadrant I and, thus, are concerned with outlining the theoretical definitions of SWFs. Consequently, most studies in the literature on SWFs focus on high-level theoretical descriptions of the concept, while fewer scholars have conducted in-depth studies on how SWFs could be aligned with a country's macroeconomic objectives. Therefore, this current thesis has identified a research gap: There is a shortage of studies examining the implementation of SWFs and the models for aligning the funds to a country's macroeconomic objectives. Thus, this current thesis aims to fill this knowledge gap.

2.6.1 Lack of Roadmaps in Sovereign Wealth Fund Design

An analysis of the studies in Quadrants II and III reveals that although many governments have established SWFs, they continue to lack a model through which to align their SWFs to their macroeconomic objectives. The studies demonstrated that, in some cases, governments have adopted inappropriate SWFs that could

not be aligned with the country's formulated macroeconomic objectives, leading to further challenges in terms of loss of financial revenue. The analysis of the visionary studies also revealed that policymakers face challenges when determining how to design SWFs, such as deciding between commodity or non-commodity funding sources and identifying the number of SWFs that the government should establish. Additionally, policymakers struggle to decide on the types of SWFs they should adopt in their countries based on the analysis of available resources and macroeconomic objectives. These studies indicate that there is a lack of clear implementation models or roadmaps to help policymakers design SWFs, especially when individual countries face unique situational factors. The existing research also demonstrates that policymakers must make many decisions when designing SWFs and often do so without any models or guidelines, which means they face significant decision-making challenges.

The insights from this analysis further indicate a lack of clear guidelines and models to facilitate the management of SWFs once policymakers have established them. In some instances, countries have opted to create private agencies to manage and oversee the SWFs, while in other cases, the state has chosen to directly manage the SWF.

2.6.2 Lack of Competence in Sovereign Wealth Fund Design

Further analysis of the studies in Quadrant IV reveals that, in addition to the lack of competence in designing SWFs, governments also face challenges when aligning the SWFs to the macroeconomic indicators in their home countries. Therefore, the identified literature gap underscores the need for a model that governments can follow to establish SWFs and easily align them with their countries' macroeconomic indicators. Moreover, the model should address the previously identified concerns regarding whether to establish commodity or non-commodity SWFs; the management of the funds, either privately or by a state agency; and the broad macroeconomic objectives to be fulfilled by the SWF. Such insights underscore the need to align SWF's mandate to the operational model and its country's macroeconomic objectives.

The evaluation also emphasised the lack of mechanisms to ensure that SWFs are well-coordinated with the country's fiscal and monetary policies, thus encouraging the efficient use of funds. A further insight is that information regarding the integration of macroeconomic tools should be available to ensure that the funds are used efficiently to achieve macroeconomic objectives, such as fiscal and monetary policies. Thus, this paper has identified a lack of expert knowledge on SWFs and their design as well as a shortage of knowledge surrounding a country's economic condition and its overall functions, including the relevant fiscal and monetary policies that can help it achieve its macroeconomic objectives.

2.7 Conclusion

The synthesis and evaluation of the literature findings in this chapter emphasise the evolving nature of SWFs in terms of their mandates and the divergent governance principles and procedures that have emerged over time. The studies reveal that SWFs facilitate a diverse set of macroeconomic objectives, including infrastructural growth and development, pension schemes, and savings funds. A review of the history of SWFs reveals an evolution in the use of these funds, which were first established in the 1950s and have grown steadily over time.

An analysis of the history of SWFs also demonstrates that governments have used diverse strategies to establish the funds, considering either commodities such as oil, natural gas, and minerals or non-commodities such as foreign exchange reserves. The evaluation of the literature using the four-quadrant framework also helped identify significant knowledge gaps that are the basis for the development of this study's conceptual model. The literature review indicated that SWFs have been differently conceptualised as a pool of assets and as institutional investors that have allowed governments to achieve their development objectives, ranging from stabilisation of the economy against price volatility to the establishment of pensions and social care funds for the elderly. However, further analysis indicates that there are several gaps in the literature involving the links between SWFs and macroeconomic indicators in

individual countries and the shortage of technical expertise in designing the funds. The studies have also identified challenges facing countries that adopt SWFs, including political interference. In some cases, governments chose the wrong type of SWF or an ill-suited mandate and operational model, reducing the efficacy of the fund in achieving the country's macroeconomic objectives.

This lack of technical expertise is a significant problem that informs the next chapter. Chapter 3 develops an easy-to-follow model that can guide the design of SWFs and their implementation to improve the achievement of macroeconomic objectives. To address the aforementioned gaps in the literature, studies have advocated for the development of roadmaps or models that enable governments to develop SWFs. Thus, this thesis seeks to develop such a model.

Chapter 3: Conceptual Model

Chapter 3 explores various governmental models for implementing SWFs in two distinct parts. Section 3.1 presents the conceptual foundations in which existing gaps in the reviewed models are identified to facilitate the development of the model in this thesis. Then, Section 3.2 presents the proposed conceptual model for achieving the objectives of this thesis. The insights from Chapter 3 are relevant in developing the thesis methodology, as they help identify appropriate data collection and analysis decisions.

3.1 Part 1: Conceptual Foundations

This section elaborates on the underlying conceptual foundations involved in the implementation of SWFs, in which the focus is directed towards the theory and model, existing SWF model management, model evaluation, and knowledge gaps in the existing models.

3.1.1 Introduction

An investigation of the impact of macroeconomic objectives and indicators on the design of SWFs in Kuwait, Singapore, and Qatar was conducted for this thesis, and it identified principles for guiding the establishment of SWFs in other countries. Thus, a conceptual model to link the different variables and outline the proposed relationship between the design of SWFs and their role in achieving macroeconomic objectives is developed in this thesis. The focus of the previous three chapters was to identify the knowledge gaps in the existing literature and to further examine the available literature on the selected thematic topics. In Chapters 1 and 2, a gap was identified regarding the lack of models to guide the design of SWFs. The findings also indicate that policymakers face challenges in deciding which SWFs are the most appropriate for their economies. Therefore, the major contributions of this thesis are its discussion of the institutional design of SWFs and the development of a conceptual model that can guide policymakers in designing SWFs and aligning them to the country's macroeconomic objectives. The alignment of SWFs to a country's macroeconomic objectives fiscal goals is an important KPI by which to assess how these funds are managed to guarantee high performance.

The literature review identified critical links between the aim of this thesis and the institutional design of SWFs; it found that, although no models exist for the development of a SWF design, developing such a model would be valuable for promoting the advancement of SWFs. Noteworthy findings gathered in the review included definitions of SWFs and information regarding their conceptualisation, implementation, history, and evolution. Following the evaluation of the literature in Chapter 2, this chapter develops a conceptual model that addresses the identified issues.

This chapter is divided into two parts. The first part, Section 3.1 (comprising Sub-sections 3.1.1–3.1.5), presents the conceptual foundations of the new model in which knowledge gaps in the reviewed models are identified to facilitate its development. The second part, Section 3.2 (comprising Sub-sections 3.2.1–3.2.3), then presents the proposed conceptual model for achieving the thesis objectives. The insights from Chapter 3 contribute to developing the thesis methodology and help identify appropriate data collection and analysis decisions.

Part one section 3.1 is divided to five sub-sections that examine existing SWF theories and models and discuss the theoretical perspectives influencing their implementation; review existing SWF models; evaluates these models' strengths and shortcomings; and examine the knowledge gaps in the identified models. Then, the three sub-sections in Section 3.2 present the proposed thesis model, elaborate on the elements of the proposed model, and further validate the developed model and detail its contributions. Section 3.3 presents the conclusion and highlights the main findings of the chapter.

3.1.2 Theory and Model

A review of existing theories can reveal the factors affecting SWFs that influence the establishment of the funds, including market and industry factors. Additionally, agency theory and institutional theory are important in the achievement of the thesis objectives, as they contribute to understanding the process of establishing SWFs and using them to promote economic growth.

3.1.2.1 International Trade and Portfolio Theories

Foreign portfolio management theories can be used to explain the factors affecting SWFs and their impact on financial markets and industries. These theories further discuss how SWFs may affect a country's economic growth through the appropriate fund injections, regulations, accountability, and transparency (Veljko, Bernard, and Merganser, 2008). The foreign portfolio theory is important in the context of this study, as it can help policymakers identify the potential roles of SWFs, such as enhancing a country's economic growth levels.

Gandolfo (2016) and Barney and Hesterly (2008) discussed the role of the international trade theory in explaining the underlying motivations for establishing a SWF. The theory describes how a country's export and import of goods and services are related to its macroeconomic objectives, whereby the export and import activities generate income to support goals such as savings and infrastructure development.

Barney and Hesterly (2008) claimed that the international trade theory is an aspect of the business management theory that merely clarifies the sources of income for the creation of SWFs (Barney and Hesterly, 2008). Fotak, Gao, and Megginson (2016) applied the international trade theory to the creation of a SWF by demonstrating that a continuous trade surplus arising from a favourable trade account relating to exports and imports leads to the accumulation of foreign reserves. These reserves can eventually reach an adequate level, enabling governments to establish SWFs. Therefore, examining SWFs through the international trade theory emphasises their reliance on international sources of income for capital injection. The theory sheds further light on the various possible income sources for SWFs, including foreign sources such as foreign exchange reserves.

A third theory relevant to SWFs is the dynamic portfolio theory. The accumulation of wealth from trade surpluses or from exporting commodities requires investment funds to balance risks and returns and determine the appropriate allocation of assets. The dynamic portfolio theory can be used to determine how best to do this (Rozanor, 2006; Aggarwal and Goodell, 2017). According to Rozanor (2006) and Aggarwal and Goodell (2017), the dynamic portfolio theory has been used for the establishment of SWFs that aim to increase returns by diversifying portfolios. Madura and Ngo (2008) also reported that the return on investment depends on the risks associated with the SWF portfolio. Daniel and Brickman (2001) reported that the modern portfolio theory identifies two types of investments: the first maximises the rate of return with a given risk, and the second minimises the risks with given returns. Subsequently, the dynamic portfolio theory indicates that willingness to increase returns or reduce risks can be achieved by allocating the investment portfolio's indifferent assets, such as bonds and cash, to ensure a balance or equilibrium (Daniel and Brickman, 2001). The argument advanced by this theory is that a diversified portfolio of assets can offer an equilibrium between risks and returns. The dynamic portfolio theory is important in the context of the current study, as it indicates that SWFs can enhance the diversification of their portfolios in a given country.

Bernstein and Lerner (2009) further argued that the chosen equilibrium will vary depending on the country, because adopting the expected risk and return from a portfolio depends on the choices made by decision-makers, the number of funds available, and the targeted returns from the investment portfolio. Based on a synthesis of the research by Daniel and Brickman (2001) and Bernstein and Lerner (2009), the decision-makers influencing the returns of the SWF investments may be political leaders, local equity managers, or external professional managers. Despite the political influences on the agenda of the SWFs, the findings reveal that SWFs provide opportunities for higher-risk businesses to access capital, as fund managers prefer a high-risk approach to gain higher returns (Grieve, 2008). Notably, a disequilibrium between risk and return in a SWF may cause an imbalance in the capital market, as these investments are

large enough to affect the market (Grieve, 2008). Despite the relevance of the international portfolio and trade theories, this study focuses mainly on two other influential theories: the institutional theory and the agency theory, which illuminate the complexities associated with the management of SWFs.

3.1.2.2 Institutional Theory

The institutional theory assumes that political, economic, and social context shapes and influences the design of institutions, including SWFs (Debroux, 2010). It argues that a country's norms, values, and rules play a major role in designing SWFs, as do its political, economic, and social contexts. De Jonge (2015) elaborated that the institutional theory not only focuses on explaining the entrenchment of organisational structures and practices but also discusses how and why changes occur. De Jonge (2015) highlighted two main ways in which institutional pressures can promote change within organisations. Firstly, new rules can be introduced and enforced, leading to pressures that can create changes both directly or indirectly through institutional dependencies, which are rules and standards. An example of this is the introduction of new listing rules for a company, which leads to new standards for the composition of the board members in the company. Secondly, companies may feel pressure to copy successful regulations or company policies from other actors during economic and political changes (De Jonge, 2015). In the context of SWFs, the institutional theory explains the pressures that may influence countries to establish their own SWFs – either because such funds become legitimised in the country or because authorities in the country enforce the establishment of SWFs. The institutional theory is used in this thesis because SWFs follow institutional processes that also operate in alignment with established rules and regulations. Additionally, the theory has been adopted by similar studies that have examined SWF management and have conceptualised the funds as institutional investors (Nowacki, Monk, and Decoster, 2020; Martínek, 2021).

The institutional theory provides new insights into the processes used in the establishment of SWFs across the countries selected for this thesis analysis. As a result, this theory addresses the formulated thesis objectives, as findings from the theory indicate that countries can be motivated to establish SWFs due to pressure to replicate other successful political and economic funding forms. The theory also sheds light on the importance of rules and proper governance procedures for SWF management.

3.1.2.3 Agency Theory

The agency theory is important to the current thesis, as it emphasises the principal–agent relationship between agencies managing SWFs and citizens, who are the benefactors of the SWFs. The theory allows for an understanding of the intricacies of this sensitive relationship as well as the conflicts that emerge between the managers of the funds and the owners, namely, the citizens.

According to Panda and Leepsa (2017), an agency relationship is one in which one or more people (principals) engage other individuals (agents) in undertaking services on their behalf. This involves the delegation of decision-making authority to a particular agent. Bendickson et al. (2016) provided an example of the agency relationship that occurs in large corporations, in which the owners of the company are different from the agents who manage it on a daily basis. As a result of the different interests of each party, conflicts may arise. Shareholders may be concerned with profits, while the management board may focus on increasing the competitiveness of the corporate organisation. Therefore, the authors argued that agency costs arise because owners and managers have differing interests due to the separation of ownership from control. An agency cost is defined somewhat differently as that which occurs when the agent is paid by the principal to work on their behalf (Jensen and Meckling, 1976). Therefore, the agency theory explains how asymmetric information and moral hazard may cause market failure, where asymmetrical information is referred to as information failure, which occurs when one person or entity in an economic transaction has greater knowledge than the other party (Akerlof, 1970).

Al-Saidi (2012) argued that the agency theory can be extended beyond the company's owners and

managers to encompass employers and employees. Thus, the theory can explain the issues that may arise in the management of SWFs between the citizens of the country, who own the resources, and the government agencies that act as the custodians that help manage them. Aguilera, Capapé, and Santiso (2016) proposed that a conflict of interest also arises between institutional investors and the company that receives the donor funds due to differing decisions regarding SWF management and investment. Nguyen and Nguyen (2021) further revealed that conflicts may arise between the top management of the SWF, government officials, and the external managers hired by the SWF managers to operate the fund, since the officials lack the expertise and specialised knowledge to oversee it. Sam (2012) also described the principal–agent theory as a nexus of contracts between the government (principal) and the SWFs (agents). Sam argued that issues arise when agents that are not monitored by principals who make decisions to maximise their interests. Clark, Dixon, and Monk (2013) also discussed the role of an effective management structure in eliminating conflicts that arise due to agency theory, where fund managers and fund owners have differing interests. For example, in Australia the Future Fund Management Agency serves as a guardian rather than a trustee of the fund to manage the interests of the fund's beneficiaries (Clark, Dixon and Monk, 2013).

A review of the three conflicts concerning SWF management in the aforementioned studies (Al-Saidi, 2012; Nguyen and Nguyen, 2021; Aguilera, Capapé, and Santiso, 2016) suggests a need to adopt appropriate governance measures and control mechanisms to minimise conflicts and enhance the performance of SWFs. This thesis adopts the agency theory to explain the likely sources of conflict in the management of SWFs. This choice is supported by the fact that the agency theory is adopted in numerous studies that have examined the management of SWFs (Filatotchev and Wright, 2011; Al-Saidi, 2012; Nguyen and Nguyen, 2021; Aguilera, Capapé and Santiso, 2016). For example, Cummine (2016) applied the principal–agent theory to examine the relationship between the government and the citizens. By analysing a series of SWF case studies, Cummine (2016) concluded that governments may act in their own interests, which are misaligned with those of their citizens; consequently, Cummine suggested a citizen ownership model that is based on the democratic control of SWFs. Thus, this thesis advocates for control mechanisms that can reduce conflicts between the different parties managing the SWFs and the principals, who are the citizens of the country.

This study is the first to shed light on the selection paradigm for the principal–agent theory in the context of SWFs. For example, QIA is a government-owned Qatari institution that acts as an agent for the government. The institution has also made investments through other separate institutions (e.g., the Qatari Diar Real Estate Company) and has hired external (private) agents for cross-border investments (Nair and Nair, 2022). QIA works as both an agent and a principal, and the Qatari Diar Real Estate Company works as a sub-agent. Therefore, the agency theory is highly important in addressing the thesis objectives, which seek to compare the processes used in the establishment of SWFs in Kuwait, Singapore, and Qatar, because management differs among the SWF owners (the citizens of these countries). For instance, in all three countries, the agency theory considers the government to be the principal and the SWFs as the agent. As such, all three countries are characterised by principal–agent relationships.

Table 3-1 reveals that, when SWFs are established, the agents and principals are not specifically outlined.

Table 3-1: Principal–Agent Theory in the Context of SWFs

Principal	Agent
Government	SWFs

Source: Adapted from Jensen and Meckling (1976)

Table 3-1 above indicates that the SWF can act as both the agent and the principal, as it represents the citizens of a given country and is also an institutional investor that can improve the country's dynamic portfolio.

3.1.3 Existing Sovereign Wealth Fund Model Management

This sub-section aims to elaborate on existing SWF models, detailing how a variety of authors have addressed problems regarding the establishment and alignment of SWFs with economic development objectives. It identifies and discusses four existing main models. The first model explores the various factors affecting the sustainable growth and performance of SWFs (Al-Saidi, 2012). The second model evaluates the outward foreign direct investment (FDI) strategies of the SWFs during global financial market turbulence (Reddy, 2019). These models were selected because they align with the objectives of the current thesis to design a model to guide SWF institutional design. For example, Al-Saidi's (2012) model explains the variety of strategies that may be adopted to ensure sustainable management of SWFs. Likewise, Reddy's (2019) model elaborates on the impact of SWFs on FDIs and their role in addressing the global financial market crisis.

The third model focuses on the governance structure adopted by the Norwegian SWF, which many countries have looked to as a model for their own SWF development (Velculescu, 2008). The final model was drawn from the Islamic SWF model developed by Bahoo et al. (2019).

3.1.3.1 Sovereign Wealth Fund Strategies and Policies Framework in Oman

Al-Saidi (2012) developed this framework in Figure 3-1, which identifies diverse factors influencing the sustainable growth of SWFs, from investment performance to the success rate of the fund in Oman. Figure 3-1 below illustrates the framework.

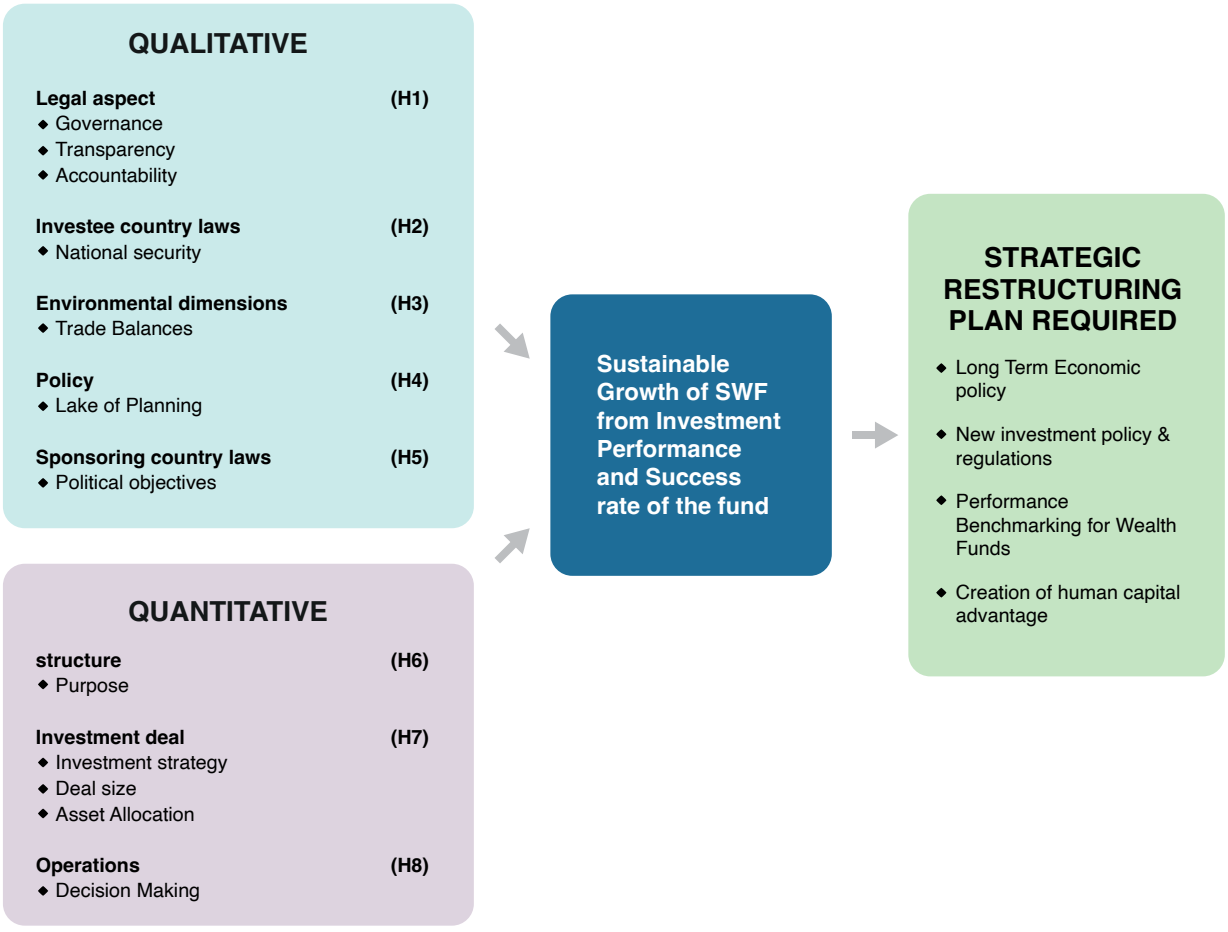


Figure 3-1: Framework of the Factors Influencing the Sustainable Growth of SWFs
Source: Al-Saidi (2012)

As detailed in Figure 3-1, the framework establishes eight factors that influence the sustainable growth of SWFs, as understood through the investment performance and success rate of the fund. The first factor is the legal aspect, which encompasses governance, transparency, and accountability (Al-Saidi, 2012). The establishment of SWFs in many countries is influenced by hidden political and social agendas; thus, there is a need to ensure that legal processes are adhered to when managing the funds. However, in democratic scenarios, the agendas are transparent and explicit, which enables further legislation. A case example to illustrate the need for democracy arises from the lack of accountability and transparency in withdrawals from the developed SWF. Where governance mechanisms and legal processes are not implemented, fund managers may misappropriate funds and fail to achieve the macroeconomic objectives established for the country. Therefore, these accountability processes aim to maximise the welfare of stakeholders and resolve conflicts (Al-Saidi, 2012). The processes also seek to develop appropriate systems for investments and ensure a suitable balance between risks and returns as well as transparency processes that focus on generating performance reports that are shared publicly with stakeholders (Al-Saidi, 2012). Truman (2007) also agreed that these legal processes are important, arguing that it is essential to ensure that foreign assets are well-managed and that the performance is transparent to all stakeholders.

The second factor in the model concerns the laws established in the investee countries, which may adversely affect or hinder the investment strategies (Al-Saidi, 2012). Furthermore, national security within the investee countries also impedes investment capabilities. The third factor in the model is environmental forces, which include trade balances and confidence in investee countries. Al-Saidi (2012) argued that it is easier to reverse capital flows into sovereign funds when countries have large deficits.

The fourth factor in the model is policy, which Al-Saidi argued is an internal factor: Governments can rely on policy mechanisms to influence the sustainable growth of SWFs. Aguilera, Capapé, and Santiso (2016) agreed, reporting that governments use multidimensional strategic governance approaches, including policies, to manage SWFs. The fifth factor is the sponsoring country's laws. Al-Saidi (2012) suggested that the growth of SWFs is directly influenced by the type of legislation passed within the local countries, to which investors must adhere before they can allocate funds to the SWF. Greene and Yeager (2008) agreed with this notion, providing the example of the UAE, which has imposed a limit of 40% foreign company ownership. Thus, SWFs that seek to invest in global companies in other countries must identify whether the laws in the given country can support mergers and acquisitions. Through these safeguards, a country's laws can influence the success of a SWF (Al-Saidi, 2012).

The sixth factor involves the structure of the SWF. Al-Saidi argued that the purpose of the SWF, its objectives, and the approaches to its management affect its overall performance and success (Al-Saidi, 2012). Martínek (2021) reported that, as institutional investors, SWFs are influenced by their strategy and overall investments. Al-Saidi (2012) argued that having a clear purpose in the management of a SWF is beneficial in the long run, as such a purpose influences both transparency and accountability. The seventh and eighth factors, which are investment deals and operations, respectively, underscore the role of strategy and asset allocation in influencing the growth of SWFs. These factors indicate that the type of strategies developed when investing in the fund and the reliance on expert knowledge influence SWF growth levels. In conclusion, this model argues that the sustainable growth of SWFs stems from multiple factors that encompass the legal, environmental, policy, and governance structures of the funds.

3.1.3.2 Sovereign Wealth Funds and an Outward Foreign Direct Investment Model

The second model, developed by Reddy (2019), explains the impact of the SWF's outward FDI strategy on gaining a competitive advantage within the market. Figure 3-2 illustrates the model.

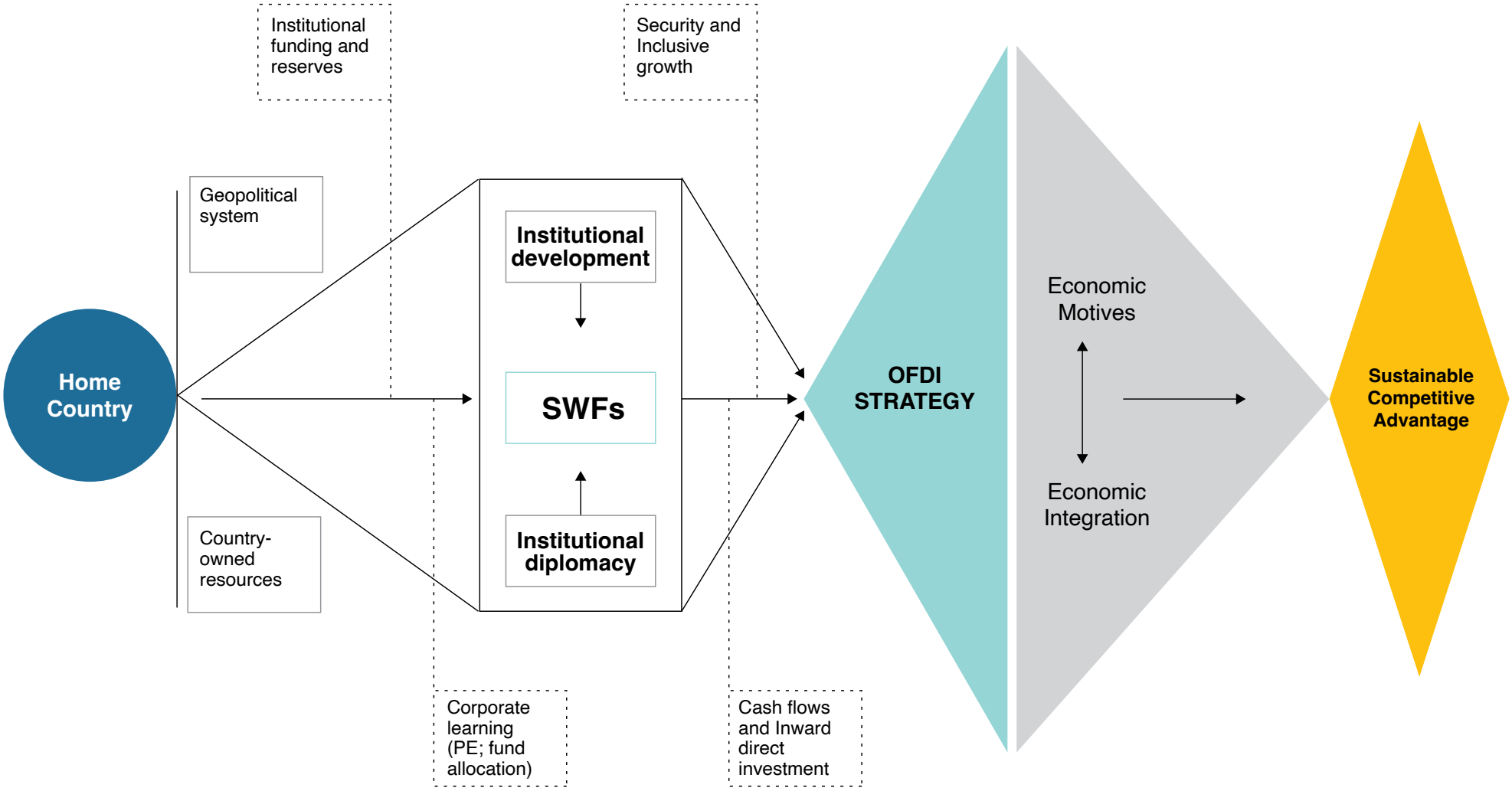


Figure 3-2: Framework for Sovereign Wealth Funds' Outward Foreign Direct Investment Strategies and Their Impact on Competitiveness
Source: Reddy (2019)

The model outlined in Figure 3-2 illustrates that the development of an FDI strategy is affected by factors such as geopolitical systems and country-owned resources, which guide the strategic development in different countries. Likewise, institutional funding from the home country through either the surplus of commodity exports or foreign exchange reserves further affects the establishment of the SWFs (Reddy, 2019). Once the SWFs are established, institutional development and diplomacy further influence the governments' large-scale investments in different countries through the allocation of FDI projects. The second set of factors that explain the objectives of FDI strategies includes economic motives and their integration (Reddy, 2019). Strategic partnerships, bilateral relationships, and the diversification of funds influence the achievement of sustainable competitive advantages. Therefore, the key contribution of this model is that it argues that the impact of factors within the domestic country – such as geopolitical systems, institutional funding, reserves, and country-owned resources – can ensure that SWFs enjoy a sustainable competitive edge.

3.1.3.3 Governance Structure of the Norwegian Sovereign Wealth Fund Model

The Norwegian SWF, also known as the government pension fund, has exemplary features that can serve as an important model for SWFs in other countries (Velculescu, 2008). Its best practices – including the integration of the fund into the national budget, the pursuit of a transparent investment strategy, and the diversification of its overseas assets – are examples of best practices that can be adopted by other countries. However, the Norwegian fund has not been adopted in other countries because of differences in economic conditions that lead to unique macroeconomic objectives that are in contrast to those of Norway. An example illustrating why the Norway model cannot be adopted in other countries can be found in the difference between the economic conditions in Singapore and Norway. Excess revenues from oil deposits fund the SWFs in Norway, while in Singapore, SWFs are funded by foreign exchange reserves and overseas investments. Due to differences in the sources of the funds, the model employed in the design of the Norway SWF is expected to be different from that used in Singapore. Moreover, it is unlikely that African countries and other developing nations can implement the advanced Norwegian model due to significant differences in economic conditions, political systems, and development stages of their economies.

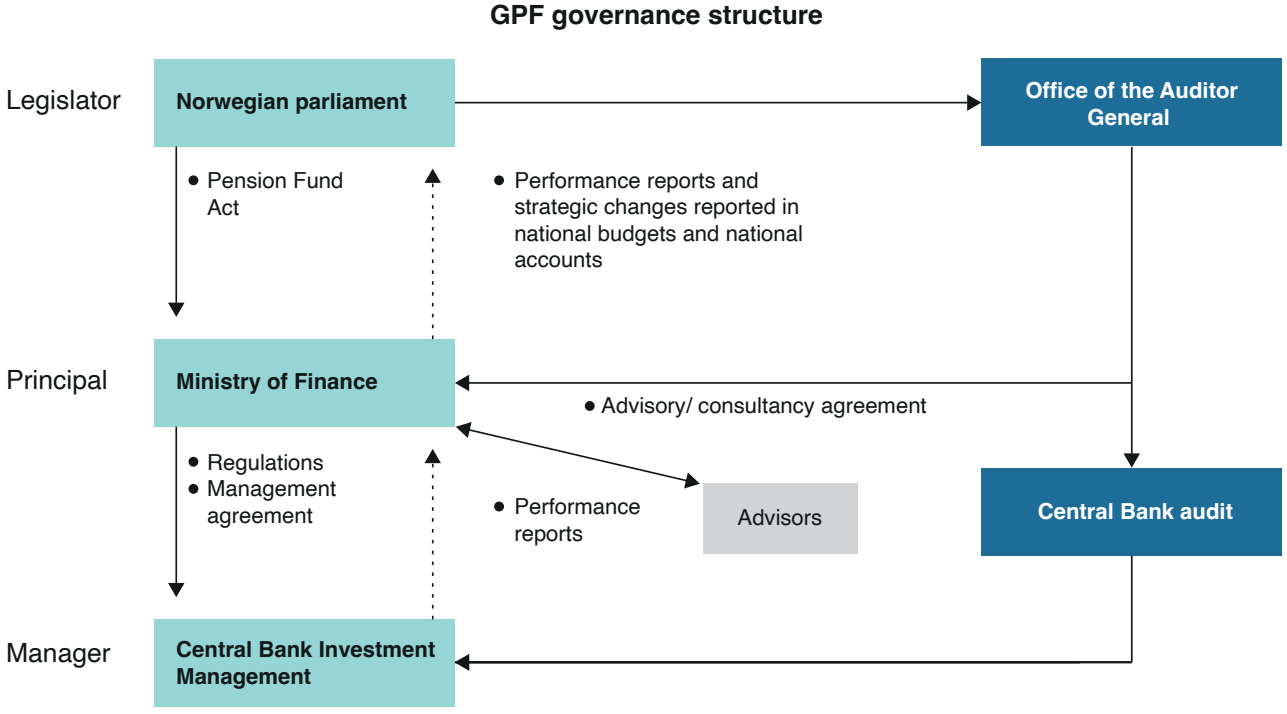


Figure 3-3: Governance Structure of Norway's Sovereign Wealth Fund Model
Source: Velculescu (2008)

As Figure 3-3 illustrates, the governance structure of Norway's government pension fund comprises a legislator (Parliament), a principal (the Ministry of Finance), and a manager (the Central Bank Investment Management; Velculescu, 2008). These three players are responsible for offering advice on the SWF's management and consulting services to manage the fund. An analysis of the Norwegian fund indicates that, in managing SWFs, it is important to ensure that regulations are in place and that performance reports are shared regularly with the different management stakeholders (Velculescu, 2008). The model's key contribution to the field is its emphasis on the need for transparency via performance reports and ethical guidelines for managing a SWF. Velculescu (2008) reported that the ethical guidelines are based on internationally accepted principles developed by the United Nations and the Organisation for Economic Co-operation and Development. A second contribution of the model is that it outlines mechanisms that control the allocation of funds to the SWF and the withdrawal of funds from it. Countries seeking to manage their SWFs could adopt a similar transparency model to ensure that appropriate rules and ethical guidelines are in place to guide the management of the fund. Furthermore, the Central Bank audits the SWF to guarantee that the funds are managed well.

3.1.3.4 Islamic Sovereign Wealth Fund Model

The fourth model considered in this thesis is the Islamic SWF model developed by Bahoo et al. (2019), which is detailed in Figure 3-4 below.

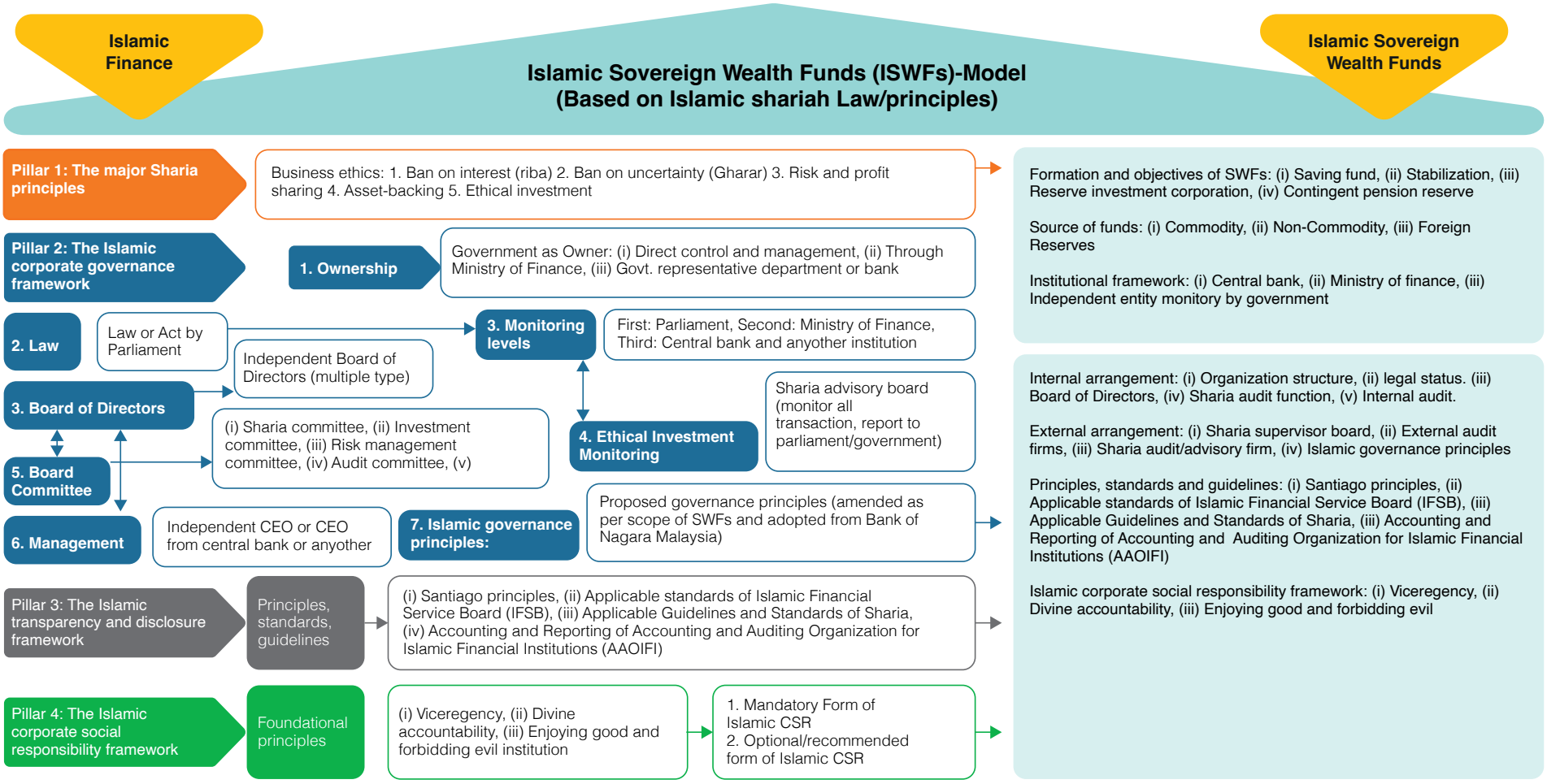


Figure 3-4: Islamic Sovereign Wealth Fund Model
Source: Bahoo et al. (2019)

The model in Figure 3-4 details the various pillars that encompass the Islamic principles that guide the establishment and management of SWFs. The model outlines important principles that SWF investors should consider when identifying Islamic countries as potential investment hubs. To begin, the model considers Islamic Sharia laws, which prohibit interest (riba) and uncertainty (gharar) and emphasise ethical investments, risk, and profit-sharing (Bahoo et al., 2019). Secondly, the model identifies the Islamic corporate governance model, which considers guidelines such as the Santiago Principles to ensure transparency and accountability (Bahoo et al., 2019). The third pillar focuses on promoting Islamic transparency and ensuring that appropriate disclosures are made to stakeholders. The final pillar discusses Islamic corporate social responsibility (CSR), in which the viceregency or leadership in senior offices and divine accountability serve as guides to ensure that individuals operate in an ethical manner (Bahoo et al., 2019).

3.1.4 Model Evaluation

This sub-section examines the identified models and discusses their strengths and shortcomings as they relate to the thesis aims and objectives formulated in the first and second chapters. Firstly, it adopts the previously discussed four-quadrant framework to classify the theories and conceptual models outlined in the current thesis. The first half of the framework involves visionary and execution-based research, where visionary research focuses on ideas and proposals, and execution-based research is concerned with the execution dynamics of establishing SWFs. The second division involves descriptive and prescriptive research. Descriptive research elaborates on what has happened, while prescriptive research is concerned with what could or should happen in the future. Therefore, the four quadrants are outlined as follows: (1) visionary and descriptive research, (2) visionary and prescriptive research, (3) execution-based and descriptive research, and (4) execution-based and prescriptive research. Table 3-2 below illustrates the categorisation of each model based on the four-quadrant framework.

Table 3-2: Classification of Sovereign Wealth Fund Theories and Models

Thesis Philosophy			
Thesis Outcomes		Visionary	Execution-based
	Descriptive	Quadrant I Governance model of Norway's SWF (Velculescu, 2008)	Quadrant III Model of factors influencing the sustainable growth of SWFs (Al-Saidi, 2012)
	Prescriptive	Quadrant II Islamic sovereign wealth fund model (Bahoo *et al.*, 2019)	Quadrant IV Model of SWF outward FDI strategy and impact on competitiveness (Reddy, 2019)

Source: Adapted from Althonayan (2003)

As indicated in Table 3-2 above, each theoretical and conceptual framework discussed can be classified into one of the four quadrants. The four-quadrant framework was adapted from Althonayan (2003) and modified to align the various quadrants with the objectives of this study.

The governance model of Norway's SWF aligns with the visionary descriptive quadrant (Velculescu, 2008), since it discusses the policies drafted by Norway to ensure that its SWF remains sustainable. The Islamic SWF model aligns with the visionary prescriptive quadrant (Bahoo et al., 2019): The model is visionary since it outlines ideas for how SWFs should be managed in the Islamic context, and it is prescriptive since it reveals what should be expected in the future when establishing SWFs. Furthermore, as discussed in

the literature evaluation in Chapter 2 and specifically in Table 2-4, a visionary research philosophy is concerned with defining aspects of the SWFs. These two models (Velculescu, 2008; Bahoo et al., 2019) reveal important ideas on governance and, thus, can be classified as visionary research.

The model for the factors influencing the sustainable growth of SWFs (Al-Saidi, 2012) and the model for SWFs' outward FDI strategy and its impact on competitiveness (Reddy, 2019) fit into the execution quadrants. The two models can be classified as execution models, since they focus on how SWFs could be structured to enhance sustainable growth and improve outward FDI competitiveness.

As the literature evaluation in Chapter 2 indicates, the main concern of the execution quadrants outlined in Table 2-4 (Quadrants III and IV) is the approaches to implementing or establishing SWFs. The two models examined (Al-Saidi, 2012; Reddy, 2019) are execution models, as they indicate how SWFs could enhance sustainable development and promote FDI strategies. Thus, these models fall into Quadrants III and IV because they indicate how countries could leverage SWFs to achieve their macroeconomic objectives. The two studies that established these models developed roadmaps that can be used by countries to understand how to establish a SWF and direct SWFs to achieve specified macroeconomic objectives.

3.1.5 Gaps in Existing Models

An analysis of the conceptual models (Al-Saidi, 2012; Reddy, 2019) reveals that they all focus on ensuring sustainability. According to Al-Saidi (2012), SWFs must ensure that they have a sustainable competitive advantage, which, as Reddy (2019) explains, arises from the use of SWFs for outward FDI. A second similarity among the models is that they highlight appropriate regulatory processes and mechanisms that ensure the funds are used according to the established expectations (Velculescu, 2008; Bahoo et al., 2019). Despite the similarities across these studies, an existing gap is their lack of focus on specific macroeconomic objectives and, as a result, their failure to highlight how SWFs can be aligned to different economic contexts. A further existing gap is that most of the models do not discuss the instruments that can be used to control SWFs once they are established, such as fiscal and monetary policies. Additionally, the models fail to identify the role of leadership and governance in enhancing the sustainability of SWFs. Table 3-3 illustrates the gaps in the various models.

Table 3-3: Gaps in the Examined Models

Elements	Al-Saidi (2012)	Velculescu (2008)	Bahoo et al., 2019	Reddy (2019)
Leadership and Governance	X	X	X	X
Institutional Structures	X		X	X
Control Policy Mechanisms		X	X	
Investment Policies		X	X	X
Growth Strategies	X			X
Institutional Development	X			X
Institutional Diplomacy				X

Source: DPhil. Candidate (2023)

The results presented in Table 3-3 indicate that all models covered issues such as leadership and governance, funding and structure, and growth strategies. However, the models did not cover aspects such as institutional diplomacy, institutional development, capital allocation and withdrawal, alignment to macroeconomic objectives, and control mechanisms. Therefore, in developing an appropriate model, the focus is directed on addressing these gaps and covering the elements mentioned above so that countries can ensure the development of effective and sustainable SWFs.

3.2 Part 2: Elements of the Proposed Conceptual Model

The second part of this chapter pertains to the development of the conceptual model, in which there is a focus on the methodological model and its elements, validation, and contribution to the field.

3.2.1 Development of the Methodological Model

This sub-section details the development of the proposed SWF model, as illustrated in Figure 3-5.

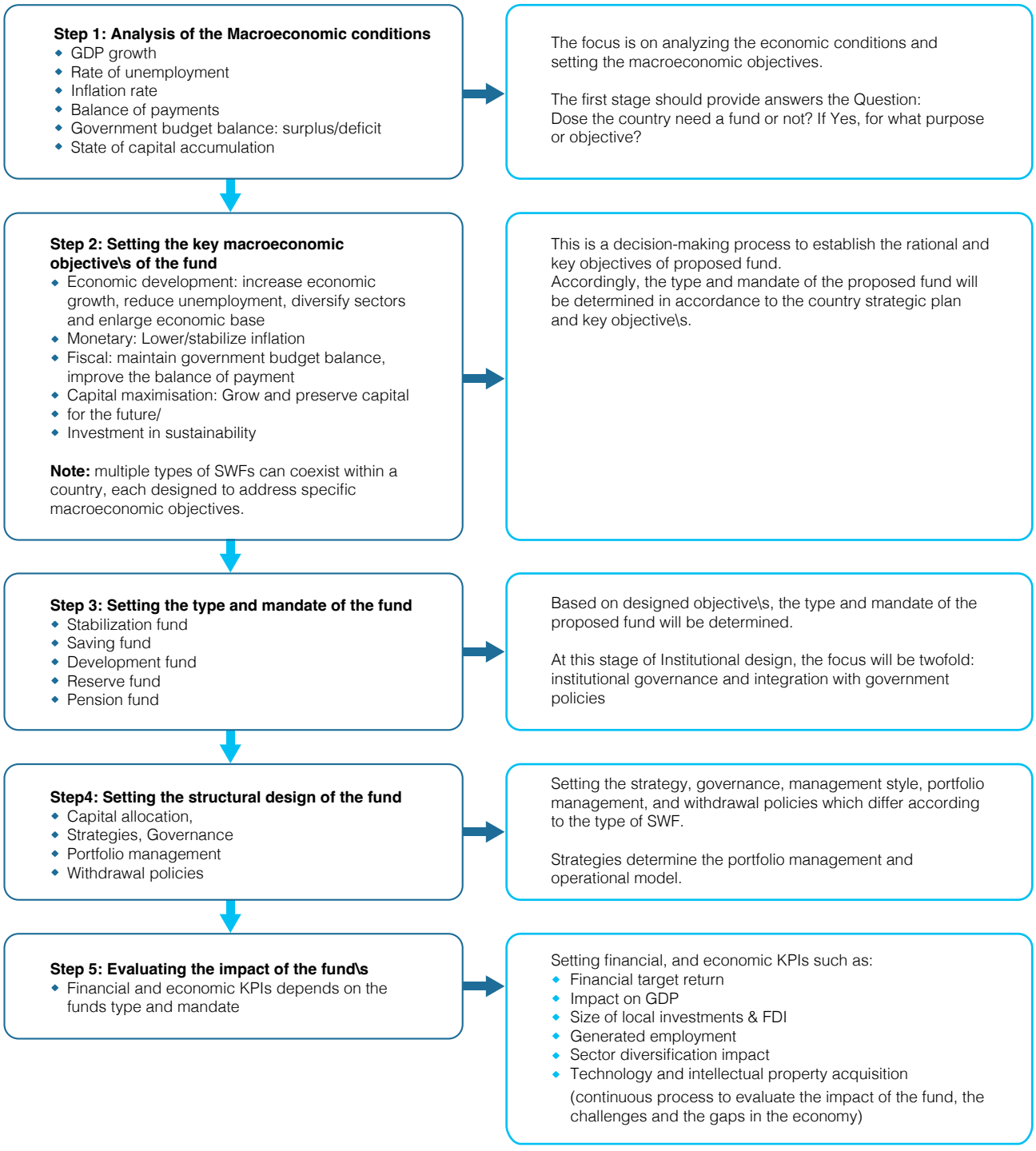


Figure 3-5: Sovereign Wealth Fund Establishment Process
Source: DPhil Candidate (2023)

As Figure 3-5 indicates, development of the proposed model for SWFs involves a five-step process: (1) analysing the economic condition, (2) identifying the key objectives of the fund, (3) establishing the type and mandate of the fund, (4) specifying the structural design of the fund, and (5) evaluating the impact of the fund.

3.2.1.1 Step 1: Analysis of the Economic Condition

In Step 1 in Figure 3-5, the focus is on the evaluation of the economic conditions of the three case studies – Kuwait, Singapore, and Qatar – with the aim of determining whether a country requires a SWF or not. The economic condition of the case studies also determines the purpose or objectives of the SWF. The macroeconomic indicators examined in the case studies include GDP growth, unemployment rates, inflation rates, balance of payments, state of capital accumulation, and government budget balance, including the surplus and deficit balances. The absorption capacity of the economy was inferred in the cases, since the SWFs and SDFs in Kuwait and Qatar were focused on diversifying the economy whereas in Singapore, the funds facilitated developing the Singaporean economy. Steigum (2012) reported that a political objective of establishing SWF (in this case, Temasek) was to manage the government's equity investments in local firms. As institutional investors, the EDBI in Singapore and the Doha Venture Capital (DVC) in Qatar also facilitated geopolitical relations in these countries, for example, investment in the technology industry.

Shaffer (2015) further indicated that the Singaporean government invested in foreign countries via its SWF to diversify the country's economy. In Qatar, Aguilar (2022) reported that the political objectives that led to establishing the SWFs included the need to diversify the economy and provide intergenerational savings for the population. The Ministry of Foreign Affairs (MOFA, 2022) also revealed that Qatar's SWF had a mandate to manage the state's investments. Another study revealed that the Kuwaiti SWF also fulfilled a similar objective, as it was responsible for the stewardship of the nation's assets (Bazoobandi, 2013). Each of these studies demonstrates that the political objectives influencing the establishment of SWFs were similar in Kuwait, Singapore, and Qatar and focused mainly on the management of the states' financial investments.

Subsequently, Step 1 in Figure 3-5 determines whether countries require SWFs based on an evaluation of their macroeconomic indicators. The analysis explores the strategy and objectives that inform and guide the process of designing a SWF, which are likely to be highly different from one country to another. For example, macroeconomic indicators in Singapore are focused on earnings from foreign exchange reserves in firms based on diverse continents (Gnabo et al., 2017), while in Qatar, macroeconomic indicators are associated with the export of liquefied natural gas (LNG) and oil (Ceicdata, 2022). Qatar's situation is similar to that of Kuwait, in which oil exports are the source of revenue (Gelan, Hewings and Alawadhi, 2021). The expected findings from this analysis include an explanation of how the strategy and objectives of a SWF are determined, a discussion of the constraints placed on SWFs, and an examination of how SWF capital is allocated. Additionally, the outcomes from this phase aim to establish whether countries need SWFs and the actual purpose that a SWF would fulfil.

3.2.1.2 Step 2: Establishing the Key Objectives of the Fund

In Step 2 of Figure 3-5, the key objectives of the particular SWF are selected from the available monetary, fiscal, and development funds, along with the future generation of alternative and perpetuity funds. One such alternative is monetary objectives, which are important for lowering inflation rates, stabilising economic growth rates, and fully using the available resources. Inflation rates have an adverse impact on economic growth due to lower capital allocation and reduced market sizes (Batayneh, Al Salamat and Momani, 2021). The fiscal objectives of the fund concern the maintenance of government budgets and the balance of payments to ensure that wealth in the economic system is distributed appropriately (Sicilia and Steccolini, 2017). Based on the development objectives, SWFs tasked with enlarging a country's economic base and diversifying its economy, for example, through improved GDP growth (Divya and

Devi, 2014). The final objective of SWFs involves wealth preservation for future generations, which ensures that a nation's wealth is available for both retirees and younger people, thereby providing a sense of social security for the entire population (Blundell-Wignall, Hu, and Yermo, 2008). The findings of this investigation should explain the type of SWF that a country chooses, the mandate of the SWF, and its rationale and key objectives.

Furthermore, in the strategic establishment of a SWF, countries possess the flexibility to concurrently adopt multiple types of funds, aligning each with specific macroeconomic objectives. This comprehensive approach allows nations to effectively address a diverse range of macroeconomic objectives through tailored SWF strategies.

3.2.1.3 Step 3: Establishing the Type and Mandate of the SWF

In Step 3 in Figure 3-5, the focus is on the institutional design of the fund, in which two main objectives are addressed: institutional governance of the fund and integration with government fiscal, monetary, and development policies. The institutional governance encompasses the establishment of an independent legal entity to manage the SWF, ensuing that the fund achieves its objectives and controls the withdrawal and allocation of capital. In Kuwait, KIA manages the SWF; in Qatar, QIA is the legal entity involved in the SWF's governance; and in Singapore, the GIC and Temasek oversee the institutional governance (MOFA, 2022).

Al-Qassemi (2017) explains that Kuwait aligned its SWF with the formulated government policies and objectives, which were to create financial reserves that future generations could use. A SWF, therefore, was integral, as institutional investors in Kuwait also created geopolitical relationships with other countries in which investments were made (Clark and Monk, 2017). MOFA (2021) also highlighted this alignment, emphasising the role of the SWF in the fulfilment of Kuwait's 2035 vision. Both Al-Qassemi (2017) and MOFA (2021) emphasised that SWF withdrawals could be directed towards the achievement of the global vision in Kuwait by ensuring accountability through transparency and auditing of the financial information. This investigation focuses on the compatibility between the design of a SWF and the government's monetary, fiscal, and development policies.

The IMF (2015) states that QIA provides Qatari authorities a fallback with which to address unexpected circumstances, such as falling hydrocarbon prices or market volatility. QIA (2016) also states that Qatar's SWF is aligned with government policies, both as a savings fund and a general reserve fund for the government to ensure development, investment, and management of the state's reserves. The fund achieves these goals by building a diversified and global investment portfolio for the long-term benefit of the State of Qatar. The May 2023 legal amendment not only fortified QIA's capacity to intervene in the domestic economy, if needed, but also officially enshrined a practice to which it had consistently adhered. This endorsement aligns seamlessly with widely accepted principles and norms. Therefore, the Kuwaiti and Qatari SWFs are aligned with the formulated government policies and macroeconomic objectives and work to ensure the attainment of these goals. The findings of this investigation seek to provide an explanation of the institutional design type of the SWF selected, whether that is savings, development, stabilisation, or reserve funds.

3.2.1.4 Step 4: Establishing the Structural Design of the Fund

In this sub-section, the considerations regarding the fund's structure are addressed. The discussion in this phase encompasses strategies, governance, management styles, portfolio management, and withdrawal policies that vary based on the particular SWF adopted. The discussion further elaborates on capital allocation by establishing the rules of withdrawal and allocation of capital from the reserve. Additionally, the necessary fund-related approving bodies are identified as well as how deposits are to be made (IFSWF, 2020). In KIA's case, a consulting firm (Mercer) was outsourced to review the fund's portfolio in the early 2000s in terms of asset diversification (Alosaimi, 2015). Capital allocation was also based on

the strategic asset allocation strategies in which funds were directed to sectors such as healthcare and technology. In Singapore, the government established the mandate of the country's SWF to ensure that financial and developmental returns were achieved (MOFA, 2022). The government, represented by the Ministry of Finance (MOF), is also involved in determining how funds are allocated to various infrastructure projects in addition to education and healthcare. Qatar relies on QIA to manage allocations after obtaining the approval from the SCEAI on its investment strategy, while the withdrawal of funds from its SWF need further approval from the Emir (Al-Hassan et al., 2013). As a result, withdrawal rules are outlined before the funds can be appropriated to other economic sectors and where QIA and the SCEAI boards approve the allocations beforehand (Al-Hassan et al., 2013). In the new Amiri decision (33-2023), the power of withdrawal needs the approval of the Emir of the State of Qatar.

3.2.1.5 Step 5: Evaluating the Impact of the Funds

Step 5 in Figure 3-5 involves defining the financial and economic KPIs that encompass aspects such as financial target returns, impact on GDP, FDI, the size of local investment, employment generated, the impact of sector diversification, and the acquisition of technology and intellectual property. The KPIs that assess economic performance should examine the role of the SWF reserves in cushioning the economy (Krishnadas, 2013). For example, during global financial crises such as the 2008–09 crisis, QIA played a role in offsetting the decline in funding by injecting the required liquidity into Qatar's economy (IMF, 2018). Financial performance KPIs are also used to examine the growth of liquidity in Qatar, as QIA has used the SWF to diversify the government's portfolio, leading to positive cash flow and limited liabilities (IFSWF, 2020). The KPIs also focus on ensuring that standards can be achieved.

Clark and Monk (2015) further discussed the roles of SDFs in enhancing development within a country. As such, KPIs can also assess the infrastructural and social development that has emerged following the establishment of the SDF in Qatar. Therefore, this phase evaluates the impact of the fund and searches for new challenges and gaps in the country's economic condition.

Based on the outline in Figure 3-5, the impact of the SWFs is evaluated based on the observable and measurable constructs in the economy, for example, whether the investments by the SWF lead to growth in GDP levels or whether any financial returns can be associated with the particular fund. An example identified in Kuwait is the ownership of the largest commercial bank in the country by the GRF. Close inspection of Singapore's situation also reveals that KPIs were achieved through the injection of funds from the SWF into the economy to stabilise it during the COVID-19 pandemic. In such instances, the impacts of the SWF in the economy are observable and easily quantified. The KPIs of Qatar's QIA are also identified by the ownership of corporations such as the Qatar National Bank (QNB), Ooredoo, and Qatar Airways, which contribute 4.9% of the country's GDP (Al-Baker, 2021). In this view, the KPIs are achieved when the SWFs are allocated generate high economic returns.

3.2.2 Institutional Design and Strategic Planning for Sovereign Wealth Funds

This sub-section describes the components of the institutional design and strategic planning model for a SWF. The model captures the SWF establishment process, including the macroeconomic conditions and indicators, the macroeconomic objectives, and the KPIs presented in Figure 3-5. Moreover, Figure 3-6, which presents the institutional design and strategic planning model for SWFs, provides a comprehensive representation of the constituent elements and their corresponding economic conditions that affect the fund's objectives and its type.

3.2.2.1 Macroeconomic Conditions and Indicators

According to Tsai (2019), macroeconomics is a branch of economics that addresses performance, structure, behaviour, and decision-making as a whole. As such, macroeconomics is essential to assess

the resources and capabilities of the economy and to identify ways to improve national income, enhance productivity, and create job opportunities to boost economic growth. Examination of the macroeconomic conditions of the case-study countries allows policymakers to develop policies that spur overall growth of the economy and boost the levels of national income. By contrast, microeconomics focuses on individual decision-making units, such as households and business firms. As SWFs are geared towards enhancing the performance of the aggregate economy, the first component of the adopted model is the economic condition component. The macroeconomy encompasses the factors listed below. The macroeconomic factors include Gross Domestic Product Growth, unemployment rates, inflation rates, balance of payments, budget balance, and state of capital accumulation.

3.2.2.1.1 Gross Domestic Product Growth

Djapou Fouthe, and Ndedi (2017) report that the economic growth rate is measured by the percentage rate increase of the GDP, which is the total sum or monetary value of the finished goods and services within the borders of a given country. Therefore, an increase in GDP is an indicator of economic growth (Divya and Devi, 2014). Singh and Sharma (2016) add that GDP growth is affected by diverse factors, including the availability of natural and human resources, advancement of technology, and availability of capital. In the case-study countries of Kuwait and Qatar, GDP growth is influenced by the presence of natural resources such as oil, which is processed into fuel and other fuel-based products. Consequently, the availability of the resources provides an opportunity for these countries to enhance their economic growth as measured by GDP.

To increase GDP growth, economists argue that countries should focus on enhancing the rate of foreign exchange reserves, reducing inflation, and promoting equilibrium in the balance of payments. Çalışkan (2015) also postulates that the integration of new technologies paves way for the production of new, cheaper goods as well as the accumulation of capital. The implication is that focusing on technological advancement is pivotal to enhancing the overall growth of the economy. Technological development contributes to a country's economic and social–cultural life, which leads to the development of new job opportunities within the economy. A case in point is the growth of e-commerce, which is enabled by the advancement of internet technologies, thereby promoting competition among countries (Çalışkan, 2015).

Moreover, Djapou Fouthe, and Ndedi (2017) highlight that increasing exports and investment rates are important for enhancing GDP growth. The insights from Çalışkan (2015) support Djapou Fouthe, and Ndedi (2017), who state that products from advanced technology are essential to promoting GDP growth. Furthermore, as detailed by Djapou Fouthe, and Ndedi (2017) and Divya and Devi (2014), GDP growth is important for empowering the government to enhance its revenue-generating capacities. Enhancing these capacities translates to additional savings that can be directed to the SWFs. The measurement of GDP is important for the current thesis, as countries assess the strength of their economies based on GDP growth. As a result, countries can determine whether their economy requires diversification and whether surplus revenue is obtained from a given sector by examining their GDP. As such, the measure is included in the model as a standard measurement tool. Furthermore, as a country's government plays an integral role in supporting GDP growth, SWFs emerge as important institutional investment vehicles that facilitate the realisation of this goal.

3.2.2.1.2 Unemployment Rates

Hjazeen, Seraj, and Ozdeser (2021) argued that unemployment is a result of both demand-side (employer) and supply-side (worker) issues, where both the unavailability of jobs and a lack of skilled workers may contribute to a high unemployment rate. In their research, Hjazeen, Seraj, and Ozdeser (2021) found a high correlation between the growth of the economy and reduced unemployment rates due to factors including GDP growth. Consequently, providing more employment opportunities supports the development of the economy (Hjazeen, Seraj, and Ozdeser, 2021).

Further arguments by Lewis (2013) identify factors such as overpopulation and economic depression as issues that contribute to high levels of unemployment in developing countries. In such instances, there are fewer available opportunities within the market compared to the size of the workforce, which creates the observed imbalance. In other cases, the advancement of technology leads to unemployment, especially where artificial intelligence and software automate manual tasks that were previously completed by human workers (Peters, 2020). McClure (2017) identifies similar arguments as Peters (2020), where they report that the proliferation of technologies such as robotics and artificial intelligence is poised to cause unemployment, thereby causing additional mental health issues and anxiety among the population.

Conteh (2021) also reported that it is important for governments to redirect their spending towards the creation of jobs to address unemployment and promote economic growth. Thus, by reducing unemployment, the government can generate more revenue capacity and increase funding for its SWF. Such findings by Conteh (2021) highlight the role of government policy in addressing unemployment in a country in which the government budget is redirected to support the creation of employment opportunities.

The SWF model used in this paper considers the unemployment rate as an indication of a country's level of economic growth. Similar to GDP, this factor is an indicator of the performance of the economy and, subsequently, can be used to assess whether a country should establish a SWF to address the problems identified in its macroeconomy.

3.2.2.1.3 Inflation Rates

The inflation rate is the rate at which the value of a given currency is falling and, subsequently, the rate at which the prices of goods and services are increasing (Roncaglia de Carvalho, Ribeiro and Marques, 2017). Elaborating on this, Roncaglia de Carvalho, Ribeiro, and Marques (2017) argued that inflation is a result of increased demand over supply, upward changes in the market, and self-feeding mechanisms such as indexation. The direct impact of high inflation rates is heightened uncertainty and reduced spending, which result in low economic growth (Batayneh, Al Salamat and Momani, 2021). Jolliffe and Prydz (2015) also report that high inflation rates lead to a reduction in the consumer's purchasing power, since the high prices lead to fewer affordable goods. The low economic growth is also attributed to the increase in the interest rates that banks and governments impose to keep inflation in check (Batayneh, Al Salamat and Momani, 2021). In such a case, people avoid applying for loans due to fears about growing interest rates while also reducing their spending power.

Research indicates that governments need to implement policies that ensure price stability and reduce inflation rates. A reduction in inflation should increase investment in the country, which can lead to further growth in SWF balances. Thus, the proposed model incorporates inflation rates, as they indicate the responsiveness of an economy to price shocks and other economic risks. By assessing inflation rates, policymakers can identify the appropriate type of SWF for their country. For example, during periods of high inflation, policymakers should use financial instruments to reduce the burden on the economy.

3.2.2.1.4 Balance of Payments

The balance of payments is defined as the record of a country's international transactions, which details the payments and receipts that are recorded following trade activities (Melvin and Norrbin, 2017). These records detail a country's international trade of goods, financial assets, and services and are influential in determining the country's foreign exchange rates (Glantz and Kissell, 2014). When a country has a trade deficit because it imports more goods and services than it exports, the foreign exchange rate is devalued. Therefore, it is important that countries aim for equilibrium in their balance of payments to avoid a negative impact on economic performance.

Melvin and Norrbin (2017) report that to improve the balance of payments, a government should adopt expansionary fiscal policies that enhance the appreciation of currency, thereby reducing the deflationary pressures on prices. The implication is that as the currency appreciates, the wage demand is moderated, the terms of trade are improved, and overall employment levels are boosted.

The main reason for incorporating this factor into the model is that the balance of payments indicates the level of foreign exchange within a country. Therefore, an improved balance of payments leads to higher levels of SWF funds, which guides policy decisions on the most appropriate type of SWF to be developed.

3.2.2.1.5 Budget Balance

Governments create their annual budgets to plan for and control their economic development (Paul et al., 2020). A government's budget plays an integral role in reducing inequality within the economy by imposing taxes on the wealthy and increasing spending on welfare programmes for the poor (Peppel-Srebrny, 2021). Countries are able to ensure continued economic growth by developing an efficient budget. As such, it is important for a country to ensure an effective budget balance to support the growth of its economy. However, D'Agostino, Dunne, and Pieroni (2016) posit that negative factors such as corruption exert a negative impact on economic growth. When the government allocates more funds to employment creation, this promotes economic growth by increasing the marginal productivity of the government. However, corruption activities discourage economic growth and lead to unbalanced budgets and a reduction in identified growth rates. Research has found that an unbalanced budget affects the ability of a government to save via its SWF. Thus, the SWF model developed in this thesis incorporates budget balance, as it is an important measure for guiding policy decisions and can help determine both the appropriateness of developing a SWF and which type of SWF to create. For example, commodity SWFs are appropriate for countries that have mineral and fossil fuel resources.

3.2.2.1.6 State of Capital Accumulation

Mengesha and Singh (2022) described capital accumulation as the increase in a country's existing wealth through investments in earned profits and savings. This increase in a country's physical and human capital contributes significantly to the growth of its economy. Hanieh (2018) supported Mengesha and Singh (2022) in reporting that various countries in the GCC – such as Qatar, Kuwait, and Oman – play an integral role in the global financial market in which surpluses from rising oil prices enable the countries to control a large asset base worth trillions of dollars. Chakraborty and Gupta (2010) highlighted similar findings, revealing that policies on investing in labour were also influential in the accumulation of capital through taxation mechanisms. Therefore, investing in a highly skilled labour force and the growth of industries can lead to high wealth distribution.

Radley and Lehmann-Grube (2022) support Chakraborty and Gupta (2010) as they report that a high rate of capital accumulation is based on the liberalisation of a labour-surplus economy, which is associated with a high rate of savings. The investments are profitable, as the surplus labour prevents the real wages from growing, whereas the existing domestic savings prevent the rise of interest rates. A high level of capital earnings leads to increased growth rates, as more financial revenues are recorded either through increases in labour, assets, or money (Chakraborty and Gupta, 2010). This, in turn, leads to better financial revenue levels and more savings for the SWF. Thus, the state of capital accumulation directly indicates the level of financial revenue in a country, and this revenue can be used to fund aSWF. Therefore, adding the factor to the model enables policymakers to consider how to enhance the growth of the economy by selecting an appropriate SWF for development.

Furthermore, the absorption capacity is an indicator of economic growth, as it influences firms' capacities to access and use knowledge (Harris and Yan, 2018). This study indicates that the net impacts of foreign ownership and human capital are important in enhancing economic growth levels and, as a result, guiding policy decisions on the development of different SWFs. In this context, it is argued that firms that have the capacity to access and use knowledge are able to contribute to the growth of the economy by enhancing a SWF. Castelli and Scacciavillani, 2012, also added that injecting more money into the economy similar to Russia would not be appropriate for countries such as Qatar since this would lead to inflation. As such, there is a need for an SWF which can support economic diversification through investment in overseas countries.

3.2.2.2 Macroeconomic Objectives

To ensure the stability of the economy, countries can establish various goals or objectives aimed at addressing systemic economic problems, such as unemployment and inflation (Petroia, 2021). Therefore, the second part of the model considers countries' macroeconomic objectives, which are detailed below.

3.2.2.2.1 Increase or Stabilise Economic Growth

According to Özpençe (2017), economic stability describes a scenario in which there are no fluctuations or volatility in a given economy's macroeconomic variables. When an economy is not fully stabilised, the country will experience high inflation and unemployment rates, leading to further economic instability. Diverse factors, such as political stability and the level of economic activity, influence sustainable economic growth (Radu, 2015). Aisen and Veiga (2013) also observe that political instability negatively affects the horizons of policymakers and, as a result, can cause frequent switching of policies that can create volatility. In turn, policymakers may resort to developing sub-optimal economic policies that adversely affect the performance of the macroeconomy. Nurudeen, Abd Karim, and Aziz (2015) demonstrated a causality relation between political instability and low economic development in the Economic Community of West African States (ECOWAS). The insights provided by Nurudeen, Abd Karim, and Aziz (2015) and Aisen and Veiga (2013) emphasise the need for governments to promote political stability due to the adverse impact of political instability on the performance of the macroeconomy and economic development. Uddin, Ali, and Masih (2017) reiterated the arguments and revealed the need for political stability to promote economic growth in different countries.

In another study, Carbó-Valverde and Sánchez (2013) proposed that the development of a country's financial sector also affects its economic growth rate or level. Sharma (2016) supported Carbó-Valverde and Sánchez (2013) when they revealed a positive association between economic growth and various dimensions of financial inclusion, such as banking penetration, availability of banking services, and use of banking services. Consequently, financial instability can lead to poor economic growth, harm a country's borrowing conditions, and increase uncertainty surrounding the value of assets and the behaviour of investors. On the contrary, when a government supports the growth and development of financial services, overall economic growth levels are promoted. Therefore, governments must ensure that a country's economic growth is stable by fostering stable political environments to attract investors. Doing so will increase the levels of foreign exchange reserves and the viability of a SWF. The implication is that countries with stable economic growth rates can develop SWFs that are effective in diversifying the economy by supporting projects such as infrastructural development.

A further insight of this study is that governments must ensure that the resources they provide, such as finances, are fully used to enhance economic growth and that there are no inequalities in the distribution of these resources (Benach, 2010). Ashaye and Irani (2019) added that various stakeholders must collaborate, particularly for the efficient use of e-government resources, including digital tools to deliver services. This insight underscores the role of collaboration between users, government agencies and ministries, and technology developers to ensure that e-government resources are used efficiently. Boe and Kvalvik (2015) also argued that to ensure the full use of public resources, governments must reduce negative activities, including corruption, by enforcing accountability measures and using performance assessment methodologies. The findings indicate that if governments ensure that resources are well used, higher financial revenues and better growth for SWFs will result. Therefore, the proposed model considers this factor, as it is key towards guiding policy decisions on the most appropriate type of SWFs and how they can be adapted to support the economy.

3.2.2.2.3 Reduce or Stabilise Inflation Rates

Batayneh, Al Salamat, and Momani (2021) reported that high inflation rates are disadvantageous to a country's economy over the long term, given that they lead to curtailed lending capacities by intermediaries, low capital allocation, and reduced sizes of equity markets. Živkov, Kovačević, and Papić-Blagojević (2020) further suggest that high inflation impedes economic growth as it increases uncertainty and leads to the inefficient allocation of resources. Therefore, governments and policymakers must adopt policies ensuring that prices remain stable in the long run (Mandeya and Ho, 2021). Ibnouf and Mohamed (2015) support the arguments regarding the adoption of government policies to reduce inflation when there is a need to develop government budgets on real sources rather than monetising deficits by borrowing from the Central Bank. The government's policies on expenditures, money supply, and budget deficits have an impact on a country's inflation rates. Li, Sun, and Chen (2021) add that monetary policies can also be adopted to promote economic growth and enhance economic momentum.

Lv, Liu, and Xu (2019) also advocate for the adoption of stimulus measures and advanced technologies, such as digital tools for monitoring the economy, to reduce overall inflation. Maintaining low inflation leads to better investment opportunities and an increase in the overall growth of SWF investments. Therefore, the proposed model considers low inflation rates, as they influence the design of SWFs and guide policy decisions on the goals that SWFs should achieve.

3.2.2.2.4 Improve or Maintain the Budget Balance

Sicilia and Steccolini (2017) reported that government budgeting is highly important, as it ensures that governments can plan and control the growth of their economy. Ssennyonjo et al. (2022) add that the government budgets are important to reallocate resources within the country and reduce inequalities in wealth distribution. In the selected case studies – Kuwait, Singapore, and Qatar – the governments use their budgets to reallocate resources, thereby reducing wealth inequities and regional disparities. The wealth obtained from oil rents in Kuwait and Qatar is redistributed to other economic sectors to promote economic stability. In turn, budgets serve as tools for political, economic, and managerial functions, ensuring that wealth is well distributed throughout the economic system.

Paul et al. (2020) argued that challenges such as fiscal policy limitations and inefficient expenditure processes affect the efficiency of government budgets. Therefore, strategies to maintain governments' budget balances and effectively plan the budgets are important, as they have a direct influence on the level of savings that governments can incorporate into their budgets. Thus, maintaining a budget balance influences policy decisions on the roles of SWFs and how they can be used in aligning a country's macroeconomic objectives.

3.2.2.2.5 Improve or Maintain the Balance of Payments

Batool, Memood, and Jadoon (2018) reported that the balance of payments – which is the record of a country's international transactions, including both international payments and receipts – is indicative of a country's technological advancement. Therefore, a country has a strong economic position when it achieves equilibrium in its balance of payments (Batool, Memood and Jadoon, 2018). Glantz and Kissell (2014) added that countries with trade deficits – that is, countries that import more than they export – experience devalued currencies, whereas countries with surplus trade balances – meaning they export more than they import – have stronger foreign exchange rates.

However, further study reveals that to shrink trade deficits, countries must boost their exports and reduce their sovereign debt burdens (Abbas Ali, Johari and Haji Alias, 2014). In this case, it is essential to devalue the currency within the country to ensure that exported goods can compete effectively within the international market. The exports increase as the imports decrease due to the lower costs of the exports, thereby leading to an improved balance of payments.

Williamson (2015) further suggested that the status of a country's balance of payments influences its economic stability. Thus, countries should strive to avoid trade deficits. Furthermore, the balance of payments influences the foreign exchange levels and, thus, the overall levels of financial revenues that can be directed towards SWF investments. Therefore, the proposed model incorporates this factor, as it can be used to guide decisions regarding the most appropriate type of SWF for a given country and how it can establish a SWF to achieve its macroeconomic objectives.

3.2.2.2.6 Sustainability as a New Theme

In recent years, and in special cases, there has been a growing shift towards emphasising sustainability as a fundamental aspect of sovereign wealth fund investments. Sustainability, achieved primarily through environmentally friendly green projects, has evolved into a crucial objective for evaluating a nation's economic well-being (Bortolotti, Loss, & Robert, 2023). The shift towards sustainable practices, renewable energy, and eco-friendly policies has substantial influence over a nation's economic prospects.

Countries that prioritise environmental sustainability and green initiatives tend to draw increased investments, elevate their global standing, and secure long-term economic stability. This emphasis on sustainability reflects a nation's commitment to responsible and forward-thinking economic principles.

Integrating sustainability as a core investment objective within the SWF model empowers policymakers to assess the economic advantages of environmentally conscious practices and defines the role of SWFs in supporting such endeavours. This strategic objective aligns seamlessly with contemporary global priorities and underscores a comprehensive appraisal of a nation's economic landscape. The pursuit of sustainability through SWF investments stems from the global demand for environmentally responsible economic practices, bolstering a country's long-term economic stability and appeal to investors. However, sustainability as a new theme will need more investigation in future research to identify how it can be adopted.

3.2.2.3 Sovereign Wealth Fund Types and Mandates

The final component of the model encompasses the various SWF types and mandates from which countries can choose when developing their own such funds. As discussed in Section 2.3, SWFs can be subdivided into five main categories: stabilisation funds, savings funds, development funds, pension reserve funds, and reserve investment corporations. If countries are to make an informed selection of one or more objectives to be fulfilled by their SWF, they must understand the individual functions of each type of fund. For example, stabilisation funds can ensure that the economy is isolated from price volatility and external shocks (Al-Hassan et al., 2018). By contrast, as Van den Bremer, Van der Ploeg, and Wills (2016) argued, SWFs can be constructed as savings funds that aim to diversify the country's portfolio of assets. This is especially important for commodity-based countries, which accrue excess income through non-renewable natural resources that eventually will be depleted. Further work by Clark and Monk (2015) highlighted the role of SWF development funds, which aim to increase the potential economic growth of a country by funding infrastructure projects. Therefore, when establishing SWFs to achieve different macroeconomic objectives, it is important for countries to identify the most appropriate SWF type to adopt. This multifaceted approach empowers governments to effectively navigate various economic challenges and opportunities, ensuring that their SWFs remain flexible and responsive to changing macroeconomic conditions. Figure 3-6 outlines the institutional design and strategic planning for SWFs based on the components detailed in Section 3.2.

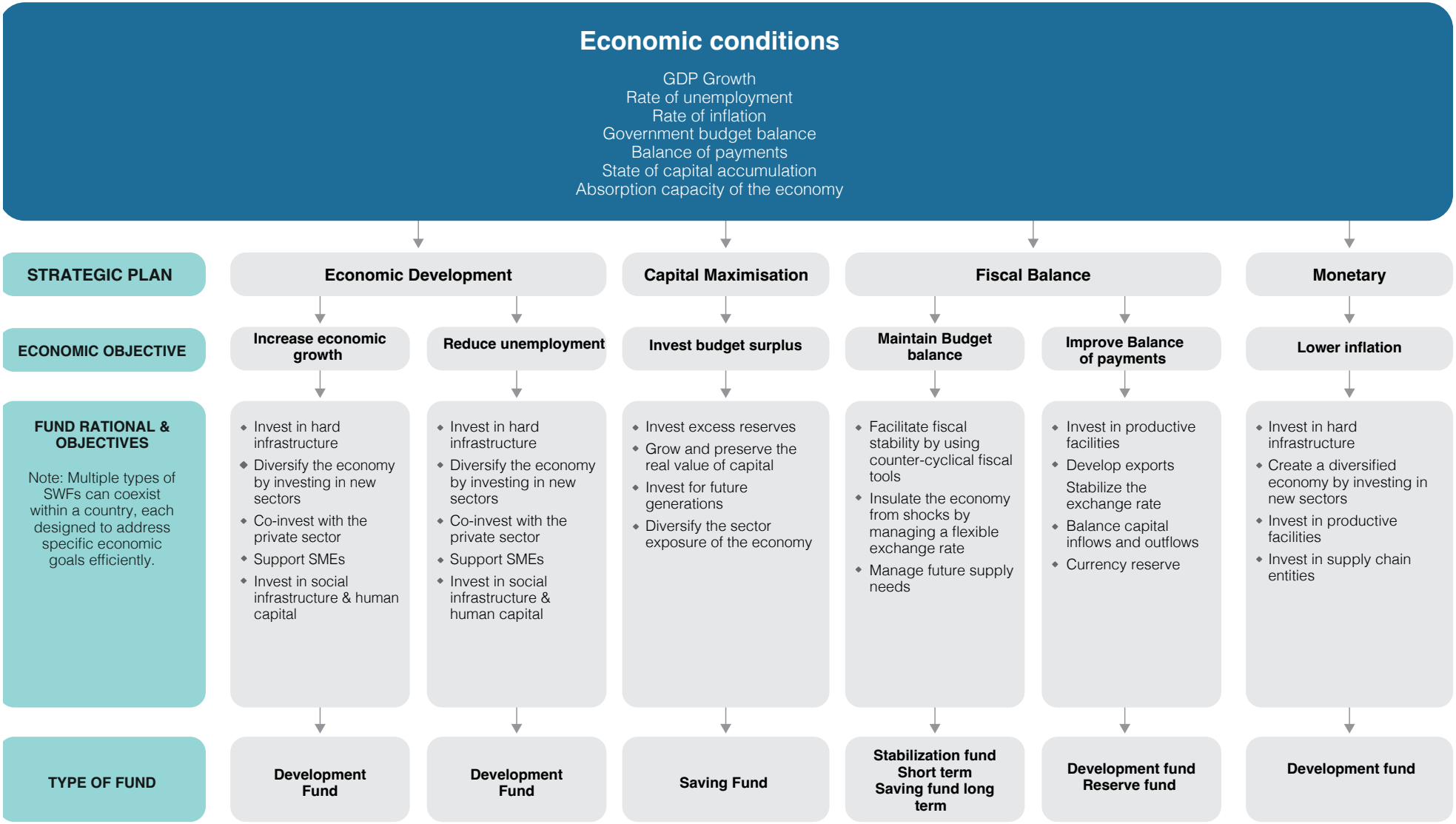


Figure 3-6: The Institutional Design and Strategic Planning Model for Sovereign Wealth Funds
Source: DPhil Candidate

Figure 3-6 illustrates that there is a relationship between a country's economic condition and its macroeconomic objective, and this relationship is based partly on the country's strategic plan and the type and mandate of its SWF.

Close inspection of Figure 3-6 illustrates an existent link to Figure 3-5 in which the SWF model is derived in a stepwise manner. Figure 3-6 captures the steps outlined in Figure 3-5 and elaborates on the elements and economic conditions. In the first phase regarding the analysis of the economic conditions, both Figures 3-5 and Figure 3-6 outline similar factors as a characteristic of the economic condition, including GDP growth, unemployment rate, inflation rate, balance of payments, and government budget balance. The two models emphasise the economic condition as the key determining factor in whether a country requires a SWF or not and the purposes or objectives that the fund will fulfil in the country. In Figure 3-6, the analysed economic conditions serve as input for the country's strategic plan.

A case example regards the identification of macroeconomic objectives such as reducing unemployment, maintaining a balanced government budget, lowering inflation rates, and increasing the country's economic growth rate. As a result, a country can aim to address several macroeconomic objectives based on the evaluation of its economic condition. Within a country, multiple types of SWFs can co-exist, each designed to address specific macroeconomic conditions or indicators. These SWFs serve as strategic instruments, allowing governments to tailor their investment strategies to align with precise economic objectives. This multifaceted approach empowers governments to effectively navigate various economic challenges and opportunities, ensuring that their SWFs remain flexible and responsive to changing macroeconomic conditions.

In the subsequent phases outlined in Figure 3-5, the objectives of the fund and selection of the type and mandate of SWF are done in alignment with the established macroeconomic objective. For example, where the country aims to increase economic growth, a development fund is deemed suitable, since it allows the government to co-invest in the private sector and provide capital for hard infrastructure. A similar argument is advanced for a stabilisation fund, which can be used to insulate the economy from shocks. However, a country with a variety of macroeconomic conditions can establish more than one fund to achieve its overall objective. In the fourth and fifth phases of the SWF model, the structural design of the fund and assessment of the impact of the fund are identified to determine the performance measures that can be used to assess whether the SWFs are achieving their goals. Therefore, a link is identified between Figure 3-5 and Figure 3-6 where the steps of developing a SWF are associated with the determination of the type of fund and its underlying objectives.

Additionally, there is a need to consider the variations in the weighting of different macroeconomic dimensions within the SWF's institutional design. In this perspective, weights can be allocated to different dimensions of the institutional dimensions in order to assess the potential implications for the SWF design. However, in this thesis, the weighting exercise is considered as part of the economic objectives that each country must perform as part of the process of establishment, and could be adopted further in future research. The current thesis is based on general research and focused on institutional design.

3.2.3 Validation and Contribution of the Proposed Model

The proposed model is validated because it acknowledges the relationship between a country's macroeconomic objectives and the mandate for establishing a SWF. As stated in Chapter 1, the main objective of this thesis is to assess the impact of macroeconomic indicators on the design of SWFs in Kuwait, Singapore, and Qatar and the principles that can be identified to guide the establishment of SWFs in other countries. Therefore, it is important to develop a model that assesses the relationships between the different variables in the current thesis based on conditions in the environment. The model is also validated by its applicability to the conditions that are present in a given country. The thesis' categorisation of macroeconomic indicators as input variables in the design of SWFs is key, as the recommendations of this research are enhanced by demonstrating how these variables affect economic growth.

An example of relying on SWFs to achieve macroeconomic objectives is using such funds to stabilise a country's budget from economic shocks and price volatility (Al-Hassan et al., 2018). Moreover, the model is validated, as it is not restricted in its applicability to the conditions of different countries and considers generic macroeconomic indicators that can be adopted across diverse contexts. In this manner, countries enjoy the freedom to select the most appropriate SWF to address their macroeconomic objectives without any undue influence from other countries. The model is influenced by conditions in different nations where inter-trade activities are conducted.

One of the contributions of the proposed model is that it highlights the elements that are required to ensure that SWFs are sustainable in the long term. For example, countries must examine their individual economic conditions and their associated macroeconomic objectives before they can develop an appropriate SWF to address their individual goals. A second contribution is that the model can be used regardless of the funding upon which countries rely when developing their SWFs. In other words, countries that rely on natural resources such as oil and those that rely on non-commodities, including foreign exchange reserves, can both use the model to develop a sustainable SWF that is well-managed, well-controlled, and focuses on sustainable and continuous growth.

3.3 Conclusion

The key conclusions from this chapter are that SWFs are important in facilitating a diverse set of macroeconomic objectives within a given country, for example, increasing the GDP, facilitating the balance of payments, and stabilising the economy. The discussion revealed that models or roadmaps are integral to the establishment of SWFs, as they highlight important components that should be considered in the design of the funds. Such aspects include leadership, governance, investment policies, growth strategies, and institutional development. Other authors have also developed SWF models and frameworks to guide the creation of these funds, and the reviewed models considered SWFs in Oman, Norway, and several Islamic countries. A synthesis of the models revealed that the sustainable growth of SWF investments is influenced by myriad factors, including policy, legal aspects, and national legislation. Additionally, the models discussed the impact of SWFs on FDI strategy and, subsequently, ensured that countries can achieve sustainable competitive advantages. Based on these models, it is clear that governance structures and accountability influence the success of SWFs.

The use of the four-quadrant model further facilitated a review of the models and frameworks to identify gaps that these models had yet to address. Based on these gaps, a stepwise approach to developing a conceptual model for designing a country's SWF was identified. The model emphasises the importance of compatibility between government policy and SWF design and between macroeconomic objectives and the type of SWF developed. The discussion of the elements of the model revealed that unemployment rates, GDP growth, and inflation directly affect the growth of the funds. Macroeconomic factors – including low inflation rates, full employment of resources, and stable growth of the economy – are also integral to facilitating SWF growth. The proposed model was also validated and justified as being able to address the formulated thesis objectives, as it assesses the relationships between the variables outlined in the thesis. The next chapter discusses the thesis methodology that guides the data collection and analysis.

Chapter 4: Thesis Methodology

4.1 Introduction

This chapter presents the research methodology guiding this thesis. As detailed in Chapter 1, a *comparative methodology* is adopted, whereby three case studies regarding the design and implementation of SWFs in Kuwait, Singapore, and Qatar are examined. The comparative methodology was selected to facilitate the analysis of how the different countries address similar problems, for example, what decisions they made when developing their SWFs and what governance models they adopted in managing the funds. This chapter further elaborates on the decisions guiding the data collection and analysis. These decisions were influenced by the philosophy, approach, and design of the research, which were aligned with the overall aim of this thesis. Thus, this chapter seeks to facilitate the achievement of the thesis objectives as it justifies the selected methods and procedures adopted for data collection and analysis.

Moreover, this chapter outlines how this thesis aligns with the university guidelines and requirements to ensure the preservation of participant confidentiality and privacy. The guidelines include using pseudonyms to conceal the details of the participants, securing the location where the participant details were stored, and using encryption to secure the data from unauthorised personnel. Furthermore, as this thesis is rooted in the social sciences, the methodology chapter addresses concerns regarding the creditworthiness, reproducibility, and generalisability of the findings to ease comparison with similar studies.

The chapter is structured based on the research onion model, which was chosen because it effectively structures the components of the methodology using a step-by-step approach to organising the research process (Saunders, Lewis and Thornhill, 2009). The research onion model has been adopted in diverse social science studies. Tuire and Erno (2001) employed the model to investigate how invisible educational science studies in Finland could be made visible by networking with scientific communities. Zolfagharian et al. (2019) also used the model in transition studies to identify patterns and trends in the field.

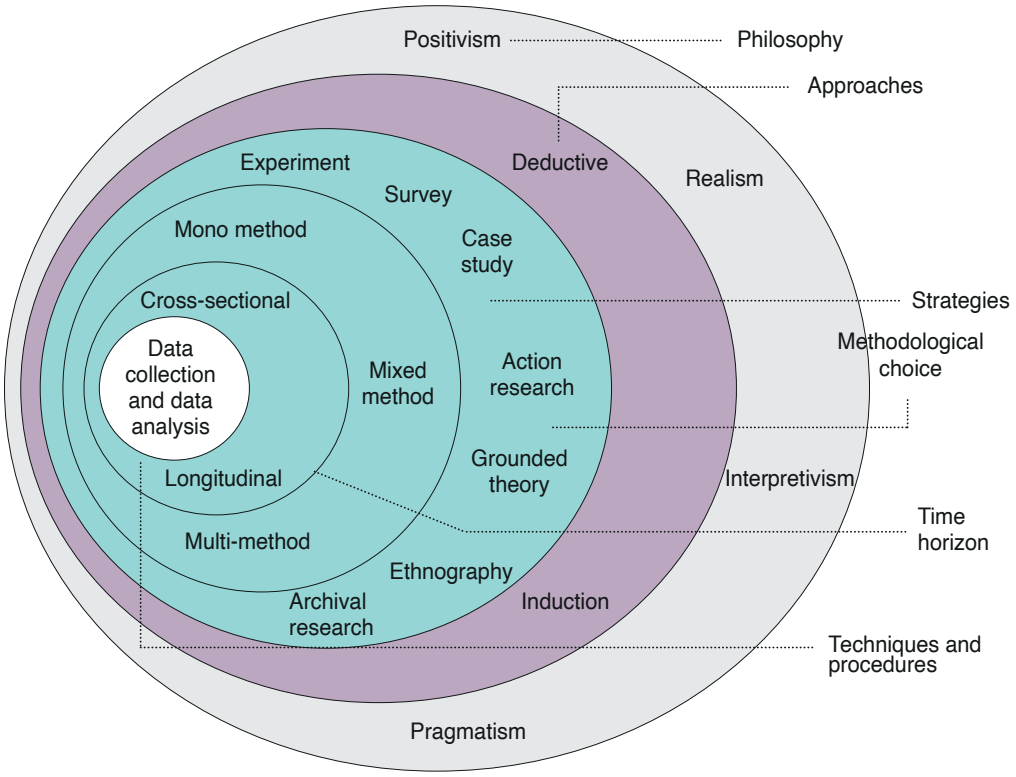


Figure 4-1: Research Onion Model
Source: Saunders, Lewis, and Thornhill (2009)

As Figure 4-1 indicates, the research onion model specifies that the thesis process begins with the choice of philosophical paradigm, represented in its outermost layer. Thereafter, the process proceeds step by step to reach the innermost data collection and analysis phase. Thus, the research onion is adopted to specify the methodological choices adopted in the thesis, for instance, an interpretivist philosophy and an inductive approach. Using this model, this chapter elaborates on the philosophy, approach, and design guiding the data collection process.

The interpretivist philosophy is suitable for this thesis because it facilitates an analysis of the lived experiences within the three countries. Interpretivism is a philosophical paradigm that advocates for the development of knowledge by examining lived experiences (Chowdhury, 2014). As the author is part of the research and cannot be separated from it, interpretivist philosophy helps outline the author's values and perspectives on what constitutes knowledge. Additionally, interpretive philosophy is used because this study is rooted in the social sciences, where human factors are important in the knowledge development process.

Additionally, the chapter justifies the data collection choices, including qualitative methods and procedures such as semi-structured interviews and secondary reviews. It also outlines the ethical factors considered during data collection, including privacy, confidentiality, and informed consent. Lastly, the chapter elaborates on the limitations of the methodology.

4.2 Thesis Philosophy

Kothari and Garg (2016) defined a research philosophy as the underlying assumption that is used to choose the procedures adopted in the collection and analysis of the data used to analyse a particular phenomenon. The focus of the current study is the phenomenon of the design and implementation of SWFs in the selected countries. The emphasis is on identifying the most appropriate research philosophy, which ensures that proper procedures can be adopted to guide data collection and analysis. Žukauskas, Vveinhardt, and Andriukaitienė (2018) added that the philosophical paradigm represents the beliefs that influence someone's perception of reality and, thus, the knowledge created for a given phenomenon. As such, the selected research philosophy influences the knowledge-creation process. Four main philosophies guide business and social research: positivism, interpretivism, realism, and pragmatism (Pasian, 2015). Pasian (2015) suggested that the distinction between the philosophies stems from their unique axiology, epistemology, and ontology. Žukauskas, Vveinhardt, and Andriukaitienė (2018) defined axiology as the role of values in a given study, whereas epistemology is the author's view of how to justify one's knowledge of a given phenomenon. Pasian (2015) defined ontology as the views of the author regarding the reality of the phenomenon studied. Therefore, the DPhil candidate's choice of research philosophy has influenced their perception of knowledge regarding the phenomenon being studied as well as the roles that knowledge plays in developing a thesis.

This thesis employs an interpretivist philosophy due to its epistemic approach, which argues that knowledge is created in a social manner, in which actors in an environment shape reality as they interact with their environments (Chowdhury, 2014). In the context of this study, knowledge of the establishment of SWFs and the use of the funds in enhancing macroeconomic development is created through the interactions between the actors (policymakers) in the case-study countries (Kuwait, Singapore, and Qatar) and their SWFs as they establish the funds and align them to their specific economic goals. As such, an interpretivist philosophy is justified for this paper, as it focuses on making sense of various perceptions and interpretations by evaluating the experiences of other individuals without imposing any prior categories. Since the study is rooted mainly in the social sciences, it relies heavily on evaluating others' perceptions and interpretations of their lived experiences. Consequently, there is a shift from an objective perspective of knowledge creation to a review of the lived experiences of other individuals as a means of creating knowledge.

An additional justification for using an interpretivist philosophy is its ontological position, which focuses on what knowledge is (Bonache and Festing, 2020). In such an approach, the DPhil candidate serves as a

social actor who interprets the interactions of multiple realities associated with different individuals. Thus, this philosophy focuses not only on individual understandings of reality but also on the adoption of various viewpoints in building knowledge. Moreover, it views the author as one who is united with the research and, thus, is unable to separate themselves from it. Furthermore, data is collected from individual lived experiences, as the author assumes the role of a social actor who interprets the interactions between actors and their environments to create knowledge regarding a given phenomenon. Therefore, interpretivist philosophy argues that multiple realities exist, and the examination of the underlying research problem can identify multiple interpretations of these realities.

Additionally, an interpretivist philosophy is justified due to its axiology. The philosophy argues that reality is not singular, and thus, individuals experience it in unique ways (Kothari and Garg, 2016). The study considers multiple realities by examining the approaches that Qatar, Kuwait, and Singapore have taken to establish their SWFs. Furthermore, since these different countries have used unique techniques to leverage SWFs for their economic growth, they have arrived at separate conclusions based on their lived experiences. Thus, an interpretivist philosophy's axiology, epistemology, and ontology make it the most appropriate philosophy for investigating the research phenomenon in this paper.

4.3 Thesis Approach and Design

The research approach refers to the manner in which information is manipulated to achieve different aims; for this reason, it describes the steps that are adhered to in drawing conclusions from the collected data (Rahi, 2017). Inductive, abductive, and deductive approaches are commonly adopted in drawing conclusions from collected data (Collins, 2010). Therefore, when selecting the research approach, it is necessary to examine the paper's focus on manipulating information to achieve different research aims. The differences between the research approaches lie in the manner in which the approaches reflect on and facilitate theory development. For example, in the deductive approach, an author first formulates hypotheses, which are statements that generalise the association between the research variables, and thereafter collects empirical data to test the correctness of the hypotheses (Collins, 2010).

An inductive research approach was adopted for this thesis, as it is effective in identifying patterns from data collected from lived experiences (Trochim et al., 2016). In particular, the inductive approach begins with the collection of empirical observations, which are further analysed to identify patterns of associations between the thesis variables. The inductive approach seeks to understand the association between variables by examining individual viewpoints rather than positing an association beforehand and then testing it through others. Therefore, the DPhil candidate aims to analyse the individual insights from the SWFs of the case-study countries and subsequently outline the relationships between the variables after examining the data collected from the selected countries. Secondly, the nature of the data collected in this thesis further influences the choice of research approach. Since the research focuses mainly on these countries' experiences with establishing and using SWFs to achieve their macroeconomic objectives, it collects qualitative data; thus, the inductive approach is appropriate.

Anastas (1999) defined research design as a strategy used by authors to organise the research components and collect trustworthy, valid results. Creswell (2014) posits that the research design of a thesis can be conceptualised as a model that facilitates its organisational process by identifying the information that should be obtained to eliminate weak conclusions. It is beneficial to select an appropriate research design, as doing so ensures that the most appropriate methods for data collection can be identified while guaranteeing that the final conclusions will be reliable. Four research designs can be adopted in business research: exploratory, explanatory, descriptive, or evaluation (Creswell, 2014).

The exploratory research design is the most appropriate for this study, as it is suitable for understanding thesis problems that are not clearly defined (Sarstedt and Mooi, 2014). In this regard, the establishment of SWFs, the underlying factors that influence their operation, and their alignment with macroeconomic objectives have not been well-researched. The findings outlined in the literature review and literature evaluation emphasised the minimal research undertaken on SWFs, their establishment, and how

countries align SWFs to achieve various macroeconomic objectives. Additionally, few scholars have attempted to undertake a comparative study of the SWFs of multiple countries, and none has compared Kuwait, Singapore, or Qatar. Recognising that this research area is understudied, this thesis adopted an exploratory research design to enhance the understanding of the topic.

The exploratory design is also justified in the current thesis, as it is discovery-oriented and focuses on generating numerous ideas concerning a given research phenomenon (Babin and Zikmund, 2016). As such, this design could be used to understand diverse concepts regarding the establishment of SWFs and the ways in which countries have leveraged these funds to achieve their macroeconomic objectives. Exploring the problem area using this design facilitated the discovery of numerous ideas regarding the establishment of SWFs and their approach to advancing macroeconomic objectives. The ideas can then be used by other scholars who are interested in the topic who also want to analyse the thesis problem.

According to French and Gordon (2015), two types of data may be collected in a study: quantitative data and qualitative data. The authors argued that the key difference between the two data types is the nature of the data. Quantitative data is distinguished by its objective nature, whereas qualitative data is based on lived experiences (French and Gordon, 2015). A qualitative method was adopted for this thesis, as this method is appropriate for describing the lived experiences of actors within their different environments. In particular, this thesis collects experiences concerning the SWFs in Qatar, Singapore, and Kuwait and builds an understanding of how the SWFs were established and the approaches used to align them to the countries' macroeconomic objectives. Haq (2015) added that, in contrast to quantitative data, which is measured using numbers and statistics, qualitative data is unique and based on lived experiences. Furthermore, it is collected in a descriptive manner using text. Lastly, the choice of qualitative data aligned with the interpretivist philosophy adopted in the thesis, as it facilitated the description of the experiences of establishing SWFs in the selected countries.

4.4 Data Collection

This section discusses the various strategies considered for data collection in alignment with the established university guidelines. Semi-structured interviews and a secondary literature review were adopted for data collection in this thesis. The Oxford University guidelines regarding data collection emphasise the importance of ethics when interacting with human participants. Therefore, this thesis adhered to university protocols to ensure that the participants' data was stored in a private and confidential manner. The university data collection guidelines also stress the need to ensure transparency in one's approach so that other scholars can adopt similar procedures if they wish to replicate the findings. Additionally, the guidelines require that an ethics form be completed before undertaking the research and collecting data from respondents.

4.4.1 Semi-Structured Interviews Using a Close Dialogue Approach

This thesis used semi-structured interviews, as they are the main method used when collecting primary qualitative data (Sapsford and Junp, 2006, Ritchie et al., 2003). In this method, a set of guiding questions is prepared to be used during one-on-one interviews with participants (Brinkmann and Kvale, 2015). The selection of the semi-structured interviews for this thesis was influenced by their effectiveness in collecting in-depth data regarding the lived experiences of the actors within their real-world environments (Sapsford and Junp, 2006).

The participants recruited for this thesis were key individuals who work in a variety of organisational departments in the governments of the selected countries, including finance, economics, and investment departments. The participants included SWF managers, experts, CEOs, financial advisors, academics, and other stakeholders from SWF institutions, including central banks, ministries of finance and economic planning, and other institutional investment organisations. These respondents were selected to ensure that validity and reliability concerns were addressed, as detailed in Section 4.7. In particular, obtaining data

from knowledgeable participants enhanced the reliability of this study and ensured that the formulated thesis questions could be adequately addressed. Each of the participants has more than 20 years of experience working with SWFs, an aspect that also enhanced the data collected for this thesis.

The setting of the interviews was an online platform on which participants engaged with the interviewer via video conferencing tools. Microsoft Teams was selected for the interviews due to its intuitive interface and ease of use. Some participants were not readily available online, and phone correspondence was also used to facilitate the interviews. The use of online platforms was appropriate because this technology circumvented the limitations of geographical distance that prevented the DPhil candidate's physical access to each of the participants. The costs of conducting the research were also minimised by the reliance on video conferencing tools, since all communications were undertaken online or over the phone and were further stored on audio devices.

Interviewing respondents from diverse backgrounds further enhanced the comprehensiveness of the perspectives and knowledge identified in the data. However, several challenges hindered the data collection process. For example, it was challenging to establish a rapport with the interviewees, given the sensitivity of the thesis topic. Some interviewees holding senior roles were sceptical and did not wish to participate in a study conducted by someone unknown to them. To encourage their participation in this research, the DPhil candidate assured the interviewees that the data they provided would be collected in an anonymous manner and stored securely on the university computer servers. With this assurance, the participants began opening up about their official and unofficial concerns regarding the thesis topic. Additionally, the use of guiding questions that were shared prior to the interviews enabled the interviewees to prepare for the actual interviews. Interviewing techniques were also important in identifying the fears that the participants had regarding sharing sensitive information on SWFs and formulating strategies to address them.

During the interviews, the participants' audio responses were recorded, and prior to this process, the participants were informed that their data would be recorded and later transcribed in the thesis. The participants were also informed that their data would be deleted after the thesis had been completed. To ensure participant confidentiality, university protocols such as using pseudonyms in place of real names were implemented. The names of the organisations for which the participants worked were also censored to conceal any identifiable details and avoid the possibility that the participants would be linked to certain institutions. Moreover, participants were referred to using placeholder names such as Respondent 1 and Respondent 2.

Close dialogue was the main data collection technique employed in this thesis. Clark (1998) argued that close dialogue relies upon the intimacy or closeness of authors with industry respondents and requires a level of personal commitment quite at odds with the conventional notions of scientific disassociation and objectivity. The use of close dialogue is important to gain first-hand information on the design of SWFs. In the context of SWFs as institutional investors, close dialogue can be used to "document and assess the actual practice of investment decision-making" (Clark, 1998). Thus, this method can be used to understand investment institutions and decision-making (Clark, 1998). Close dialogue can generate primary data in the context of both the SWF design process and investment decision-making. It also offers an opportunity to establish intimacy and openness when collecting primary data, which other data collection methods do not allow. The participants for the interviews were selected using a purposive sampling technique, in which only individuals who met the established criteria were included in the research (Sapsford and Junp, 2006). Table 4-1 outlines the interview questions that were asked.

Table 4-1: Design of Interview Questions

Key thesis question	How and what macroeconomic factors need to be considered when setting up/designing a SWF?	
First thesis theme	*Sub-questions*	*Interview questions*
Investigating the economic condition and the fund's objectives	How are the strategy and objectives of SWFs determined, and why are some objectives included and not others?	How did the idea of establishing a sovereign wealth fund emerge? What were the objectives or reasons behind the establishment of the fund? How were the objectives framed and designed? What were the major problems that the home country's macroeconomy faced when the fund was being established? Were macroeconomic indicators taken into account during the establishment of the fund? What were the development objectives that were decided upon when designing the fund? Were objectives excluded when designing the fund? Have the objectives of the fund been adapted over time to fit the evolution of the economic condition of the home country?
Second thesis theme	*Sub-questions*	*The interview questions in this theme were divided into four categories.*
	To what extent is the design of the SWF integrated into government policies?	**Category 1: Fiscal, monetary, and development policies** Who were the key participants in the design of the fund's structure? What were the main characteristics of the home country's fiscal and monetary indicators? Were the country's fiscal policies considered when designing the fund? What monetary indicators were taken into account when designing the fund? Was there a clear and obvious development objective behind the design of the fund? If yes, how were the development policies incorporated into the process of designing the fund? **Category 2: The mandate** What were the mandates of the fund? Were these mandates consistent with the objectives, and did they consider the fiscal and monetary policy? **Category 3: Capital allocation and type** How was the type of fund decided? Do you think it is consistent with the objectives and the mandate? How was the fund's capital allocated? Where, how, and through what process is the fund's capital allocation decided each year? **Category 4: Portfolio management** Where are the fund's target portfolio and target asset allocation decided? What criteria were considered when deciding the type of fund and the target portfolio? What is the management's mandate? What are the constraints imposed on management in terms of the investment policy? How does the government measure the performance of management? What considerations factor into the process of the fund's capital allocation? How was the operational model of the SWF decided? Do you think the chosen operational model is consistent with the type and mandate of the fund?
Third thesis theme	*Sub-questions*	
Investigating the impact of the SWF in the macroeconomic and development contexts: the improvements and setbacks of the designated macroeconomic indicators and in reaching the development objectives of stability, sustainability, and diversification	What has been the impact of SWF allocation on the macroeconomy in the past 10 years? Did you adopt criteria before selecting the type of SWF used in your country?	Do you think the fund has achieved its objectives? What are the main problems that the country has faced in the macroeconomic context and concerning its development path? This part will rely more on statistics and economic reports relating to the first 10 years after the establishment of the fund. Thus, statistics will be collected and analysed to answer the third thesis theme.

Source: DPhil Candidate (2023)

The questions presented in Table 4-1 indicate the diverse themes that were adopted to guide the design of the interview questions. The themes encompassed aspects such as the economic condition of the home country, the objectives of the fund, and the integration of the SWF design into the government's economic policies. Additionally, the impact of SWFs in development and macroeconomic contexts was further documented.

4.4.2 Secondary Data

Secondary findings were also collected to support the primary data by reviewing published documents from a number of sources, such as governmental agencies and international institutions. This thesis also considers other secondary sources, such as websites featuring economic statistics and reports, press releases, policy analyses, and other archived information about economic development and SWFs in Singapore, Kuwait, and Qatar.

4.5 Data Analysis

The qualitative data collected in this thesis was analysed using a thematic analysis process by extracting underlying themes from the raw interview data and secondary publications (Nowell et al., 2017). The appropriateness of thematic analysis in this thesis stems from its effectiveness in identifying patterns in raw qualitative data. Kiger and Varpio (2020) suggest that thematic analysis is also beneficial in that it provides a systematic and transparent process for analysing the qualitative findings. To conduct the thematic analysis, the authors adhered to a five-step process. Firstly, they familiarised themselves with the qualitative data to gain insight into the core concepts relevant to the study. Secondly, data codes were identified and labelled to identify patterns across the data findings (Kiger and Varpio, 2020). In the subsequent phases, the labels and codes were merged into themes that summarised the entire data set and could be used to answer the thesis questions. The final phase involved documenting the findings and using them to address the formulated thesis questions.

4.6 Thesis Ethics

Because human participants were used in the thesis, several thesis ethics guidelines were adopted to respect participants' rights. It was crucial to adhere to these guidelines when developing the methodology, as they specify how the thesis can address concerns such as privacy, confidentiality, and informed consent. Similarly, compliance with Oxford University guidelines was ensured by detailing the study ethics, which required the elaboration of all procedures adopted in the data collection and analysis. The first ethical consideration focuses on the recruitment process, in which it was paramount to obtain informed consent before the participants answered the interview questions (Hesse-Biber and Leavy, 2011). The research provided consent forms through email correspondence where the type of data that would be collected, how it would be used, participants' rights to withdraw from the research process at any time without negative consequences were outlined (Saris and Gallhofer, 2014). The consent form in the email correspondence is restated in the online Teams records. Additionally, for interviews conducted face-to-face, consent was obtained verbally at the start of each interview. This method ensured that all participants were fully informed and agreed to participate before any data collection commenced. Consequently, the participating senior government officials and policymakers provided the necessary permissions before the interviews began and any data was collected.

The second ethical consideration addresses the need to protect the confidentiality and privacy of the respondents (Schneider et al., 2012). Privacy was assured by using pseudonyms and masking the details of the organisations and agencies in which the policymakers and government officials work. University guidelines emphasise the need to ensure that organisations and respondents cannot be identified from the collected data. Moreover, the participants were informed that they should avoid sharing personally identifiable information to preserve their privacy, as stipulated by the university guidelines. To further

protect participant confidentiality, the interview responses were stored in a secure folder within the university computer servers, which ensured that unauthorised personnel could not access the data. The sharing of the collected data with third parties without appropriate approval from the research participants was also restricted.

4.7 Validity and Reliability

According to Baumgarten (2012), reliability refers to the consistency of the measurements used to examine a given phenomenon, whereas validity focuses on the degree to which concepts are accurately measured. Therefore, reliability is concerned with whether the findings can be replicated, while validity is interested in ensuring that the tools used in this thesis can accurately measure the concepts (Thyer, 2010). Replication of the findings refers to the ease with which other scholars can produce similar findings by adopting the proposed methodology. Therefore, it is important to discuss all decisions taken in the selection and application of the methodology to enable other scholars to adhere to similar processes when replicating the study or conducting similar studies.

To guarantee the reliability of the research, a transparent process was adopted in the selection of interview participants, and the data was examined in a thematic analysis conducted in a series of easy-to-follow steps. Furthermore, to ensure validity, the selection of interview participants focused on those who are knowledgeable in the thesis problem area, including the implementation of policies by the government and their alignment with SWFs. Additionally, validity was enhanced by aligning the design of the interview questions with the concepts studied in this research. Lastly, the policymakers who have been involved in the development of policies that influence the performance of the SWFs and their role in enhancing economic conditions were considered.

4.8 Limitations of the Thesis Methodology

Since the study is grounded in the social sciences, and human factors are key to the knowledge development of this work, the thesis approach has several limitations. It is necessary to highlight the limitations of the thesis methodology, as doing so indicates which areas could not be explored in depth, thereby signalling the challenges that other interested scholars are likely to face if they focus on the same problems. For instance, the failure to consider quantitative sources reduced the comprehensiveness of the data. An elaboration on how these limitations are addressed is beneficial, as doing so outlines strategies that can be adopted to overcome the various issues challenging the current work.

4.8.1 Qualitative Data Limitations

The first limitation involves the thesis' focus on qualitative data. In particular, data was collected from experts involved in the development of SWFs and secondary articles related to the case studies of Kuwait, Singapore, and Qatar. While the justification of this process is based on the fact that the respondents will answer the research questions based on their lived experiences, a limitation is the failure to collect data from quantitative sources, including published surveys and reports. To address this limitation, relevant data is reviewed in the literature review. Statistical data from the selected case studies regarding the impact of SWFs on economic growth is also reviewed to support the qualitative findings from the interviews and secondary articles.

4.8.2 Limitations Concerning the Narrow Focus of the Topic

A second limitation of the study is the narrow focus of the research, which considered only three countries. In addition, the scope of the thesis further limits the comprehensiveness of its findings. However, the aforementioned three case studies were selected because they offer insight into the diversity of SWFs and provide a broad understanding of the concept, which is important for addressing the thesis objectives.

The selection of the three case studies also facilitates a comparison of how the SWFs of the individual countries were developed and aligned to macroeconomic objectives across the different geographical regions. However, sourcing the reviewed data from only these three countries may limit the generalisability of the recommendations to other countries.

4.8.3 Candidate Bias

A further limitation of the study is the DPhil candidate's bias in the selection of participants and the resulting effect on the knowledge-creation process. This bias is likely to influence the specific participants and, as a result, the reproducibility of the findings. To address this limitation, purposive sampling was adopted to ensure that the participants considered for the study were knowledgeable about the thesis area. Similarly, the secondary sources used for the selected case studies were drawn from peer-reviewed journals to enhance the reliability of the findings.

4.9 Summary

This chapter described the thesis methodology and outlined the decisions made in the collection and analysis of the data to address the thesis questions. Additionally, the chapter outlined the aspects that ensure that the thesis is reproducible and that the findings are generalisable. It justified the use of an interpretivist philosophy based on its appropriateness in building knowledge regarding the thesis phenomenon. Based on the adopted process for knowledge development, the use of an inductive approach also was justified. This thesis adopted an exploratory design, which enabled the development of numerous ideas addressing the thesis problem. A qualitative method was selected for its effectiveness in examining the lived experiences of individuals within their environments, particularly through close dialogue and interviews. Collecting the experiences of participants through interviews increases the knowledge regarding decision-making and ensures the coherence of the SWFs with complicated political worlds and financial markets. This chapter also discussed the use of thematic analysis to extract insights from the raw data, and it highlighted several ethical concerns, emphasising privacy and confidentiality. The final section of the chapter discussed the validity and reliability of the thesis and its methodological limitations. The next chapter examines the Kuwaiti SWF to understand its rationale, objectives, and alignment with the country's macroeconomic objectives.

Chapter 5: Sovereign Wealth Funds in Kuwait

5.1 Introduction

As discussed in Chapter 1, this thesis aims to investigate the alignment between the institutional designs of SWFs and the macroeconomic objectives in Kuwait, Singapore, and Qatar. This chapter focuses on how SWFs are implemented in Kuwait and examines their impact on the country's macroeconomic conditions. Additionally, it investigates the geopolitics of the Gulf region, in which the ruling elites' influential leadership also affects Gulf countries' prosperity with a shift in investments being identified from oil (Lüdtke, 2018). Therefore, it is important to investigate how geopolitics influence investment in SWFs in Kuwait and how macroeconomic policies are aligned with the funding.

The findings reported in this chapter contribute to the overall objective of the thesis by establishing insights into how Kuwait's SWF design influences the achievement of its macroeconomic objectives. The findings in this chapter are sourced from interviews with key stakeholders, based on secondary data from published sources, and compared with those from other case-study countries in subsequent chapters.

This chapter is organised into seven main sections. Section 5.1 introduces the chapter, Section 5.2 presents the analysis of economic conditions, and Section 5.3 details the process of determining the key objectives of the fund while exploring the most relevant macroeconomic indicators relating to the design of KIA. These findings explain how the strategies and objectives of KIA are determined while further identifying the constraints placed on this SWF and how its capital is allocated. Section 5.4 details the establishment of the type and mandate of Kuwait's fund. Next, Section 5.5 discusses the process of establishing the structural design of the fund and elaborates on the types of funds adopted in Kuwait, portfolio allocations, and the operational model. Section 5.6 examines the impact of KIA on the macroeconomy, particularly the extent to which Kuwait has achieved its macroeconomic and development objectives. Finally, the findings and conclusions produced in this chapter are detailed in Section 5.7.

5.1.1 Reasons for Selecting Kuwait Case Study

KIA was chosen as the first case study because it is considered the oldest SWF in the world, having been established in 1953 (Bazoobandi, 2013). In 2021, the value of KIA was estimated at USD 700 billion, which is pivotal in preparing Kuwait for life after its oil reserves are eventually depleted (Al Arabiya, 2021). KIA includes two different funds, the GRF and the FGF. Bazoobandi (2013) observes that the GRF is a reserve that receives all state incomes and is tasked with state expenditures to cover local development in Kuwait and the Arab world, whereas the FGF is an intergenerational savings platform that focuses on worldwide investments to provide confidence during crisis periods.

In addition to the two funds included in KIA, the Kuwait case study demonstrates how countries in the Gulf region have been evolving their SWFs. The establishment of a new SWF, the Ciyada Development Fund, is part of the Kuwait government's 2023–2027 economic development programme to develop private sector partnerships that facilitate the creation of giga projects and attract FDI (GlobalSWF, 2023). Until recently, Kuwait did not consider initiating a development fund, but it has since adopted the concept (GlobalSWF, 2023). MacDonald (2023) reiterated the position of the GlobalSWF (2023) by stating that Kuwait planned to invest in the local market through this new development fund to boost overall economic growth. Further synthesis of Kuwait's macroeconomic objectives reveals that a development fund has been missing in the country, but now the Ciyada Development Fund seeks to fast-track the achievement of the country's overall development objectives. The gradual evolution of Kuwait's SWFs to incorporate a new development fund is aligned with the suggested conceptual model, especially in the Gulf region, in which SWF design and governance have evolved over time.

In another study, England, Kerr, and Al-Atrush (2023) reported that significant growth in SWFs has been observed in the Gulf region. The SWFI (2023) joined England, Kerr, and Al-Atrush (2023) by highlighting Oman's launch of a second new SWF – the Oman Future Fund – valued at USD 5.2 billion in 2023 (SWFI, 2023). Saudi Arabia also announced a new strategy in 2015 for the PIF as part of its ambitious 2030 national

vision, which comprises 87 companies in 13 sectors (PIF, 2023). Therefore, a comparison of Kuwait with Saudi Arabia, Qatar, and Oman indicates that Kuwait manages the oldest SWF and continues to establish additional funds as institutional investors on its behalf. Therefore, the main reasons for including Kuwait in this study stem from the large size of the KIA (USD 700 billion), its longevity (established in 1953), and its continued evolution with the newly established Ciyada Development Fund. The next section elaborates on the analysis of economic conditions in Kuwait.

5.2 Analysis of Economic Conditions in Kuwait

This section discusses the SWFs and their impact on Kuwait's economic conditions. The discussion presents an evaluation of the alignment of the funds with the country's objectives, economic conditions, and challenges.

Kuwait is a member of the GCC alongside Bahrain, Oman, Qatar, Saudi Arabia, and the UAE (Maghyereh and Abdoh, 2021). The country is located at the north-western corner of the Persian Gulf, bordering Iraq to the north and Saudi Arabia to the south, covering a total land area of 17,820 km2 with a population of approximately 3.9 million (UNDP, 2022).

In the 18th and 19th centuries, Kuwait developed as a port city that was dependent on pearling, fishing, and trading and also was reliant on long-distance and caravan traffic. However, the export of the first crude oil shipment in 1946 transformed Kuwait's economy (Kuwait Oil Company (KOC), 2021). In the 1950s, oil became the key source of revenue in Kuwait, creating a budget surplus for the small, young nation. Kuwait's economy quickly shifted from that of a pearl bank on the Gulf to one of the largest oil producers in the world. The country invested heavily in the oil industry and developed new fields and export facilities, increasing its share of the market and becoming one of the top 10 global oil producers. Throughout the 1950s, oil production increased more than 300% and, since 1959, the growth rate averaged 8% annually. The country's revenue jumped from USD 11.8 million in 1950 to USD 719.6 million in 1964–65 (Mallakh, 1966). While Kuwait enjoyed a growing surplus, the country was forced to make a "radical adjustment to the pace of oil development", reports Mallakh (1966). Kuwait experienced multilateral economic problems regarding investing its excess revenue, with Mallakh (1966) specifically citing "how to convert and channel the governmental wealth, disperse it throughout the economy as a whole".

The surplus generated in the 1950s through the 1970s continued into the early 1980s, when Kuwait's government announced its first budget deficit and revealed that the deficit had doubled (Kaboudan, 1988). As a result, this implied higher debt for the country. Two reasons behind the slowdown of Kuwait's economy were the eruption of the first Gulf War between Iran and Iraq, which necessitated increased expenditures by the Kuwaiti government, and a decline in the global demand for oil, which resulted in a drop in oil prices. These regional and international events heavily affected Kuwait's expenditures and revenues. In this vein, Kuwait's macroeconomic environment was facing many challenges, especially in terms of limited opportunities to develop a broad-based economy. Additionally, the small size of the economy, a scarce agricultural industry, a compact private sector, and a limited population created even more challenges (Al-Sabah, 1980). These challenges led to numerous economic transformations, especially in the key sectors of the oil and financial industries.

Therefore, Kuwait's government restructured oil companies by establishing the Kuwait Petroleum Corporation (KPC) in 1980 and consolidating the state reserve's organisations with the establishment of KIA in 1982. The KPC was instituted to "bring all state-owned oil companies under one entity" and is responsible for the sustainable development of the oil industry in Kuwait (KOC, 2021). As a state-owned corporation, the KPC formed one integrated oil industry by absorbing local oil companies under its umbrella to manage the country's diversified oil interests. It involved activities that ranged from discovering new reservoirs to delivering clean and safe fuel and providing several base petrochemical products (KOC, 2021).

The notion of a SWF to manage and invest the state's reserve emerged under HH Sheikh Abdullah Al-Salem Al-Sabah (1950–1965) with the establishment of the Kuwait Investment Board (KIB) in 1953 (KIA, History, 2021). The KIB was established to create Kuwait's investing agent, which is headquartered in London.

Kuwait's SWF was created eight years before the birth of Kuwait as an independent state (IFSWF, 2021). The SWF was mandated to "invest surplus oil revenue and reduce Kuwait's reliance on a single finite resource" (KIA, History, 2021). After 1961, the Kuwait's government shifted its focus and adopted a policy of diversification of assets to ensure sustainable economic growth for the young nation. This policy of diversification of assets introduced new types of funds responsible for managing the country's reserves to secure future generations' rights and to diversify the country's assets and portfolios. As a rentier state, Kuwait must invest its budget surplus, which is generated from oil revenue, to ensure reasonable and long-term investment in the state's sovereign reserves. This led to the creation of the Kuwait Investment Office (KIO) to replace the KIB in 1965.

However, as revealed by the interview respondents, the motivation in the early days for locating KIA headquarters in London is political, seeking to reduce the taxes levied on the fund and channel investment into the United Kingdom. This created a win–win situation both for Kuwait, which at that time faced limits on spending money outside the country, and for the UK, which was happy to receive the FDI. Respondent 1 reported,

> *Because of the early establishment (1950s), the KIO investment is exempted from the tax law. So, they are tax-free in the UK. So, Kuwait has invested hugely on this privilege, and you can see that there's an estimation of 250 billion pounds that exists in that office and is invested in every infrastructure or sector in the UK for ages now.*

Respondent 1 further explained that the location of KIO headquarters in London was influenced by the British, who provided expertise and a conducive environment for investments:

> *The idea came because the British government gave an opportunity. And then Kuwait took it at that time to open an office, and they gave them lots of facilities, which is tax-free. You know, "We will let you invest in whatever", even though they provided expertise for the business.*

To ensure the preservation of the rights of future generations, HH Sheikh Jaber Al-Ahmad Al-Sabah issued a decree in 1976 to divide the Kuwait SWF into two segments: the GRF and the FGF. The FGF was created with 50% of the GRF balance and was allocated a minimum of 10% of the state's annual revenues (KIA, 2018). The paradigm shifted from long-term returns on the state's reserve to a policy of diversification that meets the needs of a newly emerged nation. The discussions focused on introducing new types of funds that addressed the key macroeconomic conditions and that were designed to ensure security for coming generations.

As stated previously, during the 1980s, external factors emerged that negatively affected Kuwait's economic growth. The first Gulf War and the resulting drop in oil prices led to the country's first budget deficit in 1981, prompting Kuwait's government to designate KIA in 1982 as an "autonomous governmental body" (KIA, 2018). KIA was charged with managing the state's reserve, the FGF, and any other funds entrusted to it by the Ministry of Finance. Currently, KIA manages both the GRF and the FGF. The agency acts as an independent legal public authority with a budget under the supervision of the Council of Ministers and the Kuwait National Assembly. Figure 5-1 illustrates the development of Kuwait's SWF.

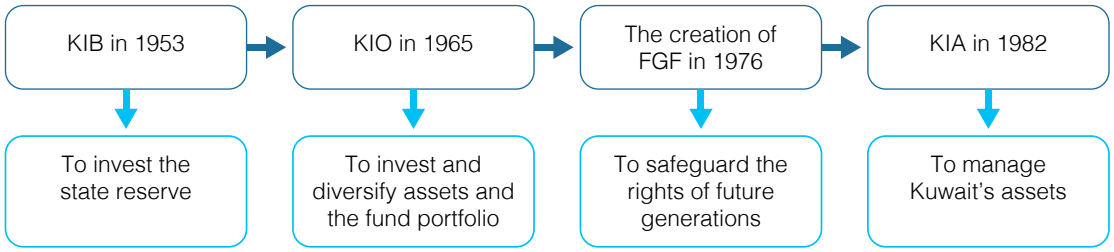


Figure 5-1: Development of Kuwait's Sovereign Wealth Fund
Source: DPhil Candidate (2023)

KIA currently acts as an independent legal authority responsible for the stewardship of the nation's assets, namely, the GRF, which receives all state incomes and is liable for state expenditures, and the FGF, which acts as an intergenerational savings platform and provides confidence regarding "rainy day" circumstances in the future (Bazoobandi, 2013). The GRF more closely resembles a treasury than an investment fund; its assets are invested mostly in cash and cash assets and, to a lesser extent, in government shares in public enterprises within Kuwait. The next section discusses the macroeconomic challenges facing Kuwait.

5.2.1 Kuwait's Challenging Macroeconomic Indicators

In the macroeconomic context, Kuwait's economy has encountered numerous challenges despite the long-term increase in oil revenues. Initially, the rapid growth in oil revenues propelled Kuwait to the forefront of economic development. As a result, all sectors of the economy have experienced varying degrees of growth. The government currently has sufficient income resources to implement its economic plans and cover its fiscal expenditures. This has, however, revived the question of dependence on oil as the single source of income, which is the most critical aspect of Kuwait's economy. Kuwait has benefited from its status as a relatively open economy, as it controls nearly 7% of the world's oil reserves and is the third-largest producer in the Organization of the Petroleum Exporting Countries. Kuwait enjoyed an increase in its GDP and an accumulating surplus that was derived mostly from natural resources, especially crude oil exports. Income from petroleum and petroleum-related products accounts for approximately half of Kuwait's GDP and is responsible for 95% of export revenues and 95% of government income (Alosaimi, 2015). However, this created a certain reliance on oil income as a component of the GDP, which has decreased in recent decades but remains extremely high.

While the generated fiscal rents have enhanced economic growth, Kuwait continues to face some macroeconomic challenges for its economy. In other words, Kuwait, as a commodity-based economy, has experienced a variety of difficulties, such as the small size of the economy and workforce, questions regarding oil depletion, fluctuations in oil prices, volatile inflation due to its per-capita GDP, and vulnerability to the so-called Dutch disease phenomenon, which is a phenomenon in which good news such as oil discovery harms the broader economy and creates related macroeconomic consequences (Bresser-Pereira, 2020). Kuwait's oil revenue and investment income from foreign assets grew expansively in the 1970s, creating large account surpluses in the present day (Bazoobandi, 2013). Table 5-1 details the increase in current account transactions, oil receipts, and investment income from 1971 to 1977. The reported figures are in millions USD.

Table 5-1: Increase in Oil Revenue and Investment Income from 1970 to 1977

	1971	1972	1973	1974	1975	1976	1977
Net balance of current account transactions	420.8	448.8	979.8	2,137.4	1,939.0	2,140.0	1,794.0
Oil receipts	527.9	548.5	1,084.6	2,369.3	2,289.0	2,615.0	2,587.0
Investment income	108.7	125.5	141.4	202.6	334.6	441.0	429.9

Source: Bazoobandi (2013)

During this six-year period, investment income grew by 60% annually, signifying the importance of efficiently managing these growing reserves, as they were bound to eventually exceed oil receipts. While oil revenues are large and permit a higher volume of government spending, it would be detrimental to spend such revenues on a regular basis in light of oil price fluctuations. The expected present value of future government cash flows from oil is assumed to gradually approach zero, as crude oil is inherently finite. Therefore, the fluctuation in cash flows from oil played a major role in rethinking the management of the state's revenue, which led to the establishment of the FGF in 1976.

Kuwait is one of many oil producers that experienced oil price volatility in the 1980s, resulting in a budget deficit in 1981–82. These challenges and problems are seen as the main obstacles to developing a broad-based economy and preserving the security of future generations. Kuwait's GDP rose exponentially from USD 2.097 billion in 1965 to USD 28.639 billion before the start of the Iraq–Iran War in the 1980s (World Bank, 2021a).

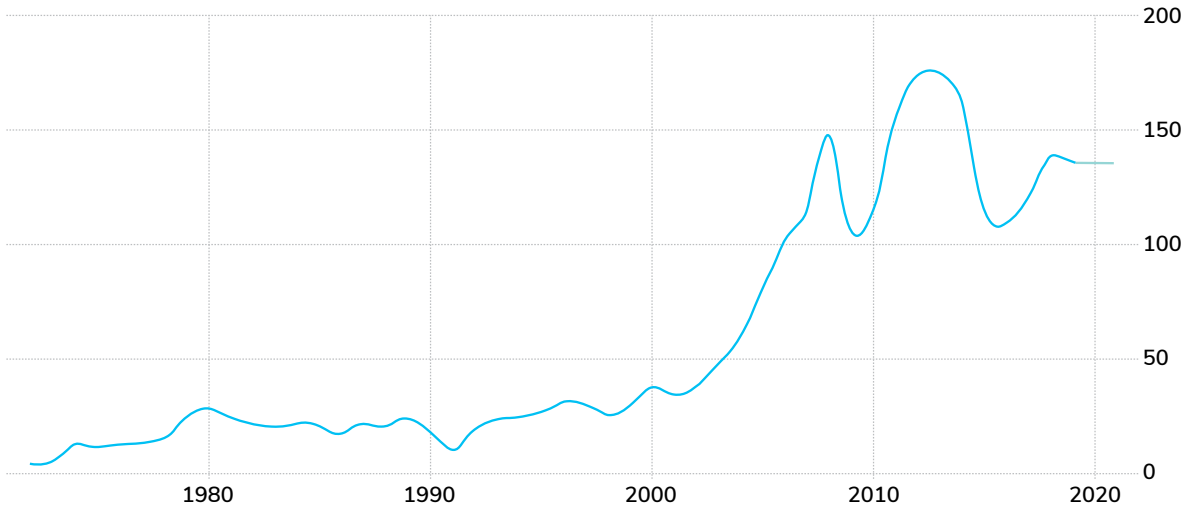


Figure 5-2: Kuwait's Gross Domestic Product Growth From the 1980s to 2020
Source: World Bank (2021a)

In addition, exporting commodities such as crude oil can lead to a long-term overvaluation of the national currency. Respondent 1 revealed that an overreliance on oil is a challenge, as funding is at risk when the resource is depleted:

> *The challenge, of course, is [determining] what is an alternative to the oil. You know, that's the big challenge. [A total of] %95 of our revenue is oil exporting. So, in case something happens to the oil, what are we going to do? Then, that was the big challenge to them; they have to have an alternative.*

Kuwait also suffered from Dutch disease (Pike, 2009), when the country's booming natural resources sector was coupled with a lagging non-tradeable sector (e.g., the service sector). The resource boom subsequently led to a "resource movement effect" in which labour shifted to meet increased resource demands, causing production to move away from the lagging sector. In light of the high volatility of oil prices and rapidly growing sovereign assets, the motivation to create a platform for longer-term investments and the ambition for greater geographic distribution of investments beyond Britain paved the way for greater institutionalisation of Kuwait's SWF. This led to the establishment of KIA, which was designed to bridge the gap in managing the state's reserve funds. Law No. 47, passed in 1982, stated that the objective was to "undertake, in the name and for the account of the Government of Kuwait, the management of the State's Reserve Fund, the monies allocated for the Future Generations Fund, as well as such other monies as the Minister of Finance may entrust the Authority with its management" (KIA, 1982).

According to MacDonald (2021), establishing the FGF in Kuwait helped mitigate the spending effect by allowing the country to prepare for a future without oil; it did so by reducing the impacts of revenue volatility from oil prices. While oil revenues were large and permitted a higher present value of government spending, excess taxes would be detrimental to spending the revenue on a current basis while risking excessive deindustrialisation and oil-price fluctuations. In this manner, the FGF was critical in allowing Kuwait to prepare for a future economy that is no longer based only on oil extraction (MacDonald, 2021). Figure 5-3 below presents the value of oil exports against total exports from 2014 to 2022 in Kuwait.

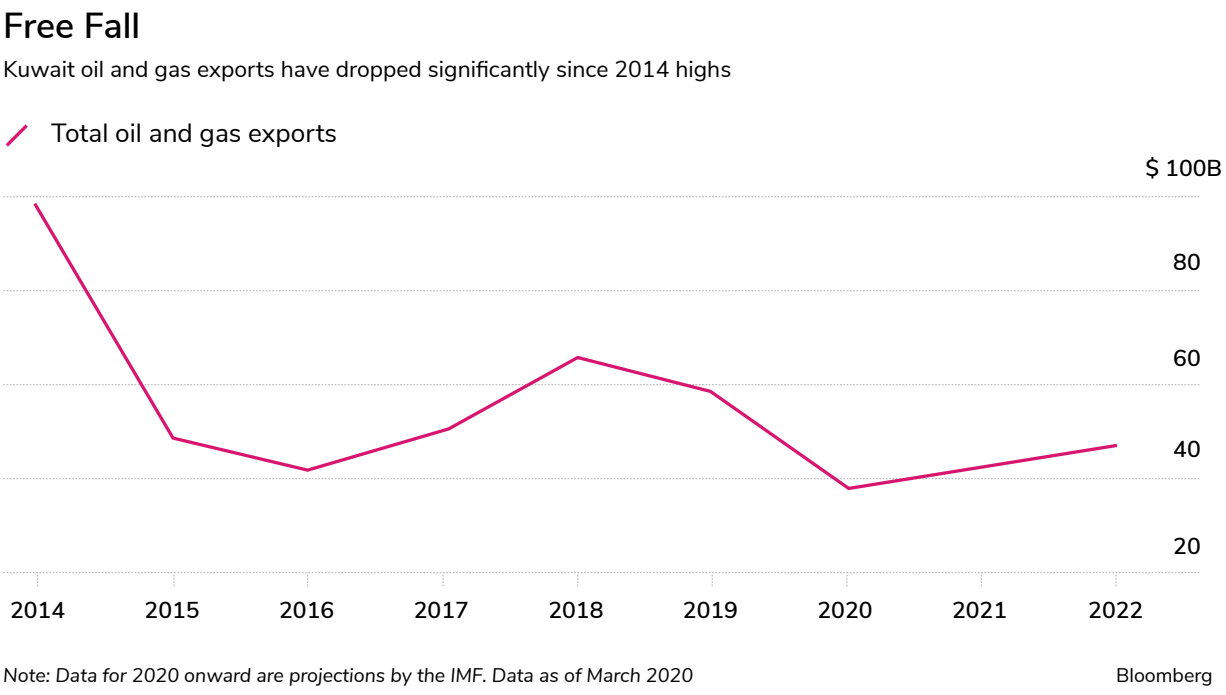


Figure 5-3: Kuwait Oil and Gas Exports from 2014 to 2022
Source: Economic Times (2021)

For a SWF that achieves a positive long-term real rate of return larger than the population growth rate, which was 2.0% in 2018, the wealth generated from oil revenues can result in a permanent income per capita, as the oil assets have successfully transformed into diversified financial assets (Steigum, 2012). The insights regarding the role of the fund in securing the future are reiterated by Respondent 1, who revealed that the SWF can help Kuwait survive even after oil is depleted:

> *I mean, in the beginning, it was only the overflow of the money from oil. But then, later on, because Kuwait has set different accounts – one of them is the future generational wealth bond. And they, what they do is get %10 of the revenue, annual revenue of the Kuwait government, and they take it to that future duration because they said, after the oil, what are we going to do with the future duration? Then, they created that fund to secure the future generation in case the oil is being depleted or any outside motive.*

Table 5-2 details the changes in oil and gas receipts and the net balance of current account transactions.

Table 5-2: Changes in Revenue and Account Incomes in 2014–2019

	2014	2015	2016	2017	2018	2019
Total oil and gas exports (billions USD)	420.8	448.8	979.8	2,137.4	1,939.0	2,140.0
Balance (percentage of GDP at market prices)	18.6	–0.3	0.5	7.5	9.3	4.7
Investment Income	108.7	125.5	141.4	202.6	334.6	441.0

Source: IMF (2020)

As detailed in Table 5-2, a reported annual investment income growth of 60% signified the importance of efficiently managing these growing reserves, as they were bound to eventually exceed oil receipts. As a result, the economy was vulnerable to diverse factors beyond its control related to international oil prices and the major oil companies' policies, which significantly influenced the prices on the global market (Ellerbeck, 2022).

Furthermore, with rapidly growing sovereign assets, the motivation to create a platform for longer-term investments was also established with the greater geographic distribution of investments beyond Britain. The investments followed the major devaluation of the British pound and aligned with the goal of installing Kuwaiti officials to operate the fund to signal independence over the country's assets following its previous status as a British protectorate (Bazoobandi, 2013). The findings regarding investing in different geographical regions are reiterated by Respondent 3, who argued,

> *So, the macroeconomics objective is to invest overseas. And that was one of the reasons at that time. We have lots of money ... so, the idea is to invest it and generate return.*

Respondent 2 also highlighted the purpose of a SWF to secure future generations and diversify the economy away from oil.

> *The basic premise was that the country's main source of wealth is oil, and its time horizon is limited, thus the need for creating a financial resource to provide for the citizens of the country.*

As a result, the SWF would facilitate the diversification of the revenue. Investment in various geographical regions has been important to ensure the fund's growth.

An additional factor motivating the creation of Kuwait's SWF was that, as with many countries that are members of the Organisation for Economic Co-operation and Development (OECD), Kuwait's population is ageing, and the population growth rate is projected to fall to 0.50% in 2050. The implied output decline from the ageing population justifies the government spending less than the permanent income per capita generated from the total oil wealth. The COVID-19 pandemic has also accelerated a number of issues, including falling commodity prices, suggesting the end of a 20-year supercycle. In addition, technological developments such as the shale revolution have significantly augmented oil supplies today and have stoked fears of total depletion in the future. Hughes (2013) reveals that the shale revolution is a global game changer in the energy sector, as oil is being extracted from previously inaccessible reservoirs. As a result, shale, oil, and gas are contributing to increased oil supplies.

The IMF claims that the combination of a declining global population and an economic growth slowdown has led to a 2.5% decrease in oil demand, which will continue over the next few decades. The Economist (2020) predicted that Gulf oil exporters would lose approximately half their revenue in 2020, shrinking the regional GDP by 7.3% compared to 2019 due to the COVID-19 shock and its effects. However, oil revenues had already fallen from USD 1 trillion in 2012 for the Middle East and North Africa (MENA) region to USD 575 billion in 2019 and USD 300 billion in 2020. Kuwait currently has a budget deficit of 40%, with political disagreements barring further borrowing following the depletion of GRF reserves in an effort to respond to the fallout from COVID-19. The government has frozen contributions to the FGF, with plans to extend this further by using FGF assets as collateral for a USD 7.2 billion loan to purchase Treasury-owned assets. In June 2020, the Kuwaiti Parliament also decided to transfer all profits generated from the FGF into the GRF in a bid to increase liquidity (Bortolotti, Fotak, & Hogg, 2020).

Martínek (2021) reported that Kuwait experienced challenges in organising institutions to manage its SWFs, determine where the funds' assets would be invested, and decide what macroeconomic objectives the funds would be required to address. Therefore, the author advocated for developing roadmaps and knowledge of the institutional design of SWFs.

Respondent 3 indicated that the large fund size has also led to additional complications in determining how to invest it:

In the mid-'70s, investing in these industries was a ground-breaking move. It was a relatively new field, and the local populace wasn't extensively educated or experienced in this domain during the '50s and '60s. Managing such substantial wealth was challenging and not easy.

These insights underscore the importance of education and training in investments associated with SWFs. Subsequently, gaining experience in identifying and managing potential investments has been important in ensuring that returns are achieved. Das, Mazarei, and Van der Hoorn (2009) argued that policymakers needed to consider broad questions before deciding on the type of SWF that was suitable for a given country based on the prevalent economic conditions. Their arguments subsequently emphasised the need to ensure that knowledge and education were provided to guide SWF development. In the next section, the rationale and objectives of Kuwait's SWF are examined.

A further challenge could be identified in Kuwait is regards the frequents changes in the government. Also, Global SWF (2021c) reveals that the interference from parliament could create negative consequences on the management ability to run the day to day business of the fund. However, to resolve such issues, the Kuwait government has restructured the governance of the fund to ensure separation between management of the fund and the political environment in Kuwait. In another report, Sender (2018) reveals that the KIA head manager is frequently summoned to parliament to respond to issues regarding the investments made by the fund while in other instances, the parliamentarians try to challenge the recruitments made.). One of the key lessons learned from the Kuwait case is that separating KIA›s management from Kuwaiti politics helps the fund maintain its autonomy in decision-making.

5.3 Rationale and Objectives of Kuwait's Sovereign Wealth Fund

As discussed in Section 5.2, the KIA was established to oversee the SWFs in Kuwait to ensure both the long-term sustainability of the Kuwaiti economy and security for future generations, According to Bazoobandi (2013), KIA serves as the current independent legal authority responsible for the stewardship of the nation's assets, the GRF, which receives all state incomes and handles all state expenditures. Velayutham and Hasan (2021) also report that KIA manages other state funds, such as the FGF, which acts as an intergenerational savings platform to prevent adverse outcomes in the event of negative consequences. According to Respondent 2, legislation led to the creation of the FGF in Kuwait:

After [Kuwait gained its] independence, Law Number 106 of 1976 allocated %10 from the state's general revenue to the Fund for Future Generations in addition to %50 of the available state's GRF.

In the current case study, the GRF is examined softly and is viewed as more of a treasury than an investment fund such as the FGF (IMF, 2017). Moreover, the GRF's assets are invested mainly in cash and minimally in government shares in public enterprises within Kuwait. As Respondent 4 stated,

KIA basically manages two funds: the General Reserve Fund and the Future Generations Fund. The oil revenues go into the General Reserve Fund. The money needed for the budget will be transferred to the Ministry of Finance and thereafter to each ministry according to their need. The General Reserve [Fund] concentrates its investments within the country. This includes ventures like Mowasalat for transportation, Kuwait Airlines, tourism, banking, and restaurants. These investments may subsequently transition to the private sector or remain under KIA Authority. In contrast, the Future Generations Fund exclusively directs its investments beyond our national borders.

The GRF's financing structure is displayed in Figure 5-4 below.

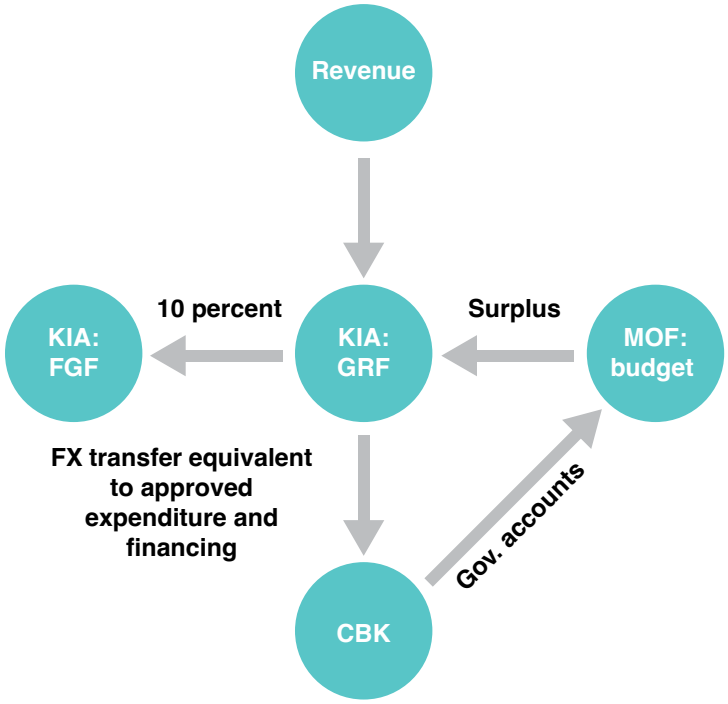


Figure 5-4: General Reserve Fund Financing
Source: IMF (2017)

Figure 5-4 indicates that the GRF is developed from revenue collected and channelled to the Central Bank and the FGF through foreign exchange transfers. The surplus from the budget is also redirected to the GRF Treasury savings.

Bazoobandi (2013) suggested that KIA aims to address three main objectives: (1) to achieve a rate of return on investment that, on a three-year rolling average, exceeds composite benchmarks by maintaining a diversified portfolio with mandated risk and return parameters; (2) to be a leading asset management organisation committed to continuous improvement in its investments and operations; and (3) to support investments that do not threaten or compete with the private sector in Kuwait (Bazoobandi, 2013). In another study, Bahgat (2010) reveals that KIA is only an asset manager and does not own any entrusted investments, with assets withdrawable only under sanction by law. Since KIA was established as the KIO parent organisation in 1982, its main goal has been to provide revenue that is uncorrelated with oil income to alleviate future uncertainty. Echoing insights from KIA (2021), Respondent 4 stated,

> *Following the birth of Kuwait as an independent sovereign nation in 1961, a modern investment paradigm was introduced to ensure the sustainable growth of a young nation, including the basic investment principles that would later become the Future Generations Fund. A few years later, in 1965, Kuwait adopted a policy of diversification of assets and portfolios, which led to the KIB being replaced by the Kuwait Investment Office (KIO).*

Bazoobandi (2013) also reported that various legislation has been formulated to preserve the confidentiality of KIA's operations. For instance, Law No. 47, which was implemented in 1982, restricts the disclosure of information regarding KIA's operations and investments with sanctions and up to three years imprisonment. The law further stipulates that KIA's objective is to manage the GRF on behalf of the State of Kuwait, all funds allocated to the FGF, and other funds that the Ministry of Finance entrusts to the authority (Bazoobandi, 2013). As Kuwait's SWF has grown, KIA has appointed various independent consultancies to advise on different operational solutions, a technique employed by other professional

investment houses. For instance, in 2004, KIA hired Mercer an international consultancy to review its investment strategies (Alosaimi, 2015). Mercer's recommendations included establishing a minimum rate of return for the FGF to cover international inflation rates and currency fluctuations.

A key feature identified in designing various objectives of Kuwait's SWF is that the GRF currently plays an integral role as a government treasury and holder of domestic assets. On the contrary, Bahgat (2008) revealed that the FGF, which holds approximately 66%–80% of KIA's AUMs, focuses on maximising long-term, risk-adjusted returns in which its portfolio does not hold any domestic or regional investments. An explanation for the focus of the FGF on long-term returns is that developmental objectives may create conflict between the government and the State Audit Bureau, particularly where the particular projects fail to create an impact. On the same note, KIA's objectives explicitly outline the need to avoid competition with the private sector in Kuwait, explaining its reluctance to invest domestically. However, the authority has been commissioned to handle various projects, such as establishing a public bank and a national portfolio to support entrepreneurship and small and medium-sized enterprises (SMEs), with the various projects maintained separately from the FGF and financed by other sources (Alosaimi, 2015). The subsequent section examines how the type and mandate of Kuwait's SWF were established.

5.4 Establishing the Type and Mandate of Kuwait's Sovereign Wealth Fund

In examining the mandate of the Kuwait SWF to diversify the country's income and save its wealth for the future generations, it is important to consider the various directives assigned to the fund to determine whether they are consistent with the objectives of fiscal and monetary policies. The analysis reveals that KIA, in its current iteration, was established in 1982 as an independent legal entity with clear objectives. KIA's main purpose was to achieve high long-term returns on the country's surplus reserves to facilitate an intergenerational transfer of wealth and to enhance the achievement of macroeconomic objectives (HydePrice, 2008). Additionally, KIA assumed all previous investments and became responsible for investment activities on behalf of the State of Kuwait. Regarding mandates, as a savings fund, it had evolved significantly from the KIO in 1953 to KIA in 1982. When the KIO was established in 1953, it was mandated to enhance the economy's long-term sustainability and achieve the SWF's objectives (Braunstein, 2009).

A new development fund, the Ciyada Development Fund, is emerging as part of the Kuwait government's 2023–2027 economic development programme to develop private-sector partnerships that facilitate the creation of giga projects (GlobalSWF, 2023). The Ciyada Development Fund was created after Kuwait's SWF, KIA, was transferred to a different ministry (GlobalSWF, 2023). The development fund has a different purpose and objective, because future generations will invest globally and not locally. The fund is also associated with different risks and returns for the government as it teams up with international companies in Kuwait.

5.5 Establishing the Structural Design of the Fund

This section discusses the structural design of the SWF with regard to portfolio management, operational models, capital allocation, withdrawal, and governance processes.

5.5.1 Capital Allocation, Governance, and Management

In examining the SWF's mandate to diversify Kuwait's income and save its wealth for future generations, it is illustrative to consider the various mandates allocated to the fund to determine whether they are consistent with the objectives of Kuwait's fiscal and monetary policies.

The capital allocation to KIA from the government was discussed in Sections 5.3 and 5.4. Bazoobandi (2013) reports that the GRF contributes 10% of its revenue to the FGF, and that portfolio holds about 66%–80% of KIA's AUMs to maximise long-term, risk-adjusted returns. This capital allocation in KIA is

controlled by legislation directing a proportion of revenue from oil and gas rents to the FGF. This was confirmed by Respondent 2, who stated:

> *Sovereign fund management is governed by a set of stringent regulations and rules. One such rule mandates that %10 of the annual revenue must be allocated to the fund, regardless of Kuwait's prevailing oil-related circumstances. Even during challenging periods like the COVID19- pandemic, when oil prices plummeted to 20$ per barrel and the government faced substantial financial losses, these regulations remained steadfast. The government continued to allocate %10 of its oil-derived revenue to the fund, recognising its critical role in sustaining essential expenditures such as salaries.*

Reuters (2021) reported that the government withdrew funds from the FGF only once, before the onset of the Gulf War. However, the cabinet submitted draft legislation that would allow the government to withdraw up to KD 5 billion from its SWF annually (Reuters, 2021). An earlier report by Hagagy (2020) also postulated that the government submitted a public debt law to borrow KD 20 billion over 30 years to help alleviate the national budget deficit. These insights indicate that Kuwait's government withdrew capital from the FGF as a strategy to support shortfalls in its budget.

No explicit statement was made regarding the funding source of these drawdowns, but it was assumed that a significant amount was withdrawn from the FGF due to the size of the fund relative to the GRF (The Sovereign Wealth Fund Initiative, 2011). Alosaimi (2015) revealed that Kuwait has been successful in managing its foreign investments, producing USD 6.3 billion for the FGF through the implementation of investment strategies compared to the USD 5.4 billion generated from oil.

The particular drawdowns were not foreseen or consistent with the fund's policy to continually reinvest in the long term, but the extraordinary circumstances created by the COVID-19 pandemic and the precipitous decline in oil prices heavily disrupted the domestic economy, creating significant capital losses that had to be addressed (The Sovereign Wealth Fund Initiative, 2011). These insights were supported by Respondent 4, who argued,

> *Going forward, if the government's large spending continues and the deficit gets larger, there is a concern that the parliament will pass a law to allow the withdrawal from the [FGF] to cover the ever-expanding deficit.*

Historically, only one drawdown was necessary to support the liberation effort so that eventually, Kuwaiti citizens could return home after the Gulf War under the consistent "rainy day" narrative shared by KIA officials at the time of its establishment (The Sovereign Wealth Fund Initiative, 2011). Therefore, it could be argued that the war and conflict justified the withdrawals.

Regarding the governance and management of KIA, the management committee, which manages the day-to-day activities of the fund, is composed of five members from the Kuwait private sector and four members from the government. The analysis in Section 5.2 revealed that KIA, in its current iteration, was established under the Ministry of Finance in 1982 as an independent legal entity with clear objectives (Bazoobandi, 2013). KIA was directed mainly to achieve high long-term returns on the country's surplus reserves to facilitate an intergenerational transfer of wealth and enhance the achievement of macroeconomic objectives (HydePrice, 2008). Additionally, KIA assumed all previous investments and was responsible for investment activities on behalf of the State of Kuwait (HydePrice, 2008). The use of mandates in the fund evolved significantly from the SWF's creation in 1953 until 1982. Originally, the SWF was mandated to enhance the economy's long-term sustainability (Braunstein, 2009). However, over time, KIA has played additional roles, including stabilisation of the economy, development of infrastructure, and growth through overseas investments (HydePrice, 2008).

Additional insights reveal that the SWF has evolved from simply holding all of its assets, such as fixed-income and real estate instruments, in the early 1970s to having a more traditional portfolio in the 1980s, with a proposition to protect against inflation while providing liquidity for the state treasury to use for further

reinvestment (Martínek, 2021). However, Kuwait's SWF played a significant role during and after the Iraqi invasion as the leading financial institution headquartered abroad in London (Bazoobandi, 2013). In the aftermath of the war, regular budgetary allocations were halted due to the interruption of oil sales. As a result, there was a significant disturbance in foreign trade and the domestic financial market (Bazoobandi, 2013). During this disturbance, the SWF managed foreign assets, distributed money to exiled Kuwaitis, financed military operations supporting liberation efforts, and funded crucial post-war reconstruction (Bazoobandi, 2013). Government revenues were also heavily affected, and regular budgetary activities were halted in light of the heavily diminished revenue from oil sales (The Sovereign Wealth Fund Initiative, 2011).

Further analysis also revealed that in 2002–2007, before the onset of the global financial crisis, annual fund contributions and investments in overseas locations increased. For instance, KIA invested in two Western financial institutions, Citigroup (USD 3 billion) and Merrill Lynch (USD 2 billion; The Sovereign Wealth Fund Initiative, 2011). A plausible explanation for the rise in overseas investments is the need to diversify the economy and reduce the reliance on the oil sector, which had been deeply affected by the Iraqi invasion and the Gulf War. Kuwait's capacity to make informed decisions about offshore investments in major Western financial institutions emphasises the need for Gulf countries to diversify their economies by investing abroad.

Ultimately, Kuwait's assets were depleted, and the range of disturbances encompassed sharp declines in oil output and exports, destruction of infrastructure and businesses, and large government pay-outs for wages and transfers (The Sovereign Wealth Fund Initiative, 2011). The invasion caused widespread physical damage and significant balance-of-payment deficits as well as a disrupted labour market, with more than 60% of Kuwait's oil wells destroyed (The Sovereign Wealth Fund Initiative, 2011). Estimates of the total damage were more than USD 10 billion. The substantial impact of the invasion on fund contributions during 1990–1991 can be observed in Figure 5-5 below.

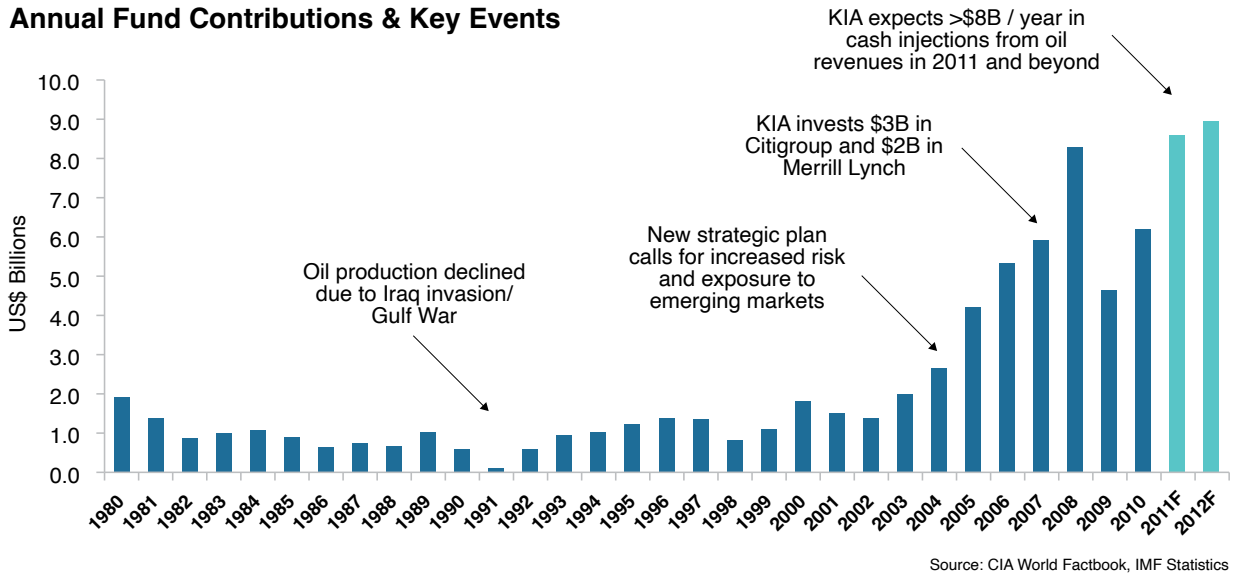


Figure 5-5: Annual Fund Contributions from 1980 to 2012
Source: The Sovereign Wealth Fund Initiative (2011)

Figure 5-5 indicates that sovereign assets played a significant role in responding to the heavily disrupted Kuwaiti economy. Investment income fell from 27% of GDP in 1989 to less than 8% in 1994 (The Sovereign Wealth Fund Initiative, 2011). Furthermore, the disruption caused a reduction in total government revenue, which was heavily dependent on oil exports. Additionally, more than 80% of total expenses in 1991 were for the liberation effort, particularly payments to foreign governments for Desert Shield and Desert Storm operations, totalling roughly USD 21.6 billion, with signed arms agreements valued at USD 5.6 billion.

A third impact was the destruction of 742 of 1,080 Kuwaiti oil wells during the conflict, resulting in a recorded deficit of 120% of GDP, which was supplemented by withdrawals from both the GRF and FGF. The seven-month-long Iraqi occupation and reconstruction cost USD 66.7 billion by the end of the 1994–1995 fiscal year, with approximately 25% arising from debt forgiveness (Exell, 2016). As a result, Kuwait had a balance of only 40% of its pre-invasion foreign reserves, an estimated USD 46.7 billion (Exell, 2016).

No explicit statement was made regarding the funding source of these drawdowns, but it was assumed that a significant amount was withdrawn from the FGF due to the size of the fund relative to the GRF (The Sovereign Wealth Fund Initiative, 2011). The particular drawdowns were not foreseen or consistent with the fund's policy to continually reinvest for the long term, but the extraordinary circumstances, such as war or the pandemic, caused heavy disruption to the domestic economy with significant capital losses that had to be addressed. Additionally, the drawdowns were necessary to support the liberation effort so that, eventually, Kuwaiti citizens could return home under the consistent "rainy day" narrative shared by KIA officials at the time of its establishment. Therefore, it could be argued that the war and conflict justified the withdrawals (Wilson et al., 1997).

KIA also enabled Kuwait to address its various economic challenges, as the leadership was able to independently control the country using the SWFs. The funds support various organisations in the home country, such as those in the financial sector, through bailouts or direct investments to avoid the firms' bankruptcy and eventual failure. In the next section, the impact of Kuwait's SWF on development is discussed. The next section discusses Kuwait's SWF portfolio management and operational model.

5.5.2 Kuwait's Sovereign Wealth Fund Portfolio Management and Operational Model

As discussed previously in this chapter, Kuwait's SWF evolved from simply holding all assets, such as fixed-income instruments, in the early 1970s to having a more traditional portfolio in the 1980s that covers inflation while providing liquidity for the state treasury to use or for further reinvestment (Martínek, 2021). In addition, Kuwait took initiatives to further diversified the fund's portfolio into assets such as private equity or real estate, in which it can arbitrage its long-term investment outlook and further realise the returns, compared to a typical asset manager with liquidity concerns or shareholders. While disclosures of investment strategies, portfolio components, and target rates of return are not revealed officially by KIA, the respondents were able to elaborate on its structural design. As Respondent 4 indicated:

> *The mechanism in place for the Future Generations Fund was designed with understanding to double both assets and returns every 10 years. This equates to an annual target return rate of %7, a goal we have not only met but exceeded in recent years, achieving a remarkable %10 annual return. This mechanism effectively ensures the continuous growth and expansion of the fund, in line with our commitment to securing the financial future of generations to come.*

Diversification remains an integral part of the fund's investment strategy. The fund's strategic asset allocation is based mainly on world GDP contribution, market capacity, and market growth (i.e., key financial and macroeconomic indicators). The allocation of capital between the different investment pools is based on a strategy developed by the board and management, as stated by Respondent 4:

> *KIA actively manages its portfolio according to a dynamic asset allocation strategy set and monitored by our board of directors. The portfolios seek to deliver superior long-term, risk-adjusted returns, primarily through investments in high-quality companies and projects.*

Respondent 4 also revealed that:

> *KIA is overseen by a board of directors chaired by the Minister of Finance, with members including the Minister of Oil, the Central Bank Governor, and the Under Secretary of the Finance Ministry. Additionally, five independent members appointed by an Amiri decree, one of whom becomes the Managing Director and Chairman of the Executive Committee,*

make up the board. The Executive Committee manages day-to-day investment operations, aiming to secure sustainable long-term returns for Kuwait. Its duties encompass setting investment policies, approving decisions, monitoring performance, and ensuring transparent and citizen-centric management.

Therefore, according to Respondent 4, the allocation of capital in KIA is determined by the strategy established by the management. These findings were reiterated by Respondent 2, who revealed that capital allocation within the fund is based on strategic asset allocation:

The allocation is based on the strategic asset allocation, which takes into consideration the mid-term and the long-term [outlooks]. It is based on geographical investment, including the sectors outside of the emerging investment venue, such as start-ups, private equity, and the like ... mostly the future or expected growth in different economic sectors (healthcare, technology, infrastructure, etc.).

Regarding the capital withdrawal from Kuwait's SWF, legal restrictions forced the government to cover its budget shortfalls through revenue collection and different precautionary savings rather than withdrawals from KIA (Bauer, 2020). Alosaimi (2015) indicated that several factors were considered. Firstly, regarding liquidity, Alosaimi (2015) argued that when a strategy is realised in equity and achieves its expected growth, a rational exit decision must be made. Thus, the liquidity of the nation's exchange and the stock itself are essential for any rational investor, including KIA. However, as previously argued, KIA adopts a long-term, intergenerational focus by using its capital to make a rational trade-off between market liquidity and expected return.

The second factor is a consideration for prudence, and prudence considerations are a major factor in investment decisions (Alosaimi, 2015). KIA implicitly invests in highly reputable companies as part of its market-indexing strategy. KIA's investment in Chinese financial firms can also be a factor to diversify the portfolio to the Chinese banking system. Nonetheless, potential market growth remains a higher priority, as suggested by Managing Director Bader Alsaad, who stated that "someone who just seeks reputation may not agree with this step and ignore the fact that Chinese banks might be the biggest banks in the world one day soon" (Alosaimi, 2015).

The third factor is related to large capitalisation, where KIA's investments also focus on large-capitalised firms due to their ability to accommodate significant capital while allowing the fund to remain "off the radar". KIA prefers less than 5% ownership, as larger stakes are likely associated with mandatory disclosure requirements with financial market authorities, which involve time-consuming, complex paperwork and potential restrictions. The insights also emerge from KIA's diversification strategy, which includes purchasing minor stakes in various firms with high growth potential in the long term. KIA's geographical asset allocation leans towards countries while maintaining its own active representative office (e.g., London).

However, inflows from the new funds are typically used to rebalance the existing portfolio to fit its strategic asset allocation in light of market changes (Alsaad, 2013; Alayob, 2013). Regarding target sectors for distributing capital, KIA executives have outlined a clear preference for the financial sector, as it can best reflect an economy's performance. Alsaad, the managing director, argues that financial institutions, specifically banks, are the best proxy for growth in emerging economies. To take advantage of the growth opportunities in China following the significant privatisation of its financial sector in the 2000s, KIA has actively participated as a cornerstone investor in the Industrial and Commercial Bank of China, the Agricultural Bank of China, and CITIC Securities. Diverse investments have formed the bulk of KIA's USD 6 billion investments in mainland China since 2011, and the Capital IQ database at the time reported that 42 of 74 investments were made in financial institutions, providing proof of this preference (Sender, 2013).

KIA management has also issued several mandates imposing certain restrictions, such as investments in gambling and alcohol-related activities, which extend to their portfolios with external asset managers. According to Respondent 4,

KIA does not invest in companies whose major business is selling alcohol or gambling.

Sender (2013) stated that the mandate of the SWF serves three key roles: (1) achievement of a three-year rolling average rate of return that exceeds relevant benchmarks, (2) commitment to continuous improvement in its operations and investment, and (3) commitment to refraining from competition with the domestic private sector. As Respondent 2 relayed,

> *As a long-term fund with a focus on future generation, the portfolio should be conservative in general and [should reflect] changes in the short term if they are well-justified.*

According to Respondent 2, Kuwait's SWF is crucial in diversifying the revenue in the country and facilitating the achievement of its macroeconomic objectives. Moreover, Buteica and Petrescu (2017) have reported that additional countries are diversifying their economies by establishing SWFs. As a result, SWFs have served as tools that have guided economic stabilisation. The next section discusses the impact of Kuwait's SWF on macroeconomic and development contexts.

5.6 Impact of Kuwait's Sovereign Wealth Fund in Macroeconomic and Development Contexts

The previous section established the roles of monetary, fiscal, and development policies in Kuwait's SWF and government. The operational and portfolio management aspects of the SWF were discussed, and the mandate of the SWF and concerns regarding the allocation and withdrawal of capital were examined. A measurement of the performance of Kuwait's portfolio management was also undertaken. This section discusses the impact of SWFs in macroeconomic and development contexts and examines how the funds focus on achieving various objectives and outcomes.

5.6.1 Kuwait's Sovereign Wealth Fund Objectives and Outcomes

Sheikh Abdullah Al-Salem has described Kuwait's investment philosophy by stating that the SWF aims to generate long-term returns on financial reserves and provide alternatives to oil reserves. This strategy is designed to empower future generations in Kuwait to face uncertainties with higher levels of confidence (Al-Qassemi, 2017). The arguments were reiterated by Respondent 4, who described the SWF thusly:

> *There were no challenges at that time, only the realisation that the oil will not last forever, so there was a need to create a savings account [so] that the future generation can use its income to help them with the income when there is no more oil or the price of the oil is very low and another source of income is needed.*

At the 2008 Foreign Trade Conference in Luxembourg, Alsaad formally expanded the SWF's objectives to include three main goals (Bazoobandi, 2013; Bahgat & Gawdat, 2010). The first is to achieve a three-year rolling average of returns that exceeds composite benchmarks. This is achieved by maintaining a diversified portfolio with mandated risk and return parameters, adjusting to market conditions, and making swift changes that are tactical for the allocation of assets to arbitrage economic trends. The fund also aims to select outperforming asset managers and investments for each respective index. The second objective is to lead an asset management organisation that continuously improves its investments and operations by comparing its performance to peers at large institutional investment bodies. The fund also provides continuous support and training for staff while fostering a dynamic modern organisational culture. The third objective is to select investments that do not threaten or compete with the private sector in Kuwait. This includes contributing to human capital formation by attracting talented young Kuwaiti citizens to be trained as investment professionals, partaking in the growth of the investment sector by partnering with profitable firms and further investing in their growth, ensuring transparency in its operations by installing corporate governance measures, and holding all portfolio and business partners accountable to the fund's ethical standards. These goals were supported by Respondent 3, who added:

> *The purpose and the plan of the fund … [is that] we achieve our target. We established a*

fund with good returns and one day if you decide to use it you can supplement. The issue is that the country depends on oil %90, which is the main security.

The response indicated that KIA's objective is to generate returns from its portfolio of assets in alignment with market conditions. The implication is that investments will help Kuwait sustain its economy in a future in which oil is depleted and, in turn, reduce overreliance on natural resources.

Kuwait's economy places significant importance on seeking positive returns on foreign investments. Kuwait's annual GDP per capita is eighth globally, at USD 67,000, and the capital-to-labour ratio is very high, with sufficient income in education and healthcare. Therefore, further domestic investment is unlikely to generate returns and is already contentious regarding its potential to be ineffective due to political manipulation (IMF, 2003; Belmont and Caroline, 2016). The SWF's assets grew 34% between 2012 and 2017, as reported by Kuwait's minister of finance at the Euromoney Conference in 2017. The fund was also praised for its prudent and successful investments (Arab Sovereign Wealth Monitor, 2017). These findings were reiterated by Respondent 1:

But still talking about the experience in the '50s, the Kuwait Investment Office in London was very successful in utilising this money and became one of the legends… According to the US Sovereign Fund Office, [Kuwait's SWF has] become the third-largest fund in the world after Norway and China.

This statement emphasises the fund's success and the subsequent high returns generated from its diversified overseas investments. Respondent 2 also revealed that Kuwait's SWF has achieved its mandate through portfolio diversification:

By looking at the growth of the fund yearly, it is very clear that the fund is achieving its objectives and, in the meantime, working to diversify its economy, like most countries in the GCC.

As discussed in Sections 5.2 and 5.3, the fund has diversified its investments and reduced its exposure to any particular market by transforming its simple market-indexing strategies into well-diversified portfolios (Alosaimi, 2015; Belmont and Caroline, 2016). The fund's long-term horizon allows it to capture the illiquidity premiums of certain assets, such as private equity, that other investors may not have the timeline to leverage.

Moreover, Alosaimi (2015) argued that the fund's asset footprint also spreads wider now, as it was concentrated in the UK for a large part of the 20th century and then expanded into other Western markets. Additionally, the SWF has dedicated a sizeable portion of its investments into capturing gains from the meteoric rise of the Chinese economy since the turn of the millennium as well as other emerging markets. Thus, KIA's selection of asset managers reflects this performance as its successful roadmap, capping capital investments with regular monitoring and contact that has led to 64% of its partners outperforming their benchmarks (Alosaimi, 2015).

In addition, fund capital has been concentrated in foreign equity markets to avoid competition with the Kuwaiti private sector, and only public initiatives that act to spur economic activity, such as the Commercial Bank of Kuwait or the public telecommunications network, have been funded. However, during some periods, the KIA board may desire to withdraw finances to initiate projects, so it is important to ensure that this is done only when the Kuwaiti economy requires supplemental funds to minimise domestic volatility. These public investments would be necessary only if the domestic economy at the time could not provide the incentive. This restriction helps provide confidence that the Kuwaiti economy will be supported by the KIA's assets only when it is truly needed to reduce domestic volatility or to fund vital economic projects (Bazoobandi, 2013). As a result, this allows the Kuwait government to address deficits in its budget. The next section discusses the impact of Kuwait's SWF on economic conditions.

5.6.2 Impact of Kuwait's Sovereign Wealth Fund on Economic Conditions

Concern has arisen regarding whether the Kuwait SWF has achieved sustainability, stability, and economic diversification, thereby improving the economic conditions in the country. A geographical analysis reveals that Kuwait is a small nation in both area and population and is endowed with approximately 7% of global oil reserves. Crude oil production is 3 million barrels daily, and the industry and its subsequent sectors account for nearly 60% of Kuwait's GDP, while oil revenue constitutes 90% of public state income. Oil rents relative to other MENA nations and globally remain high, as they have historically (World Bank, 2018; Al-Mejren, 2015). Figure 5-6 below compares the oil rents across GCC countries.

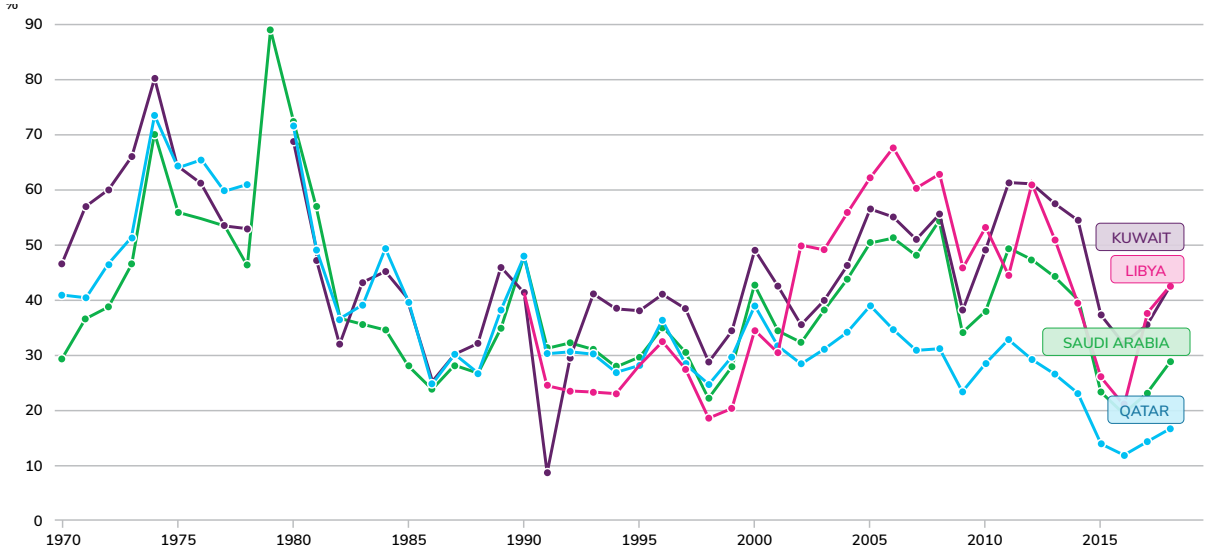


Figure 5-6: Oil Rents in Gulf Cooperation Council Countries in 1970–2016
Source: World Bank (2018)

According to the figure, oil rents as of 2018 constituted approximately 43% of the economic activity in Kuwait, dwarfing fellow GCC member and neighbour Saudi Arabia by an estimated 50% while rivalling Libya, whose significant reliance on oil income can be explained by the recent years of instability due to conflicts arising from power vacuums. As mentioned previously, for a large part of the fund's history and after oil discovery in Kuwait, oil incomes, on average, have been responsible for 91.3% of total public revenues (World Bank, 2018; Steigum, 2014). The implication is the use of KIA to minimise overreliance on oil as reported by Respondent 4:

> *HH Sheikh Abdullah Al-Salem Al-Sabah (1965–1950), in February 1953, established the Kuwait Investment Board (KIB) headquartered in the City of London with a mandate to invest surplus oil revenue and reduce Kuwait's reliance on a single finite resource.*

This response indicates that the SWF was transforming its economic conditions by establishing a future generations fund to diversify the state income away from oil. The interview response is confirmed by Sharma (2017), who argued that funds from Kuwait's SWF were held abroad temporarily until useful investment opportunities were identified. As a result, the SWF would facilitate the diversification of revenue and, therefore, create economic stability. Such findings align with those of Bazoobandi (2013), who reported that Kuwait had developed its SWF from the sale of oil and natural gas deposits that were widely available in the GCC region. A historical overview of the oil rents from 1971 to 2020 is detailed in Figure 5-7 below.

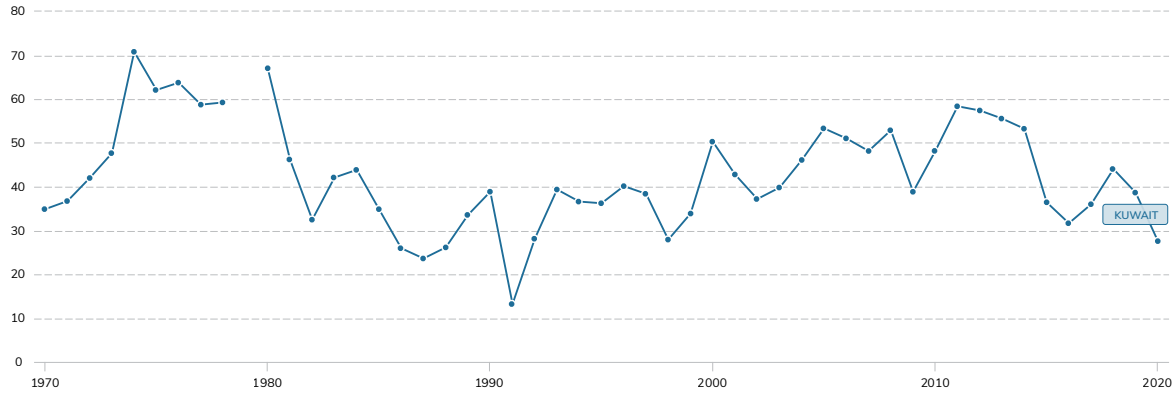


Figure 5-7: Oil Rents for Kuwait from 1970 to 2020
Source: World Bank (2021)

As can be seen in Figure 5-7, Kuwait's share of oil rents has been unstable due to global oil price volatility, but it was at its highest in the 1970s. The prices settled and declined further in 2006–2014. The analysis indicates that Kuwait is the only GCC country in which the size of its non-oil sectors has decreased in the past two decades, which is partially explained by the lack of large-scale contracted development projects. Therefore, the focus of the fund is to support diversification of the income and reduce overreliance on oil in the future as reported by Respondent 1:

> *The main objective was to hedge against potential internal uncertainties. It's not merely about diversifying investments; they aim to hedge because the oil and gas sector generates substantial revenue, yet it's beyond their control, especially pricing. So, they're hedging. What's intriguing is that Kuwait's sovereign fund, the earnings or net income, doesn't contribute to Kuwait's budget. Instead, they use it as a safety net for rainy days, essentially creating a shadow economy beyond Kuwait.*

This response suggests that Kuwait's SWF is designed to create a significant transformation in the country, not only to secure the nation's future beyond the depletion of oil reserves but also to ensure prosperity for future generations. This underscores the fund's overarching objective of maintaining long-term economic stability and welfare for Kuwait, even in the face of unpredictable fluctuations in the oil and gas sector. Furthermore, with quickly growing sovereign assets, the motivation to create a platform for longer-term investments was also established with the greater geographic distribution of overseas investments beyond Britain, where its London office is situated (Bazoobandi, 2013).

The changes in oil prices versus total revenue from 1972 to 2014 are depicted in Figure 5-8 below.

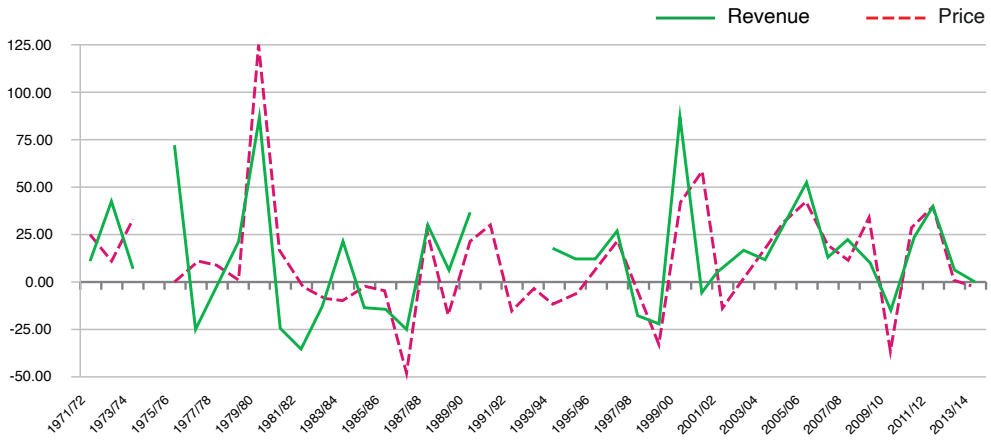


Figure 5-8: Ratios of Changes in the Oil Price to Changes in Total Revenues in 1972–2014
Source: Steigum (2012)

Figure 5-8 reveals a significant correlation between oil price changes and total revenues. As indicated, Kuwaiti public finances rely on a volatile exogenous factor, which undermines strategic efforts to plan over the medium to long term. Moreover, public investment projects correlate with rising oil prices, while the reverse is true during an oil price slump when capital is withheld from these activities (i.e., higher oil prices lead to a new stage of expanded government spending and distribution of rents). The dominance of oil revenue in the state budget over the past seven decades indicates that Kuwait has been unable to distribute wealth throughout its economy to achieve a sufficient level of domestic economic diversification, and it is distinguished by having the lowest ratio of non-oil economic activity compared to the rest of the GCC bloc (IMF, 2017; Shehabi, 2020). However, by introducing KIA with a mandate to transform the economy, wealth has been distributed in the country. This assertion is supported by Respondent 1, who reported:

> *Well, I think that their goal has to be changed at some point. And I think they should utilise those wealth channels they have to benefit Kuwait in terms of technology, industrial and the others.*

The view from respondent 1 indicated that KIA was achieving its mandate in promoting growth of the economy through wealth distribution in industries such as technology.

Kuwait's government has historically managed its budget according to oil prices. However, with global population dynamics, innovations in oil extraction technology, and more sustainable alternatives threatening oil's long-term role as the primary global energy source, Kuwait has been unable to adjust. As a result, the divergence between its budget and actual revenue has increased since the turn of the millennium (Al-Mejren, 2015; Belmont & Caroline, 2016). Respondent 3 revealed that the FGF is funded by the surplus from oil rents:

> *… based on long-term, mid-term, and short-term strategies that take into consideration the changes in the world economy and a special consideration for the price of oil.*

The insight from the response showed that the government funded its SWF through transfer of excess revenue of oil rents to the FGF. The fluctuation in the price of oil, the global health issues (COVID-19), which followed by unemployment, etc. At some time, there was a need to adjust the allocation percentage from the General Reserve which was modified in 2020.

Figure 5-9 below details the differences between changes in oil prices and the divergence between Kuwait's budget and actual revenue obtained.

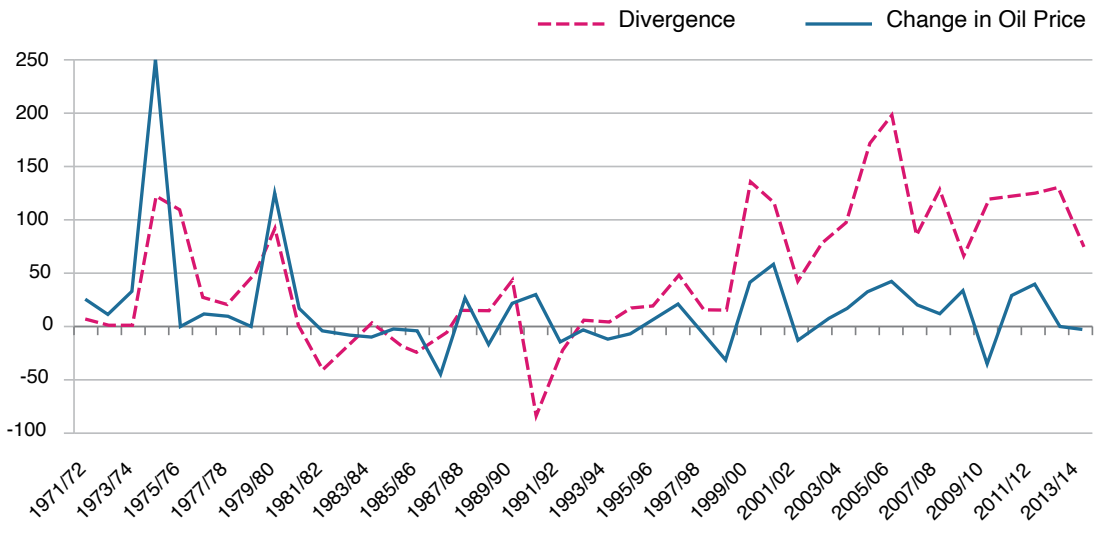


Figure 5-9: Changes in Oil Prices Versus Divergence Between Budget and Actual Revenue
Source: Al-Mejren (2015)

Low oil production costs due to favourable geological conditions have supported Kuwait's heavy dependence on the hydrocarbon industry compared to that of other GCC nations. The production of hydrocarbons is further managed through the KPC, which is state-owned, while the economy has obtained advantages from the accumulation of liberal trade policies for goods, services, and capital. As a result, Kuwait has adopted the GCC's regional economic, trade, and integration plans by placing its focus on maintaining low inflation (1.5%) while using fiscal policy as the main instrument to stabilise the macroeconomy. Kuwait has accomplished this through the substantial accumulation of foreign assets, which, in turn, helps stabilise the nominal exchange rate (Consumer Price Index % YoY Inflation; World Bank, 2018). Figure 5-10 illustrates the domestic inflation rates over the past 10 years.

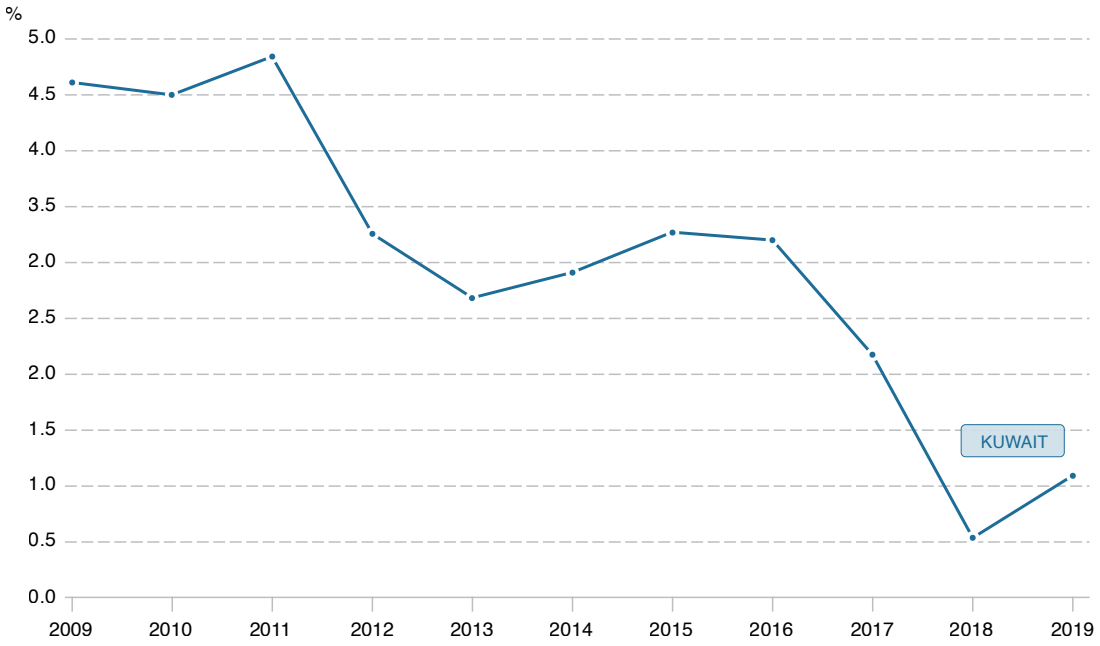


Figure 5-10: Changes in Domestic Inflation Rates in 2009–2019 in Kuwait
Source: World Bank (2018)

Domestic inflation in Kuwait declined between 2009 and 2019, when it settled at 1.5%. Therefore, this analysis reveals that Kuwait's SWF has successfully captured foreign commercial gains, but it remains debatable whether the fund has effectively diversified the Kuwaiti economy and secured long-term wealth.

5.6.3 Impact of Kuwait's Sovereign Wealth Fund on Development

Insights from Shehabi (2020) indicate that the Kuwaiti economy resembles that of other GCC states, characterised by three key aspects. The first is pervasive oligopolies, where the Kuwait economy is dominated by public entities or a small number of private agents who are either members of or are well-connected with the politically influential merchant elite. This pervasiveness can be observed in the concentration of the economy within a few companies, as detailed in Table 5-3 below.

Table 5-3: Oligopolies in the Kuwait Economy

Sector (as listed in Kuwaiti Stock Exchange)	Total number of listed firms	Percentage of total firms owning 60% of industry capital	Percentage of total firms owning 80% of industry capital
Oil refining and gas	8	38	63
Chemicals and mining	5	40	40
Light manufacturing	7	14	14
Telecommunications	3	33	33
Construction and transportation	36	14	36
Financial services (e.g., banks, insurance, other services)	72	8	14
Other sectors (e.g., real estate, technology, healthcare)	75	8	15

Source: Shehabi (2020)

Figure 5-11 below illustrates the concentration of firms by plotting the number of domestic firms compared to the cumulative market share, revealing skewed results.

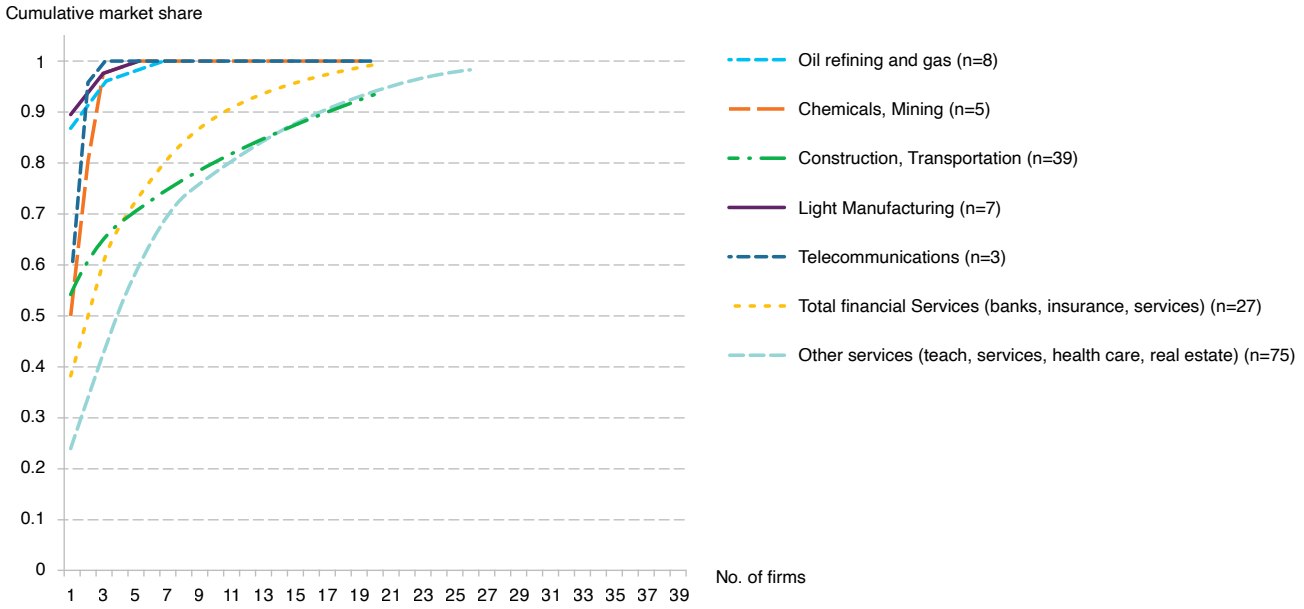


Figure 5-11: Cumulative Kuwaiti Firm Shares in the Industry
Source: Shehabi (2020)

The second factor concerns the sectoral composition of the Kuwaiti economy, in which the crude oil industry dominates, comprising more than 62% of the GDP and greater than 90% of export revenue (estimated at USD 61 billion). The non-oil, non-tradeable sector is also significant, constituting an estimated 32% of the GDP. Sectors such as chemicals, telecommunications, and transport services contribute to approximately 14% of exports and have the potential for further expansion, which could induce competition for imports. However, imports continue to dominate intermediate and final demand.

The third aspect relates to the structure and welfare state of Kuwait. Tax rates are negligible due to public

and parliamentary opposition to personal income taxes, as the government controls oil revenue through the KPC. A corporate tax has been proposed but has not been implemented due to the collapse of the secondary oil market in 1982. The welfare state includes a significant domestic subsidy or redistribution system for citizens as well as various mechanisms for transferring oil wealth to citizens. This has led to a sharp increase in transfer payments since the 2000s, which is one of the more noticeable changes in public expenditures. The Kuwaiti government has not adopted the GCC-wide 1.5% value-added tax.

Finally, the welfare state is characterised by the actuarial deficit, which has been growing due to generous pension schemes in exchange for relatively low employee contributions. The IMF warned in 2001 that the public pension system might be depleted of its funds within two decades if no corrective measures were taken. As a result, the cumulative actuarial deficit increased by KD 1.5 billion from 1998 to 2004, with KD 2 billion needing to be transferred in 2007 to account for this expense and cover the above deficit. Increases in salaries and fringe benefits have further stressed the system, which now accounts for 44.57% of public expenditures. This was explained by Respondent 4:

> *Currently, around %80 of the budget is used to pay for salaries and subsidies, therefore, not much is left for development, which will hold Kuwait back compared to its neighbours.*

The insights from the response indicate that the Kuwait economy is challenged by the high recurrent expenditures in form of salaries and subsidies. To understand how the SWFs enhance the growth of the GCC economy, it is essential to assess its distinct features. Firstly, the labour market in Kuwait is highly fragmented, with foreign labour comprising approximately 83% of the total labour force as of 2018. Expatriates are employed mainly in the private sector, with lower pay and weaker contracts than national workers who have similar education and technical training levels. Meanwhile, most domestic citizens are guaranteed work in the public sector, which has been costly due to the bloated workforce and lack of productivity, especially with the current stress on government finances as a result of the COVID-19 pandemic (as discussed further in Sections 5.2 and 5.3).

Secondly, the public sector dominates the Kuwaiti economy, controlling the largest industries, such as oil, gas, and refineries. The sector also funds many private sector activities and operates through public–private enterprises and partnerships (Shehabi, 2020). Thirdly, studies have demonstrated an asymmetric relationship between commodity prices and real exchange rates, especially for oil-dependent nations such as Kuwait. This asymmetry is dependent on whether an economy is a net exporter or importer.

Thus, in the context of Kuwait, studies on Australia's economy provide evidence of asymmetry in response to commodity price shocks that are dependent on economic structure, industrial regulation, and aptitude for a government policy response. A robust relationship between commodity prices and real exchange rates is important for departing from the Obstfeld and Rogoff puzzle. The impact of the oil price shock on investment has been demonstrated to be weak, since the magnitude of oil reserves matters most to the sustainability of oil incomes in the medium term. Overall, there is a strong consensus that asymmetric responses tend to occur in this scenario due to a lack of institutional mechanisms for de-linking fiscal expenditures from current revenues in heavily oil-dependent nations. While much literature exists on the Middle East, Berument and Cymann's data analyses conclude that, from 1952 to 2005, an asymmetric relationship existed between GDP and oil prices (Steigum, 2014; Shehabi, 2020).

Fourthly, Looney's analysis in 1991 suggests strong evidence of Dutch disease effects following a period of export price hikes. Additionally, a potential oil price collapse would have robustly contractionary effects on the Kuwaiti and GCC economies. Echoing insights from Shehabi (2020), Respondent 4 stated:

> *In 1965, Kuwait's focus shifted significantly as it adopted an asset and portfolio diversification policy, leading to the replacement of the Kuwait Investment Board (KIB) with the Kuwait Investment Office (KIO).*

This response indicates that KIA was leading the change by diversifying assets and reducing overreliance on oil. Such an argument aligns with that of Das, Mazarei, and Van der Hoorn (2010), who revealed that the SWF was established as a mechanism to invest oil surplus revenues on behalf of future generations and as part of its strategy to reduce Kuwait's reliance on finite oil resources. Therefore, Kuwait's economy was diversified through the creation of the SWF.

Finally, Shehabi's 2020 paper on the potential countercyclical effects of Dutch disease on the Kuwaiti economy following the COVID-related oil price crash looks to model the impact of trade shocks on the highly distorted Kuwaiti economy. The model characterises Kuwait as a small, "open" economy with a fragmented labour market and a large public sector. To this end, the model also considers KIA's external financial flows with a Walrasian long-term view, a concept that states that markets tend towards the equilibrium, as opposed to partial equilibrium, where prices and interest rates eventually adjust to clear the financial markets.

The model, by Shehabi (2020), first simulates the impact of price volatility by imposing Equi proportional trade shocks in an unregulated oligopoly (i.e., shocking the price of oil in the short and long term by +10% or –10% with all existing economic policy remaining constant). This study finds that, in the short run, a striking asymmetry exists in the response of real GDP to equip operational trade shocks. This asymmetry is visualised in Figure 5-12.

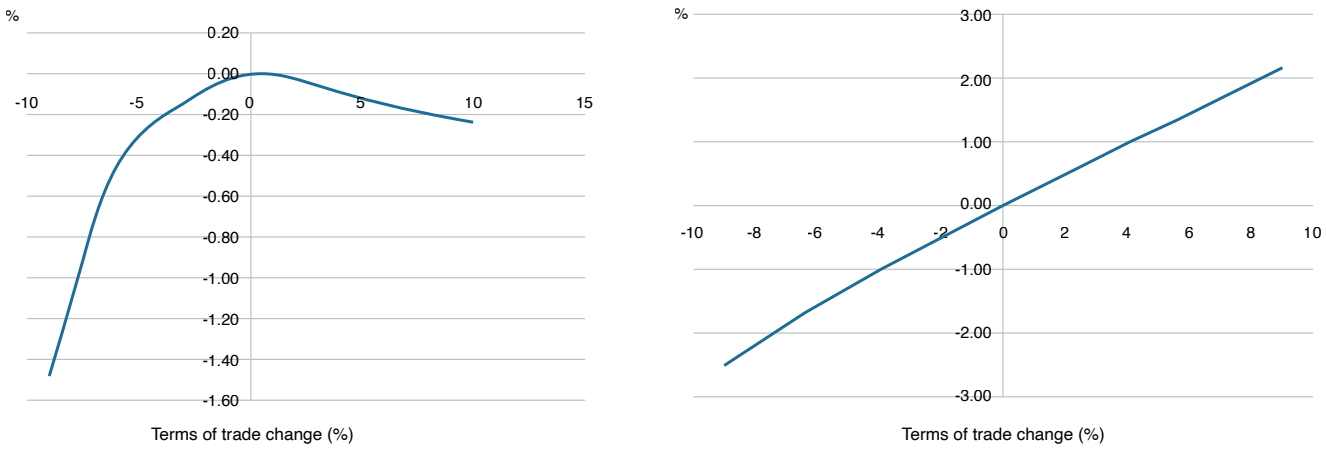


Figure 5-12: Short-Run Effects of Gross Domestic Product in Response to Shocks
Source: (Shehabi, 2020)

The results indicate that positive shocks exerted only a small impact on improving the terms of trade, while negative shocks had a much more significant effect on reducing real GDP as well as practical measures such as the exchange rate and real disposable household income. Ultimately, KIA has influenced the economy by covering the country's budget deficit.

Dyck and Morse (2011) analysed Middle Eastern SWFs, including KIA, and suggested that the funds were solely motivated by achieving appropriately risk-adjusted financial returns by investing in broad industries and economies to achieve diversification in addition to alternative types of riskier assets. While the typical portfolio investor view explains the majority of KIA's portfolio, a consideration of the possibility that some investments have been made to achieve certain industrial planning objectives could explain particular regional and domestic investments. An analysis of major KIA contributions indicates that KIA has a 24.5% stake in the Kuwait Finance House, a bank, with the local portfolio covering private equity, hedge funds, and real estate. The large investments in the Kuwait Finance House can be attributed to KIA's development and monetary objectives, offering a strong indication that Kuwait's SWF has effectively fulfilled its mandate.

Bazoobandi (2013) explained that the investment was motivated by the desire to develop the nation's financial sector, which was significantly undeveloped in the 1970s and could not provide investment vehicles for large, localised operations. Therefore, as KIA continued to grow and develop a larger global asset footprint, it began actively engaging in the establishment of numerous domestic financial institutions. The institutions were jointly established by the government and the domestic private sector, with the dual responsibility of managing global investments in addition to local development. Two major examples of these institutions are the Kuwait Investment Company (KIC), established in 1962, and the Kuwait Foreign Trading, Contracting, and Investment Company (KTFCIC), established in 1964. The KIC was founded with 50% state ownership, and the KFTCIC had an 80% government contribution; both have played an integral role in developing Kuwait's financial sector.

The motivation to develop the fund is clear, as a functional financial market would allow economic expansion to non-hydrocarbon sectors through competitive loans and distribute capital and risk across the Kuwaiti economy.

However, a question that arises is whether issuing these objectives through public investment mechanisms is the best method to achieve the objectives and whether purchasing equity stakes in private companies is a sustainable approach. Various alternatives exist, such as direct state subsidies or state-owned enterprises, while the GRF, for instance, owns the largest commercial bank in Kuwait. Nevertheless, questions remain about whether the various mechanisms are efficient and are vulnerable to political manipulation. The analysis also reveals that, since the turn of the 21st century, KIA has explicitly stated a desire to refrain from potentially competing with the private sector in addition to the conflict between the government and the State Audit Bureau. The Ministry of Foreign Affairs (2021) further reports that Kuwait Vision 2035 focuses on transforming Kuwait into a financial and trade hub, both regionally and internationally, making it more attractive to investors. From this perspective, some projects exist to support local entrepreneurship but are maintained and financed separately from GRF activities. The findings indicate that KIA is supporting the diversification of the economy by generating returns for its different investments. The next section details the findings and conclusions of this chapter.

5.7 Findings and Conclusions

In this chapter, the impact of Kuwait's SWF on both macroeconomic and development aspects has been thoroughly examined, alongside an exploration of the similarities between Kuwait's economy and that of other GCC states. These findings are now be aligned with the overarching themes of this thesis, leading to the chapter conclusion. One finding concerns the objectives of Kuwait's SWF, which are to diversify the country's income and prepare it for a future in which oil resources are depleted. Braunstein's (2009) research indicates that the SWF gathered a pool of capital derived from external resources (oil and gas revenues) that was later redirected to reinvestment. Additionally, the focus of the Kuwait SWF was to pursue commercial profits in foreign countries in which the economy lacked sufficient exposure. As a result, the role of Kuwait's SWF in the global financial system has been to diversify the country's economy by increasing its exposure.

The findings also reveal that the SWF facilitated economic stability in Kuwait by buying a 16% stake in the Gulf Bank of Kuwait to cover derivative losses and to mitigate further damage to the lender's balance sheet (Reuters, 2009). Furthermore, in 2006, KIA intervened before Kuwait's stock market crash, which improved the country's economic stability.

The analysis in this chapter also indicates that the design of Kuwait's SWF was embedded in the country's economic policies and its government development objectives. KIA has been highly successful in its administration of the fund, as the size of its assets has increased over the years, leading to the establishment of numerous domestic financial institutions. The KIC and KTFCIC enhance the mandate of Kuwait's SWF by working alongside the private sector to resolve conflicts and ensure the achievement of macroeconomic objectives.

The third finding identifies the impact of KIA on macroeconomic and development contexts: The fund has

been successful in enhancing development in Kuwait, maintaining a diversified portfolio with mandated risk and return parameters, offering continuous support and training to staff, fostering a dynamic modern organisational culture, and ensuring commitment in selecting investments that did not threaten or compete with the private sector. Further evidence of the success of the SWF arose from the fund's asset footprint, which spread more broadly to encompass the UK, other Western markets, and anticipated growth in China.

In conclusion, Kuwait's SWF was established in 1953 to diversify the country's economy, and the findings highlight the existing alignment between the SWF objectives and the country's macroeconomy. The fund has diversified Kuwait's economy with investments in a variety of global companies, such as Royal Dutch Shell, Barclays, Vodafone Group, and Daimler AG. The fund has managed to avoid conflicts of interest and differing agendas by having a board composed of the minister of finance, minister of oil, governor of the Central Bank of Kuwait, and five other staff members from the private sector, among whom three may not hold any other public office. The officials from the Ministry of Finance and the Central Bank ensure that management prioritises long-term growth and financial stability.

Furthermore, there is a weak and limited reverse Dutch disease dynamic with strong resource movement effects but weak resource deindustrialisation effects due to the unique characteristics of the Kuwaiti economy. In addition, its significant financial outflows act as a savings mechanism (i.e., that KIA) that helps sterilise oil revenues and reduce government spending on current domestic expenditures. However, these outflows can occur only if the foreign rates remain higher than the domestic rates while the SWF absorbs some of these contractionary impacts. The SWF can accomplish this only for so long.

Chapter 6: Sovereign Wealth Funds in Singapore

6.1 Introduction

This chapter focuses on Singapore's SWFs and is organised into seven main sections. The remainder of Section 6.1 introduces the chapter and outlines the reasons for including the case study. Section 6.2 examines Singapore's economic conditions, which includes a discussion of the challenging macroeconomic indicators. Section 6.3 discusses the key objectives of Singapore's SWFs, while Section 6.4 examines the establishment of their type and mandate. Then, Section 6.5 discusses the approaches that are adhered to in establishing the structural design of the funds. Next, Section 6.6 discusses the impact of Singapore's SWFs on macroeconomic stability and the development context. Lastly, Section 6.7 discusses the findings and conclusions.

6.1.1 Reason for Selecting Singapore as a Case Study

Singapore was selected as the second case study because of its non-commodity-based economy and the large size of its SWFs, which in 2021 were valued at USD 744 billion (Bloomberg, 2021c). Due to their large size, these SWFs provide one of the most appropriate case studies for understanding how such funds affect macroeconomic development. A further justification for selecting Singapore as a case study is the successful management and infusion of SWFs into the Singaporean economy. The findings establish that these funds have been instrumental in advancing Singapore's economic growth through development and as a source of savings. Therefore, this case study helps to address the objectives of this thesis by revealing the various strategies that Singapore has adopted to leverage its SWFs for economic growth. The findings also help address the core aim of this thesis, namely, to align a SWF's institutional design to the country's macroeconomic objectives by comparing Kuwait, Singapore, and Qatar, thereby identifying similarities and differences in the use of those SWFs for future macroeconomic development.

6.2 Analysis of Economic Conditions in Singapore

This section examines Singapore's economic conditions, thereby establishing the factors that support the selection of its SWFs and that describe the challenges currently facing the country. Furthermore, the history and evolution of Singapore's SWFs are explained further.

In 1965, Singapore separated from Malaysia to become an independent, sovereign state (History SG, 1965). Respondent 11 stated the following:

> *There was severe doubt [that] Singapore could survive at all as a tiny island (we are just a little red dot!) with no natural resources.*

He added that the country was poor and its economy was fragile, with very little private enterprise and few or no multinational corporations. Building a foundation for survival was the main objective for Singapore's government. The plan was to concentrate on creating jobs, building useful infrastructure, and diversifying its enterprises with the few financial resources it had available. Embarking on an aggressive industrialisation and economic development programme, the government established businesses in strategic sectors to foster self-sufficiency, such as transportation, industry, engineering, and logistics. Respondent 11 said that "in this context, the idea of Temasek emerged". Temasek was incorporated in 1974 to commercially manage an initial portfolio valued at S $354 million, acquired from the Singapore Minister for Finance. As of 31 March 2021, Temasek has a net portfolio value of USD 381 billion, where its assets are distributed across sectors such as financial services, telecommunications, media technology, consumer goods, real estate, and transportation (Temasek Foundation, 2021). Ng (2010) adds that, in the evolution of Temasek, the company has focused on holding investments in government-linked companies (GLCs) with monopolistic control of key industries, including shipping, telecommunications, public utilities, and food and beverages. Furthermore, Steigum (2012) reveals that one of the rationales for

establishing Temasek as a SWF was to enable the Singaporean government to manage equity investments in local firms by being an active shareholder and investor across diverse industries, both in foreign and domestic companies. Reiterating this view, Temasek (2021) indicates that the assets in its SWF have been distributed across various geographical regions, including Europe and the Americas. Gnabo et al. (2017) examined Temasek from 1990 to 2010 and revealed that the fund targeted unlisted firms in foreign countries when information asymmetry was low between the target and home countries. They found that involvement in large stakes depended on the firm's financial characteristics. Such insights underscore the influence of firm performance on policymakers' decisions to invest in SWFs.

Additionally, Krishnadas (2013) reveals that Singapore's economy transitioned from a highly labour-intensive economy in the 1960s–70s to an environment in which industries were more intent on capital production in the 1980s. Consequently, Singapore accumulated high values of foreign reserves, and its government determined the need to invest in high-yielding assets. As a result, the GIC was established in 1981 (Krishnadas, 2013) and now manages the government's reserves alongside Temasek and the Monetary Authority of Singapore (MAS). GIC is tasked with investing in all major asset classes to ensure that the government's foreign reserves are well-managed, thereby producing a sustainable return rate over 20 years (Krishnadas, 2013).

A third SWF managed by Singapore is EDBI, which was established in 1991 and serves as an independent equity investment arm of the EDB of Singapore (Gwendolyn, 2010), which was created in 1961 to promote industrialisation in Singapore, while EDBI, an investment arm of the EDB, was founded in 1991 to focus on accelerating the growth of strategic industries. Tan (2022) revealed that in 2020, by its 30th anniversary, the EDBI had invested in more than 200 firms, with 45 of them ranking as unicorns, each with a valuation of more than USD 1 billion. The following sub-section explores Singapore's economic challenges, aiming to discern the extent of adaptation demonstrated by its SWFs to the country's macroeconomic conditions.

6.2.1 Singapore's Challenging Macroeconomic Indicators

This sub-section examines Singapore's economic challenges, which include a small workforce, lagging labour productivity, a lack of natural resources, and a lower capacity to deliver returns on investment. The aim is to establish how the SWFs have adapted to the country's economic conditions as well as how such conditions have influenced the country's selection of SWFs. Respondent 11 stated the following:

> *Singapore was rapidly industrialising during the 1960s leading into the 1970s, and had courted sizeable investment commitments from the petroleum and electronics sectors. Singapore had also increased its manufacturing sector to create more employment opportunities for its people. This led to a labour shortage and rising labour costs.*

This argument reveals the small population size as a hindrance, as it equates to a reduced workforce. According to a review by the World Bank, Singapore had a population of 5.6 million in 2020, whereas the workforce comprised 3.4 million people (World Bank, 2022a). The population level is relatively low compared with neighbouring Malaysia, which was home to 31.9 million in 2019 and had a labour force of 16 million (World Bank, 2022b). It is argued that Singapore's small workforce adversely affects the country's economic growth due to reduced labour productivity. Respondent 8 reiterated the views on the need to improve economic growth as a factor that influenced the establishment of the funds as follows:

> *GDP and GDP per capita were the primary indicators used to measure whether Singapore was achieving its objective of economic growth through the promotion of exports-led industrialisation. Singapore also prioritised the development of government-linked companies (or GLCs) as an engine of national economic growth.*

This assertion that the need to improve Singapore's economic growth and GDP were crucial influences in the funds' establishment is supported by Shahid (2014), who observes a negative association between the growth of Pakistan's economy and the participation of its labour force. Tsani et al. (2013) also revealed

that, among South Mediterranean countries, a direct and positive association exists between economic growth and workforce participation by women. A synthesis of the findings of Tsani et al. (2013) and Shahid (2014) indicates that the size of the labour force significantly affects economic growth, whether one considers the entire workforce or only female workers. From this perspective, Singapore's relatively small labour force of 3.4 million adversely affects its economic growth. Moreover, Bhaskaran (2018) argues that Singapore faces additional challenges in the form of slow population growth, reduced fertility rates, and workforce stagnation. Figure 6-1 details Singapore's labour productivity growth rate.

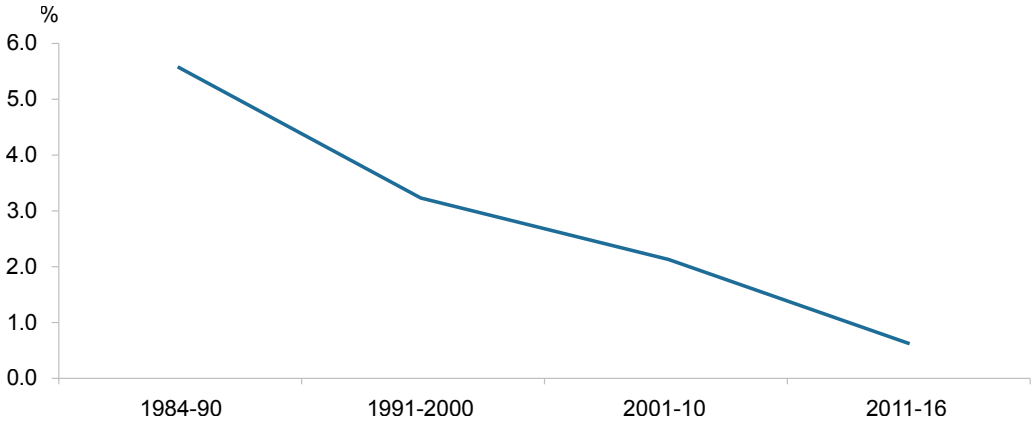


Figure 6-1: Labour Productivity Growth in Singapore From 1984 to 2016
Source: Bhaskaran (2018)

As the figure indicates, Singapore has experienced reduced labour productivity since the 1980s due to an increasingly ageing population and slowing fertility rates. The implication is that the country must diversify its economy to bolster its productivity. Furthermore, lagging fertility indicates that fewer workers will be available to support economic growth in the future.

The findings of a study conducted in Singapore by Ng (2018) reveal that an ageing population adversely affects the economic growth rate. The author reports that if fertility rates remain low, then the ageing population is likely to cause a drop in GDP of 1.5% per capita annually until 2060.

Another challenge was identified by Respondent 6, who highlighted Singapore's poor economy after it gained independence in 1965, which motivated the establishment of the Temasek SWF:

> *The economy was poor, it was small, and that's where Temasek was set up. So Temasek's mission was primarily, in the early days, to help Singaporean companies to become national champions.*

In addition, Singapore is also challenged by its lack of natural resources, such as oil, natural gas, and minerals, but it does occupy a strategic position between the Indian Ocean and the South China Sea (Krishnadas, 2013). A report by the Electronic Industries Alliance (EIA) (2013) reveals that although Singapore is not endowed with natural resources, its strategic location in the Strait of Malacca has enabled the country to become one of Asia's leading energy and petrochemical hubs and one of the top three oil trading and refinery centres in the world. The report indicates that Singapore mainly refines imported petroleum, which is now used in power generation.

A more recent EIA report (2021) indicates that petroleum and other liquids are the primary source of energy for Singapore (86%), followed by natural gas (13%). Additionally, Singapore's port is the world's largest bunkering port in Asia, valued at USD 30 billion (EIA, 2021). However, despite the large ports and strategic geographic location, Singapore is limited by its lack of natural resources for generating financial revenue, which poses a challenge to the country's macroeconomic development. Finally, Bhaskaran (2018) argued that Singapore also experiences competitive challenges with a lower capacity to deliver returns on investment than its competitors. Table 6-1 presents Singapore's global competitiveness ranking.

Table 6-1: Singapore's Competitiveness Rankings

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
WEF Global Competitiveness Index	8	7	5	3	3	2	2	2	2	2	2	3
WEF Ease of Doing Business	1	1	1	1	1	1	1	1	1	1	2	2
WEF Tourism Competitiveness Index	-	16	10	-	10	-	10	-	11	-	13	-
INSEAD Global Innovation Index	-	-	-	7	3	3	8	8	7	6	7	-

Source: Bhaskaran (2018)

This table indicates that although Singapore is highly ranked in terms of the ease of engaging in business and global competitiveness, the country struggles in terms of tourism competitiveness and global innovation. Such insights indicate that Singapore cannot rely on tourism as a source of foreign exchange reserves on a long-term basis. Suprayitno and Heng (2021) contradict Bhaskaran (2018) by reporting that the hotel and tourism sectors are critical for the economic growth of Singapore as a potential source of employment and financial revenue through foreign exchange. An earlier study by Geh and Sharp (2008) indicates that Singapore is located in one of the world's richest biodiversity hotspots, where the country's beautiful scenery attracts diverse tourists to sites such as the Bay East Garden and Sentosa Island (Sawe, 2019). Nonetheless, Singapore's relatively low World Economic Forum (WEF) ranking indicates that tourism does not influence the country's overall economic performance.

Anguera-Torrell, Vives-Perez, and Aznar-Alarcón (2021) revealed that the COVID-19 pandemic adversely affected the tourism sector in various Asian countries, including Singapore. Moreover, the United Nations World Tourism Organisation (UNWTO; 2020) reported a reduction in international tourism by 80% in 2020 due to the pandemic. However, Singapore relies mainly on sectors such as manufacturing, finance and banking, trading, and transport and logistics to support its economy (Singapore Tourism Board, 2019). Therefore, dependence on these sectors of the economy leads to lower revenues as compared to other countries in Asia. The evaluation of macroeconomic challenges faced in Singapore emphasises that issues arise from the lack of natural resources, an ageing population, and the need for the country to identify sustainable and long-term strategies to promote economic growth.

Furthermore, the country should invest its government assets in different markets to provide security for future generations. As a result, the rationale and objectives of SWFs have been adapted to cushion the economy and ensure long-run sustainability through investment in foreign assets. Respondent 7 stated that the importance of diversifying the economy was the underlying motivation for the establishment of the SWFs:

> *The SWF was created to provide financing for Singapore's economic development agenda.*

Moreover, Krishnadas (2013) has argued that SWFs were created to facilitate diversification, especially in countries that lack commodities or natural resources to support the economy.

6.3 Rationale and Objectives of Singapore's Sovereign Wealth Funds

The rationale behind the Singaporean government's decision to establish its SWFs in 1974 was the diversification of its economy. According to Elson (2008), Singapore has two SWFs – Temasek and GIC. The two funds reflect the macroeconomic fundamentals and the financial discipline that the Singaporean government has adopted over the years. According to Respondent 11, Temasek was established as part of Singapore's broad economic and development strategy, which included promoting economic growth, creating jobs, attracting foreign investment, and building a resilient national economy. As many of the businesses transferred to Temasek were key to Singapore's economic development, the goals were to

develop economically viable businesses, retain and create jobs, and contribute to Singapore's economic survival, progress, and prosperity. Respondent 7 argued that the SWFs have facilitated Singapore's economic development:

> *The sovereign wealth fund was built to actually provide the financing or the equity to kickstart the development of Singapore's economic development agenda. Right, so we needed to develop some national champions and stakeholders beyond [those] within the government.*

Steigum (2012) reported that Temasek was established in 1974 as wholly owned entity of the Singaporean government due to concern about holding investments used in managing the equity investments of the state in local firms. This was reiterated by Respondent 8:

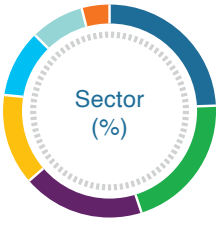
> *Temasek's objective is to function as a commercial investment company that owns and manages a portfolio of assets, and this served to separate the regulatory and policymaking function of the government from its role as a shareholder of commercial entities.*

Temasek's asset value at the time of its establishment was USD 150 million, which comprised equity stakes previously held by the MOF. The fund uses active equity while concentrating its interests in diverse firms across strategic industries in Singapore and Asia (Krishnadas, 2013). As of 31 March 2021, Temasek had a net value of USD 381 billion in its local and international portfolios, with a diverse distribution of assets (Temasek Foundation, 2021). These findings were reiterated by Respondent 5, who argued that Temasek was implemented to diversify the economy:

> *So, Temasek was established before GIC, and when Temasek was established, the mandate was to firstly diversify the economy and also as an inflation hedge.*

This response indicates that the government has used its SWFs as a strategy for diversifying the economy and ensuring overall growth in GDP. Table 6-2 illustrates the distribution of current investments in the company.

Table 6-2: Asset Distribution in Temasek Holdings Ltd.



	2021	2020	2019	2018	2017
Financial Services	**24**	23	25	26	25
Telecommunications, Media & Technology	**21**	21	20	21	23
Transportation & Industrials	**19**	18	19	19	20
Consumer & Real Estate	**14**	17	17	16	17
Life Sciences & Agri-Food	**10**	8	7	6	4
Multi-sector Funds	**8**	8	8	8	8
Others (including Credit)	**4**	5	4	4	3

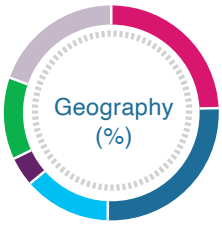
Source: Temasek (2021)

As this table indicates, Temasek manages assets across various sectors, including financial services and real estate (Temasek Foundation, 2021). A close analysis reveals that in 2017–2021, non-significant changes were observed across different assets, where a change in units of only 2% to 3% was reported. For example, with financial services, the change in investments from 2020 to 2021 was 1%. A similar finding was observed in transportation and industry. These insights indicate that investment across the different industries has stabilised. Further analysis of Table 6-2 indicates that the investments have been made within Singapore. These findings align with Respondent 5, who stated the following:

Temasek started off doing that [investing internationally] and also GIC, but increasingly, they are starting to also invest within the country […] not by a lot, but when they do invest within the country, it is typically to either retain a company in the country or to attract an outside investment into the country.

This observation aligns with the literature, which reports that Temasek's investments are local, regional, and global. Furthermore, the assets are distributed across geographical regions, including China and the remainder of Asia, Europe, and the Americas, as illustrated in Table 6-3.

Table 6-3: Geographical Distribution of Assets in Temasek Holdings



	2021	2020	2019	2018	2017
Singapore	**24**	24	26	27	29
China	**27**	29	26	26	25
Asia (ex Singapore & China)	**13**	13	14	15	14
Australia & New Zealand	**4**	5	6	7	8
Europe, Middle East & Africa	**12**	11	12	11	10
Americas	**20**	18	16	14	14

Source: Temasek (2021)

As this table indicates, most assets are located in China and the Americas instead of being concentrated in Singapore (Temasek Foundation, 2021). One explanation for the Chinese investment is the cordial relationship between Singapore and other Asian countries. Moreover, investment in the United States and Europe could be due to the fact that high-performing companies are likely to be located on those continents. The findings regarding the diversification of investments across the globe align with Respondent 8's argument that the SWFs facilitate such investments:

But then again, it is very hard even asking the national champion. It is very difficult for them to go beyond where Singapore invests in [a] small economy. And then, Temasek now plays a second, slightly revised role in helping all the national champions to go global. That was at that time. Now, things have changed again, as these companies do not really need Temasek anymore. They have established themselves outside Singapore.

\This insight indicates that Temasek has played a crucial role in facilitating investments abroad for companies based in Singapore. However, over time, these companies have diversified into other countries on their own. These arguments were supported by Respondent 9, who indicated that Temasek manages government investments:

All of these government services or the businesses they will form are under Temasek, which is the sovereign wealth fund. So, it becomes a corporate management-like framework to manage all of these, so all are investment management companies for all of these government companies.

From this perspective, a second rationale for establishing a SWF in Singapore is long-term investing to enhance the international purchasing power of its funds. This insight was emphasised by Respondent 8, who reported that GIC is tasked with investing in the country's reserves:

Investing in Singapore's reserves was excluded from Temasek's objectives. That role belongs to the Government of Singapore Investment Corporation (GIC).

Ng (2010) added that over the course of Temasek's evolution, the company has focused on holding investments in GLCs with monopoly control of key industries, including shipping, telecommunications, public utilities, and food and beverages. Furthermore, Steigum's (2012) findings revealed that one of the rationales of Temasek as a SWF is to enable the Singaporean government to manage equity investments in local firms by being an active shareholder and investor across diverse industries, both in foreign and domestic companies. Table 6-3 illustrates this view by indicating that the assets of the SWF have been distributed across many geographical regions, including Europe and the Americas.

A second rationale for Singapore's SWFs is long-term investing to enhance the international purchasing power of its funds. For example, the analysis of the 2019–20 annual performance of GIC reveals that its portfolio investments ranged from developed and emerging market equities to nominal and inflation-linked bonds and real estate (GIC, 2021). Table 6-4 details the components of the GIC portfolio.

Table 6-4: Government Investment Corporation Portfolio Asset Mix

Asset Mix	31 March 2020 (%)	31 March 2019 (%)
Developed Market Equities	15	19
Emerging Market Equites	15	18
Nominal Bonds and Cash	44	39
Inflation-linked Bonds	6	5
Real Estate	7	7
Private Equity	13	12
Total	100	100

Source: GIC (2021)

As indicated in Table 6-4, between March 2019 and March 2020, GIC investments in private equities, nominal bonds, cash, and inflation-linked bonds increased. However, developed and emerging market equities both decreased during this period. A further aspect that highlights the similarity of GIC and Temasek is that the investments are distributed across diverse geographical regions, which ensures resilience against market and economic conditions and the generation of long-term real returns. Figure 6-2 illustrates the geographical distribution of the GIC portfolio.

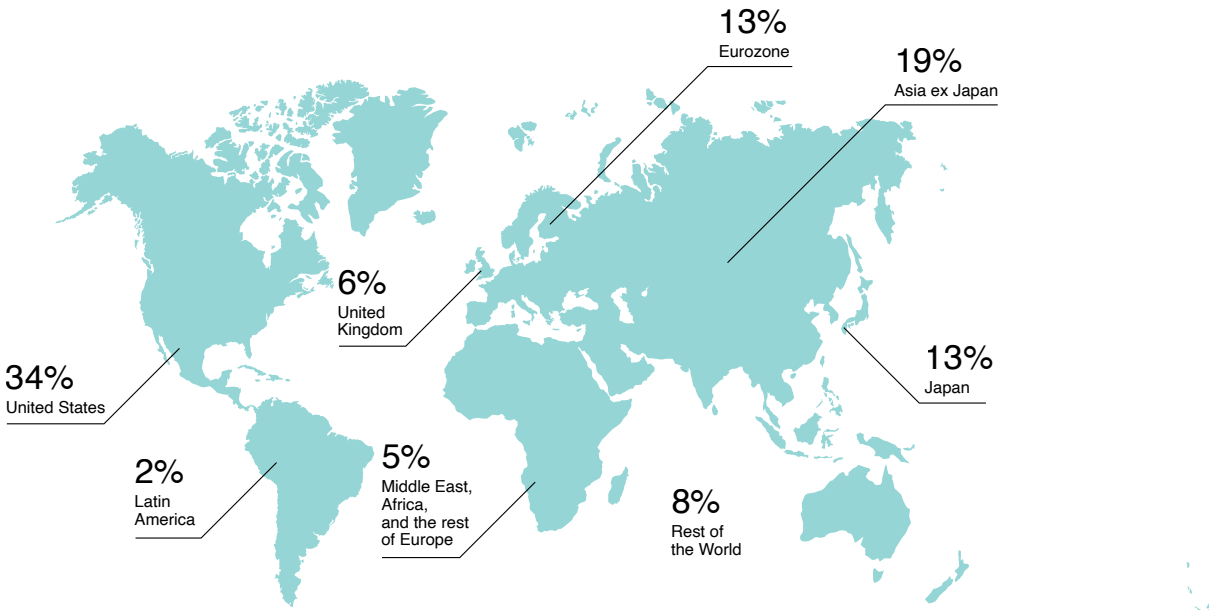


Figure 6-2: GIC Portfolio Asset Distribution
Source: GIC (2021)

A side-by-side comparison of Figure 6-2 and Table 6-4 reveals that the two Singaporean SWFs have invested throughout the world, including the United States, which has the largest share at 34%, the Eurozone (13%), and Asia (19%; GIC, 2021). The argument for the geographical distribution of the portfolio assets is that it enhances the resilience of investments by ensuring that they are distributed across a range of market and economic conditions while generating long-term real returns. However, a noteworthy difference is that with the GIC portfolio, the highest asset levels are located in the United States, whereas Singapore maintains the highest SWF reserves in the Temasek portfolio. A further evaluation reveals that the high asset levels in the United States are likely to arise from high-performing companies, such as Apple and Google, in which Singapore has made significant investments. A further difference was identified by Respondent 8, who revealed that Temasek has been more focused on domestic investments, whereas GIC has been more diversified and global:

> *The GIC is like QIA, with an international portfolio. The goal is long-term stability. [Due to] big inflation, they don't invest in Singapore because they invest the foreign reserves for Singapore, and that has always been the same since 1981. That has not changed. They are very diversified, in terms of their portfolio. Temasek, at least in the recent times, the message is very heavy in Asia, in China, and Singapore. Singapore and China probably make up to %70 of the portfolio. Temasek is very heavy in private equity. Temasek has a higher risk and high-return goals.*

Respondent 9 added that GIC differs from Temasek in its agenda:

> *If you look at the GIC, they take a longer-term stake or longer-term involvement into the company. In other words, when the GIC invests in a particular company, they have more mandate to generate wealth from the investment rather than a direct spin-off to the economic development in Singapore, whereas the Temasek agenda is more used to create a national champion that leads to economic development in Singapore.*

The EDBI was also established in 1991 as an independent equity investment branch of the Singapore EDB to engage in investments and accelerate the growth of various strategic industries (Delaney, 2017). By 2020, the EDBI had invested in more than 200 companies, among which 45 were considered unicorns, each with a valuation of more than USD 1 billion (Tan, 2022). Therefore, unlike the GIC and Temasek, the EDBI's mandate is focused mainly on strategic investments on behalf of the Singaporean government. These insights were supported by Respondent 9, who argued:

> *So EDBI is very similar to Doha Venture Capital, where we constantly track you know, what are you doing in the country? How can we help you from a revenue support perspective? How are you … getting the approvals in place? Are you hiring the right people? Do you need assistance to hire people? Do you need assistance to streamline the licencing process?*

A noteworthy finding from the evaluation of the GIC and Temasek funds is their focus on international investments within global markets. As shown in Figure 6-2, the GIC has invested in the United States (34%), Asia (19%), Eurozone (13%), United Kingdom (6%) among others (GIC, 2021). Table 6-3 also shows that the assets in Temasek Holdings are distributed in global markets including Americas (20%), China (27%), Asia (13%) and Europe, Middle East and Africa (12%) (Temasek, 2021). Therefore, conflicts of interest are likely to emerge due to the overlap of the investment sectors and assets between Temasek and GIC as both entities pursue different investments in global markets. The conflicts of interest have been reported in previous investments where in 2016, both Temasek and GIC purchased USD $500m of stock in the Ali baba Group holding company (Insead, 2016). Ngui (2023) supports Insead (2016) where they also report that while China accounts for 22% of Temasek's investments worth $281 billion, the GIC has also been increasing its investments in China in companies such as Ali Baba and Ant Group. To address these conflicts, it is essential for the fund management to adopt clear structures and mechanisms to ensure each fund attains its objectives.

6.4 Establishing the Type and Mandate of Sovereign Wealth Funds in Singapore

In this section, the SWFs in Singapore are examined to explore how they interact with the country's economic conditions and how they influence and are influenced by its indicators. According to Steigum (2012), the total market value of SWFs worldwide that year exceeded USD 5.1 trillion, of which 60% was from oil and gas revenues. Martínek (2021) reported that the size of the funds had risen to a market value of USD 7 trillion by 2020. These reports emphasise the global recognition of SWFs as institutional investors that enable countries to achieve diverse objectives. Other countries have developed their SWFs based on non-oil commodities despite the high market value, as detailed in Table 6-5.

Table 6-5: Major Sovereign Wealth Funds and Their Countries of Origin

Country	Year started	Source	Assets ($ Billion)
China (5 funds)	1993/1997/2000/07/07	Non-commodity	1,482.7
UAE – Abu Dhabi (3 funds)	1976/1984/2002	Oil	740.5
Norway	1996	Oil	656.2
Saudi Arabia (2 funds)	n/1 /2008	Oil	538.1
Singapore (2 funds)	1947/1981	Non-commodity	405
Kuwait	1953	Oi	296
Russia	2008	Oil	149.7
Qatar	2005	Oil	115
USA (6 funds)	1854/1958/74/85/2011	Oil/ minerals/ Non-commodity	90.7
Australia	2006	Non-commodity	78.65
UAE – Dubai	2006	Oil	70
Libya	2006	Oil	65
Kazakhstan	2000	Oil	61.8
Algeria	2000	Oil	56.7
South Korea	2005	Non-commodity	43
Malaysia	1993	Non-commodity	34
Azerbaijan	1999	Oil	32.7
Brunei	1983	Oil	30
Iran	1999	Oil	23
Chile (2 funds)	2006/2007	Copper	20.4
Ireland	2001	Non-commodity	17.5
Canada	1976	Non-commodity	15.9
New Zealand	2003	Non-commodity	15.5
France	2008	Non-commodity	14*)
Brazil	2008	Non-commodity	11.3
East Timor	2005	Oil	10.2
18 small funds from other countries			47.4
Total			5,120.5
Total oil-related			2,952.5

Source: Steigum (2012)

Table 6-5 identifies two broad categories of SWF sources – commodities and non-commodities. On average, more countries rely on commodities such as oil and minerals to finance their SWFs. However, other countries have adopted non-commodities, such as foreign exchange reserves, to grow their funds. An analysis of this table reveals that among countries that establish their SWFs using non-commodities,

Singapore has the second-largest SWF value at USD 405 billion, following China with USD 1,482.7 billion (Steigum, 2012). Therefore, the justification for selecting Singapore's SWFs in this thesis stems from the large size of the country's reserves developed from non-commodities.

Secondly, this study examines Singapore's SWFs to provide complementary insights into Kuwait's SWFs, which were developed from oil reserves. Such arguments emphasise the need to consider alternative funding sources for SWFs instead of depending mainly on natural commodities. An alternative argument is that countries that depend on commodities such as oil can also learn from case studies such as Singapore's to enhance their economic growth, even in scenarios in which commodity revenues decrease. A case in point is the oil market crisis, where oil prices may fall due to political rivalry and market forces.

These insights underscore the diverse available alternative funding sources for non-commodity SWFs. Furthermore, unlike commodity-based SWFs, where the main resource contributing to the funds is domestic, with non-commodity-based SWFs, countries can invest in many companies across different continents.

Respondent 11 stated the following:

> *The government decided to set up Temasek in 1974, to relieve themselves from the commercial management of the companies which they had built or acquired controlling stakes in. The main objective was to separate the regulatory and policy function of government from its role as a shareholder of commercial entities. Therefore, the government transferred all the companies which it had an interest in to Temasek, valued at S 354$ m. Temasek would operate as a commercial investment management company, to develop economically viable businesses that would contribute to Singapore's economic prosperity.*

The analysis reveals that the sources of these SWFs include foreign exchange reserves as well as active shareholders and investors in diverse domestic and foreign industries. The insight into the use of non-commodities to develop Singapore's SWFs is vital for understanding how funds such as these can enhance macroeconomic development. Additionally, this chapter provides context regarding the decisions that countries make when identifying appropriate countries and companies for their SWF investments. The discussion is also beneficial as it indicates the industries on which policymakers focus when selecting companies to invest in as sources of SWFs.

GIC is tasked with investing in all major asset classes to ensure that the government's foreign reserves are well-managed, thereby securing a sustainable return rate over the next 20 years (Krishnadas, 2013). The 2021 GIC Annual Report evaluation indicates that this objective has been achieved by realising an annual return rate above 2.5%. However, a number of challenges occurred during the targeted period, such as a sharp decline resulting from the global financial crisis of 2008–09, in which the return rate plummeted from 4% to 2.7% (GIC, 2021). This indicates that Singapore's reliance on an outward-oriented development strategy in which risks in the global macroeconomy affect foreign investments has an impact on GIC's performance. A similar perspective can also be assumed for Temasek, where the extant risks in the macroeconomy have affected its performance, although the SWF has achieved its mandate in managing assets previously held by the MOF. Figure 6-3 presents Temasek's performance from 1992 to 2021.

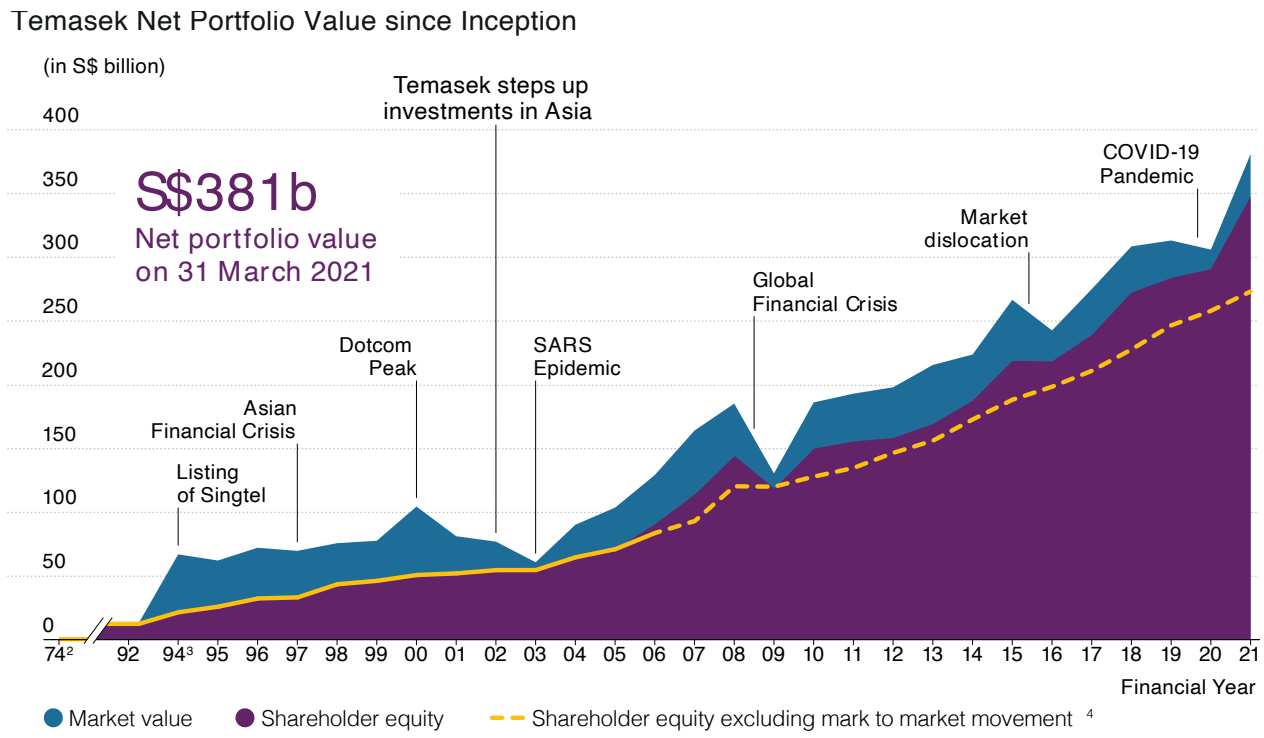


Figure 6-3: Temasek's Net Value from 1992 to 2021
Source: Temasek (2021)

A close look at Figure 6-3 reveals that although Temasek improved its net portfolio value from S $354 million at its inception in 1974 to S $381 billion in 2021, diverse macroeconomic factors have affected its performance. For example, the COVID-19 pandemic, the Severe Acute Respiratory Syndrome (SARS) outbreak, and the global financial crisis have negatively affected its net portfolio value. By contrast, other macroeconomic events, such as the dotcom industry peak, improved the overall performance of the SWF. Respondent 5 indicated that auditing is influential in managing SWFs to ensure that they perform as expected:

> *You can measure them all the same way so that you don't have, like, one capital measured in one way and the other company measured in another way. Plus, they are all using the same management structure, and then also the deployment of the senior management in today's entity is based on the selection of the board members being controlled, centrally controlled. So, I think control is actually the government.*

An evaluation of Singapore's annual report for 2019–20 indicates that diversifying the country's portfolios is one of the core strategies adopted in developing SWF investments (GIC, 2021). Respondent 5 stated the following:

> *Typically, you won't see Temasek and GIC investing within the country, right? Typically, investing is outside of the country.*

This response suggests that the SWF focuses on the diversification of the economy through overseas investing. Indeed, Singapore has diversified its investments by selecting various types of companies representing a wide range of industries. In addition, a focus has been placed on different types of markets in which equity and bonds are traded.

A further review of Temasek's annual report reveals that the liquidity of its investments has been distributed broadly across unlisted assets and listed large blocs (Temasek Foundation, 2021b). Table 6-6 illustrates the liquidity of Temasek's holdings.

Table 6-6: Temasek's Portfolio Liquidity

Liquidity (%)



	2021	2020	2019
Unlisted assets	45	48	42
Listed large blocs (≥50% share)	10	10	12
Listed large blocs (≥20% and <50% share)	7	5	10
Liquid & sub-20% listed assets	38	37	36

Source: Temasek (2021b)

A synthesis of these figures underscores the following key insight: Temasek's portfolio investments are diversified geographically and across economic sectors and feature a wide range of liquid assets. Respondent 8 stated the following:

> *Whilst GIC was set up as a reserve investment fund, Temasek was set up to function like a private investment firm, as the government was looking to relieve itself of commercially managing the firms it owned during the time. Unlike GIC, which manages the nation's spare cash, Temasek does not like to keep spare cash and instead reinvests it to grow its portfolio.*

Jayeola, Ismail, and Sufahani (2017) argued that the diversification of portfolio assets minimises risk while maximising returns. Additionally, they posited that diversification alleviates the chances of bankruptcy while improving the placement of assets and productivity. Koumou (2020) added that with the diversification of portfolios, investors adopt various principles, including the law of large numbers, the capital asset pricing model, risk contribution or parity, and correlation. Thus, the country can gain significant returns from investments in a variety of organisations. For example, Table 6-6 reveals that Temasek invested heavily in financial services (24%), telecommunications (21%), and media (21%) due to the likelihood of low risk and high returns. Additionally, Table 6-6 indicates that most of the investments are based in China (27%) and Singapore (24%; Temasek Foundation, 2021a).

A further analysis of GIC (2021) and Temasek (2021a, 2021b) provides several key insights. Firstly, the diversification strategy focuses on equities and bonds as well as investments in leading companies in a variety of geographical regions. Moreover, Temasek established its portfolio development function (2022) in 2020 to improve its value creation through innovation, growth strategies, and partnerships. Temasek invests in mature companies in Singapore, including PSA, SP, and Mapletree, and these companies account for approximately 30% of the unlisted portfolio (Temasek Foundation, 2022). Furthermore, approximately 25% of Temasek's unlisted portfolio comprises investments in credit funds and private equity, enabling the fund to gain in-depth insights into new markets and subsectors of specialisation. The investments include private companies such as Global Healthcare Exchange, Verily Life Sciences, Ant Financial, and the GoTo Group (Temasek Foundation, 2022). An analysis of these insights aligns with Jayeola, Ismail, and Sufahani (2017) and Koumou (2020), who have argued that investors are selective in determining how to develop and diversify their portfolios. In Temasek's case, the strategy is to prioritise investments in mature companies with lower risks and higher returns rather than devote resources to risky businesses. From this perspective, diversification across different asset classes ensures that diverse risk–return profiles are obtained. For example, public and private equities can generate higher returns than less risky bonds.

A second strategy involves investing in foreign companies that perform well in different geographical regions (Temasek Foundation, 2021a). As indicated in GIC's investment approach (GIC, 2021), the fund diversifies its investments across a number of markets and regions to minimise risk. Instead of

allocating assets based on specific countries or geographical areas, GIC's strategy prioritises monitoring and effectively managing exposure for risk mitigation. This approach is aligned with the global market composition and capitalises on opportunities identified by GIC's international teams.

Shaffer (2015) revealed that in 2015, GIC had more than 350 property investments distributed across 40 countries. She argued that GIC is keen to invest in property in emerging markets – including Brazil, Russia, India, and China – where property and real estate holdings contribute to the GDP. However, an analysis of these findings indicates that the investment strategy is influenced by additional factors, such as whether the market is emerging or the stability of the countries' political and macroeconomic situations. For example, Figure 6-3 indicates that most GIC investments are in the United States (34%) compared with only 5% in the Middle East and Africa, which is due to robust US macroeconomic stability. However, Temasek (2021b) reports that a risk–return framework has been developed to guide investment decisions, specifying the investment focus, allocation of capital, investment system, capital allocation, and performance measurement. The same report also indicates that resilience in investment decisions for portfolio diversification is further enhanced by robust corporate governance structures, in which boards of governors and directors monitor both short- and long-term performance.

Thirdly, the priority that Temasek (2022) places on sustainable living influences its investment decisions. From this perspective, the investment focus is affected by sustainability-related risks and opportunities; therefore, companies that focus on reducing net carbon emissions are selected for their portfolio. GIC (2021) coordinates with Temasek (2022), as both funds emphasise long-term investments in companies with satisfactory sustainability practices, which are likely to generate substantial investment returns over time. A plausible reason for this strategy is that green investment and CSR are linked to improved financial performance (Indriastuti and Chariri, 2021).

Indriastuti and Chariri (2021) examined the performance of 132 manufacturing companies between 2016 and 2019 and identified a positive relationship between sustainable investment and financial success. Asogwa et al. (2020) also revealed that a company's intensive CSR efforts can positively affect its stock value. Uadiale and Fagbemi (2012) similarly reported that CSR positively influences the financial performance of companies. Based on the findings from empirical studies such as Uadiale and Fagbemi (2012) and Indriastuti and Chariri (2021), a key insight is that companies that specifically focus on green investment and CSR are expected to perform better than their counterparts that fail to adopt similar practices. As a result, Temasek and GIC are keen to identify companies that demonstrate sustainable practices in the long term.

In summary, several factors affect the strategies adopted for SWF investments. Firstly, GIC and Temasek diversify their portfolios across various industries to enhance returns on their risks. Secondly, the investments are spread across countries and geographical regions, with the United States receiving more investments than other world regions. This indicates that the maturity of a country's companies and its macroeconomic stability are essential factors that influence investment decisions by Singapore's SWFs. Thirdly, companies' sustainability practices influence SWF investment, with these funds focusing on investing in companies that demonstrate a commitment to sustainability, as they are expected to perform even better financially over the long term. Risk–return incentive frameworks have also been developed to guide investment decisions by Singapore's SWFs, and corporate governance mechanisms are adopted to monitor the performance of the investments. The following section discusses the interrelationship between Singapore's SWFs and its government policies.

6.5 Establishing the Structural Design of the Fund

This section discusses Singapore's monetary, fiscal, and development policies and their integration into the SWFs. The allocation and withdrawal of capital from these funds are also detailed.

6.5.1 Capital Allocation, Governance, and Management

Capital allocation in the Singaporean SWFs is based on the strategies implemented by the management structure. Wu (2016) reported that both Temasek and GIC are owned and managed by Singapore's government and are accountable to the Ministry of Finance, as they are operationally autonomous.

An analysis reveals that management structures and systems have been enforced in the SWFs to maintain performance and determine capital allocation. This insight was also stated by Respondent 11:

> *As a shareholder of Temasek, the Ministry of Finance makes capital injections into Temasek through investments in new Temasek shares. All such investments are done as part of the government's decision to allocate funds across Temasek, GIC, and MAS [Government of Singapore Investment Corporation, Monetary Authority of Singapore]. These decisions consider the government's liquidity need, and the long-term, risk-adjusted expected returns of the entities.*

Temasek is managed by a board of directors and a professional management team, who operate the company (Temasek Foundation, 2023a), pay taxes to the authorities, and distributes dividends to shareholders. To further safeguard Temasek's reserves, transactions that are likely to draw on past reserves must be approved by the president of Singapore (Temasek Foundation, 2023a). Its investments topped USD31 billion in 2023 (Temasek, 2023b), with an average of USD9.9 billion in dividends annually. The findings align with Respondent 5, who reported,

> *Increasingly, [Temasek and GIC] are starting to also invest within the country to build the country … so they're increasingly starting to invest within the country, not by a lot. But when they do invest within the country, it is typically to either retain a company in the country or to attract an outside investment into the country.*

The Singapore government also withdraws capital from its SWFs to support its economy during crisis periods; for example, both Norway and Singapore planned to withdraw USD73 billion in total from their SWFs during the pandemic (Arnold, 2020). Soddu (2021) also reported that Temasek supported local companies during the pandemic by providing new COVID-19 test kits, expanding laboratory capabilities, and opening community care facilities. To do so, the government withdrew cash from the SWF to redirect it into the economy during the pandemic crisis. However, the government's withdrawal of capital from Singapore's SWFs occurs only during times of crisis. This reality was reinforced by Respondent 9:

> *I think Singapore had to spend a lot of money also. I think that came from the government reserves as a whole. We have got several government reserves, so I think, of course, the source of the reserve partly is from taxes, partly is from sovereign wealth fund also, which they power into the reserves on a regular basis, so it's not directly from these funds.*

The above response reveals that during the pandemic, the government relied on reserves from the SWF and taxes to stabilise the economy. Respondent 11 agreed:

> *Temasek declares and distributes annual dividends to its shareholder, the Minister of Finance, which may be viewed as a withdrawal of capital.*
> *This is distinct from a draw on past reserves, which occurs if the government spends more than the reserves it has accumulated during the current term of government, or if an asset is sold below its fair market value and the difference is not topped up in the current term of the government. The government's expenditures on COVID19- over FY –2020 2022 were drawn down from past reserves.*

According to a report by the World Bank (2017), Singapore's economy generates high income levels, given its gross national income of USD 54,530 per capita in 2017. The report further revealed that the country provides a highly business-friendly environment that ensures that local entrepreneurs can engage in

business due to conducive regulations. As a result, the economy is competitive, and a high GDP growth rate of 7.7% has been reported in the country since it gained independence (World Bank, 2017). Singapore's core development policy is to support the economy's growth over the long term by promoting partnerships for local entrepreneurs. Blomqvist (2000) concurred, revealing that Singapore has emphasised the internationalisation and regionalisation of its economy to ensure long-term growth. Thus, the development strategy has been outward-oriented and mainly dependent on FDI to support economic growth.

Furthermore, Angelstorf (2020) revealed that the deepening of international connections has been a vital strategy for Singapore to promote trade and investments. Blomqvist (2000) and Angelstorf (2020) both reported an emphasis on internationalisation and close relationships between Singapore and foreign allies to encourage long-term economic growth. A report by the Singaporean government (2020) provided similar findings, revealing that the country's economy is open and highly dependent on trade, with a focus and commitment from the government to maintain an open investment climate. In addition, the report highlighted laws friendly to businesses, including conducive regulations and tax structures, which encourage investors to build businesses in the country.

Furthermore, the World Bank (2017) reported that Singapore is the second easiest country in which to conduct business with economic conditions that support FDI industries (e.g., manufacturers of electronics and machinery) and service industries (e.g., wholesale and retail trade and financial services). Additionally, the World Bank (2017), State Gov. (2020), Blomqvist (2000), and Angelstorf (2020) indicated that Singapore's outward-oriented development strategy, with a focus on encouraging more FDIs, creates an environment that emphasises the ease of conducting business. Tax law incentives, transparency, a lack of corruption, the protection of intellectual property, and customs facilitation have all been identified as structures conducive to the investment environment. The U.S. government has responded to this strategy by investing USD 219 billion in Singapore, making this country the largest recipient of U.S. FDIs in Asia (State Gov, 2020).

Additionally, according to Angelstorf (2020), the acquisition and use of deep skills is an important development strategy, and the Singaporean government actively supports economic development by enhancing research and development and promoting start-up businesses. Angelstorf (2020) also highlighted the government's emphasis on building strong digital capabilities by promoting the uptake of technologies (Angelstorf, 2020). In alignment with this development policy, which seeks to promote the growth of start-ups and entrepreneurial businesses, Singapore seeks to create conditions of macroeconomic stability, promote social equity, and support economic growth (MOFA, 2022). This aligns with Respondent 10's views, who argued that the MOF was involved in setting up the mandate of Singapore's SWFs:

> *So, you know that EDBI would be sponsored by both the Ministry of Trade and Industry, which requires us to deliver our financial returns – sorry, our developmental returns – but also the Ministry of Finance, which then requires us to deliver some sort of financial returns as well.*

The mandate for SWFs in Singapore was developed by the MOF and the Ministry of Trade and Industry, which also established performance targets.

Respondent 9 also revealed that the Ministry of Finance manages GIC fund:

> *GIC is more fund management, portfolio management, right? And through fund management to get more money from the Ministry of Finance, they would also use this as a strategic tool to develop strong relations [with] international companies.*

Respondent 11 added that the Ministry of Finance also manages the Temasek fund:

> *Every year, the Temasek board and senior management meet with the Minister of Finance and officials from the Ministry of Finance to review Temasek's portfolio and financial performance, global economic outlook, and investment strategies.*

According to the MOF (2022), Singapore's fiscal policy devotes a significant percentage of the budget towards investment and development, whereas approximately 25% of the budget is allocated to development. In turn, fiscal policy promotes business growth, firm growth, and firms' competitiveness in the global arena. Gomulya et al. (2015) supported these findings by revealing that Singapore is an innovation-driven economy whose growth is largely dependent on the economic activities of its citizens.

Angelstorf (2020) stated that an additional development policy in Singapore involves infrastructural development, through which roads, urban areas, and shopping centres are constructed to improve the living conditions for the population. This effort then merges with the country's fiscal policy, through which the government focuses on sustainability as it invests in public spending to ensure that its population and businesses can thrive (MOFA, 2022). Figure 6-4 illustrates the fiscal spending in Singapore in 2010 and 2019.

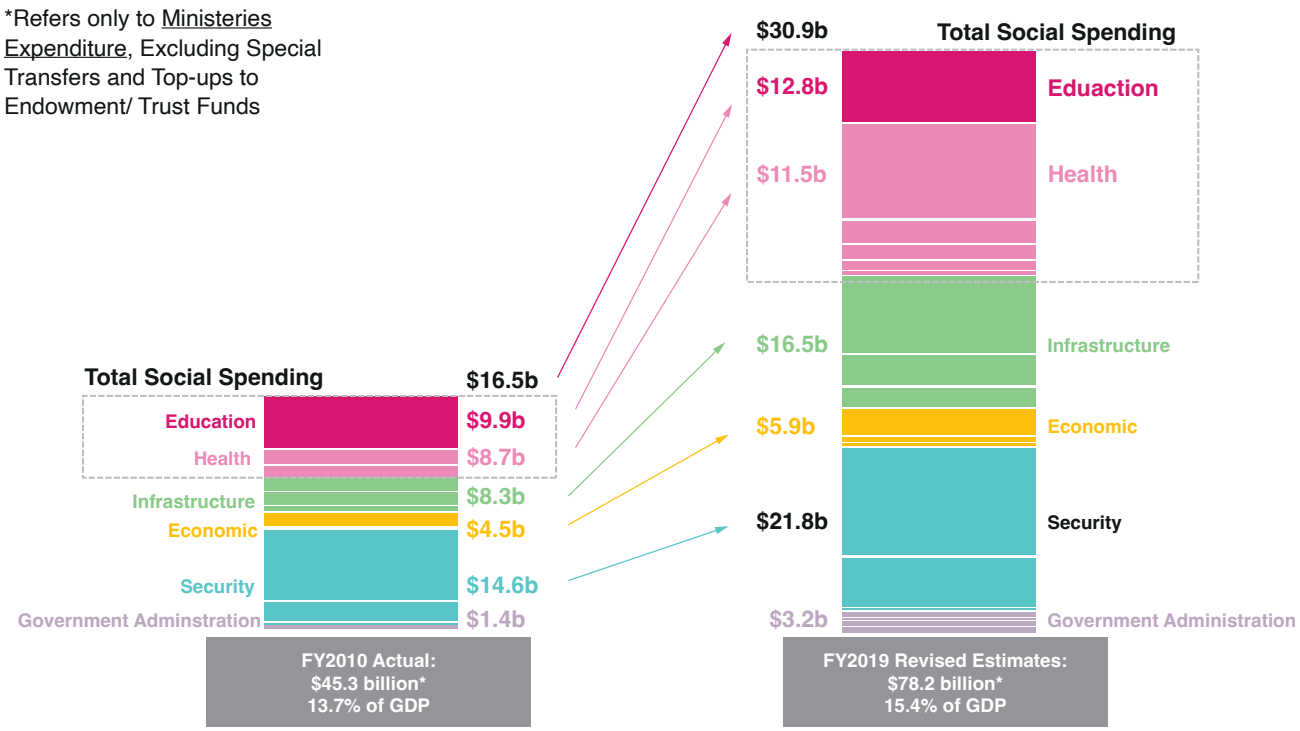


Figure 6-4: Singapore's Fiscal Policies in 2010 and 2019
Source: MOF (2022)

This figure reveals a significant increase in total social spending from USD 16.5 billion in 2010 to USD 78.2 billion in 2019. In addition, infrastructural and economic spending were reported to increase from USD 8.3 and 4.5 billion to USD 16.5 and 5.9 billion, respectively. These numbers indicate that the fiscal policies adopted in Singapore influence the achievement of development goals.

In addition to fiscal policy supporting the sustainable growth of the economy through public spending, a fourth policy focuses on promoting equity by providing support for vulnerable members of society (MOFA, 2022). Singapore uses a fair taxation system, in which 55% of taxes are reserved for the top 20% of earners, 11% for the middle 20%, and 9% for the bottom 20% (MOFA, 2022). Philippova et al. (2018) argue that a progressive tax rate promotes social equity and reduces the gap between high- and low-income earners.

A further review reveals that the monetary policies in Singapore are influential in ensuring that development policies are achieved. For example, the exchange rate is considered an effective tool for maintaining the stability of prices to ensure sustainable economic growth (MAS, 2022). A report by MAS (2022) indicated

that the country's monetary policy focuses on managing the Singapore dollar. This view was supported by Respondent 9, who stated the following:

> *Any time the government has a new policy, maybe it's fiscal, maybe it's monetary, they will use one of the state's companies to drive it. So when you have a policy, you need someone to, for example, come in as a new fiscal policy to create new growth in the telecoms sector example, right? 'I want to help create more internet companies'. Then you get one of the government companies to head it.*

The comment suggests that the government uses monetary and fiscal policies to ensure that overall development objectives are achieved against a basket of trade-weighted currencies – a concept described as the Singapore dollar nominal effective exchange rate (SD-NEER; MAS, 2022). Upon close analysis, the SD-NEER exchange rate ensures the stability of prices in the medium term as a basis for economic growth. These findings echo those of the World Bank (2017) and the Singapore government (2020), which have emphasised creating a conducive business environment in which investors can easily conduct their affairs. Other empirical studies, such as that of Dağlaroğlu and Demirel (2016), have revealed that monetary policies, including foreign exchange rates, are a vital tool for controlling inflation within the economy and, thus, mitigating the effects of external shocks. Notably, in Singapore, the exchange rate is the preferred monetary policy tool that ensures the stability of prices, whereas interest rates are not widely adopted. In this manner, strategic fiscal policies enable the Singaporean government to promote sustainable economic development in the long run by ensuring economic growth. The following sub-section discusses the integration of the SWFs into the monetary, fiscal, and development policies of Singapore.

6.5.2 Singapore's Sovereign Wealth Fund Portfolio Management and Operational Model

As the findings in the previous sub-section indicate, Singapore's economic development has been supported by an outward-oriented development strategy. This sub-section examines how the SWFs influence the achievement of these policies and manage their portfolios with this operational model. Here, the focus is on identifying how the mandate of the SWF influences development policies that emphasise internationalisation while supporting partnerships with foreign investors. Similarly, an analysis of the literature indicates how the SWFs affect the country's fiscal and monetary policies. For example, Krishnadas (2013) observed that the key mandate of GIC has been to oversee the foreign reserves owned by Singapore, guaranteeing that a sustainable real return rate is achieved over 20 years. Respondent 8 commented on the governance of the funds as follows:

> *The global logistics consultings held by Temasek have flourished into highly profitable businesses. On average, these [companies] provided superior returns (on both assets and equity) and are valued more highly through good corporate governance and better management of expenses than [other companies]. They have undeniably contributed towards Singapore's economic/GDP growth and infrastructural development.*

When comparing the findings of Krishnadas (2013) and those of the MOF (2022), a similarity is observed, as the SWFs support the fiscal sustainability policies in Singapore by enabling the identification of long-term plans. Similarly, a review of monetary policies and the SD-NEER reveals that the foreign exchange reserves in the SWFs are crucial for cushioning the foreign exchange rate and ensuring a stable and conducive environment for undertaking business.

Furthermore, to understand how Temasek and GIC are integrated into monetary, fiscal, and development policies, the differences between the two must be examined. Table 6-7 summarises these differences.

Table 6-7: Differences Between Temasek and the Government Investment Corporation

Component	Temasek	GIC
Ownership and Reporting Structure	Both are owned by the Singapore government and are accountable to the Ministry of Finance. Both are operationally autonomous.	
Nature of Fund	Investment holding company. Temasek owns the assets it manages.	Fund management. GIC does not own the funds that it manages.
Size of Fund	More than USS$ 134 billion	More than US$300 billion
Investment Aims	Capital Appreciation	Wealth enhancement: (1) to preserve international purchasing power of funds (2) to enhance value of funds
Market Orientation	Domestic (Singapore) and Foreign	Foreign only
Portfolio Allocation	100% Equities - either directly held, via subsidiaries, or in Astrea Equity Fund	50% - Equities 30% - Bonds 20% - Others: private equity/ hedge fund/real estate/ commodity investments
Current Geographical Focus	33%: Singapore 41%: Rest of Asia 23%: OECD econmmes (excluding Korea) 3%: Others	40-45%:US 20-25%: Europe 8-10%: Japan Remaining 32-20%: not specified but likely to be Asia, Latin America and Eastern Europe.
Top 3 Sector Focus (not listed in particular order)	Financial Services, Telecommunications & media, Transportation & Logistics	Not specified but based on portfolio, likely to be real estate, infrastructure and financial services.
Investment timeframe	Any: the bottom-line is to reap profits	Medium (at least 2 years) to long term (5 to 10 years)
Key Performance	(1) Shareholder returns	(1) Real rate of return higher than weighted

Source: Wu (2016)

Table 6-7 provides insights into the distinctive approaches to portfolio management between Temasek and GIC. A notable disparity lies in their asset management philosophies. Temasek actively engages in investments, taking ownership of assets, whereas GIC functions primarily as a fund manager, not holding direct ownership over the assets it oversees. Furthermore, Temasek funds its operational activities from its investment portfolio, while GIC's core objective focuses on safeguarding and augmenting government assets (Wu, 2016). Moreover, Singapore's SWFs employ diverse and dynamic portfolio management strategies that reflect their unique mandates. GIC focuses on capital preservation and liquidity, while Temasek adopts an agile approach driven by long-term structural trends. These distinct strategies exemplify the adaptability of Singapore's SWFs to navigate evolving global economic landscapes. For

example, Temasek allocates a portion of its investment capital to support innovations and emerging technologies at pre-commercialisation stages. This strategic approach aligns with its commitment to driving progress and staying at the forefront of technological advancements. This insight is provided by Respondent 11:

> *Temasek's allocation of capital is aligned to trends that shape our long-term portfolio construction: digitisation, sustainable living, future of consumption, and longer lifespans. We invest into companies that directly enable, drive, and benefit from these trends.*

In addition, Temasek employs a comprehensive ESG assessment framework across its investment procedures. This rigorous evaluation ensures that investment opportunities are in harmony with their sustainability objectives, reflecting their dedication to responsible and forward-looking economic practices. This approach resonates with the insights highlighted by Bortolotti, Loss, and Robert (2023), emphasising the significance of integrating ESG principles into SWF investment strategies to promote sustainable economic growth and long-term stability.

By contrast, GIC on an international scale, emphasises managing an international portfolio. Its overarching goal is to secure stable, long-term returns, considering factors such as inflation. Unlike Temasek, GIC refrains from investing in Singapore's domestic assets; instead, it is entrusted with the task of managing foreign reserves for Singapore. This strategic approach allows GIC to diversify across a wide array of assets, including various geographies, public and private investments, and different investment categories such as dividend stocks and growth stocks. This diversification strategy is instrumental in ensuring the resilience and adaptability of GIC's portfolio to navigate dynamic and ever-changing market conditions. This point was stated by Respondent 6:

> *The guiding principle is the management of diversification at the portfolio level. Their approach encompasses diversification across multiple dimensions: geography, asset types (public and private), and investment categories such as value and growth stocks. It's evident that GIC's portfolio is meticulously diversified, spanning various facets to mitigate risk and optimise returns.*

The following section discusses the impact of these SWFs on Singapore's macroeconomic development.

6.6 Impact of Singapore's Sovereign Wealth Funds on Macroeconomic Stability and the Development Context

This section discusses the impact of Singapore's SWFs on the country's economic conditions, objectives, and economic development.

6.6.1 Objectives and Outcomes of Singapore's Sovereign Wealth Funds

The GIC is tasked with investing in all major asset classes to ensure that the government's foreign reserves are well-managed and provide a sustainable return rate over 20 years (Krishnadas, 2013). An evaluation the 2021 GIC annual report indicates that this objective has been achieved. Figure 6-5 details the annualised 20-year return rate of the GIC portfolio from 2001 to 2020.

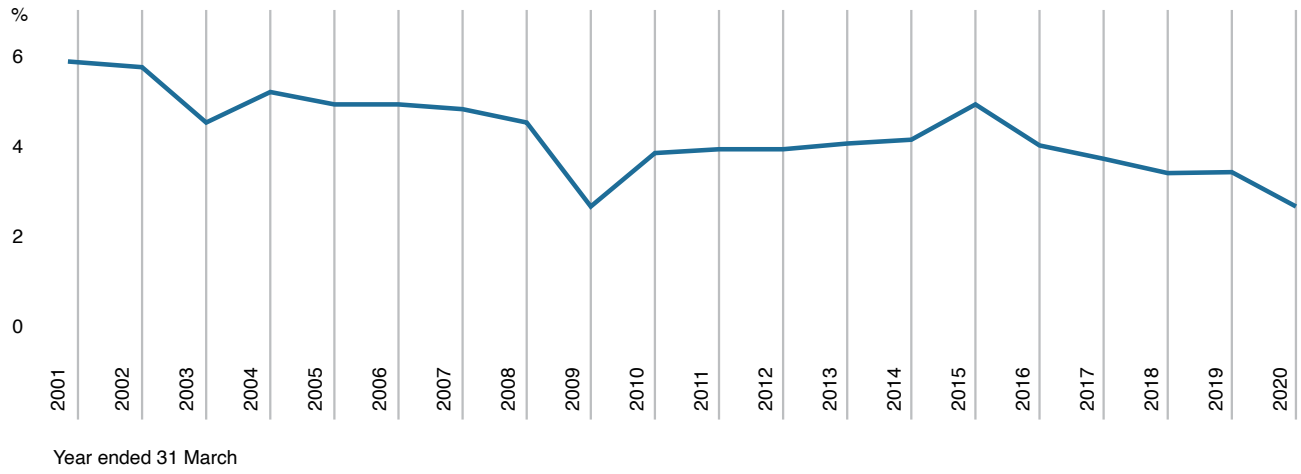


Figure 6-5: Government Investment Corporation's 20-Year Rate of Return From 2001 to 2020
Source: GIC (2021)

Figure 6-5 illustrates that an annualised return rate above 2.5% has been maintained throughout the period, which indicates that GIC has achieved its mandate by preserving and enhancing its purchasing power over the long term. However, diverse challenges have also been reported during this period. For instance, a sharp decline emerged between 2008 and 2009 due to the global financial crisis, as the rate of return fell from 4% to 2.7% (GIC, 2021). This indicates that Singapore's reliance on an outward-oriented development strategy in which risks in the macroeconomy affect foreign investments influences the GIC's performance. A similar perspective can be deduced for Temasek; although the SWF has achieved its mandate in managing investments previously held by the MOFA, the extant risks in the macroeconomy have also affected its performance.

6.6.2 Impact of Singapore's Sovereign Wealth Funds on Economic Conditions

Various studies have revealed that Singapore's SWFs have positively affected the economic conditions in the country. For example, Shih (2009) reported that the SWFs have been an important tools for enhancing a country's long-term survival and profitability. Moreover, Krishnadas (2013) revealed that SWFs have been crucial in supporting Singapore's GDP during times of crisis. According to the author, 75% of Singapore's GDP can be attributed to exports, exposing the country to macroeconomic risk events such as the global 2008–2009 financial crisis. During the recession, the crash of global companies adversely affected Singapore's GDP, and the lending market froze. To cushion Singapore's economy from adverse macroeconomic conditions, the government used USD 120 billion from its SWF reserves to guarantee the stability of the dollar and deposits of foreign currency from individual and non-bank customers across merchant banks, licenced banks, and financial companies (Krishnadas, 2013). GlobalSWF (2022) reported similar findings, indicating that Temasek moved to acquire Singapore's troubled Sembcorp Marine, an offshore and ship engineering group, in 2020 due to poor performance resulting from the pandemic, specifically plunging oil prices and slowing oil demand in the global transportation sector. In addition, Singapore drew on USD 6 billion in past reserves to cover COVID-related public health expenditures (Tham, 2022). In the takeover of Sembcorp Marine, Temasek offered its highest share price bid of USD 0.08 per share, leading to a 46.6% increase in total shares (GlobalSWF, 2022). In 2021, EDBI also invested in 11 portfolio companies, helping them list on the stock exchange while providing further support during the pandemic (Tan, 2022). As a result, the SWFs have contributed to enhancing the economic environment within the country. Further contributions of Temasek to the economic environment are detailed as follows (Dhungana, 2012; Temasek Foundation, 2023c; Flood, 2021; Lee, 2020):

Investing in strategic sectors: Temasek has invested in a wide range of strategic sectors, including manufacturing, financial services, transportation, and telecommunications (Dhungana, 2012). Dhungana (2012) revealed that Temasek held the highest number of shares in SingTel, the largest telecom company in Singapore, with 54.5%. These investments have helped to diversify Singapore's economy and make it more resilient to shocks.

Temasek has also supported innovation and start-up via investments in companies such as Mind Palace, which uses virtual reality technology to help seniors with dementia maintain active minds, in its pre-accelerator programme to grow disruptive start-ups (Temasek Foundation, 2023c). These investments have helped create an entrepreneurial environment in Singapore and have boosted the country's innovation capabilities (Marquez, 2023).

Promoting internationalisation: Temasek has a global portfolio of investments, which has helped connect Singapore to the rest of the world. For example, in 2023, the fund invested USD2 billion in Manipal Health Enterprises, based in India, to boost its portfolio of assets (Chatterjee, 2023). Nanda (2021) also reported that Temasek invested $120 million in the educational technology platform upGrad, which is based in India and focuses on the delivery of online courses in higher education. This has been beneficial for Singapore's trade and investment relations.

Developing human capital: Temasek has also invested in education and training programmes. This has helped develop the skills of Singapore's workforce and has made the country more competitive (Temasek Foundation, 2021)

Helping to develop the domestic capital markets: Temasek has raised debt in the domestic market, which has helped develop the local capital markets, for example, by allocating $500 million to state-backed investment companies such as Leapfrog Investments, an investment manager (Flood, 2021). This has made it easier for businesses to raise capital and invest in new projects. Additionally, Temasek has provided financial assistance during times of crisis; it rescued firms such as Singapore Airlines (Daga, 2020) during the pandemic. Daga (2020) also revealed that Temasek injected USD 13 billion into the airline, which was allocated to S $5.3 billion in new equity, up to S $9.7 billion in convertible notes, and a S $4 billion bridge loan (Daga, 2020). The injection was important in reopening Singapore's economy to ensure fast recovery from the pandemic, protecting jobs and businesses and mitigating the impact of the crisis on the economy.

Temasek has also supported social development initiatives in Singapore, such as education, healthcare, and environmental sustainability. Lee (2020) reported that in 2020, Temasek invested in healthcare and education start-ups in South Eastern Asia as it added to its $227 billion portfolio. These initiatives have helped to improve the quality of life for Singaporeans and have made Singapore a more liveable city.

6.6.3 Impact of Singapore's Sovereign Wealth Funds on Development

Singapore's SWFs have also enhanced economic development in the country by injecting capital into the economy to support compromised sectors on the verge of failure due to events such as the global economic crisis and the COVID-19 pandemic, when sectors such as transportation were adversely affected.

Such arguments were made by Respondent 9, who stated the following:

> *Singapore allocated significant funds for this purpose, drawing from various government reserves. These reserves are funded through a combination of taxes and regular contributions from sovereign wealth funds, among other sources.*

During the COVID-19 crisis, the government relied on reserves from the SWFs and taxes to stabilise the economy. Similar findings have been reported regarding SWFs in other countries, such as KIA, which provided a cushion for the Kuwaiti economy by supporting the stock market following the global recession (Raymond, 2010). Raymond (2010) revealed that SWFs have been viewed as last-resort shareholders in the banking sector, as they are unable to recover the stability of the financial system. The Chinese Investment Corporation was observed injecting funds into the compromised banking sector during the global financial crisis to promote infrastructural development in China (Thomas and Chen, 2018). Additionally, the Singapore SWFs have supported the macroenvironment through capital injection into failing sectors, such as the transport sector (Raymond, 2010; Thomas and Chen, 2018). Other countries have also considered SWFs a last resort for supporting the economy. In Singapore, the high risk of depending on a non-commodity economy leads to a reliance on SWF reserves to support the macroeconomy during crises. Clark and Monk (2010c) indicate that GIC acted as an insurer of last resort for Singapore during the financial crisis, thereby improving financial stability and social welfare in the country. Singapore's SWFs have also enhanced economic development through investment in a number of countries and across a diversified portfolio in sectors such as financial services, telecommunications, and media, which offer high returns (Temasek Foundation, 2021a).

In addition, EDBI has enhanced economic development, given that in 2021, approximately 25 technology start-ups focusing on educational technology, e-commerce, financial technology, and healthcare received USD 216 million from the EDB (Ting, 2021). Additionally, the EDBI invested $1 billion in 2021 to support deep tech research and innovation in diverse types of tech start-ups, as well as a further commitment of $25 billion to develop cutting-edge technologies and solutions (EDB Singapore, 2021).

Cheok (2018) reported that Singapore had invested in diverse industries – including information and communications technology, healthcare, and deep tech – through the provision of venture capital and private equity funding. Through such overseas investments, the EDB aims to create shareholder value for Singapore's government in high-growth technology sectors (EDB, 2022). Such investments are crucial for improving the overall creation of value in the country. Respondent 10 reported that EDBI was founded to invest in joint ventures with multinational corporations:

> *As I understand it, [EDBI is] a risk-sharing vehicle for multinationals looking to do economic activity in Singapore. So, in the early – I think – the early 20 years since our founding, most of our core mandate was really to invest in projects, in joint ventures with the multinationals.*

6.7 Findings and Conclusions

In this section, the findings reported in this chapter are presented in alignment with the study's conceptual framework. Concerning the first theme, the findings reveal that Temasek, which was founded in 1974, and GIC, which was founded in 1981, aim to diversify Singapore's economy. Foreign exchange reserves funded and grew SWFs, active shareholders, and investors in diverse domestic and foreign industries. For instance, as of 31 March 2021, Temasek had a net portfolio value of USD 381 billion. Fund assets are distributed across the financial services, telecommunications, media technology, consumer goods, real estate, and transportation sectors. Additionally, Temasek manages assets across various sectors, including financial services and real estate. A GIC analysis reveals that the fund manages the Singapore government's reserves alongside Temasek and MAS.

Moreover, findings that align with the designs of Singapore's SWFs have been integrated into government and economic policies. The key mandate of the GIC SWF is to oversee the foreign reserves owned by Singapore, guaranteeing a sustainable real return rate over 20 years. A review of the monetary policies and the SD-NEER reveals that the foreign exchange reserves in the SWFs are critical for cushioning the foreign exchange rate and ensuring a stable and conducive environment for conducting business. Monetary policies, including foreign exchange rates, are used to control inflation rates within the economy, thus mitigating the effects of external shocks. Subsequently, fiscal policies have enabled the Singaporean government to promote sustainable economic development in the long term by ensuring economic growth.

Fiscal policies that support sustainable economic growth through public spending and equity promotion to aid vulnerable populations are integrated into the SWFs' design. The findings also demonstrate that SWFs have influenced macroeconomic and development contexts. Specifically, GIC has invested in all major asset classes to ensure that the government's foreign reserves are well-managed with a real rate of sustainable return over the next 20 years. Additionally, GIC has been crucial in supporting Singapore's GDP during crises.

Finally, the SWFs' impact on the macroeconomy's stability has been established, as the findings demonstrate that the government used USD 120 billion from its SWF reserves to cushion Singapore's economy from adverse macroeconomic conditions. The funds guaranteed the deposits of foreign currency from individual and non-bank customers across merchant banks, licenced banks, and financial companies.

The findings presented in this chapter reveal valuable insights into the implementation and roles of SWFs in Singapore. The review reveals that Singapore operates two distinct SWFs, namely, Temasek and GIC, which were established in the 1970s and 1980s, respectively, to manage the foreign reserves owned by the Singaporean government. Differences exist in the mandates of these SWFs, with GIC focusing on capital growth in global markets while Temasek owns both local and international markets. EDBI plays a pivotal role in the local market by strategically investing to bolster and advance key industries, thereby fostering economic growth and development within the nation. Furthermore, the three funds have grown significantly, with Temasek valued at USD 381 billion in 2021. GIC has also increased the financial value of its reserves over the years while expanding the geographical distribution of the fund across the United States, Asia, Latin America, and Singapore. In 2021, EDBI invested in approximately 25 technology start-ups, injecting substantial financial support totalling USD 216 million into various segments of the tech industry, with a primary focus on educational technology, e-commerce, financial technology, and healthcare.

The discussion also reveals that portfolio diversification is a critical strategy for minimising risks and maximising returns. The findings indicate that SWFs are crucial in Singapore, which is limited by a lack of natural resources such as oil reserves and precious metals. Furthermore, the country's small population constrains labour productivity and exerts an additional negative effect on economic growth. The country relies on the export market, with a significant percentage of the GDP being supported by exports. Therefore, the rationale of Singapore's SWFs is to provide an economic cushion, especially due to the risks associated with macroeconomic conditions.

To ensure that its SWFs are resilient, Singapore has adopted a range of strategies to determine how to invest in different economies. The most critical aspect is the need for diversification, where GIC and Temasek invest in foreign companies across various industries, including finance, telecommunications, and media. A critical analysis reveals that a risk–return incentive framework has been adopted in addition to diversification, whereby GIC and Temasek focus on mature companies that are likely to have safe and assured returns. Experts and corporate governance mechanisms also support the Singapore SWFs' investment decisions while measuring their performance. Moreover, the SWFs and government policies are connected in that they facilitate the overall success of the economy.

Finally, this research indicates that Singapore's SWFs have met their core objectives and mandate concerning their impact on macroeconomic conditions in the country. Similar to other funds in countries such as Kuwait and Qatar, Singapore's SWFs cushion the macroeconomy through capital injections during crises. Specifically, a confluence is observed among Singapore, Kuwait, and Qatar, whose SWFs supported banking and stock markets during the 2008–2009 global financial crisis. The best example is the funding package of up to S $19 billion (USD 13.27 billion) for Singapore Airlines that was offered by Temasek Holdings, which is the single largest rescue for an airline that suffered huge losses because of the COVID-19 pandemic.

The next chapter presents a discussion of the SWFs in Qatar. This review is valuable as it reveals the differences between commodity-based SWFs, such as those in Qatar and Kuwait, and non-commodity SWFs, such as those in the Singapore case study.

Chapter 7: Sovereign Wealth Fund in Qatar

7.1 Introduction

This chapter elaborates on the Qatari SWF. The first section, 7.1, presents the reasons for the inclusion of this case study in this research. Next, Section 7.2 focuses on an analysis of the economic conditions in Qatar, including the country's history, evolution, and challenging macroeconomic indicators. Section 7.3 explores the rationale and objectives of Qatar's SWF, and Section 7.4 establishes the type and mandate of Qatar's SWF. Subsequently, Section 7.5 presents the structural design of the SWF and discusses its capital allocation, portfolio management, and operational model, and Section 7.6 examines the impact of Qatar's SWF on economic and development contexts. Finally, Section 7.7 presents the main findings from this chapter as well as the key conclusions.

7.1.1 Reasons for Selecting Qatar as a Case Study

Qatar was chosen as a case study because it is representative of a new version of commodity-based funds. The Qatar SWF emerged in the 2000s, marking a distinction from the SWF eras in Kuwait and Singapore. This enables a comparative analysis between the older and newer iterations of SWFs regarding various aspects, such as governance, design, strategy, mandate, and effectiveness. The Qatari selection has immense value for understanding the evolution and advancements within the realm of SWFs. Moreover, Qatar's case is of special interest due to the SWF's role in diversifying income sources and reducing dependency on a hydrocarbon economy. The country's remarkable growth trajectory positions its fund as one of the most rapidly expanding SWFs in existence. QIA is the country's primary vehicle for sovereign wealth investments (Perera, 2015). Examining QIA as a case study reveals essential insights into the design of a commodity-based SWF and how it is governed to ensure that it achieves its established mandate.

7.2 Analysis of Economic Conditions in Qatar

The macroeconomic conditions in Qatar have fluctuated since oil was first discovered in 1939 onshore at Jebel Dukhan, on the south-western coast of Qatar. By 1950, Qatar had already begun its oil production, and this production would subsequently triple by 1954. The boost in revenue was remarkable, with Qatar's income from oil soaring from USD 1 million in 1950 to USD 23 million in 1954. This substantial increase was primarily due to an agreement signed in September 1952 with the Petroleum Department of Qatar, which introduced a 50–50 profit-sharing arrangement (Geo ExPro, 2023) .

In 1971, Qatar declared its independence from Great Britain, and in the same year, the world's largest natural gas field, the North Field, was discovered offshore of the north-east Qatar peninsula (Qatargas, North Field, 2021). These discoveries of oil and gas economically empowered the country to become the largest per-capita producer of both resources. The resulting investments positively influenced the growth of Qatar's production base as oil production became profitable and petroleum revenues increased through the 1970s and '80s, while various other countries in the Arabian Gulf also recorded high profits from oil and gas.

The origins of the establishment of Qatar's SWF date back to the 1970s, during a budget surplus just after the country gained its independence. The first state reserve fund was created in 1972, while Qatar Petroleum, recently renamed Qatar Energy, was established in 1974 as an integrated national oil corporation responsible for the sustainable development of the oil and gas industry (Qatar Petroleum, 2021).

Despite the surplus budget, the established fund was not expanded and remained limited in size for two main reasons: Firstly, the government was focused on enhancing internal development in various sectors, such as health, education, and infrastructure; and, secondly, regional and international events, such as the outbreak of the 1973 war, the Iran–Iraq war (1980–1988; Gause, 2002), and Iraq's invasion and annexation of Kuwait in 1990 challenged and interrupted the survival of the SWF (Quamar and Kumaraswamy, 2019).

The frequent spate of wars was disadvantageous due to the challenges of exporting oil and natural gas, which, in turn, reduced international investments.

Furthermore, the collapse of oil prices in 1986 to approximately USD 12 a barrel negatively affected Qatar's economic performance (Gately, 1986). These events significantly affected the Qatari state's reserve and the GCC in general, further interrupting the initiation of Qatar's first sovereign fund. Meanwhile, the country was heavily dependent on revenues from oil production, which increased from a 0.3% contribution to the GDP in 1970 to approximately 80% throughout the 1980s (World Bank, 2021). The latest reports on oil rents reveal that, in 2021, oil contributed 16.91% of Qatar's GDP (World Bank, 2022). Figure 7-1 details the contribution of oil to Qatar's GDP over the years, declining from 80.13% in the 1970s to 11.75% in 2019.

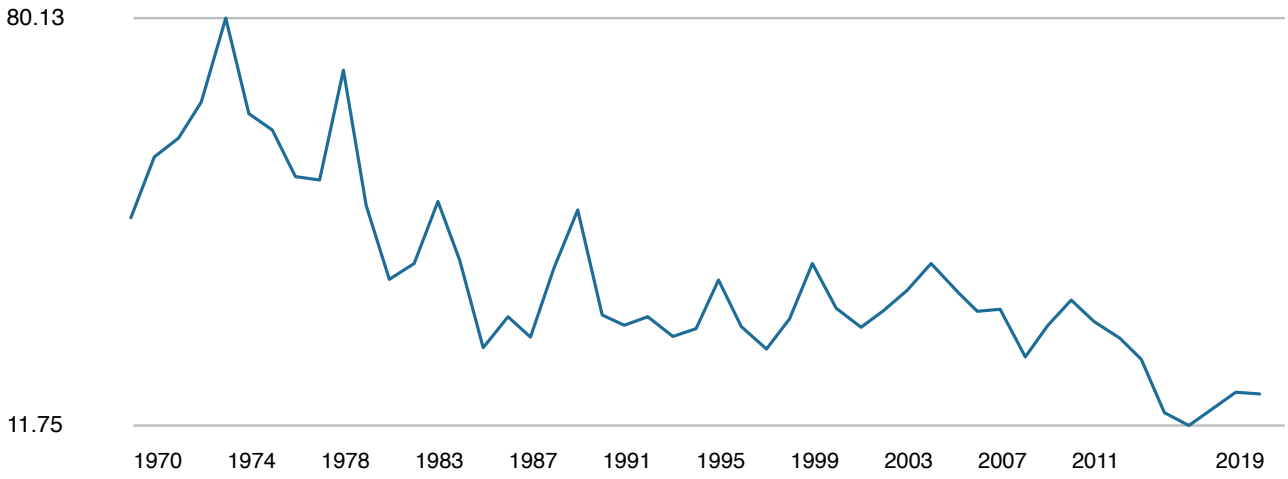


Figure 7-1: Oil as a Percentage of Qatar's Gross Domestic Product Grom 1970 to 2019
Source: Global Economy (2022)

Since the early 1990s, Qatar has invested heavily in LNG. Qatar Petroleum constructed the Ras Laffan industrial city, which the company declared was "mandated to provide infrastructure, facilities, and services" for natural gas-based industries that produce gas products and their derivatives from the North Field (Qatar Petroleum, 2021). By 1996, the Ras Laffan industrial city had begun to operate, and the first LNG shipment was loaded and delivered to Japan in 1997 (Qatargas & History, 2021). The new LNG industry generated a surplus, leading to the establishment of the SWF to ensure national stability by shielding the economy from fluctuations in oil and gas revenues. When oil prices are high, the fund receives resources, whereas if they are low, the government temporarily stops injecting new money (Bahgat, 2008). Subsequently, Qatar has invested its surplus oil and gas revenue to ensure the reasonable and long-term availability of the state's sovereign reserves, with the goal of having the wealth fund supplement the country's budget in the future (Bahgat, 2008).

In the early 2000s, the Qatari government had sufficient funding and hedging to cover infrastructure, education, healthcare, and other initiatives for the local economy. Therefore, no additional capacity existed to absorb further investment without causing inflation. Thus, the focus was on investing the surplus to generate extra financial income for future generations, support the stability of the budget in the long term, obtain a variety of prominent hard currencies, and increase global trust in Qatar's economy. The economic conditions controlled the course of the fund's creation and resulted in key determinations that limited the fund to diversifying the national income by managing state reserves. These strategies and objectives evolved as a result of developments in Qatar's economy, particularly the abundance of the financial resources used to cover the government's budget as well as the effective fiscal and monetary tools for generating economic growth and full employment. Additionally, challenges related to the absorption capacity of the economy and fears of high inflation persuaded the government to establish the SWF. Thus, a surplus arising from a single commodity must be maintained, developed, and diversified to be sustainable.

In 2000, the government also established the Supreme Council for State Reserve Investment, which is responsible for all policy matters related to the management and investment of the state's reserves and the strategic management of funds (Emiri Decision 58, 2000). The Council is the governmental body responsible for investing the generated surplus in international and local assets to diversify Qatar's national income (Emiri Decision 58, 2000).

In a second stage, in 2001, the SCEAI replaced the Supreme Council for State Reserve Investment as the state reserve council (Emiri Decision No. [37] of 2001 Establishing the Supreme Council for Economic Affairs and Investment (SCEAI). 2003, the SCEAI's General Secretariat was also upgraded and divided into two divisions, namely, a policymaking division for economic affairs and an investment division for daily investment activities (Emiri Decision No. [18] of 2003 amending some provisions of Emiri Decision No. [37] of 2001). In 2023, the Supreme Council was reorganised (Emiri Resolution No. [33] of 2023 reorganizing the Supreme Council), and the new legislation empowers the Council to additionally oversee economic affairs. Moreover, the Council manages policy aspects regarding the economy, energy, and public policies in finance. In addition, the Council is tasked with investing the state's reserve according to its long-term policy while identifying banks and financial institutions to help invest capital in the market in various asset classes. The portfolio of the Council has developed further and has become more detailed in its structure and asset classes. It contains assets in various geographical areas, mainly in bonds and listed equities, through fund management and managed accounts.

The growth in the hydrocarbon industry ushered in a new economic era in Qatar, in which the GDP was supported by oil and gas revenues. Figure 7-2 further illustrates Qatar's economic development stages from the early 1950s with GDP evolution from 1996 to 2019 and its institutional development.

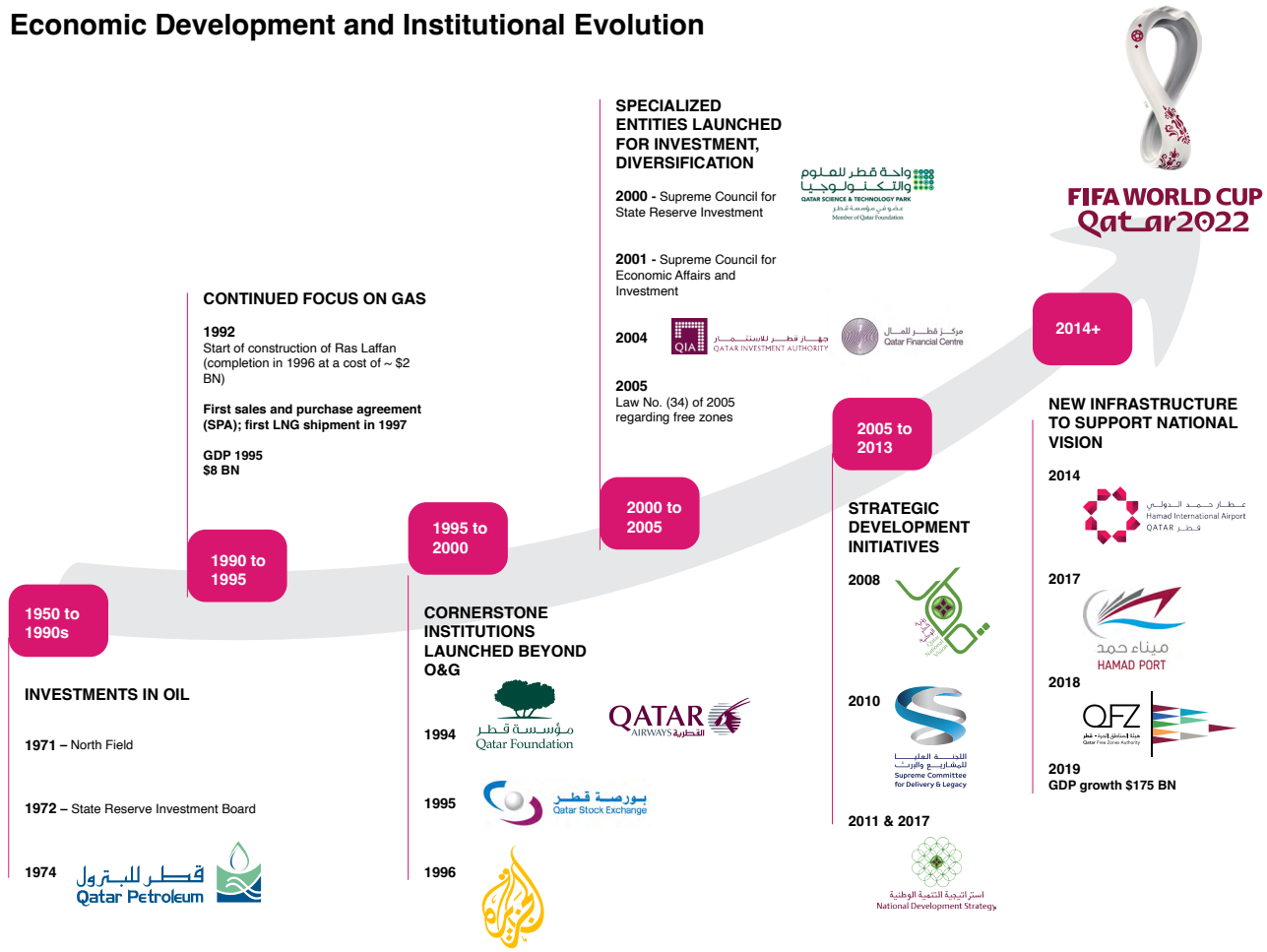


Figure 7-2: Economic Development and Institutional Evolution
Source: DPhil Candidate (2019)

Figure 7-1 indicates that from the 1950s to the 1990s, Qatar's GDP was supported mainly by oil investments. However, over the years, the economy diversified by establishing cornerstone institutions, the SWF, and strategic development initiatives (Petcu, 2020). The LNG sector experienced a rapid growth phase, particularly in 2000, and Qatar began to accumulate a financial surplus generated by oil and gas revenues. Various economic developments contributed to the GDP, which increased from USD 8.14 billion in 1995 to USD 17.76 billion in 2000 and continued to rise until it reached USD 186.83 billion in 2012 (World Bank). In addition to enhancing the hydrocarbon industry, the Qatari government has also focused on building cornerstone institutions beyond oil and gas (Petcu, 2020), such as the Qatar Foundation and Qatar Airways in 1994, the Doha Securities Market in 1995, and the Al Jazeera international television news network in 1996. In developing the Qatar National Vision 2030 (QNV 2030), the country has also focused on switching to a knowledge-based economy (Nachef, Jantan, and Boularas, 2014).

In addition, the Qatari government has historically invested and taken the lead in partnerships with the private sector in the local market to initiate business projects and local champions as well as to support initial public offering (IPO) listings by acquiring shares in local companies, such as Ooredoo, Industries Qatar, Qatar National Bank (QNB), and Mesaieed Petrochemical (Reuters, 2014). A closer inspection reveals that the economy relies on government spending to drive growth. Therefore, the government's strategy is to invest in vital projects that are essential for economic growth while encouraging the private sector to enhance further economic development, as observed with the purchase of IPOs (Reuters, 2014). Respondent 18 confirmed that:

> *[T]he involvement of the government in the establishment of the major companies was vital to helping these companies succeed in order to have a positive impact on the local economy.*

The Qatari government takes the lead until these projects or companies become operational and independent and then reduces its stake or plays a passive role in the projects. However, it is worth mentioning that, by 2002, the Supreme Council and QIA had inherited the government legacy portfolio, both locally and regionally.

7.2.1 Qatar's Challenging Macroeconomic Indicators

By 2000, as one of the nations with the most significant natural resource endowments, especially in natural gas, Qatar had experienced increased returns from the export of LNG to boost economic growth and employment, contributing up to 70% of GDP (Ceicdata, 2022).

Figure 7.1 indicates that the contribution of oil to Qatar's GDP gradually declined from 80.13% in 1970s to 11.75% in 2019 (World Bank, 2023). Meanwhile, revenues from natural gas has increased significantly to compensate for the decline in oil revenue since the 2000s. In this context, Respondent 19 provided particularly relevant insights:

> *It was a strategic decision to establish the fund, which not only will have a positive economic impact on economic solidary but also will contribute positively [to] social stability for the future generations.*

Qatar is part of a group of states for which oil and gas are the primary income sources, with only a modest contribution from other economic sectors (IMF, 2022). From 2000 to 2005, Qatar experienced significant economic growth; thus, the Qatari government accumulated sufficient income resources to cover its budget, while fiscal and monetary tools were used to generate economic growth and achieve full employment. Figure 7-3 details Qatar's growth in GDP from 1970 to 2018.

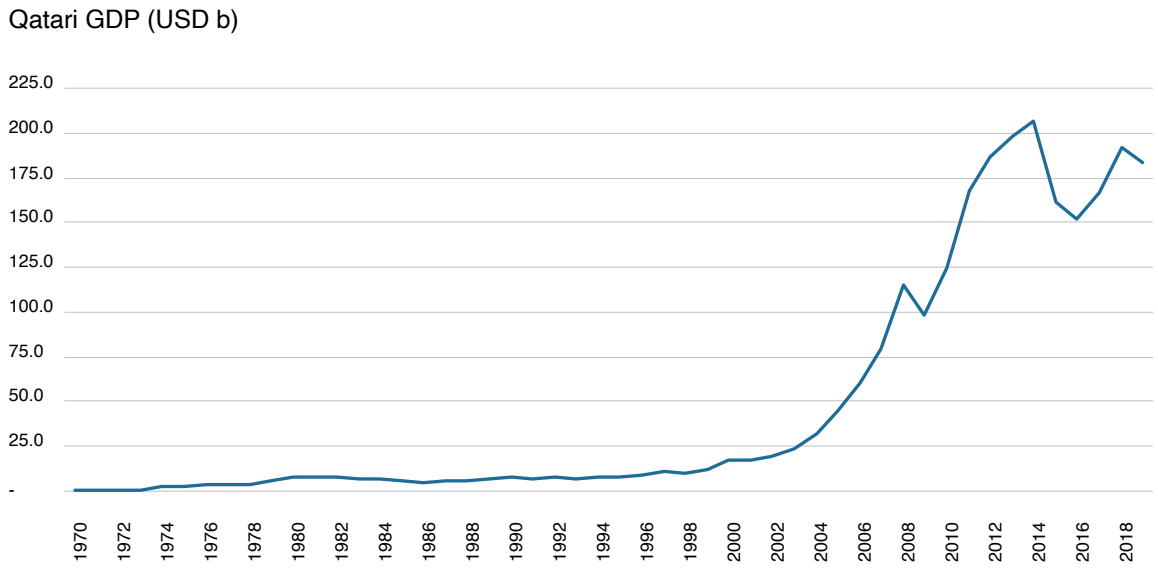


Figure 7-3: Gross Domestic Product Growth in Qatar From 1970 to 2018
Source: IMF (2022)

Furthermore, Figure 7-4 details Qatar's budget surplus, which justified creating a SWF to manage the country's excess wealth and achieve its development objectives, and Qatar's budget deficits from 2001 to 2019.

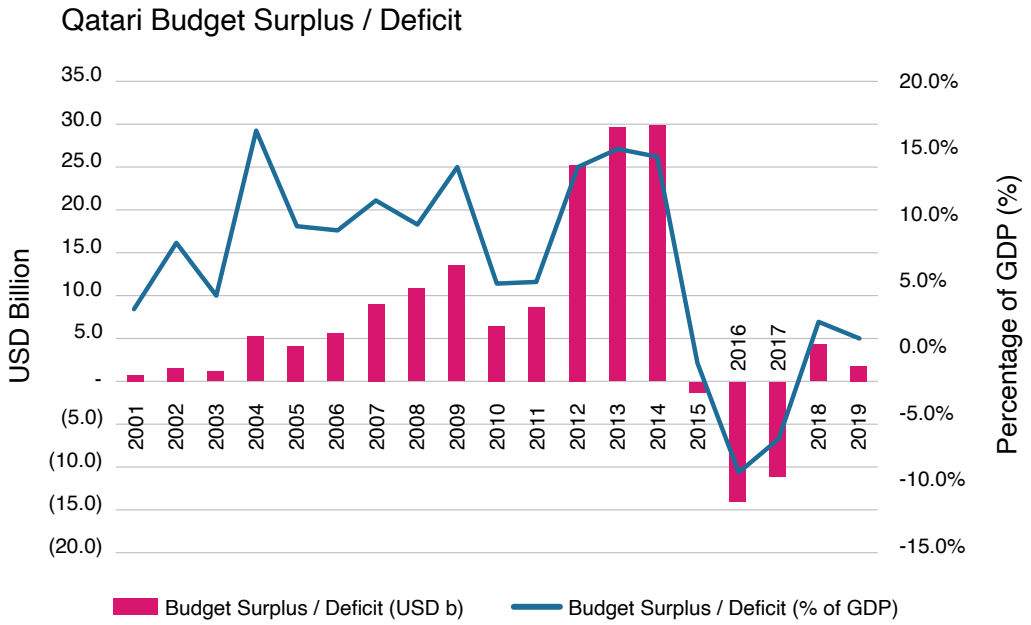


Figure 7-4: Qatar's Budget Surplus and Deficit From 2001 to 2019
Source: IMF (2022)

However, from 2016 to 2017, a sharp decline occurred in surpluses which lead to a deficits due to macroeconomic influences. Similar to many GCC commodity-based economies, Qatar has faced macroeconomic challenges and risks due to its small economy and population, such as volatile inflation and unstable oil and gas prices (World Bank, 2020). Market challenges, including the global financial crisis, affected how QIA was funded, further hindering growth. Respondent 15 revealed that fluctuations

in oil and gas had an impact on the QIA's funding, which impeded the fund's growth:

> *I would say the major problem is being able to forecast the amounts to be directed to QIA. Indeed, Qatar's budget surplus (or deficit) is tied to the price of oil and gas, which fluctuates widely depending on factors outside the control of QIA and the government.*

Moreover, Respondents 12 and 14 indicated that although the price volatility in the commodity industry adversely affected Qatar's growth and, consequently, the injection of capital into QIA, this volatility also might have contributed to the growth of its international portfolio. In fact, the QIA took advantage of a rare opportunity to build its international portfolio at an attractive entry price during the 2008 global financial crisis. Such insights were identified by Respondent 13, who revealed that the challenges in the global macroeconomy offered opportunities for use of the QIA's funds.

> *Shortly after establishing QIA, the financial crisis of 2008 hit the world. Ironically, this provided the once-in-a-lifetime opportunity for cash-rich Qatar to opportunistically buy strategic stakes in some large financial institutions and other companies at a meaningful discount.*

An analysis of the literature also indicates that a need existed to diversify the Qatari economy overseas to reduce the country's dependence on the oil industry. Lynch (2002) reported that most commodity-based economies experienced different levels of oil price volatility in the late 1990s and early 2000s. As a result, these countries faced economic downturns as a result of low market prices. The decision to diversify the Qatari economy through investments aligns with Sharma's (2017) observation that stabilisation funds shield the economy and budget against price and commodity fluctuations and volatility. Moreover, Landon and Smith (2015) reported that stabilisation funds work to address the volatility in revenues due to difficulties in predicting the prices of resources, such as petroleum. These insights underscore the role of SWFs in diversifying investment portfolios as well as the need for Qatar to establish SWFs to enhance economic and budget stabilisation.

While coordination between QIA's activities and the domestic fiscal and monetary authorities has been maintained among senior board members, top executives, and related government agencies, it was not explicitly regulated by the founding Emiri Decision of QIA (Emiri Decision No. [22] of 2005 establishing the QIA. Instead, the local economic and development objectives were part of the QNV 2030, which was launched in 2008, three years after the establishment of QIA. The QNV 2030 aims to transform Qatar into an advanced society; thus, it constitutes a roadmap for guiding economic, social, human, and environmental development (GSDP, 2008). Developing a comparative and diversified economy is one of the four main pillars of the vision (GSDP, 2008). Consequently, the QNV 2030 addresses challenges related to economic development that have been the responsibility of the domestic economic, fiscal, and monetary authorities but were not considered during the design of QIA (GSDP, 2008). Therefore, the details regarding fiscal or monetary indicators did not directly affect QIA's design at that time. However, the original structural design of the fund has been acknowledged to have been established to address the main objective, namely, to manage and invest the state's reserves, particularly internationally. In the recent reorganisation of QIA, the new governing legislation of 2023 explicitly regulates the importance of coordination with the competent national authorities regarding QIA's fiscal and economic activities.

Nevertheless, one positive impact is that, according to the IMF, QIA and the Qatar Central Bank can inject liquidity into the financial system if required, which helps stabilise Qatar's economy during crises. Therefore, QIA's portfolio acts as a buffer fund for the local economy in times of emergency.

7.3 Rationale and Objectives of Qatar's Sovereign Wealth Fund

As discussed in the previous section, during the establishment of QIA, Qatar experienced significant growth in its revenue surplus as a result of high oil and natural gas outputs and prices (IMF, 2008s).

Between 2000 and 2005, the country also recorded growth in other aspects of its economy, such as employment, governmental public services, and accumulated fiscal reserves, which increased to 40% per year in 2005–06 (IMF, 2008). However, similar to many commodity-based economies, Qatar has faced various macroeconomic challenges, with the main one being the need to increase the contribution of the non-oil and gas sector to the GDP, reduce budget volatility, ensure low cash reserves, and avoid double-digit inflation (IMF, 2008).

In 2005, QIA was formally established by an Emiri Decision as an independent investment fund whose objective was to develop, invest, and manage the state's reserve funds and other assets assigned by the SCEAI (QIA, 2005). In the new governing legislation of QIA of 2023, the fund's mandate was expanded to include managing its revenues for several economic and financial purposes. Accordingly, QIA became an independent government body with an independent legal personality and budget under the supervision of the SCEAI, which remains the highest policymaker for investment and economic affairs, chaired by His Highness the Emir of the State of Qatar (SCEAL, 2023). Figure 7-5 illustrates QIA's objectives based on the most relevant economic conditions.

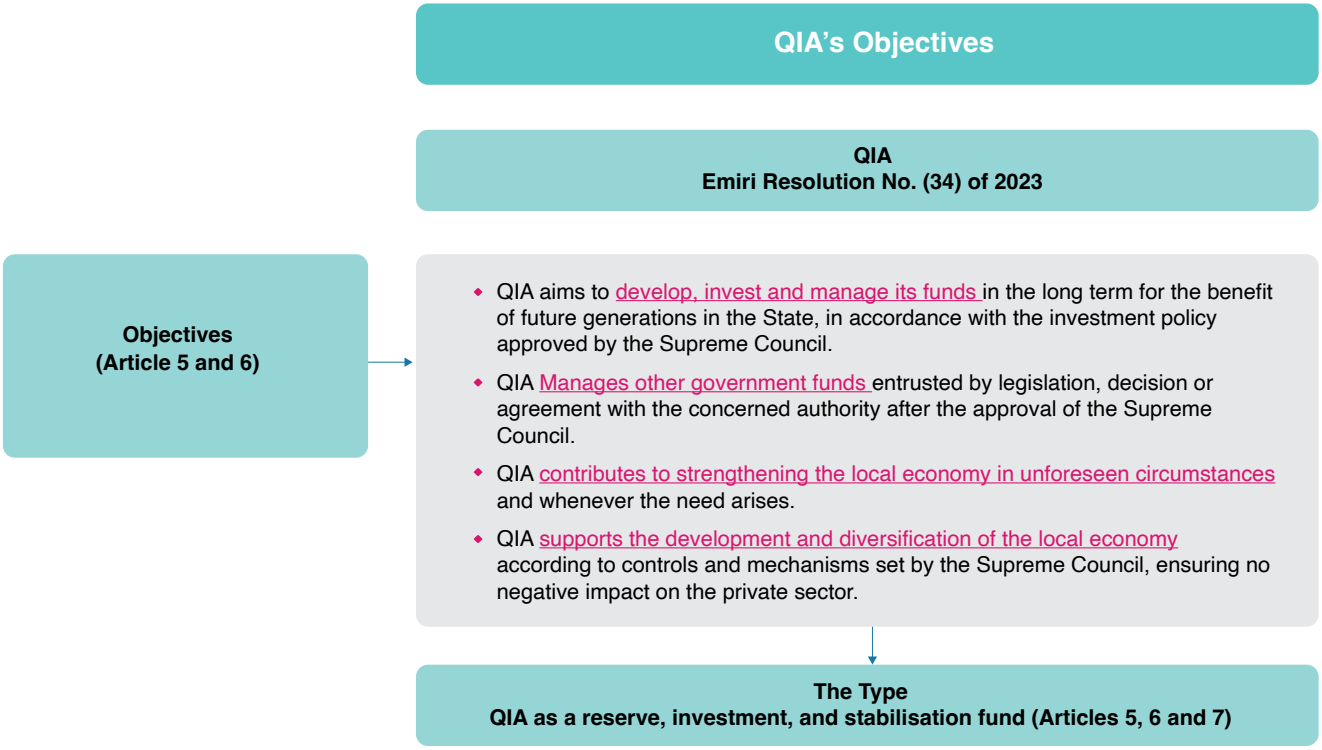


Figure 7-5: The Qatar Investment Authority's Objectives
Source: DPhil Candidate (2023)

This figure indicates that QIA aligns with Qatar's macroeconomic indicators, such as its accumulated fiscal reserves. Respondent 18 stated that:

> *It was important from legal and operational views to separate the commercial activities in an independent body to run the investment on purely commercial bases, keeping all the policy and the national strategy in different sectors within the Supreme Council.*

Moreover, some but not all macroeconomic indicators were considered when designing QIA fund. The focus of the fund is on building a diversified investment portfolio to complement its wealth in natural resources (IFSWF, 2020). This could be achieved, for example, by generating extra-national income and obtaining hard foreign currency to increase trust in Qatar's economy and the country's global credit

rating (Aguilar, 2022). Aguilar (2022) reports that SWFs serve three critical roles, namely, macroeconomic stabilisation, economic development, and intergenerational savings. In establishing a SWF, Qatar sought to enhance its economic growth. Respondent 15 stated the following:

> *QIA was established as an entity through which the State of Qatar may build a diversified investment portfolio to complement its wealth in natural resources. QIA's investment strategy is based on its responsibility to generate stable and sustainable returns for the State of Qatar within an investment mandate based on purely economic and financial grounds and a long-term investment time horizon.*

Since its establishment, QIA has focused mainly on investing internationally to build long-term wealth and create a stable return from international assets in different hard currencies. As stated by former Finance Minister Yousef Kamal, "Qatar Investment Authority, is an open, long-term investor" (O'Neill, 2007). Thus, the management has rarely considered the local macro-indications in building the fund's strategies or operations. The Emiri Decision also revealed that other funding assigned to QIA by the SCEAI was separated from QIA according to the policies, plans, and programmes approved by the Supreme Council (Emiri Decision No. [22], 2005). Thus, QIA became a professional investment house aimed primarily at developing, investing, and managing the state's reserve internationally and inheriting the local government's legacy portfolio (Braunstein, 2022). Subsequently, QIA's activities were designed to diversify the government's income and reduce the country's heavy reliance on the revenue gained from the sale of oil and natural gas commodities. Therefore, QIA does not have immediate domestic macroeconomic implications. These insights are in line with Respondent 12, who argued that the main objective of QIA is to ensure the development of an internationally diversified investment portfolio:

> *The overarching objective was to build a diversified direct investment portfolio that is uncorrelated to the natural resources revenues of the country. There was a focus on key sectors for which dedicated teams were established, such as real estate, financial institutions, industrials, healthcare, tech, consumer, infrastructure, and commodities.*

These insights on diversified investment portfolios echo those of Van den Bremer, Van der Ploeg, and Wills (2016); Karametaxas (2019); and Affuso, Istiak, and Sharland (2022), who have argued that savings funds are vital for supporting a government's macroeconomic objectives through portfolio diversification as well as for easing the pressure on future budgets due to ageing of the population.

It is noteworthy that some of QIA's local portfolio companies make major contributions to Qatar's GDP. For instance, Pratap (2021) reports that Qatar Airways contributed 4.9% of the country's GDP in 2021 by shouldering 10% of the world's cargo-carrying capacity. Respondent 17 highlighted the following:

It is clear that the establishment of Qatar's SWF was motivated by the need to diversify the country's economy away from reliance on oil and gas revenues. Thanks to the wealth gained from its oil and natural gas exports of up to 1.297 million barrels daily, Qatar was able to establish one of the largest SWFs to diversify its economy (World Population Review, 2023). A more recent article by GlobalSWF (2023) revealed that QIA's growth is being further funded by surplus profits from the export of oil and LNG, with an estimated QAR 118 billion (USD 32Billions) expected to be channelled to the fund.

During the 2008 financial crisis, QIA became a crucial source of economic support for Qatar. Firstly, it intervened in the local economy by addressing the needs that emerged due to the crisis, especially the need for liquidity to be injected into the local banking system (Raymond, 2010). Raymond (2010) revealed that both Qatar and China used their SWFs to rescue their banking sectors during the crisis. This intervention involved purchasing stocks from Qatari banks through repeated acquisitions. Secondly, QIA started a highly active direct investment programme in international blue-chip companies, diversifying its portfolio among various sectors, geographies, and asset classes while building its internal institutional capability (Doherty, 2013). Furthermore, QIA may also manage other government funds after the approval of the SCEAI, according to the investment policy stipulated in the related

legislative instruments or the decisions or agreements concluded between QIA and the concerned national bodies.

In line with the above observations, according to the current QIA governing decision of 2023, QIA's goal and principal mandate were expanded from merely developing, investing, and managing state reserve funds to a more expansive approach. Thus, QIA's main goals and mandate became the following: to manage the agency's funds, including state reserve funds and assets as well as other funds assigned to it by the State, and all returns on investments of those funds and assets, in the long term for the benefit of future generations; to contribute to strengthening the local economy in unexpected circumstances and whenever the need arises; and to support the development and diversification of the local economy.

However, the domestic economic impact can still be derived from the local economy (IFSWF, 2020). Therefore, a strong credit rating may be desired to diversify funding sources, increase the size of asset portfolios, and gain access to cheaper credit (IFSWF, 2020). This will allow for liquidity in an emergency, when the state's income may fluctuate due to changing oil prices (IFSWF, 2020). With this in mind, Respondent 18 stated that:

> *QIA's investments work as an emergency pool, further strengthening the state's credit rating and ensuring the main fund by acting as a buffer while increasing debtholder confidence in shielding against foreign currency fluctuations.*

Both economic advantages and challenges played a major role in justifying Qatar's decision to establish a SWF. In particular, the state's overreliance on the oil industry justified the need for such a fund to shield the economy from price volatility during oil crises. Such arguments were reiterated by Respondent 17, who stated the following:

> *As part of Qatar National Vision 2030, the country planned to move to a knowledge-based and diversified economy in order to increase the percentage of non-oil and gas sectors in Qatar's GDP.*

7.4 The Type and Mandate of Sovereign Wealth Funds in Qatar

The mandate of QIA as a savings fund was established by Emiri Decision No. (22) in 2005, which was reconfirmed in the 2023 legislation. This is also consistent with the country's economic objectives, which influenced the fund's establishment. As discussed in Section 7.2, it was a prudent decision to establish QIA mainly with the large surplus of the state's reserves, which needed to be developed and invested. Respondent 14 identified similar insights regarding the SWF's mandate and allocation of capital:

> *Mandates cover investment target return and value preservation. The mandates were aligned with the overall objectives. However, further alignment could be achieved with the government fiscal and monetary policy.*

According to Emiri Decision No. (22), 2005, QIA has all of the powers and competencies required to achieve its objectives, including developing, investing, and managing the state's reserves. The QIA was granted a set of powers – such as the ability to propose investment policies, follow up on the execution of investment programmes, and designate banks and financial institutions – as illustrated in Figure 7-5. Its powers also include buying and selling real estate inside and outside of Qatar while determining the investment instruments to be used. A few changes in QIA powers are stated in Article 7 of the new governing decision of 2023; most crucially, QIA now has the ability to participate in all types of financial and banking actions, including investing in debt instruments and loans, granting and issuing guarantees and pledges in general or with respect to any assets, borrowing in any way with or without a guarantee, obtaining credit facilities, and lending to related entities. Furthermore, QIA has focused on building its portfolio in various asset classes to seek financial returns (IFSWF, 2020).

As stated previously, in line with the 2023 governing decision for QIA, the main objectives that guide its

investment strategy are as follows: focus on the long term for the benefit of future generations in the state, contribute to strengthening the local economy in unexpected circumstances and whenever the need arises, and support the development and diversification of the local economy. Additionally, QIA may manage other government funds based on legal instruments or agreements with the concerned national authorities.

The new governing decision affirms that QIA is committed to closely coordinating with the competent monetary, financial, and economic authorities in Qatar regarding agency activities that may have important and direct repercussions on the local macroeconomy; thus, it can ensure that those activities are compatible with the local macroeconomic policies.

Respondent 15 argued that the objectives of the Qatar SWF are based on the need to ensure sustainable returns for the state:

> *[The] QIA was established as an entity through which the State of Qatar will build a diversified investment base to complement its wealth in natural resources. QIA's investment strategy is based on its responsibility to generate strong and sustainable returns for the State of Qatar within an investment mandate based on purely economic and financial grounds and a long-term investment time horizon.*

Respondent 12 added that it is important to develop investment portfolios that are unrelated to natural resources and the oil industry or in a different geographical location. As such, the country's transition from a commodity-based economy to a knowledge-based alternative influenced the creation of the Qatari SWF. Respondents 12 and 17 emphasised the impact of the prevailing market conditions on the decision to establish the fund. In particular, volatile market conditions created the need to diversify the economy away from the hydrocarbon industry, which faced a multitude of risks, including price volatility and political factors that influence oil revenues. Chhaochharia and Laeven (2008) reported that SWFs are crucial investment vehicles that facilitate diversification away from the home country by predominantly investing in countries that share similar cultures to maximise available profits. Moreover, Steigum (2012) argues that stabilisation funds have been adopted in GCC countries that rely on natural resources to support their economies. In this vein, establishing the Qatar SWF ensured stability for Qatar's economy and reduced its reliance on hydrocarbons.

Despite QIA's focus on investing internationally, the fund also inherited management of the local investment portfolio from the government upon its inception (QIA, 2016). This portfolio plays a significant role in domestic activities and contributes heavily to the GDP. For example, QIA is a major shareholder in the QNB, the Qatar Electricity and Water Company, and Ooredoo, a Qatari telecommunications company. Additionally, QIA has intervened in three emergencies since its establishment, namely, the 2008 financial crisis, the 2014 drop in oil and gas prices, and the 2017 Gulf Crisis (Al-Hassan et al., 2013).

In addition to the listed portfolio, QIA owns Hassad Foods, which stabilises and secures Qatar's food supply by promoting sustainable production to allow the country to focus on agriculture (Vaimal, 2020). Moreover, QIA owns Qatari Diar, a large local and international real estate developer, which enables the country to leverage low interest rates (SWFI, 2021). These companies and others have played vital roles in developing Qatar's local economy. However, QIA's mandate to invest internationally to generate additional income was unaltered by any domestic monetary indicators, such as inflation or bond yields (Vaimal, 2020). Figure 7-6 illustrates the progression of QIA's mandate from the 1970s through the 2020s.

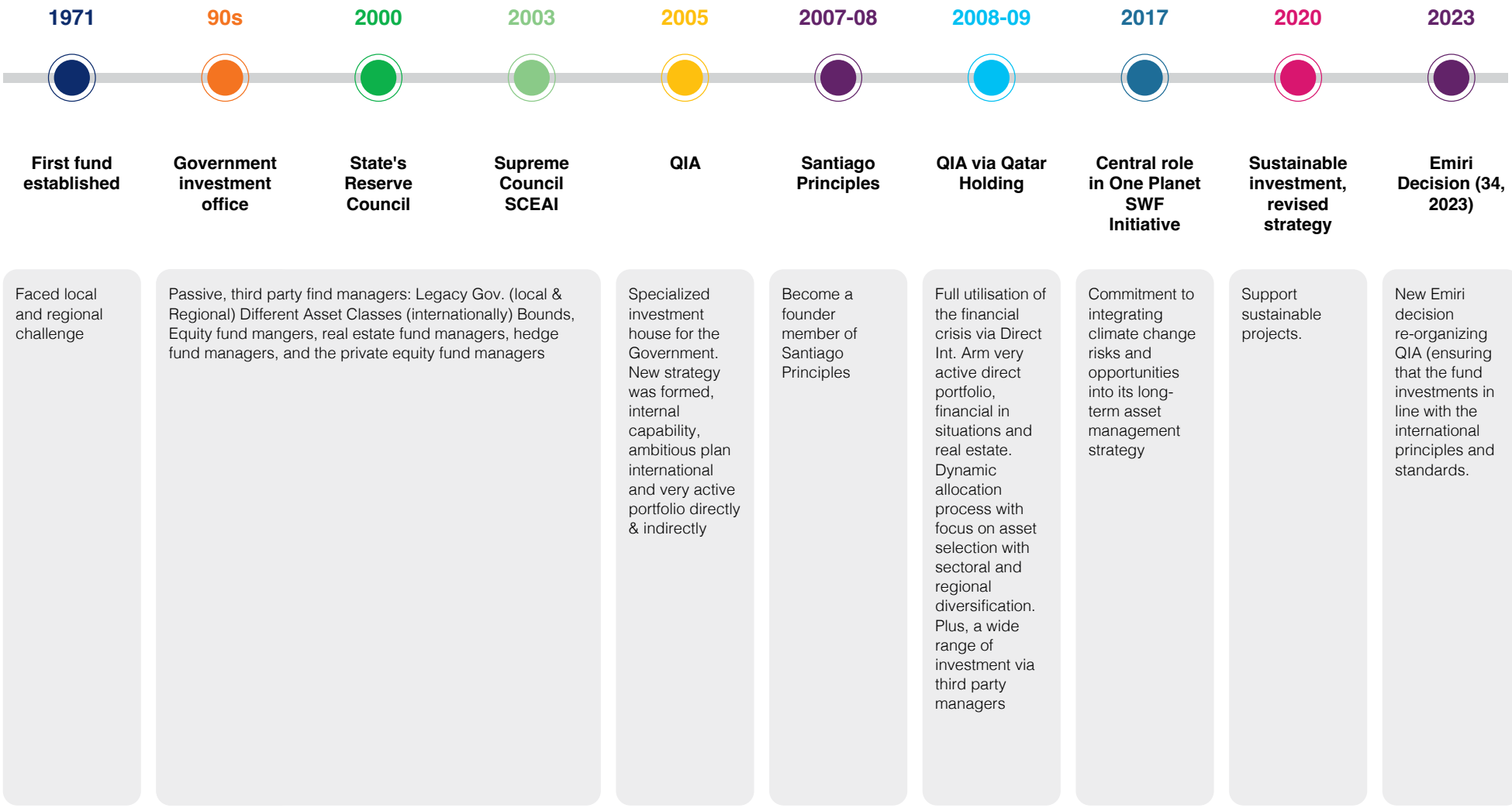


Figure 7-6: Evolution of the Qatar Investment Authority's Mandate
Source: DPhil Candidate (2023)

7.5 Structural Design of Qatar's Sovereign Wealth Fund

This section examines the approach to establishing the structural design of QIA SWF by discussing capital allocation, portfolio management, and the fund's operational model.

7.5.1 Capital Allocation and Governance

Regarding capital allocation, the government periodically transfers some of its fiscal surpluses to QIA and other hedging reserves (IFSWF, 2020). Qatar's government, in collaboration with the MoF is responsible for allocating the state's surplus budget to the reserve managed by the QIA. Consequently, QIA receives its deposits from excess revenues rather than as a constant share or a percentage of revenues (IFSWF, 2020). Accordingly, there are no clear transfer rules as in other GCC countries, such as Kuwait. In this regard, under the latest legal amendment (Articles 29 and 30 of the current governing decision), the Supreme Council determines the legal, financial, and administrative procedures and measures for transferring fixed and movable cash and in-kind assets as well as various documents, statements, and account balances related to the investment of state reserve funds and assets from the Council to QIA. QIA receives the allocated funds according to the ratios, controls, and mechanisms determined by the Council based on the financing programme proposed by QIA in coordination with the Minister of Finance. QIA also reinvests the returns from the investments of the agency's funds.

Despite the similarity of their sovereign sources, SWFs are heterogeneous. According to Al-Hassan et al. (2013), SWFs are distinguished based on their state's objectives and the consequent asset allocation. QIA was mandated to generate returns and intervene in emergencies to stabilise the local economy. Articles 5 and 6 of Emiri Decision No. (22) in 2005 clearly state that the objective and mandate of QIA are to develop, invest, and manage the state's reserves internationally (Emiri Decision No 22, 2005). Thus, QIA's given type mirrors its economic priorities.

Concerning withdrawals, since the beginning of its operations, QIA has accumulated assets and fiscal returns (IFSWF, 2020), of which the government of Qatar has not withdrawn any (IFSWF, 2020). QIA's board must approve a withdrawal request from QIA directors and the Supreme Council (IFSWF, 2020). The implication of this is that QIA's mandate and type must function to develop, invest, and manage the state's reserve to reduce macro-fiscal risks, especially the negative carrying costs of holding cash and the volatility of oil and gas prices (IFSWF, 2020). Article 31 of the current governing decision makes withdrawals from the agency's funds more difficult, as they have been limited to emergency expenses of the government of the State of Qatar, in accordance with the controls and mechanisms determined by the Supreme Council, and they must be made by decision of the Emir.

As for the agency's governance, QIA played a role in drafting the Santiago Principles, which guide the governance of SWFs. The Santiago Principles (see Sub-Section 2.2.3.1) are a set of 24 practices endorsed voluntarily by members of the SWFI (IFSWF, 2022). The principles (1) facilitate the maintenance of a stable global financial system and the free flow of capital and investments, (2) ensure compliance with all regulatory and disclosure requirements applicable to the countries in which SWFs invest, (3) ensure that the developed SWFs consider financial and economic risk as well as returns, and (4) ensure that the SWFs have implemented transparent and sound governance structures that have adequate accountability, risk management, and operational controls.

The new Emiri Decision of 2023 introduces various improvements for reorganising the authority in QIA, mainly regarding its governance. In this regard, Respondent 20 stated the following:

> *These new amendments have actually been in practice since 2008 when QIA was a founding member of the General Accepted Principles and Practices for SWFs (GAPP). Also, the new legislation clarified the relationship and the integration of the fund into government policies.*

There is also close coordination with local authorities in areas in which impacts on the local economy or fiscal and monetary aspects are anticipated. Respondent 16 explained this as follows:

> *The improvements emphasise (1) ensuring QIA investments are based on pure economic and financial bases and away from the political considerations; (2) QIA investments to be guided by principles and practices that are internationally accepted and applicable to SWFs, including board independence, governance, transparency, compliance, and disclosure; (3) improvements regarding the conflicts of interest of the chairman and board members as well as CEO and QIA employees; (4) allowing the SCEAI authority to approve [human resources] regulations, bids regulations, and other internal regulations; (5) criteria and rules for financing QIA; [and] (6) criteria and rules for withdrawal of money from QIA under decisions of His Highness the Amir.*

According to the new Emiri Decision of 2023, QIA is clearly identified as a "saving fund mainly for the benefits of the future generations and supports economic diversification and stabilisation of the national economy in times of emergencies". Such a mandate aligns with Aguilar's (2022) assertion that SWFs increase macroeconomic stabilisation, economic development, and intergenerational savings. Based on an analysis of the aforementioned findings, macroeconomic indicators have played a significant role in indirectly defining the fund's type.

Figure 7-7 illustrates the QIA capital allocation and governance.

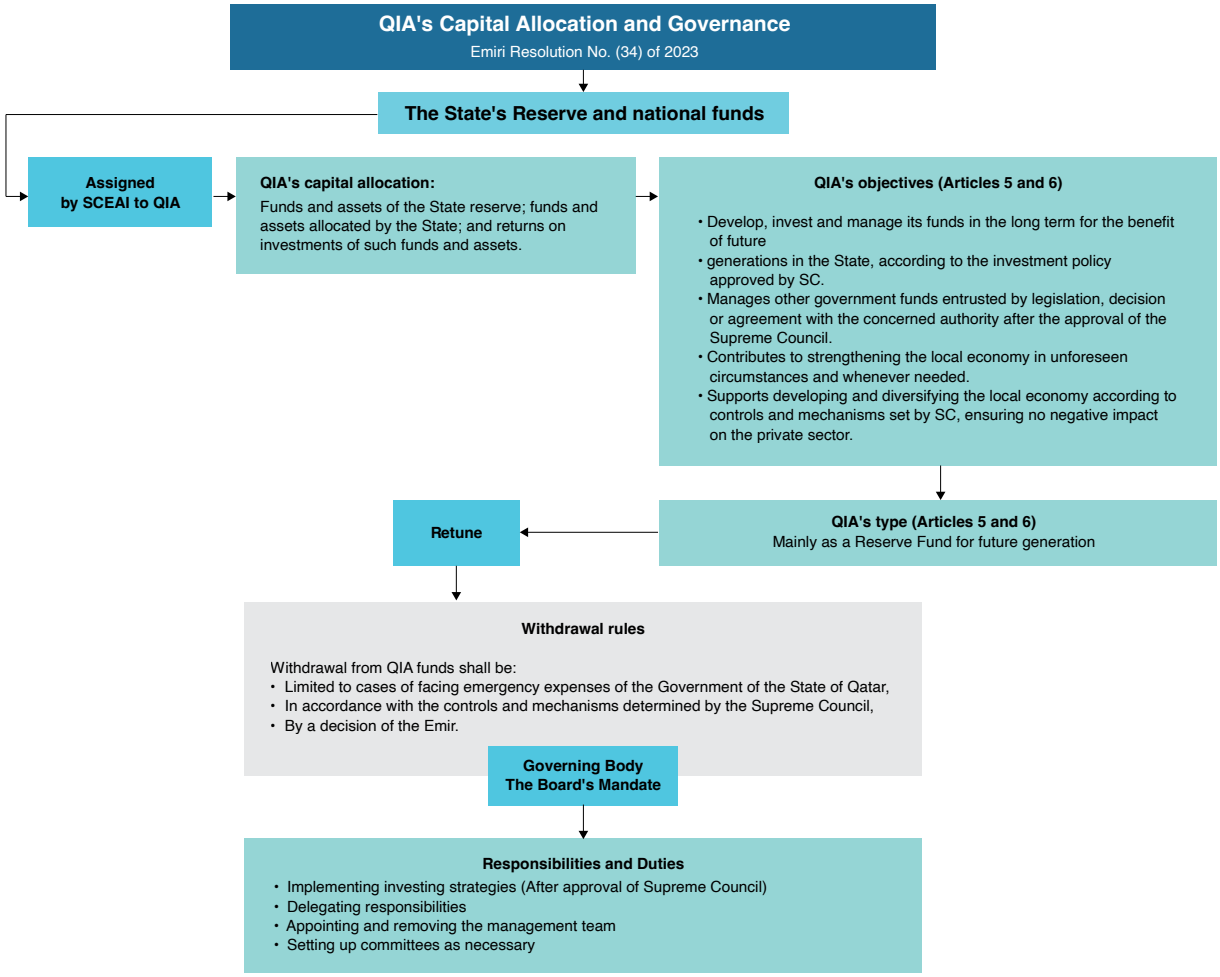


Figure 7-7: Qatar Investment Authority's Capital Allocation and Governance
Source: DPhil Candidate (2023)

This figure illustrates that QIA's objectives in managing its funds have been achieved through the government's transfer of the surplus. Withdrawal rules enforced by the governing body have also been identified. Next, Figure 7-8 details the design of the SWF.

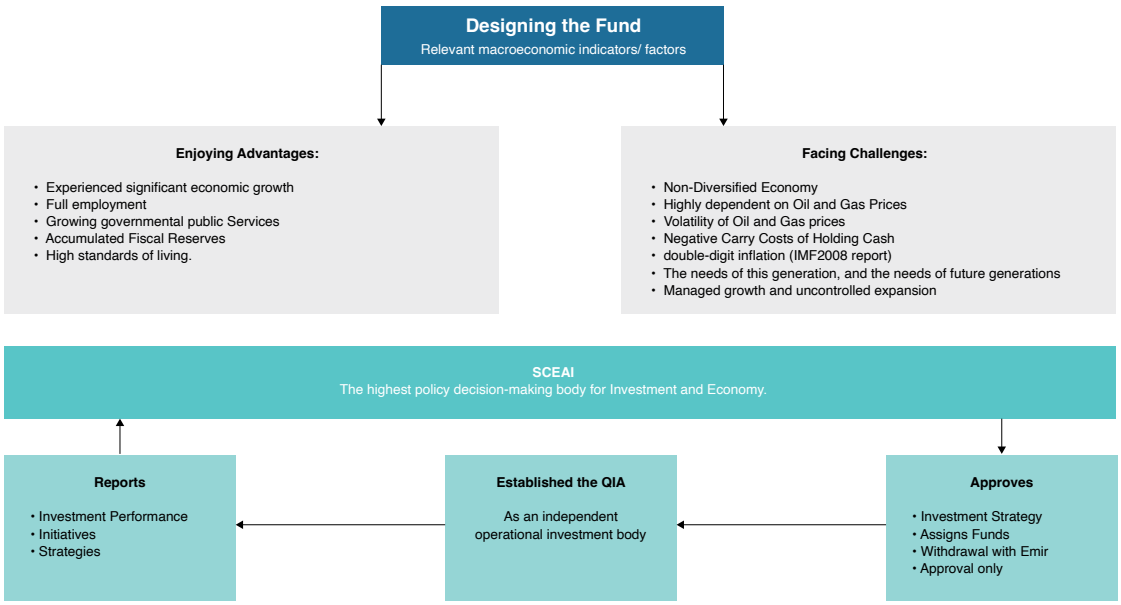


Figure 7-8: The Design of Qatar's Sovereign Wealth Fund (Economic Condition and Challenges)
Source: DPhil Candidate (2023)

This figure illustrates that the fund's design considered Qatar's economic conditions and the challenges posed by its macroeconomy. The advantages outline the main goals of Qatar's SWF, while the challenges represent the problems experienced in the country's economy. The SCEAI ensured a balance between leveraging economic conditions and addressing existing macroeconomic challenges. QIA management has always coordinated with the MOFA, Central Bank, and other fiscal authorities, as supported by Respondent 15 as well as officially enacted in the new law of 2023:

> *In general, the economic indicators have been always taken into consideration by the fund, and QIA management has always coordinated with the Finance Ministry, Qatar Central Bank, and other fiscal authorities in QIA.*

The economic indicators emphasised the need to diversify the economy away from oil and further support economic growth through diverse investments. The responses echo the findings presented by Van den Bremer, Van der Ploeg, and Wills (2016), who argued that SWFs were originally used as savings funds that enabled countries to diversify their income sources. As such, the insights stress the importance of considering macroeconomic indicators when designing Qatar's SWF.

Figure 7-8 also highlights the role of the SCEAI in establishing QIA and developing principles for governing the SWF. The SCEAI[1] is chaired by HH the Emir and, according to the founding decision of 2001, it is the highest policy decision-making body concerning all matters relating to the economy, energy, and investment as well as to the development of economics, finance, commercial, and energy public policies (Emiri Decision [37] of 2001). Emiri Decision No. (33) of 2023 reorganises the SCEAI, maintains the aforementioned mandate, and adds the Council's authority to issue directives related to policies for investing the state's reserve as well as general policies of the state in the economic, financial, investment, and commercial fields; in energy affairs, resource exploitation, and natural wealth; and for following up on the implementation of those directives.

[1]The Supreme Council for Economic Affairs and Investment (SCEAI) was established by Emiri Decision No 37 in 2001 to replace the Supreme Council for the Investment of the State Reserve. It has been amended by Decision No 17, in 2003, so that it is the highest governmental body specialised in all matters relating to the economy, investment, and energy. For information, see Articles 3 and 4 of Emiri Decision No 37 in 2001.

As a governmental agency, the Board is the key decision-maker in the design of QIA, as reflected in Article 3 of Emiri Decision No. (22) in 2005; this wording is the same in Article 3 of the current governing decision of 2023, which attaches QIA to the SCEAI. In this manner, the Council can assign funds and properties to QIA and approve policies, plans, and programmes for investing in the state reserve, along with QIA's budget regulations (IFSWF, 2020). Allowing QIA to be managed by a separate government body is critical for ensuring its effectiveness in achieving the established objectives. Such findings were supported by Respondent 12 as follows:

> *The objectives were framed and designed by the Board of Directors in accordance with the principles laid out by the Supreme Investment Council. Those principles are then implemented by the Chief Executive Officer with the support of the different departments.*

This respondent further added the following:

> *The [QIA's] strategy is determined at the level of the fund's leadership and the country's highest authorities.*

These insights on the SCEAI leadership are aligned with those of previous literature. The IFSWF (2020) reported that QIA's Board of Directors and the Supreme Council influence the governance of funds in Qatar. Therefore, leadership by the Supreme Council ensures that QIA's mandate is achieved through strategy. The governing body's role in the management of the fund and capital allocation was also identified by Respondent 16, as follows:

> *The capital of the fund was allocated for some time with a mix of bottom-to-top and top-to-bottom approaches. Once the fund reached a certain degree of maturity, a decision was made to institutionalise the capital allocation exercise by creating an investment strategy department whose main function is to coordinate the set-up of the asset allocation and make sure the risks and liquidity are in line with the overall objectives of the funds.*

An analysis reveals that establishing an investment strategy department was crucial for ensuring that risks were aligned with the fund's objectives. Therefore, QIA not only works mainly as a government savings fund but also functions indirectly as a long-term stabiliser and a future-generation fund.

7.5.2 Qatar's Sovereign Wealth Fund Portfolio Management and Operational Model

QIA has adopted a governance framework for establishing an effective division of its role and responsibilities to facilitate the achievement of its strategic investment mandate. Article 7 of the Emiri Founding Decision No. (22) in 2005 and Article 12 of the current Governing Decision No. (34) of 2023 state that "a board of directors shall manage QIA". This was reiterated by Respondent 14, who stated that the SCEAI designed the SWF's structure. The Board of Directors is responsible for implementing investment strategies, delegating responsibilities, and appointing QIA's management team. Based on the founding decision, the Board has the power to approve investment programmes and projects, investment standards and criteria, the incorporation of companies, the establishment of investment enterprises, the holding of shares in existing companies or enterprises, governance policies, a risk-management framework, policies for subsidiaries and third parties, and its annual budget and closing account (Emiri Decision No 22, 2005). In addition, QIA, upon approval of the SCEAI, has the power to adopt and issue its own organisational structure, the human resources regulations for QIA employees, tenders and bids, and other internal regulations (QIA, 2022c). This was the case under the founding Emiri Decision, but under the new Emiri Decision, the powers of QIA's Board of Directors have been expanded; thus, the authority of the Board has become final in issuing the regulations for the agency's organisational structure and human resources, the regulations for tenders and auctions, and approval of the agency's annual budget, all of which were dependent on the Supreme Council's adoption being final. Furthermore, the Board provides strategic guidance for QIA by evaluating and considering the performance of investments and monitoring the activities of its executive management team. Figure 7-9 outlines the governing body of QIA and its mandate.

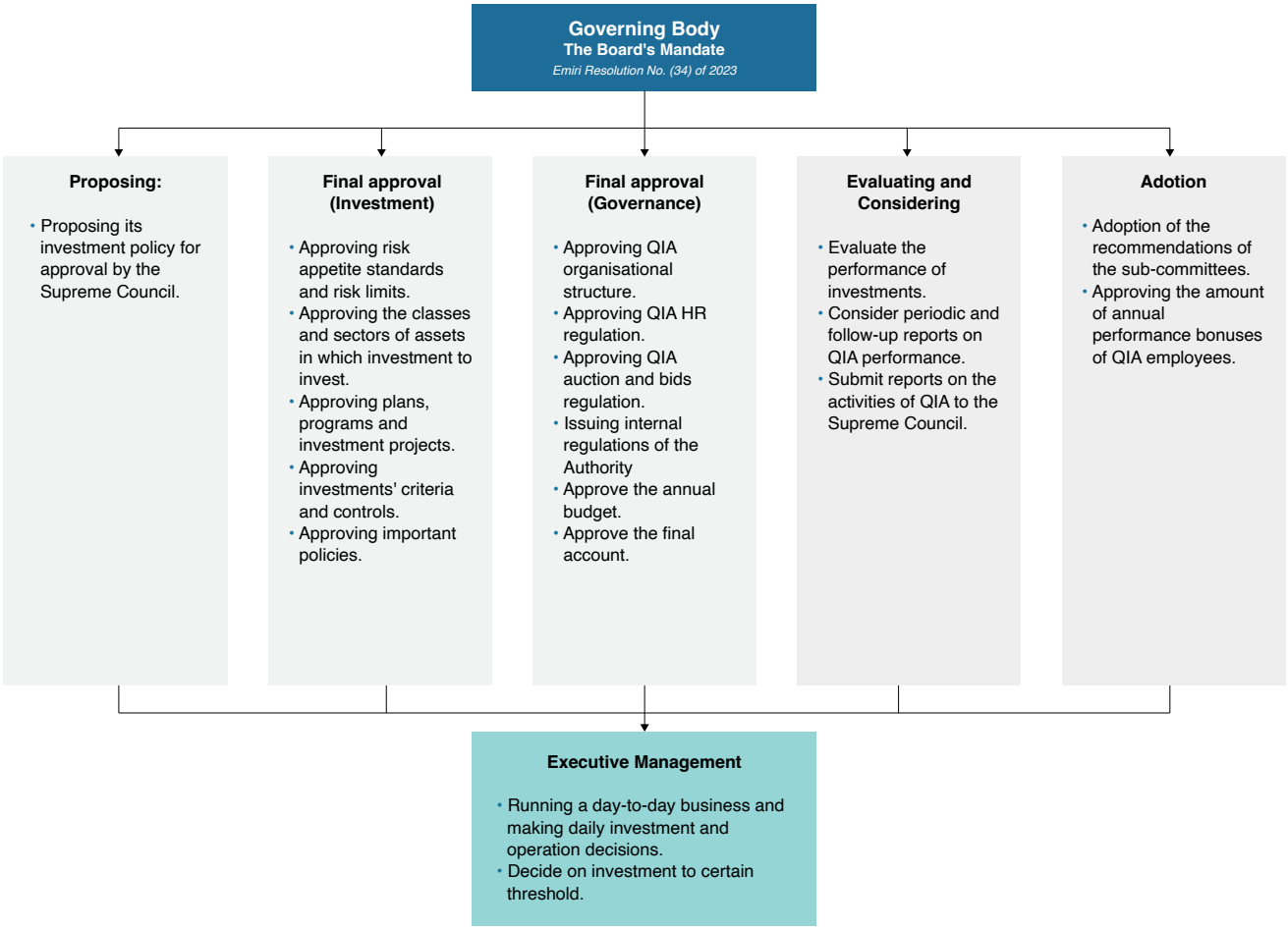


Figure 7-9: Governing Body and the Board of Directors' Mandate
Source: DPhil Candidate (2023)

The evaluation of Figure 7-9 indicates that the governing body and board of directors are influential in the achievement of the QIA objectives.The role of management involves running a day-to-day business and making daily investment and operation decisions. Respondent 15 stated the following:

> *The performance of QIA management is measured by the Supreme Council on behalf of the government, which is headed by the Head of State of Qatar, HH the Emir of the State of Qatar. The performance of said management is measured through examining detailed QIA performance reports on an annual basis, consolidated yearly reports, consolidated audited financial statements, and the annual budget (amended by the current governing decision of 2023), which are all subject to Supreme Council approval.*

An analysis reveals that examinations of various performance reports and audits of financial statements have facilitated QIA's management.

QIA is designated to generate high returns from a diversified investment portfolio with different hard currencies, thus supporting the Qatari economy's robust credit rating. The mandate was successfully executed when QIA worked as a stabilising fund to shield the Qatari economy from shocks in financial crises in 2008–09, fluctuations in oil and gas prices in 2014, and political turmoil in 2017. As of 2022, QIA manages assets worth USD 450 billion and 68 subsidiaries (SWFI, 2022). QIA also manages a diversified portfolio that comprises real estate, private equity, hedge funds, infrastructure, and cash (SWFI, 2022).

According to Article 6 of founding Emiri Decision No. (22) of 2005 and Article 7 of the current Emiri Decision No. (34) of 2023, the Board is responsible for representing and delegating the state in "all local,

regional, and international agencies, organisations, conferences, meetings, and symposia concerning the investment of the state reserve". Furthermore, the Board works with the Board Investment Committee and the Board Audit Committee to pursue QIA's objectives laid out in the governing decision. Organising committees within the Board of Management are crucial because the mandates given to the Board are consistent with that given to QIA.

Respondent 12 added that, to implement QIA's investment strategy, the Board is guided by the following five core principles: long-term investments, active investment decisions based on market views, flexibility, building of strategic external partnerships to complement QIA's in-house capabilities, and building of a position for portfolio companies as financial investors, not activist investors. The implication here is that the Board of Directors is responsible for deciding QIA's target portfolio and asset allocation. Accordingly, it allocates the funds from QIA in different asset classes – namely, equities, credit or fixed income, private equity, real estate, multi-strategy, absolute return, and macro strategies – with limited correlation to other asset classes in the portfolio.

The portfolio allocation is similar to that of a long-term-only asset manager, in which capital flows into the five asset classes to capture the financial upsides that the assets may experience due to favourable market conditions. Capital is also diversified into these asset classes and the sectors within them to reduce the volatility of the fund's income over time through diversification strategies (Credit Suisse, 2020).

Moreover, the Board evaluates performance and measures the returns generated by each investment activity. The target portfolio and target asset allocation are reviewed annually to analyse QIA's performance against specific benchmarks on a three-year average. During this review, capital within the portfolio may flow into other assets or sectors to achieve financial growth. Additionally, the Board allocates capital based on certain investment criteria, such as financial target returns, long-term targets, portfolio size, risk appetite, and other wider international economic indicators, as stated by Respondent 13. In addition to traditionally liquid equity and debt investments, QIA has also differentiated into higher-yielding illiquid longer-term assets ¬– such as private equity, property, and infrastructure – to further diversify its portfolio, as reported by Respondent 12.

Furthermore, QIA's operations and activities are guided by specific standards established by the Board. These professional standards include the integrity, mission focus, entrepreneurialism, and excellence required to guide management teams in each undertaking (QIA, 2022). Table 7-1 presents examples of QIA's criteria and standards.

Table 7-1: Examples of the Qatar Investment Authority's Criteria and Standards

QIA Criteria and Standards			
Criteria		Standards	
Financial Target Returns	To ensure reasonable returns from investing in the state reserve	Integrity	To apply the highest ethical, moral, and professional standards
Long-Term Target	To ensure reasonable and sustained income	Mission focus	To execute day-to-day responsibilities
Risk Appetite	To diversify risks to an acceptable level over the medium to long term	Entrepreneurialism	To encourage initiative and a flexible approach
Portfolio Size	To build a portfolio of assets as part of long-term savings	Excellence	To create a respectful workplace
To build blocks of expected returns		To provide guidance in each of the undertakings	

Source: DPhil Candidate (2014)

This table presents examples of QIA criteria that focus on long-term targets, portfolio size, and returns from financial targets. By contrast, its standards focus on excellence, integrity, and mission. Therefore, a similarity exists between the criteria and the standards, which helps to facilitate the achievement of QIA's criteria. However, a contradictory finding is that QIA Board and Supreme Council determine policies and rules that restrict QIA's operations and activities at the international level (IFSWF, 2020). QIA relies on legislation to address any existing problematic issues, including money laundering and fraud (IFSWF, 2020). The Board also fully adheres to company laws as well as international sanctions and embargoes imposed by global organisations (IFSWF, 2020).

The Board of Directors and the management decided on the operational model at the inception of QIA and were tasked with providing strategic guidance and monitoring activities (QIA, 2022). The model was mainly passive, but by the time of the global financial crisis of 2008–09, it had moved to a mixed model with a further focus on direct operations. The model's passivity entitles the fund manager to share some profits while restricting control during emergencies, such as during the financial crisis, when the state had little access to or control over its financial reserves. Despite the different rules, no clear criteria were established to decide the fund's operational model at its inception. At the same time, management occasionally reviews the model in terms of its alignment with the mandate, as stated by Respondent 12. By contrast, there is an absence of any consideration of theoretical models or background in selecting the operational model. While operationally independent, QIA's management cooperates with the government, as demonstrated by its direct capital injection into the fund to purchase equity in the banking sector during the 2008 financial crisis, which increased liquidity, reduced credit spreads, and stabilised the incredibly volatile and uncertain financial markets (IMF, 2018). During the massive withdrawal of money from the Qatari financial system during the 2017 blockade, QIA intervened by investing in stabilising the banking system and supporting the financial stock market (IMF, 2018).

7.6 Impact of Qatar's Sovereign Wealth Fund on Macroeconomic Stability and Development

This section presents a discussion of the impact of Qatar's SWF on the country's economic conditions and developmental context.

7.6.1 The Qatari Sovereign Wealth Fund's Objectives and Outcomes

An evaluation of relevant empirical studies reveals that since the establishment of Qatar's SWF in 2005, the fund has achieved its mandated objectives. For example, it has succeeded in developing, investing, and managing the state's reserve by building a diversified and global investment portfolio (QIA, 2016; IMF, 2018). Similarly, the IFSWF (202) reports that the fund has achieved "real long-term investment returns, positive cash flow, and has no liabilities at its portfolio level". In this respect, QIA has maintained a diversified portfolio aligned to its mandate in various asset classes and by managing the inherited internal and international portfolio to shield the economy against negative economic trends.

The portfolio is also divided among asset classes, such as listed equities or private equity, credit or fixed income, real estate, and multi-strategy assets. According to an IMF country report, Qatar has accumulated financial assets that are a source of its strength. The IMF estimates that in 2015, the net financial wealth of QIA was approximately 100% of the country's GDP (IMF, 2015). By June 2016, QIA's assets were estimated at USD 335 billion (IMF, 2017), which in 2019 constituted 166% of Qatar's GDP (IMF, 2019). This indicates that the SWF has successfully contributed to the growth of Qatar's economy, particularly in its contribution to the GDP. In general, QIA has continued to achieve its objectives by accumulating assets; as a result, it has built a diversified portfolio that has contributed to the country's GDP (IMF, 2019). Qatar's economic achievements can be partially attributed to QIA's continued independence from domestic politics, which is strongly recommended by the Santiago Principles (IMF, 2019).

7.6.2 Impact of Qatar's Sovereign Wealth Fund on Macroeconomic Conditions

During the 2008–09 financial crisis, QIA intervened to preserve financial stability and mitigate the domino effects of the crisis on the Qatari economy (IMF, 2009). For instance, the government authorised QIA to purchase up to 20% of the enhanced share capital of banks listed on the Doha Securities Market, a value of approximately USD 5.3 billion (IMF, 2009).

In its 2009 country report, the IMF states that the QIA's pre-emptive intervention in the banking sector was substantial, reaching a figure amounting to 6.5% of the country's GDP, as QIA played a significant role in providing liquidity to banks, restoring confidence, containing financial risks, and maintaining the stability of the local banking system (IMF, 2010).

However, the decline in energy prices in 2015 caused a deficit estimated at 2.2% of Qatar's GDP in 2016 from a surplus of 8.4% in 2015 (IMF, 2017). This implies that the Qatari government relied on QIA to stabilise its financial position, which created a structural problem in preserving and growing future wealth (IMF, 2017). In addition, the 2017 Gulf Crisis affected economic activities in Qatar, and financial reserves at the Qatar Central Bank declined from USD 30 billion to USD 15 billion by the end of 2017 (IMF, 2019). As a last resort, QIA played a role in offsetting the decline by injecting the required liquidity into the economy (IMF, 2018). In this regard, QIA helped mitigate the financial risks posed by the crisis (IMF, 2019).

Furthermore, QIA contributed to stabilising the Qatari riyal and maintaining Qatar's position in a high group of global credit ratings. Since 2005, credit rating agencies such as Standard & Poors, Moody's, and Fitch have ranked Qatar at the top of their long-term rating scales (Qatar-Rating, 2021). Furthermore, as a savings fund, QIA eased the pressure on Qatar's Central Bank regarding the risks of the carrying cost of cash and currency mismatches (IMF, Country Report, 2015 Article IV Consultation-Staff Report, 2015).

In the macroeconomic context, QIA has experienced numerous interventions intended to stabilise the financial sector due to various economic crises (IMF, 2009). Thus, the positive role of QIA has entitled it to establish a separate fund to enable the government to manage its resources and counter its macroeconomic problems, thereby helping to avoid a sudden withdrawal that could interrupt business plans (IMF, 2009). In addition, the decision to improve the financial sector can enhance the ability of QIA to focus on developing, investing, and managing the state's reserves internationally, as stated in its mandate.

7.6.3 Impact of Qatar's Sovereign Wealth Fund on Development

An analysis of the empirical findings reveals that QIA has played an essential role in addressing substantial economic sustainability and stability gaps in a developmental context. QIA investments in sustainable development enhance the country's economic and societal stability by encouraging and catalysing the expansion of the local economy. Further reports indicate that QIA is either the majority shareholder or the sole owner of several leading Qatari companies, many of which have developed world-class expertise and global reach, including Qatar Airways (QIA, 2016).

From this perspective, QIA is a significant shareholder in many Qatari companies with local and international operations. For instanceThe QIA holds 50% of the shares in the QNB Group and owns Ooredoo, a community-focused Qatari telecommunications company with international operations across markets in the Middle East, North Africa, and Southeast Asia. QIA also owns Qatar Airways, a global airline leader operating both to and from its hub in Doha. Qatar Airways is a critical contributor to the Qatari economy, accounting for approximately 4.9% of the country's GDP (Al-Baker, 2021).

Moreover, QIA (2016) and Al-Baker (2021) have emphasised the QIA's role in enhancing economic growth through the diversification of assets, including real estate investments. For example, Qatari Diar was one of the real estate companies established in 2005 by QIA to support the country's growing economy and coordinate its real estate development priorities (QIA, 2016). In 2020, Qatari Diar was capitalised at USD

8 billion, with more than 50 projects in 22 countries worldwide and a combined value of over USD 35 billion (Qatari Diar, 2021). Lusail City is one of the company's flagship projects and signifies the QIA's role in enhancing the real estate sector in the local economy (Qatari Diar, 2021). Respondent 16 stated that that QIA supports the economy through bank deposits and investment in corporations:

> *The mandate given to the fund was to invest directly or through third parties in the different asset classes with a focus outside the Middle East. In addition, the fund was asked (1) to invest directly in Qatari corporations that were deemed as essential to the development of the country and (2) to inject liquidity in the Qatari economy via deposits with local banks.*

Moreover, QIA is taking the lead in the local hospitality industry by operating through Katara Hospitality and Al Rayyan Hospitality. Al Rayyan Hospitality focuses on a collection of luxurious properties in the hospitality industry, while Katara Hospitality, the country's flagship hospitality organisation, supports the diversification of the local economy by investing in five-star hotels in Qatar. In addition to contributing to the local economy, Katara Hospitality has 35 properties in its portfolio that are either in operation or under development, spread across three continents (QIA, 2016). Such insights indicate that QIA is integrated with Qatar's development policies.

Moreover, QIA owns the Qatar Stock Exchange (QSE), a key contributor to the diversification of the local economy (QSE, 2021). The QSE supports the country's economy by providing investors with a platform for trading stocks freely and efficiently (QIA, 2016). By operating in a variety of economic sectors – such as banking, real estate, and industrials – the QSE has played a critical role in paving the way for investors to develop their savings and contribute to the local economy through diversification (QSE, 2021). Al-Rayyan subsidies and Harrods in London are also managed by QIA.

In 2009, to manage Qatar's seaports and shipping terminals, the government established Mwani Qatar, which plays a pivotal role in diversifying the Qatari economy and transferring assets to QIA as it seeks to transform Qatar into a regional shipping hub (Mwani Qatar, 2021). Moreover, to provide land transport services, QIA has developed and widened Mowasalat, popularly known as "the transport company", which offers several solutions to fulfil a variety of requirements, including logistics and transport, thus developing sustainable and efficient transport systems while achieving improved mobility for all citizens (QIA, 2016).

A further investment area is the food and agri-business sector, in which the QIA has been contributing widely and vigorously to secure the needs of Qatar's growing economy in agricultural products (Vaimal, 2020). Hassad Food, which is wholly owned by the QIA, is Qatar's premier investor in the food industry; it works to diversify food sources by investing locally and internationally as well as by fostering local employability (Vaimal, 2020). QIA also contributes to enhancing and fostering the growth of the national economy as the largest investor in the food and beverage industry, with investments such as Califia Farms, which is based in California (Caballero, 2020).

In the sustainable energy sector, QIA co-founded Nebras Power in 2014 to promote the country's sustainable growth as a custodian of wealth for future generations (Nebras Power, 2021). This goes hand in hand with Respondent 21's statement:

> *Qatar, as a founding member of the One Planet Sovereign Wealth Funds – along with other esteemed institutions like Abu Dhabi Investment Authority, Kuwait Investment Authority, New Zealand Superannuation Fund, and Public Investment Fund – has implemented a systemic ESG policy today through Qatar Investment Authority (QIA).*

Furthermore, according to the IMF, Qatar has maintained strong growth driven by a double-digit non-hydrocarbon sector expansion between 2011 and 2014. Figure 7-10 illustrates the contribution of various sectors to Qatar's economic growth.

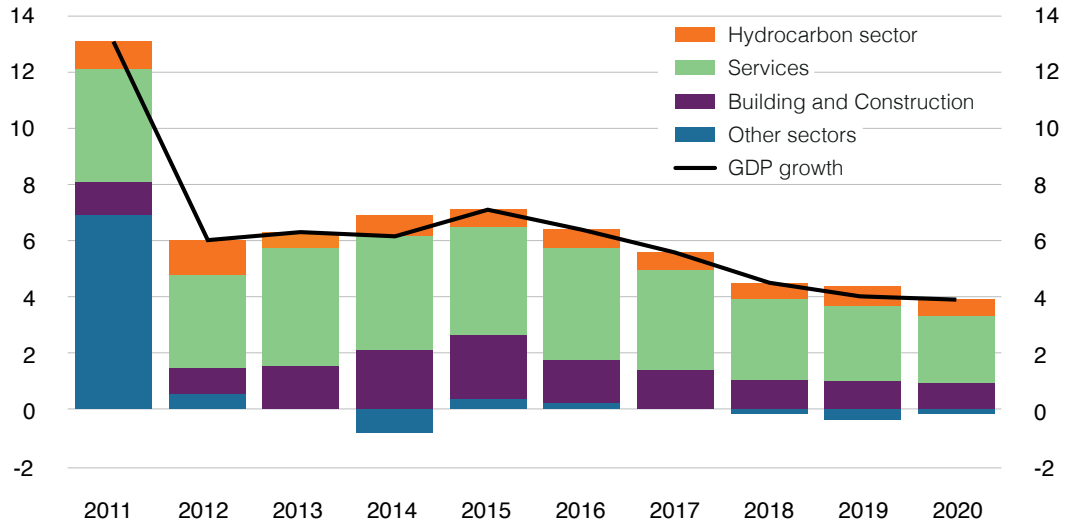


Figure 7-10: Contribution of Various Sectors to Qatar's Economic Growth
Source: IMF (2020)

As this figure illustrates, from 2011 to 2020, Qatar's real GDP growth shifted from hydrocarbons to services, which dominated the economy. These findings indicate that this diversification due to QIA's activities has successfully enhanced the sustainability of the economy.

Similarly, Respondent 16 confirms that

> *[the] QIA was involved in founding the One Planet SWF organisation.*

In this context, according to the recent amendment to the legal framework of QIA in 2023 (by Emiri Decision No. [34] of 2023 – reorganising the QIA as "the governing decision"), the objectives related to "supporting the development and diversification of the local economy" became among QIA's purposes stipulated in the governing decision, with the condition that "it does not hurt the activity of the private sector".

QIA is also a significant contributor to the private sector and the country's diversification strategy, which is a pillar of the QNV 2030 (QIA, 2022). Thus, QIA helps encourage the private sector to share in and effectively participate in local investments (QIA, 2022). QIA leads by investing in various blue-chip companies that are essential to implementing its vision, including Barclays, Porsche, Airbus, and Lockheed Martin (QIA, 2022). Additionally, QIA leadership's investment in blue-chip companies has paved the way for more FDI flows, which have increased with the activation of the Qatar Free Zones (QFZs; QIA, 2022).

An example of a successful SDF is the DVC, founded in 2018 and serving as the venture capital arm of the QFZs (DVC, no date). Respondent 17 stated the following:

> *[The] Qatar Free Zones Authority was established in 2018 to develop and oversee Qatar's new free zones […] QFZ established [the] Doha Venture Capital Fund as a %100 subsidiary to act as their venture capital arm in 2018 based on approval from the Supreme Council for Economic Affairs and Investment in order to attract SMEs and emerging technology to establish a presence in QFZ.*

DVC is a development fund that is guided by its mission to provide stable and long-term capital investment, capitalise on its geo-location, grow into regional and global markets, and strengthen relationships with its international partners and industry leaders (DVC, no date). DVC engages in the following three main types of activities: (1) investment and joint venture opportunities, in which direct investments are made in high-growth companies; (2) assistance to companies to develop growth strategies through long-term investments that are supported by a robust economy; and (3) strengthening of networks as well as leveraging of opportunities to access the national champions within Qatar (DVC, no date).

Wamda (2021) reveal that the DVC raised USD 235 million in partnership with EDBI and other financial institutions in Singapore to invest in the Singapore-based entertainment provider Cityneon. Through these invested funds, Cityneon was able to enhance its growth efforts and build more intellectual property exhibitions (Wamda, 2021). The insights from Wamda (2021) underscore the DVC's mission to invest in high-growth companies worldwide to attract them to establish a presence in Qatar. As a result, the DVC promotes the growth of Qatar's economy through diversification strategies in various industries by attracting FDI. Respondent 17 added the following:

> *The Supreme Council for Economic Affairs and Investment and [the] QFZs are the key participants in designing the DVC structure.*

Tracxn (2023) reveals that, since the establishment of the DVC in 2018, the agency has held five different portfolios, with recent acquisitions in 2022, including SparkCognition and Tradeshift. SparkCognition is a start-up based in the United States that delivers artificial intelligence and predictive analytics solutions. Tradeshift, also based in the United States, provides cloud-based software-as-a-service invoice management solutions for various businesses (Tracxn, 2023). In addition to investment in the tech industry, the DVC also focuses on agriculture, in which partnerships among QFZs, the DVC, and AeroFarms, based in the United States, have led to the establishment of commercial indoor vertical farms (AeroFarms, 2022). The investment was essential to elevating agriculture and introducing aeroponic technology, which is useful for increasing food production in vertical farms in Qatar (AeroFarms, 2022). Such investments were also supported by Qatar's Ministry of Municipalities to transform food systems and ease pressure on traditional agriculture. The DVC also partnered with the QFZ Authority to invest in Eat Just Inc., a US-based provider of plant-based alternatives to egg products produced through conventional approaches (Private Equity Wire, 2021). The funding supported the establishment of a manufacturing plant in Qatar that offers high returns for stakeholders while ensuring that food sustainability solutions are delivered in the MENA region through the establishment of a cultured meat facility. The insights from Private Equity Wire (2021) and AeroFarms (2022) underscore the strategic approach adopted by the DVC to invest in high-growth companies that promise significant returns for stakeholders and to transform Qatar through the establishment of sustainable food industries in the country. Additionally, the partnership between DVC and Aspiration, a US-based global leader in sustainability service solutions, led to the delivery of carbon-neutrality solutions, green financial solutions, and green certifications within the QFZs (Business Wire, 2021). The DVC has proved it can enhance economic growth through strategic investment choices in the economy.

Qatar's SWF is an essential tool for realising the country's 2030 vision and moving it towards a knowledge-based economy. It unlocks growth opportunities for the private sector by discovering new sectors to drive job creation and development. Moreover, when commercially viable, SDFs seek to unlock potential opportunities to support the diversification and development of the economy while attracting new waves of FDIs by providing co-investment to international and national investors. Accordingly, Qatar has developed its own SDF with the debut of the DVC.

7.7 Findings and Conclusions

In this section, the findings identified in this chapter are synthesised and aligned with the conceptual model that guides this thesis. The findings align with the mandate of Qatar's SWF, which demonstrates that QIA was established as a savings fund to invest and develop the state's reserves in addition to the other related objectives. These were recently emphasised by the current governing Emiri Decision of 2023, and they include enhancing the state's ability to respond to and mitigate adverse effects of economic and financial crisis by diversifying the national economy.

An evaluation of the empirical studies in Sections 7.3–7.6 reveals several crucial insights. Firstly, the macroeconomic indicators in the Qatari economy warrant the establishment of more than one fund. QIA as a SWF is integral in building the country's international portfolio by diversifying its national income in a pool of hard currencies. However, insights from the literature have established the need for Qatar to

develop a stabilisation fund to avoid a yearly budget deficit that results from fluctuations in oil and gas prices and to steer away from unstructured withdrawals, which could disrupt the country's investment operations and strategy. In conformity with such findings, the current governing Emiri Decision of 2023 limited the withdrawals from QIA funds to meeting emergency expenses of the government of the State of Qatar through the controls and mechanisms determined by the Supreme Council. These withdrawal decisions are to be made only by decision of the Emir. Therefore, QIA bears multiple responsibilities in developing, stabilising, and diversifying the national economy by focusing on its objective to invest and manage the state's reserve internationally.

Several studies have indicated that active SDFs are strategic, government-sponsored investment organisations with the dual objective of delivering high financial performance while fostering development (Clark and Monk, 2015). Despite expectations that this dual-objective function would inevitably lead to financial underperformance, SDFs have delivered consistently high investment returns, especially in private markets (Clark & Monk, 2015). They play a central role in diversifying a nation's economy, ensuring the security of supply, and investing in priority sectors and technology transfer.

Thus, there is growing interest, regionally and internationally, in establishing multiple sovereign funds, as the UAE and Singapore have done. Recently, the Dubai Investment Corporation joined the IFSWF, and the UAE has four funds, three in Abu Dhabi and one in Dubai. In this direction, Qatar may consider studying the feasibility of establishing specialised sovereign funds as needed, mainly by building a development fund that focuses on local development and diversification and co-investing with international partners. These SWFs would be in addition to QIA, which focuses on international investment for future generations.

The findings from this chapter also align with the second theme regarding the integration of SWFs into government and economic policies. The literature analysis reveals that in the 10 years since its establishment, QIA has effectively managed the national reserves on behalf of the Qatari government for future generations. Currently, QIA manages a total of USD 445 billion in its SWF (GlobalSWF, 2022).

Moreover, QIA gives the Qatari authorities policy space to manage unexpected circumstances in the case of falling hydrocarbon prices or market volatility (IMF, 2015). This has led to a reduction in financial sector liquidity, and the IMF states that policymakers have options, including reallocating deposits of government-owned companies and QIA from abroad and adjusting the size of T-bill and T-bond auctions (IMF, Qatar: Staff Report for the 2015 Article IV Consultation, 2015; IMF, 2020). Figure 7-11 details the total flow of the sale of hydrocarbons to the state, indicating its volatility.

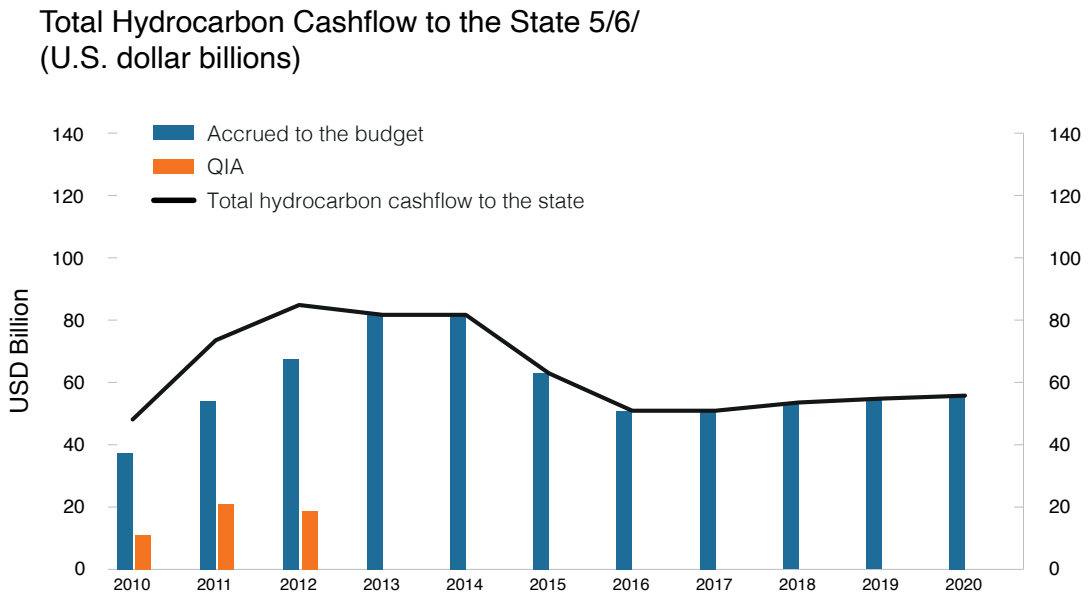


Figure 7-11: Total Hydrocarbon Cash Flow
Source: IMF (2020)

This figure indicates a reduction in the cash flow from hydrocarbons to the state as the economy has diversified though QIA. Moreover, the government of Qatar occasionally transfers some of its fiscal surpluses to QIA, which has created the need for further clarity regarding the transfer rules. Furthermore, the withdrawal rules need to be clarified. In this regard, to respond to such gaps, the new governing decision states that the Supreme Council determines the procedures and measures for transferring assets related to the investment of state reserve funds and assets from the Supreme Council to QIA. Additionally, QIA shall collect the funds allocated to it by the ratios, controls, and mechanisms determined by the Supreme Council based on the financing programme proposed by QIA in coordination with the Minister of Finance.

While QIA has a clear governance structure defining the relationship between the SCEAI, the Board of Directors, and the executive management, the operation model has changed over time due to periodic management changes. For example, QIA moved from a passive model to a mixed model and then to a direct operating model. With the passive model, QIA had less control over its capital, which led to a change in the operating model. By moving to a direct operating model, QIA gained more control over its capital, which enhanced its ability to diversify its portfolio and asset allocation.

Finally, the literature findings align with third thesis theme described in Section 4.4.1, which indicates that SWFs influence macroeconomic and development contexts. Additionally, QIA has played a vital role in boosting economic growth and enhancing Qatar's capabilities to face macroeconomic challenges. Furthermore, QIA has transformed the state reserve into a sustainable and stable future income by investing in suitable international assets. This has helped Qatar avoid boom–bust cycles, such as those experienced in the 1970s due to the 1973 Arab–Israeli War and the collapse of oil prices in 1986.

By investing in various sectors at the local level such as the food industry, hotels, and hospitality services, QIA contributes to developing an industrial and service foundation that serves as a platform for Qatar's sustainable economic growth. Subsequently, the fund aids in developing an efficient and diversified economic base that helps prepare the country for a time when its oil and gas resources are depleted. The findings also demonstrate that QIA's objectives align with the country's strategic plans, leading to macroeconomic development. QIA has played an essential role in smoothing government spending by setting the fiscal surplus aside and acting as a reserve and stabilisation fund. However, while QIA has been effective as a reserve, it has been less successful as a financial stabiliser that can cover fiscal liabilities during crises. The findings further indicate that the lack of stable economic conditions has affected the achievement of Qatar's macroeconomic objectives such as GDP growth. Macroeconomic challenges over the past decade have negatively affected the fund. Similarly, interruptions to international logistics and production prioritise the establishment of differentiated and specialised funds to compete with the challenges encountered by the Qatari economy. In 2000, the surplus obtained from exporting LNG encouraged the Qatari government to establish the state's reserve council as an incentive to promote international investment and management.

Important lessons regarding Qatar's analytical model can be identified from this case study. The discovery of LNG in the late 1990s resulted in Qatar accumulating rents, and this presented both an opportunity and a challenge. The development of LNG led to prosperity, economic growth, and a high per-capita income in Qatar. However, it also created difficulties regarding absorption capacity, the diversification of the national economy, high inflation rates, the negative carrying costs of holding cash, and the volatility of oil and gas prices. QIA was established by Emiri Decision No. (22) of 2005 to manage, invest, and develop the state's reserves; later, it was amended by Emiri Decision No. (34) of 2023, which reorganised QIA to assign it essential roles in responding to economic and financial crises and diversifying the national economy. QIA is aligned with the conceptual model in Figure 3-6, in which the setup of the SWF is influenced by the decision to ensure alignment between the economic conditions and objectives. The Emiri Decision equipped the QIA with the power and competencies to achieve its goals. The clear mandate facilitated investment decision-making while underpinning Qatar's purpose of having a stable, sustainable, and diversified economy. QIA focuses on investing the country's surplus to generate additional income by gaining prominent hard currencies, mainly globally, to diversify the government's revenue.

Therefore, QIA works as a savings fund with a specific mandate to cover some of the challenges that arise from Qatar's economic condition. From this perspective, the economic situation requires more than one fund to address the challenges posed by the accumulated reserves. Hence, Qatar requires development and stabilisation alongside its international savings fund, in other words, the QIA. These insights further align with the study's conceptual model, wherein a country's economic conditions and objectives determine its choice of SWF. Thus, QIA serves as an essential stabilisation, savings, and development fund, facilitating the achievement of established macroeconomic objectives. For example, QIA ensures stable economic growth and low inflation rates. Indeed, a development fund is required to take the lead in enlarging the economic base by investing in non-hydrocarbon industries, while a stabilising fund is required to manage the fluctuations in oil and gas prices while avoiding deficits in the government budget, which can cause annual reductions in the country's international credit rating. As a global focus fund, QIA is also necessary for enabling Qatar to expand globally. Therefore, a country must consider establishing more than one type of fund, each with different priorities and foci, as doing so will enhance its ability to ensure stability, sustainability, and economic diversification.

Chapter 8: Findings – Towards A New Model

8.1 Principal Findings

In this section, the findings are organised in alignment with the aim, objectives, and questions of the thesis as well as the identified research gap.

8.1.1 Differences and Similarities in Economic Conditions

A critical examination and comparison of macroeconomic objectives in Kuwait, Singapore, and Qatar has identified several similarities and differences among the case studies. One of the similarities is that the SWFs were established under the vision of the political leadership in each country. In Kuwait, the British and Kuwaiti leadership created the SWF in 1953 and established its office in London. In Singapore, the government was also involved in establishing its SWFs as a government investment holding in local champions, with the foreign reserve assets being wholly owned by the state. In Qatar, the government guided the design of the fund to facilitate the development, investment, and management of the state's reserve.

A further similarity emerged in the underlying macroeconomic indicators that influenced the design of the SWFs in Qatar and Kuwait. In both countries, the sovereign funds were tasked with reinvesting excess profits from sales of oil and gas products to achieve the long-term goal of diversification and reduce the heavy reliance on oil revenue. By contrast, the design of Singapore's SWFs met dual needs: to manage the government equity holdings on a commercial basis in the case of Temasek and to manage the country's foreign exchange reserves in overseas countries in the case of GIC. Therefore, while commodity-based SWFs were established in Qatar and Kuwait, non-commodity-based SWFs were created in Singapore. Additionally, a third type of SWF – namely, a development fund – was created in Singapore to prepare the economy for the future by investing in technology.

8.1.2 Establishment and Selection of the Funds' Key Objectives

This thesis has addressed the economic conditions and processes of SWF establishment in Kuwait, Singapore, and Qatar. The first Kuwait SWF was created in 1953, which was followed by the establishment of KIA in 1982 to provide oversight of the funds. KIA serves as an independent legal authority responsible for the stewardship of the nation's assets, including the GRF, which receives all state incomes and is tasked with state expenditures, and the FGF, which acts as an intergenerational savings platform to prevent adverse outcomes in the event of negative economic consequences. The Kuwait SWFs were established with the assistance of the British administration, which opened a London office that offered tax incentives and other benefits for management of the fund. As a result, the funds were invested in overseas countries, including the UK and others in greater Europe.

In Singapore, two SWFs were established: Temasek, founded in 1974, and GIC, founded in 1981. A third SWF, EDBI, was created in 1991 to invest on behalf of the government in future industries and to expand current industries. However, unlike in Qatar and Kuwait, the sources of the funds are non-commodities, which include foreign exchange reserves as well as active shareholders and investors in both domestic and foreign industries. Temasek is wholly owned by the Singaporean government, which was concerned about holding investments used in managing the equity investments of the state in local firms. Additionally, GIC was tasked with management of the government's reserves alongside Temasek and MAS and was also developed to facilitate long-term investing with a view towards enhancing the international purchasing power of its funds.

In Qatar, the SWF was created to enable the country to invest surplus profits generated from oil and natural gas sales. QIA is an independent investment fund whose objectives are to develop, invest, and manage the state's reserve funds and the other assets assigned to it by the SCEAI. As of 2022, QIA manages assets worth hundreds of billions of USD; its diversified portfolio comprises real estate, private equity, hedge funds, infrastructure, and cash.

Political leaders in each of the three case-study countries were involved in establishment of the SWFs. Additionally, in Kuwait and Qatar, independent authorities – KIA and QIA – were identified to manage the funds. The analysis also revealed that each SWF was designed in alignment with the countries' macroeconomic indicators and objectives. These indicators included the available foreign exchange reserves (Singapore) and the surplus of oil sales (Kuwait and Qatar), while the objectives focused on stabilisation of the economy.

8.1.3 Differences and Similarities in the Mandate and Type of Established Funds

The findings address the main thesis question outlined in Chapter 1 (Section 1.5) related to the impact of macroeconomic objectives on the institutional design of SWFs in Kuwait, Singapore, and Qatar. Additionally, the principles that guided the establishment of SWFs in these countries are identified.

Macroeconomic objectives that influenced the design of SWFs in the three case countries are identified. In Kuwait and Qatar, these are the need to diversify the countries' revenue and provide security for future generations by investing excess profits from the sale of oil and gas. In Singapore, the focus is on managing the state's equity investments in local firms and investing in foreign exchange reserves. Therefore, economic stability and diversification are key objectives that influenced the case countries' selection of savings funds and foreign reserve types of SWFs. Further analysis reveals that the macroeconomic objective of maintaining the government's budget balance was influential in guiding the selection of savings and stabilisation types of SWFs in both Kuwait and Qatar. The findings emphasise that to ensure that the SWFs were effective in addressing these macroeconomic objectives, it was critical to align the funds with their specific mandates.

In Kuwait, Singapore, and Qatar, the objectives of diversifying income and ensuring economic stability led to the selection of savings and stabilisation-oriented SWFs. A second principle concerned the integration of monetary and fiscal policies to facilitate the establishment of SWFs. For example, the fiscal policy of the Singaporean government focused on devoting a significant percentage of the budget towards investment and development. Other principles concentrated on capital withdrawal and allocation in the SWFs, as well as on measuring the performance of the funds.

An examination of the findings also address the first sub-question presented in Section 1.5 regarding the application of SWFs for meeting macroeconomic objectives in Kuwait, Qatar, and Singapore. Based on the primary and secondary results, long-term savings SWFs were identified as the most suitable and applicable for Kuwait and Qatar based on the countries' overreliance on the oil economy. As a result, it was crucial for these two countries to establish savings SWFs to ensure that their economies were protected from future price volatility and external shocks. The results also revealed that other GCC countries, including Saudi Arabia, had established public investment funds to diversify their oil economies.

However, in the case of Singapore, funds for future generations – in other words, perpetuity – were identified as the most important. Furthermore, SDFs ¬– which combined economic missions and financial goals, thereby leading to further development within the country – were found to be applicable to Singapore's case and potentially to those in Kuwait and Qatar.

The findings also address the thesis' third sub-question outlined in Section 1.5, which focuses on the factors that influenced the design of SWFs in Kuwait, Qatar, and Singapore and examined the variances across the three countries. The key differences observed were that in Kuwait and Qatar, the design of the SWFs was influenced by the need to diversify the oil economy, whereas in Singapore, the management of foreign reserves was emphasised. The findings also reveal that in Singapore, Temasek and GIC were created to invest across all major asset classes and support various economic sectors during crises. Therefore, differences in the economic conditions of each country led to the unique conceptualisations of the SWFs that were implemented.

8.1.4 Structural Design of the Funds

The evaluation of the findings from the three case countries address the two thesis goals formulated in Section 1.3: (1) to investigate how to align a SWF's institutional design to the country's macroeconomic objectives through a comparison of Kuwait, Singapore, and Qatar; and (2) to develop a model to facilitate the establishment of SWFs to promote economic growth.

The findings from the Kuwait case study reveal that KIA was aligned with the country's macroeconomic objectives, as it enabled the country to diversify its revenue and reduce its reliance on the hydrocarbon industry. The findings demonstrate that KIA was used to provide economic stability during crisis periods, such as during the global financial crisis of 2008–09, in which it intervened to prevent the failure of the Gulf Bank of Kuwait and the stock market. KIA demonstrated its capacity for bolstering economic stability during the COVID-19 pandemic, offering support through expenditures that supplemented employee wages amid the economic downturn. Notably, as of 2023, Kuwait's SWF continues its upward trajectory. Plans to establish a development fund are a testament to Kuwait's commitment to economic growth. This fund – an integral part of the Kuwaiti government's 2023–2027 economic development programme – aims to foster private sector partnerships that facilitate the initiation of ambitious giga projects (GlobalSWF, 2023).

This strategic move underscores Kuwait's astute diversification strategy. The development fund is not only a well-conceived notion but also offers distinct risk–return profiles compared with those of the government. It is a judicious complement to Kuwait's broader diversification efforts, manifesting as a prudent strategic choice.

This positive proposition is reinforced by the distinct nature of the other two funds managed by the KIA. One of them, the FGF, focuses on global investments rather than local ones and operates under a legal framework that constrains its use due to associated risks. The second fund, the development fund, is designed to collaborate with international companies in Kuwait, showcasing a balanced blend of local and global elements. This multidimensional approach positions Kuwait for steady growth and diversification.

In Singapore, the findings are similar to those in the Kuwait case study, wherein the institutional design of the country's SWFs – Temasek, GIC, and EDBI – was found to be aligned with the macroeconomic objectives to manage the country's foreign investments. An analysis of the findings reveals that GIC is tasked with investing in all major asset classes to ensure that the government's foreign reserves are well managed to provide a real rate of return that is sustainable over a 20-year period. Similarly, Temasek manages Singapore's local investments, which are distributed across diverse sectors and expanded geographical regions with a view towards ensuring resilience against market and economic conditions and providing long-term real returns for future generations. The Singaporean SWFs were also found to be integral in cushioning the economy during crisis periods, such as during the COVID-19 pandemic. Therefore, similar to KIA, GIC and Temasek are aligned with the country's macroeconomic objectives to ensure that the Singaporean economy is diversified and stable.

Furthermore, the findings from the Qatar case study are similar to those from Singapore and Kuwait in that the design of the country's SWF is aligned with its macroeconomic objectives. In Qatar, the main macroeconomic objectives influencing the establishment of the SWF were investing the surplus revenues from oil and diversifying Qatar's income to reduce reliance on the hydrocarbon sector. Based on the findings, QIA was observed to manage a diversified overseas portfolio in sectors such as financial institutions, real estate, retail, healthcare, technology, and fixed income. Additionally, during the Gulf crisis, QIA was identified as the lender of last resort, where it injected the required liquidity to stabilise the Qatari government and the Qatari riyal, thereby maintaining the country's high global credit rating. These findings support the conclusion that the institutional design of the SWFs in Kuwait, Singapore, and Qatar was aligned with their countries' respective macroeconomic objectives. The SWFs facilitated their countries' economic diversification and stabilisation by lending to financial institutions and supporting companies at risk of bankruptcy during crisis periods.

The findings also address the second aim of the thesis, which was to develop a model to facilitate the establishment of SWFs to promote economic growth. The conceptual model created in this thesis is

presented in Figure 3-5 in Section 3.2. The model comprises three main components. The first is the development of the methodological model, which reflects SWF establishment process that include conditions and indicators, such as GDP growth, unemployment rate, inflation rate, balance of payments, the government's budget balance, state accumulation of capital, and the economy's absorption capacity. These macroeconomic conditions are indicative of the country's economic growth and the presence of favourable exchange rates.

The second component of the model is the macroeconomic objectives, including the stabilisation of economic growth, full utilisation of resources, lowering of inflation rates, and maintenance of the government budget balance and balance of payments. Identifying a country's objectives is crucial for determining which types of SWFs would be appropriate for its economy. Finally, the third component of the model is SWF types and mandates, which include savings funds, stabilisation funds, SDFs, and reserve investment corporations.

Based on the conceptual model, the countries' strategic plans were identified to align macroeconomic indicators with macroeconomic objectives. Indicators and objectives also influenced the SWF types and mandates adopted in any given country. The hypothesised arguments in the conceptual model were further validated through an evaluation of the case-study findings. A case in point is the influence of macroeconomic indicators on the SWF types and mandates identified in Kuwait, Singapore, and Qatar; for example, in all three countries, the selection of savings SWFs was motivated by the need to improve government budget balances. Additionally, the selection of stabilisation SWFs was influenced by the macroeconomic objective of stabilising the economy. Overall, the developed model was validated based on the findings of the case studies.

8.1.5 Impact on Macroeconomic and Development Contexts

The fourth thesis objective outlined in Section 1.4 aims to determine the impact of SWFs in achieving economic growth objectives in Kuwait, Singapore, and Qatar. The findings reveal that in Kuwait, KIA supported economic growth through diversificationKIA was also influential in supporting critical elements of the economy, including buying stakes in financial and local companies to cover derivative losses and to mitigate further damage to the lender's balance sheet. Additionally, KIA prevented the stock market from crashing during the global financial crisis. In Singapore, GIC and Temasek were important in diversifying the economy by investing across all major asset classes and supporting various sectors during crisis periods. In Qatar, the QIA achieved the established objective of supporting economic growth, as the fund has developed a diversified and global investment portfolio for the benefit of the state and has interfered in the local market in times of crisis and as needed to create financial stability.

Therefore, in all three case countries, the SWFs have been crucial in supporting economic growth through diversified portfolios that contribute to the GDP and stabilise the economies. SWF investments contribute to a country's economic growth and fund various sectors during crises by ensuring liquidity for banks, restoring confidence, containing financial risks, and maintaining the stability of the local banking system.

The findings further address the thesis' second sub-question outlined in Section 1.5 regarding the effectiveness of each country's current SWF model in facilitating and promoting economic growth. In Kuwait, the KIA was effective in enhancing economic growth through the achievement of the following three core objectives: (1) to achieve a three-year rolling average on returns that exceed composite benchmarks by maintaining a diversified portfolio with mandated risk and return parameters, (2) to lead asset management organisations committed to improvement in their investments and operations, and (3) to engage in investments that do not threaten or compete with the private sector in Kuwait, thus contributing to human capital formation by attracting talented young Kuwaiti citizens to be trained as investment professionals. Therefore, the fund has enhanced economic growth through portfolio diversification, asset management, and investments that did not compete with the private sector.

In Singapore, Temasek, GIC, and EDBI have been effective in enhancing economic growth through the management of foreign exchange reserves. GIC invests in all major asset classes to ensure that the government's foreign reserves are well-managed with a real rate of return that is sustainable over 20

years. The funds have also stabilised the economy, as the government used USD 120 billion from its SWF reserves to cushion Singapore's economy from adverse conditions. A similar finding was established in Qatar, where QIA played a key role in boosting economic growth and enhancing Qatar's capabilities to face macroeconomic challenges. QIA also transformed the state reserve into a sustainable and stable future income by investing in suitable international assets. Moreover, QIA played a crucial role in smoothing government spending by setting the fiscal surplus aside and working as a reserve and stabilisation fund. While QIA has been effective as a reserve, it has been less effective as a financial stabiliser that can cover fiscal liabilities during crises.

The final thesis objective outlined in Section 1.4 is to evaluate the effectiveness of the currently available SWF frameworks and models. In Chapter 3, the following four SWF models were evaluated: the governance model of Norway's SWF (Velculescu, 2008), the Islamic SWF model (Bahoo et al., 2019), the framework for an outward FDI strategy and its impact on competitiveness for SWFs (Reddy, 2019), and the framework for factors influencing the sustainable growth of SWFs (Al-Saidi, 2012). A synthesis of the frameworks reveals that each one facilitates different macroeconomic objectives. The framework developed by Al-Saidi (2012) ensures that SWFs have a sustainable competitive advantage. Likewise, the model by Reddy (2019) explains how sustainable competitive advantages arise from the use of SWFs for outward FDI. Other models, such as that by Velculescu (Velculescu, 2008; Bahoo et al., 2019), highlight appropriate regulatory processes and mechanisms to ensure that the funds are used in alignment with target expectations.

However, these models have not been effective due to the identified gaps. Firstly, they lack a focus on specific macroeconomic objectives, leading to their failure to highlight how SWFs could be aligned with various economic contexts. Secondly, the models do not discuss the instruments that can be used to control SWFs once they are established, such as fiscal and monetary policies. Thirdly, the models fail to identify the roles of leadership and governance in enhancing the sustainability of SWFs. Due to these performance gaps, the models are ineffective, which led to the conceptual model proposed in this thesis.

8.1.6 Addressing the Research Gap

This thesis addresses the literature gaps identified in Section 2.6, which encompass the lack of competence and roadmaps for SWF design. The conceptual model proposed in Figures 3-5 and 3-6 in Chapter 3 outlines a roadmap for guides the design of SWFs in a variety of geographical contexts. It comprises five steps in SWF design. In the first step, policymakers and fund managers are required to evaluate the countries' economic conditions. This is crucial for determining SWF strategies and objectives, defining SWF constraints, and determining the assignment of capital allocation. In the second step, the key objectives of the fund are identified. The third step involves establishing the type and mandate of the SWF to address macroeconomic objectives; subsequently, the compatibility between SWF design and government policy can be determined. The fourth step involves the development of a new SWF model and a set of principles for the SWF design. In the fifth step, the impact of SWFs in macroeconomic and development contexts should be investigated to analyse the macro-indicators. By adhering to these steps, fund managers and policymakers can derive a SWF model that is appropriate for adoption in individual contexts.

The conceptual and theoretical framework in Figure 3-6 regarding the institutional design and strategic planning for SWFs also outlines the interrelationship between economic conditions, macroeconomic objectives, SWF type, and SWF mandate. The knowledge gained from this framework is influential in selecting an appropriate SWF by aligning macroeconomic objectives with macroeconomic indicators. For example, to select a stabilisation fund (type of SWF), one must consider the alignment between indicators such as GDP growth and macroeconomic objectives such as stable economic growth. Therefore, this thesis develops a model that can enable countries to select SWFs that ensure the achievement of their macroeconomic objectives based on the existing indicators.

8.2 Implications – Theory and Practice

This section elaborates on the implications of the findings for theory and practice.

8.2.1 Implications for Theory

The findings support propositions of the principal–agent theory in which the independent governance of SWFs ensures transparency and accountability of the funds to avoid conflicts of interests with fund managers. The findings contribute to theory through the development of the model proposed in Figures 3-5 and 3-6 to facilitate the institutional design and strategic planning of SWFs. The model is developed to guide countries in designing and establishing the strategic plans of their SWFs and is validated based on the findings of each case study. The model aligns macroeconomic indicators and objectives with SWF mandates and can facilitate decision-making among policymakers and fund managers. Other scholars can build on this model by applying it to various economic scenarios and countries.

Furthermore, the findings from this thesis contribute to the literature on SWF design and its impact on macroeconomic development in the selected case countries. Critical insights on the macroeconomic indicators and objectives were established; for example, in Kuwait and Qatar, SWFs are commodity-based, while those in Singapore are non-commodity-based. Additionally, this thesis has generated crucial insights into how each of these countries aligned their SWFs with their overall macroeconomic objectives. The impact of SWFs on macroeconomic development and the role of tools such as monetary and fiscal policy in guiding SWF implementation were also identified.

Lastly, the findings contribute to the literature regarding the challenges faced in the design and implementation of SWFs in various countries. Such challenges, which range from political interference to a lack of technical expertise in SWF design, are important for enhancing an understanding of the improvements that can be made to SWFs. This thesis has demonstrated that most of the challenges facing SWF design and development are associated with a lack of knowledge and competence in designing SWFs and integrating them into macroeconomic development.

8.2.2 Implications for Practice

Diverse implications for practice have also emerged from this thesis and are crucial for countries' leaders, policymakers, fund managers, MOFs and economic planners, and other institutional investment organisations. Firstly, the model in Figure 3-6 is critical for guiding decision-making when designing and selecting a SWF for any given country. It underscores the need to align macroeconomic objectives and indicators with SWF mandates. By adhering to the guidelines in the model, fund managers and stakeholders will be in a position to fast-track the design and implementation of SWFs, which will ensure the achievement of specific macroeconomic objectives, including GDP growth and economic stability.

A second practical implication is that countries without major commodities such as oil or natural gas can also develop SWFs that are non-commodity-based. In such cases, the SWFs are funded by investments in foreign assets, including portfolio investments and foreign exchange reserves, such as in Singapore. The thesis also demonstrates that countries such as China, Singapore, and Malaysia have been successful in using non-commodity-based SWFs to enhance their macroeconomic objectives.

Thirdly, the findings reveal crucial principles that will guide SWF management in various countries. Such principles and performance measurement mechanisms are vital for ensuring that the selected SWF does not deviate from the established mandate and that the expected results can be obtained. The principles also encompass transparency, accountability, and good governance by ensuring that capital withdrawals and allocations are disclosed to the state. Agency theory has revealed that conflicts may arise where the interests of fund managers differ from those of the state that owns the SWF. To minimise such conflicts, this thesis underscores the role of governance principles that ensure accountability and transparency in the management of the SWFs through KPIs.

Finally, the findings of this thesis underscore the significance of good governance and clear mandates as critical factors behind the success of SWFs. The Kuwait, Singapore, and Qatar case studies demonstrate that the SWFs were designed to fulfil a specific mandate aligned to the formulated macroeconomic objectives in each country. In Kuwait and Qatar, SWFs facilitated the diversification of the revenues and

economies away from the hydrocarbon industry. In Singapore, SWFs were pivotal in enhancing economic growth through the management of foreign exchange reserves. The findings also demonstrate that good governance through independent boards, such as KIA in Kuwait and QIA in Qatar, is integral to the success of these sovereign funds. Thus, a clear mandate and good governance are essential to the success of SWFs in any given country.

8.3 Towards a New Model

This thesis has investigated the design of SWFs to ensure that their operations are aligned with a country's macroeconomic objectives. SWFs were conceptualised as important institutional investors that enable countries to achieve their economic objectives, such as the stabilisation of the economy, infrastructure development, diversification of national income, and preservation of the rights of future generations through a savings portfolio. However, challenges were observed in the institutional design of SWFs, in which policymakers were unable to select the appropriate investment tool to effectively address a country's macroeconomic objectives. To address the identified challenges, this thesis proposes a model that can guide policymakers and fund managers in designing SWFs based on macroeconomic indicators that are in line with a government's economic objectives, such as creating diversified, stable, and sustainable economic development. The model provides a valuable roadmap that will be influential in decision-making and will guide policymakers in determining the most appropriate SWF for their countries' economic conditions.

It is important to recognise that multiple SWF types can operate simultaneously within a country. Each SWF should be tailored to target specific macroeconomic conditions or indicators. This strategic diversity empowers governments to adeptly respond to economic changes and maintain flexibility in managing their SWFs. The conceptual model detailed in Figure 3-5 (SWF Establishment Process) in Chapter 3, outlines a stepwise process that policymakers and fund managers can adopt (1) to determine whether their countries require SWF investments, (2) to determine the objectives of the SWF if the fund is found to be necessary, (3) to establish the mandate of the fund, (4) to create the structural design of the SWF, and (5) to assess or audit the impact of the SWF investments. Subsequently, the conceptual model led to the creation of a roadmap that guides fund managers in answering the core questions to determine whether SWFs are appropriate investments for a given country. The new model captures unprecedented changes in economic conditions across the globe, such as pandemics and political upheavals. It should also prioritise dynamism by aligning with diverse goals in an economy following changes in macroeconomic indicators.

To develop a new conceptual model, it is vital to examine the proposed model and highlight areas in which further improvements may be introduced in future work. In the first step of the conceptual model, the economic condition of a country is assessed. Policymakers are advised to assess indicators such as GDP growth, the inflation rate, the balance of payments, and the status of the government budget (surplus or deficit). The essence of this phase is to enable a country's government to determine whether SWF investments are necessary to address its macroeconomic objectives.

The second phase involves establishing the objectives of the SWF, such as economic growth stabilisation, economic sector diversification, and government budget maintenance. The third phase involves the establishment of the SWF mandate and type of fund, which are determined in accordance with the objectives selected in Phase 2. For example, a stabilisation type of SWF is recommended for facilitating the economic growth stabilisation. The fourth phase involves the structural design of the fund, in which capital is allocated and governance strategies are outlined. The outcomes of this phase include an outline of portfolio management approaches and withdrawal policies for the SWF. It is important to recognise that multiple SWF types can operate simultaneously within a country. Each SWF should be tailored to target specific macroeconomic conditions or indicators. This strategic diversity empowers governments to adeptly respond to economic changes and maintain flexibility in managing their SWFs.

The final phase is to evaluate the impact of the SWFs, where KPIs such as financial target returns, employment created, and impact on GDP are elaborated. This phase is integral to identifying strategies

for governance and management of SWF portfolios. Future work should expand on the outlined strategies and identify further mechanisms that can be adopted to facilitate fund management.

One of the new objectives common to SWFs is increasing investment in sustainability through environmentally friendly green projects. Future work should expand on the outlined strategies and identify additional mechanisms that can be adopted to facilitate the management of these funds as they promote sustainability and environmentally responsible investments.

The model depicted in Figure 8-1 offers a graphical overview of the core phases outlined above, providing a concise representation of the systematic approach that will guide policymakers and fund managers in designing SWFs congruent with macroeconomic objectives.

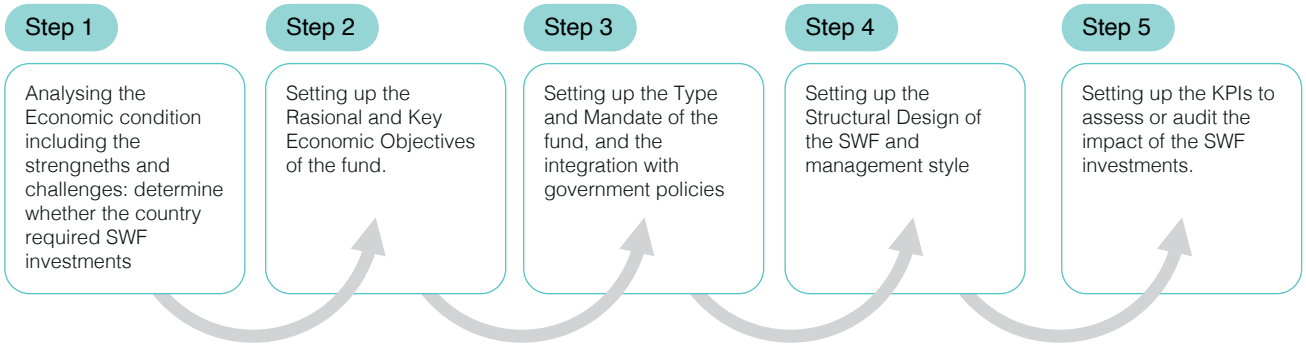


Figure 8-1: Steps Towards a New Model
Source: DPhil Candidate (2023)

This figure depicts the steps adhered to in developing a SWF model, namely, the analysis of the economic conditions, the establishment of the key macroeconomic objectives of the fund, the type and mandate of the fund, the structural design of the SWF, and the KPIs used for assessing or auditing the SWF's impact. To further understand these steps, Figure 8-2 provides a perspective that parallels the conceptual framework depicted in Figure 3.6, establishing a direct linkage between the five phases of the new model and the formulation of the country's strategic plan.

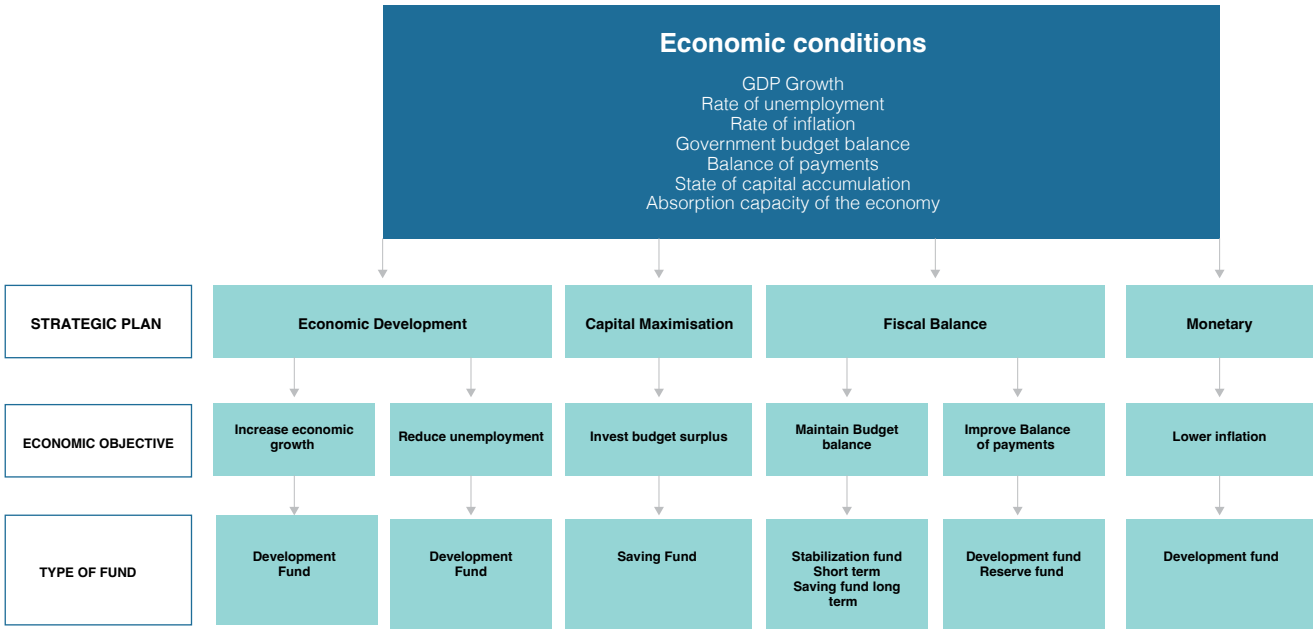


Figure 8-2: Strategic Sovereign Wealth Fund Implementation Model
Source: DPhil Candidate (2023)

Figure 8-2 illustrates the influence of economic conditions on the country's strategic plan, where the economic challenges determine the type of fund and its roles and objectives. Figures 8-1 and Figure 8-2 are linked, with the five steps in the first model reflected in the first three steps of the second model, namely, the analysis of the economic conditions, establishment of the fund's objective, and definition of the fund's mandate. In the analysis of the economic conditions, both models outline the main problems faced within the economy, such as high unemployment, high inflation, and slow GDP growth rates. The step involving the fund's objectives is linked to the selection of the type and roles of the fund in Figure 8-2. A development fund is suitable where economic diversification is required, whereas a stabilisation fund is adopted to facilitate fiscal stability and insulate the economy from shocks. Therefore, the outcome of the model in Figure 8-2 is the determination of the country's strategic plan and its alignment to the macroeconomic objectives within the country.

8.4 Directions for Future Research

Despite the critical findings identified in this thesis, several subjects were not fully developed and are recommended for further analysis in future studies. Firstly, future scholars may wish to test the developed model in different economic and geographical contexts to validate its ability to be adopted in a variety of scenarios. In this thesis, the conceptual model was validated based on findings from Kuwait, Singapore, and Qatar. However, future work could focus on validating the model based on data from other countries, such as Australia and countries in Europe and Africa. In such studies, the validation could focus on the interrelationship between the state as the SWF owner, the SWF as an organisation, and its management by selecting an appropriate fund type that influences the strategy and mandate. Similarly, future work could avoid examining internal governance within the SWF itself.

Secondly, a follow-up study is recommended to investigate the effectiveness of SWFs that are designed and implemented according to the proposed model. Such a study could examine the challenges associated with the alignment of macroeconomic indicators to macroeconomic objectives, as outlined by the model. Likewise, the benefits of adopting the model could be outlined, as they are critical for further validating and enhancing it. In addition, the assignment of weights to the various economic components of the institutional design of SWFs. As the institutional model will be adopted in different countries, assigning weights will be a separate important process to evaluate and to agree on the economic goals and the impact of each element in defining the macro-objectives. In future work, the discussion on the assignment of weights to the different elements should be concise and focused on outlining a procedure to them. Future scholars could focus on identifying principles and guidelines that can be adopted to manage SWFs. Notably, this thesis has highlighted the Santiago Principles, which concentrate on accountability, transparency, and governance. To further enhance SWF management, future scholars may wish to identify additional principles and guidelines that can be adopted in different political environments.

Thirdly, in the institutional design and strategic planning model for SWFs, a new theme on sustainability is integrated as an area that will be examined further in future research. As such, it will be important for future scholars to investigate the sustainability of SWF investments.

Finally, a further area where scholars should direct their focus is examining the influence of political dimensions on the current research area. The current model in the thesis is structured in a way to take the political aspects and choices as given and to probe that, once political incumbents have decided what they want to choose in terms of their political and economic objectives. Future scholars are recommended to undertake a comprehensive examination of the impact of political dimensions in SWFs and how they influence SWFs.

8.5 Conclusion

This investigation into the institutional design of SWFs in Kuwait, Singapore, and Qatar captures the growing role of these types of funds in the contexts of both the stability and the development of the countries they serve. In the 21st century, SWFs have become increasingly important in many developing countries that are seeking to diversify their economies, enhance investments in long-term growth, support economic development, underpin infrastructure, and preserve wealth for generations to come. This study has determined that the success of these funds is based on the alignment of the institutional design of a fund with the economic conditions of its home country. Despite the highlighted links between SWFs and macroeconomic objectives, the relationship between the design of SWFs and the home country's macroeconomic indicators is rarely investigated. These macroeconomic indicators – such as unemployment, GDP growth, inflation, balance of payments, and the economy's absorption capacity – have a deep impact on whether a country requires a SWF and what type of fund it should establish. The relationship between a SWF and its country's economy is important, because it can guide decision-makers regarding the SWF design in terms of type, mandate, operating model, and capital allocation. The result of failing to properly consider this relationship is that many countries have chosen an inappropriate type of mandate or operational model for their SWFs, leading to a vast reduction in the efficacy of the fund in achieving the country's macroeconomic objectives (Wil., 2016).

This thesis examined the SWFs of three countries – Kuwait, Singapore, and Qatar – and their alignment with their respective countries' individual macroeconomic objectives. The justification for selecting SWFs in two distinct geographical regions, the Middle East and Asia, was to provide a better understanding of the use of SWFs to address macroeconomic objectives. As a result, diverse insights were established regarding the way in which SWFs are designed, the macroeconomic indicators that influence their design, and the alignment of each SWF with its country's macroeconomic objectives. Additionally, the order of the analyses of the SWFs was intentional; it was based on the chronological establishment of each fund. The oldest SWF, the Kuwait fund, was established in 1953, while the Singapore funds were created in 1974 and 1981, and the Qatari funds were established in 1972 and 2005. This thesis identifies insights into the importance of SWFs over the years and the ways in which they have evolved to meet their countries' macroeconomic objectives. The thesis outcomes highlight how SWFs are employed to diversify the economy and reduce reliance on oil and natural gas (Kuwait, Qatar) as well as manage the government's reserves (Singapore).

In investigating these three cases, agent theory was used to conceptualise the institutional design of the SWFs. A fund can be better designed in the context of being a governmental agent that addresses the challenges and structural problems in the country's macroeconomic conditions. It can act on behalf of and in the best interest of a government to achieve its macroeconomic objectives. The DPhil candidate used qualitative methodology and close dialogue to collect data and official documentation to investigate the institutional design of SWFs. This methodology and the data collection tools provide a thorough analysis and a deep explanation of institutional design based on the analysis of macroeconomic conditions in the three cases. Additionally, many secondary academic literature sources were reviewed to define the research gap.

This study is structured into eight different chapters, with each covering distinct topics that contributed to the achievement of the overall aim of the thesis. Chapter 1 introduced the thesis and detailed the background of the study, the problem statement, and the thesis aim and rationale. A SWF is defined as a pool of assets owned and managed directly or indirectly by the government to achieve pre-established national objectives. Additionally, the history of SWFs from the 1950s through the 2010s and their evolution in different geographical regions were covered briefly. The problem statement was further identified, and the need to understand the most relevant macroeconomic indicators that influenced and informed the design of SWFs to achieve and realise the home country's economic development objectives was underscored.

In Chapter 2, diverse topics were examined to establish current knowledge in the thesis area. The topics included the changes in economic conditions and evolution of SWFs, governance frameworks in SWFs,

the integration of SWFs into government policies, and challenges in the design and implementation of SWFs. The four-quadrant model was used to further evaluate the literature and, subsequently, to highlight the existing gaps that were yet to be addressed. The evaluation revealed that roadmaps for designing SWFs were still non-existent alongside an overall lack of competence in the design of the SWFs. The highlighted knowledge gaps underscored the need for a model to guide the institutional design of SWFs and align them to macroeconomic objectives.

Chapter 3 presents the conceptual and theoretical framework adopted in the thesis. To develop the model, various theories were examined, including trade and portfolio theory, institutional theory, and agency theory. Existing SWF models were further reviewed and evaluated using the four-quadrant model, which allowed the DPhil candidate to identify the gaps in the existing models. Finally, the proposed conceptual model was presented and validated. The contributions of the model were highlighted as well; for example, the model outlined various elements that were required to ensure the sustainability of SWFs in the long term.

Chapter 4 details the thesis methodology guiding the collection and analysis of data. The thesis was guided by the interpretivism philosophy, which was justified based on its ontological and epistemological positions regarding knowledge development. In particular, the lived experiences of the individual case-study countries were documented. The thesis examined how SWFs were designed and used to enhance macroeconomic development by evaluating interactions between the actors (policymakers) in Kuwait, Singapore, and Qatar. Moreover, the qualitative method was employed, and data was collected by conducting semi-structured interviews and facilitating focus group discussions. The participants who provided the primary data included SWF managers, experts, officers, academics, and other stakeholders from SWF institutions. Additionally, secondary data was collected through the review of published documents from a number of sources, such as government agencies and international institutions. The qualitative data was analysed through a thematic analysis method, through which themes were derived and succinctly summarised.

Chapters 5, 6, and 7 presented the case-study findings from Kuwait, Singapore, and Qatar, respectively. In each of these chapters, secondary data was examined and compared against primary findings from the interviews and close dialogue discussions. In investigating the linkage between macroeconomic conditions and institutional SWF design, a five-step model is adopted. In the first phase, an evaluation of the economic conditions in Kuwait, Singapore, and Qatar revealed a need to supplement governmental budgets and diversify the economy through investments. In Kuwait and Qatar, a SWF was required to diversify the economy by investing surplus revenues from the sales of oil and natural gas. Additionally, this need for diversification and the efforts to reduce reliance on hydrocarbons were emphasised as factors justifying the establishment of SWFs. Therefore, relevant policymakers should assess the conditions in their country's macroeconomy and determine whether a SWF can enhance economic performance. Four important rationales were identified in this thesis: stabilisation of the economy, maintenance of the government budget and balance of payments, economic diversification, and preservation of wealth for retirees and members of future generations.

In the second phase, an analysis of the objectives of the established funds indicated that economic stability and the maintenance of government balance were critical and required support from SWF. Based on the thesis findings, savings funds were found to be effective for stabilising revenues in both Qatar and Kuwait. In other cases, policymakers may choose to select reserve funds, such as pension funds, to secure the livelihood of future generations. Therefore, as a clarification, economic stability and the maintenance of government balance are not the only mandates that SWFs can achieve, as the realisation of other objectives is also possible. In addition to the mandate, the stakeholders must determine how the SWFs will be managed or whether there will be institutional governance of the fund.

Significant progress has been achieved in the institutional design of SWFs, particularly regarding the mandate of the funds and the tools to govern them. Concerns regarding capital allocation, portfolio management, capital withdrawal, and governance have also been addressed. Emphasis has been placed on the need for governance procedures to enhance transparency, which ensures that managers of the

fund do not misappropriate the money for different purposes. The final phase involves an examination of the impact of the fund, where important KPIs are determined. Noteworthy KPIs include financial return targets, the impact on the country's GDP, the size of local investment and FDI, and the generated employment levels. Additionally, SWF performance should focus on whether the fund has an impact on the diversification of the economic sector as well as the acquisition of technology and intellectual property.

In summary, Kuwait's SWF has evolved in terms of objective, mandate, and type in response to challenges and changes in the country's macroeconomic conditions. The fund has succeeded in achieving long-term returns, maintaining a diversified portfolio, fulfilling macroeconomic objectives, enhancing development in the country, and providing alternatives to oil reserves that empower future generations in Kuwait to face uncertainties with higher levels of confidence. In Singapore, macroeconomic conditions have played a key role in the varying institutional designs of its funds. The country has established different types of SWFs – Temasek, GIC, and EDBI – in response to changes in its macroeconomic conditions. Qatar has also altered the institutional design of its fund to meet its macroeconomic conditions. It was upgraded from the state's reserve fund in 2000 to the SCEAI in 2003 and to QIA in 2005 as an independent investment fund. The varieties and differences in objectives, mandates, and types of established funds are based on macroeconomic conditions, challenges, and changes that occurred in after the funds' establishment. Thus, in this study, I have demonstrated that the institutional design of funds in the three cases varied and progressed based on the challenges that evolved in the individual countries' macroeconomic conditions.

Moreover, it is important to highlight that in developing Chapters 5, 6, and 7, references to case studies and interviews were made in which the findings were compared to relevant case studies and interviews to identify similarities and differences. As a result, important contributions were made to the literature following the synthesis of the primary findings and the secondary data. For example, the findings revealed that each SWF was aligned with the macroeconomic development objectives established in the individual countries.

Finally, macroeconomic conditions influence and define the institutional design of SWF. These conditions are reflected in defining the fund's objective, establishing its mandate, and determining its type. The institutional design of a fund is highly important for achieving economic development and stability in a country. It has a significant impact on stabilising government finances, diversifying the economy, promoting development, boosting economic growth, and building a reserve for generations to come. The linkage between a country's macroeconomic conditions and the institutional design of its SWF plays a critical role in achieving the government's priorities and macroeconomic objectives.

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Appendix A: Summary of Key Secondary Sources

Author	Title	Type	Country	Finding	Justification for Inclusion in the study
Bazoobandi (2013)	The political economy of the Gulf sovereign wealth funds: A case study of Iran, Kuwait, Saudi Arabia and the United Arab Emirates.	Book	Kuwait	Kuwait's oil revenue and investment income from foreign assets grew expansively in the 1970s, creating large account surpluses in the present day	The source elaborates on the political significance of sovereign wealth funds in Gulf countries including Kuwait which is a focus of the study. Important information useful in developing the Kuwait case study is detailed.
Sharma (2017)	Sovereign wealth funds investment in sustainable development sectors	Industry Report	Kuwait	Funds from Kuwait's SWF were held abroad temporarily until good investment opportunities were identified. As a result, the SWF would facilitate the diversification of the economy.	The reference provides important insights on the Kuwait case study and how it developed its SWF to ensure economic diversification.
Bahgat (2008)	Sovereign wealth funds: dangers and opportunities	Journal Article	Kuwait	The FGF, which holds from two-thirds to 80% of KIA's AUM, focuses on maximizing long-term risk-adjusted returns where its portfolio does not hold any domestic or regional investments, and Kuwait's economic structure rarely affects its investment strategy.	The reference details the structure of Kuwait's SWF, including the FGF and GRF. The reference also elaborates on how the KIA influences Kuwait's economic growth.
Braunstein (2009)	Sovereign wealth funds: the emergence of state owned financial power brokers	Journal Article	Kuwait	During the establishment of KIA in 1953, the SWF was mandated to enhance the economy's long-term sustainability and the SWF's objectives.	The reference focuses on Kuwait's SWF mandate in enhancing economic growth and ensuring sustainability of the economy.
Shehabi (2020)	Quantifying Dutch disease effects and assymetry in economic responses to oil price volatilty in Kuwait.	Industry Report	Kuwait	The public sector dominates the Kuwait economy, controlling the largest industries such as oil, gas, and refineries. The sector also funds many private sector activities and operates through public-private enterprises/partnerships	The reference elaborates on the impact of the Dutch disease in Kuwait where asymmetric economic responses to the volatility of oil prices are identified. The reference is important in highlighting the negative aspects demonstrated via the Dutch disease.

Krishnadas (2013)	Sovereign wealth funds as tools of national strategy: Singapore 's approach.	Industry Report	Singapore	The GIC now manages the Singaporean government's reserves alongside Temasek and the Monetary Authority of Singapore. The GIC is tasked with investing in all major asset classes to ensure that the government's foreign reserves are well-managed, ensuring a sustainable return rate over 20 years.	The reference elaborates on the importance of GIC SWF in Singapore's economic growth and its impact on the national strategy. The reference details how the GIC invests the government's foreign reserves.
Elson (2008)	The Sovereign Wealth Funds of Singapore	Journal Article	Singapore	Singapore has two SWFs: the Temasek and the GIC. The two funds reflect the macroeconomic fundamentals and the financial discipline that the Singaporean government has adopted over the years.	The reference elaborates on the influence of Singapore's SWFs and the macroeconomic objectives in the country.
GIC (2021)	Report on the management of the government's portfolio 2019/20	Official Website	Singapore	Analysis of the 2019–2020 annual performance of the GIC reveals that its portfolio investments range from developed and emerging market equities to nominal and inflation-linked bonds and real estate	The reference elaborates on the portfolio investments of the GIC SWF in both developed and emerging markets.
Temasek (2021a)	How we invest	Official Website	Singapore	Temasek invests in foreign companies that perform well in different geographical regions	The reference highlights the various areas where Temasek has invested in across diverse geographical regions.
Ministry of Finance (Singapore) (2022)	Singapore's fiscal policy	Official Website	Singapore	Fiscal policies in Singapore are directed toward creating conditions of macroeconomic stability, promoting social equity, and supporting economic growth	The reference elaborates on the impact of fiscal policies in Singapore on the economic growth of the country, social equity and macroeconomic stability.
Qatar Investment Authority (2022a)	Governance	Official Website	Qatar	In 2005, QIA was formally established by an Emiri Decision as an independent investment fund whose objective was to develop, invest, and manage the state's reserve funds and other assets assigned by the SCEAI.	The reference discusses the background of the QIA and its mandate when it was created in 2005. The role of the SCEAI in the creation of the QIA is also elaborated.

Braunstein (2022)	Capital choices: sectoral politics and the variation of sovereign wealth	Book	Qatar	QIA became a professional investment house mainly intended for developing, investing, and managing the state's reserve internationally and inheriting the local government's legacy portfolio	The reference discusses the mandate of the QIA and its professional objectives in managing the state's reserves.
QIA (2016)	QIA Review 2016	Official Website	Qatar	Despite QIA's focus on investing and managing the state's reserve internationally, the fund also inherited the local portfolio. This portfolio plays a significant role in domestic activities and contributes heavily to the GDP. For example, QIA is a major shareholder in the Qatar National Bank (QNB), the Qatar Electricity and Water Company, and Qatar Telecoms Ooredoo company, where it is a major stockholder.	The reference outlines the local portfolio managed by the QIA including the QNB, Qatar Electricity and Water Company. The reference also elaborates on the international portfolio of investments managed by the QIA.
Al-Hassan et al. (2013)	Sovereign Wealth Funds: Aspects of governance structures and investment management	Industry Report	Qatar	To date, QIA has intervened in three emergencies since its establishment: the 2008 financial crisis, the 2014 drop in oil and gas prices, and the 2017 Gulf Crisis.	The reference discusses the role of QIA in supporting different crises in the country. As a result, the importance of the fund as a last resort during crisis is highlighted.
Aguilar					
(2022)	Sovereign wealth funds take to the stage	Industry Report	Qatar	QIA was established in response to different macroeconomic factors, including accumulated fiscal reserves, the volatility of oil and gas prices, and the needs of the future generation	The reference elaborates on the underlying objectives that the QIA was required to fulfil in Qatar including ensuring sustainability for the future generations.