The Impact of Public Investment Fund on the Financial Performance of Listed Firms on Tadawul: Empirical Evidence from the Saudi Arabia Market

Jaizah Othman[a], Shams Fadhel Albuainain[b]

[a]Department of Accounting and Finance, Faculty of Business Management & Professional Studies, Management and Science University, Malaysia, [b]College of Business Administration, Dublin City University@Princess Nourah Bint Abdulrahman University, Riyadh, Kingdom of Saudi Arabia
Corresponding Author Email: jaizah_othman@msu.edu.my

Abstract
The Public Investment Fund (PIF) changed its strategy to align with the 2030 Vision of Saudi Arabia. Therefore, this study was conducted to investigate the impact of PIF investment on the performance of the target companies. At the end of the study, the reader is provided with an overview to characterize the impact of PIF on businesses against the global backdrop. Furthermore, a quantitative research design was used to examine the relationship between the PIF investments and the impact on the performance of the target firms listed on Tadawul. This research conducted three multiple regression models to measure the relation between the performance of the investee firms and the PIF investments. The results show that the PIF investments positively affect target firms but do not significantly affect firm performance in the long run. Furthermore, the study found that the transparency of the PIF is very low; it does not disclose its strategy or its future investments.
Keywords: Sovereign Wealth Funds, Public Investment Fund, PIF Investments, Targeted Firms, Tadawul

Introduction
        Ninety per cent of Saudi Arabia's budget is entirely dependent on oil revenues. From an international perspective, however, global energy demand is related to the economic growth rate of Saudi Arabia and the world (Salameh, 2016). These factors demonstrate that changes in oil prices not only affect the Saudi economy, but also affect the global economy. It is important to remember that oil prices are partly determined to balance the supply, demand, and fears of future shifts. Since Saudi Arabia's discovery of oil in 1938, the country's revenues have been largely dependent on oil exports (Salameh, 2016). Oil and gas are natural

resources that could be temporary for Saudi Arabia, which is why Saudi Arabia plans to diversify its sources of income by diversifying its sources of economy. The concept of diversifying the Saudi economy resources is the main objective of Vision 2030.

In 2016, the Kingdom's Crown Prince, Mohammed bin Salman, launched Vision 2030 for Saudi Arabia. The main objective of this vision is to diversify Saudi Arabia's economy and reduce dependence on the oil sector. In other words, it is liberation from oil (Vision 2030, 2016). The Vision also includes several key programs to achieve its goals. The main sectors that will be developed are the Renewable Energy Market, the Mining Sector, Tourism, Transformative Industries, Defense Industries, and the Public Investment Fund. The Public Investment Fund is the main aspect of the Vision's structure. The Saudi government aspires to develop the fund so that it becomes the state's main financier instead of oil, with hopes that it will become one of the world's largest sovereign wealth funds (SWF). Consequently, this paper focuses on the Public Investment Fund of Vision 2030 (Vision 2030, 2016).

Since the main objective of the Vision is to restructure the Saudi economy, the plan is to make investment an essential part of the Saudi economy (Vision 2030, 2016). Saudi Arabia is the largest oil exporter in the world and its oil exports have reached 1/10 of the world's oil production. Saudi also has large reserves of oil (about 2.6 million barrels) and is considered the fourth-largest natural gas reserve in the world (Yang and Zhang, 2012). However, while Saudi Arabia is the largest oil exporter, it is not the strongest country in terms of sovereign wealth funds and economic development in the world or even in the Gulf Cooperation Council (GCC) countries.

Table 1 presents the GCC countries' SWF domestic holdings. In 2015, the Saudi Public Investment Fund (PIF) framework was renewed and assigned more inclusive authority by linking it to the development of Saudi economic affairs (PIF, 2019).

Table 1
The Holdings in Domestic Markets of the GCC Countries SWFs

Country	SWFs Amount	Number of holding firms	Worldwide investment ($ billions)	Domestic investment ($ billions)	Proportion in GCC capital market
Saudi Arabia	5	27	101	166,713	57
UAE	7	27	102	61,002	21
Qatar	6	9	40	28,744	10
Kuwait	5	33	180	25,054	9
Oman	9	21	128	5,998	2
Bahrain	4	14	43	5,045	2
Total	36	131	594	292,557	100
(*Source:* Yang and Zhang, 2012)					

Problem Statement

As explained earlier, the Public Investment Fund (PIF) is the key element in the Vision 2030 structure for transforming Saudi Arabia from one source of income (oil) to diverse sources of income. The Public Investment Fund will be the main financier of the state budget instead of oil. However, what the fundamental role of the Public Investment Fund is in achieving economic diversification (Vision 2030) remains a question. Furthermore, Saudi Arabia aspires through Vision 2030 to become the largest sovereign wealth fund in the world. Until 2015, it played a safe role, but there was no dedicated sovereign fund for the oil revenues in Saudi Arabia. SAMA uses oil revenue to manage foreign assets and investments in US Treasury bills (Diwan, 2009). As the strategy of the Public Investment Fund has changed in 2015, it is expected to affect the firms in which the Public Investment Fund invests. The problem lies in how the Public Investment Fund will impact these firms. While Norway currently has the largest SWF (viz. Norway's Government Pension Fund), Saudi Arabia's PIF is ambitiously vying for this position and aiming to become the largest SWF.

This study aims to examine the impact of PIF investments on the performance of selected firms that invest through the PIF and are listed on Tadawul. Specifically, the main objectives are as follows:

1. To analyze the impact of PIF on the Return of Assets (ROA) of the listed firms on Tadawul
2. To analyze the impact of PIF on the Return of Investment (ROI) of the listed firms on Tadawul.
3. To analyze the impact of PIF on the Return on Equity (ROE) of the listed firms on Tadawul

The performance of 17 firms listed on Tadawul will be analyzed in order to measure whether the effect of PIF investing was positive or negative. The main firms that invest by means of the PIF will be mentioned in this paper along with the Fund's most important transactions in 2019. At the end of this paper, the reader will have an overview and characterize the impact of the new PIF strategy on firms considering the global backdrop. In line with the PIF's ambitions to be among the largest SWFs in the world, the literature review of the study will examine whether or not the PIF can achieve a place among the top SWFs. The policy of the Public Investment Fund was changed in 2015 to comply with Vision 2030, as was announced later in 2016. Because this is a transformation of the Public Investment Fund of Saudi Arabia, this change has not been covered previously in Saudi Arabia, and other researchers have not studied the firms invested in by the Public Investment Fund.

This study is significant because it provides information about unknown outcomes to the changes in the PIF policies. It also helps us realize whether this transformation (of the Public Investment Fund with Vision 2030) has positively or negatively affected the firms that the PIF has invested. Therefore, this study can be considered a reference in this field.

The remainder of this paper is organized as follows: the second section discusses the literature review, followed by the empirical models and the data. The fourth section describes the regression analysis and the last section covers the conclusion, including the policy implications derived.

Literature Review

Sovereign Wealth Funds

Sovereign wealth funds (SWFs) are a global phenomenon. They are basically government-owned assets in a foreign country's currency (primarily U.S. dollars). They are used for generating commercial gain by investing in national and international long-term investments. Most of these funds have been established to stabilize commodity prices (or oil prices) and avoid sharp increases in oil prices. However, these stabilization funds have evolved to "wealth preservation" due to the ever-increasing price of oil (Jen, 2007; Johnson, 2007). Sovereign Wealth Funds generally reflect the government's reserves and aim to provide a source of wealth for future generations (Kern, 2007).

In most cases, these reserves are created by government investments. SWFs are funded by oil revenue, gas, or other resources, such as copper or other minerals (Kern, 2007). In general, there is no universally agreed definition for Sovereign Wealth Funds. The US Treasury has defined SWFs as a vehicle of government investment that is financed by foreign currency assets. These assets are managed separately from the official reserves of monetary authorities (the Central Bank and reserve-related functions of the Finance Ministry) (Weiss, 2008).

SWFs are basically divided into two categories according to their sources of wealth. The first category has two sources of wealth funds. The first source is from natural resources, such as exported oil and gas. Funds that build their assets through commodities or government taxes are also included here. The second source of funds is from financing assets; this is usually done by converting the assets from foreign exchange reserves, such as China (Balin, 2008). The second category includes non-oil exporters, such as China and Japan. The size of their SWFs depends entirely on the policy of the exchange rate. However, the importance of Sovereign Wealth Funds may diminish in the future if oil prices fall (Caner & Grennes, 2010).

According to the IMF, there are five different types of SWFs, which are broadly classified according to their objectives. The first type of reserve fund focuses on the return on investment of reserves and the Fund's interest in foreign investments, e.g., Dubai's Investment Corporation. The second type is the pension-reserve fund. The purpose of this fund is to cover the responsibility of the aging population by building assets. The main reason behind these funds is to guarantee basic solidarity pensions for those who could not provide enough to retire. Norway started the Norway Government Pension Fund Global (GPFG) in 1990 for this reason, and continues to this day (Weiss, 2008). On the same lines there is the oil stabilization fund of Russia, which has partly transformed into a future generation fund (Beck & Fidora, 2008). The third type of fund is the fiscal stabilization funds. These funds are set up to stabilize commodity prices. Fourth is saving funds, which are formed to save for future generations by converting nonrenewable resources into fiscal assets. They focus on intergenerational equality as much as possible. The last (fifth) fund is the Strategic development fund. These funds are set up for developmental purposes and aid in establishing the economy and society (Mulder et al., 2009).

Most resource-rich economies have established sovereign wealth funds to stabilize government revenue from oil and commodity price fluctuations (Beck and Fidora, 2008).

Furthermore, the first SWF was established by Kuwait in 1953 to stabilize the oil revenue. The Kuwait fund then grew to be large and significant among global sovereign funds. After that, a government entity was created for the management and handling of the fund. It was named the Kuwait Investment Authority (Alhashel, 2015). The Kuwait Investment Authority (KIA) accounted for more than two percent of the total global equity and bond market as of 2009 (Gieve, 2009). However, the fund's size and origins have changed since inception, as is the purpose. Having started at $500 billion, the fund increased over time and was reported to be close to $3trillion in 2007 (Jen, 2007). In 2014, these funds were estimated to be $6.65trillion, while belonging to 71 different SWF entities (Alhashel, 2015). In 2018, Reuters reported that the Kuwaiti Fund had increased further to $7.73trillion due to the increase in global equity markets (Milhench, 2018). These funds are growing by the year and are expected to increase in the future.

Nowadays, various countries have their SWFs. The main purpose of setting up these funds was to stabilize export and government revenues, save for future generations, avoid the lack of resources in the future, and manage the country's foreign reserves. The five largest groups that established SWFs include, but are not limited to, oil-rich countries, such as the GCC countries, Norway, Brunei, Malaysia, and Russia. (Urban, 2011). The Government Pension Fund Global of Norway (GPFG) is currently the largest SWF globally, followed by China (Jen, 2007).

After this SWF group, a new group of countries established their SWFs with other commodities like diamonds, copper, natural gas, and other minerals. Another group of funds was established based on foreign reserves accumulating from large export revenues; the funds are mainly from Korean, Asian, and Chinese exporters (Bortolotti *et al*., 2015). Among these groups of SWFs, three countries are quite prominent and important: China, Japan, and Russia. The Chinese SWF was set up at $200 billion and is expected to grow at $200-300 billion per year. The Russian fund was initially set up to be a small fund. However, it grew and became the world's third-largest reserve with $400 billion in 2007 (Jen, 2007).

Policy of the Sovereign Wealth Funds
SWFs are gaining interest among countries because they provide better yields than government-generated bonds or Sovereign bonds. Governments wishing to set up SWFs have to consult with all the actors in their financial realm. These actors include finance ministries; state-owned enterprises; regulatory authorities, commissions and boards, and developmental banks and commercial banks. All of these entities exert different sorts of influences over the state, the shareholders, the stakeholders, and the general public. The way that a fund is handled depends on the country of origin. For example, a country like Norway has to disclose information about the funds to the general public because the fund is set up according to Norway's legislature; an independent board of specialists represents it. Australia's New South Wales set-up is guarded against the financial entities stated above to protect the funds from any potential political pressure. Some countries do not disclose information about the assets under management and only report to their rulers. Such investors include the Abu Dhabi Investment Authority (ADIA), and the Government Investment Bank (GIB) of Singapore (Bortolotti et al., 2015). Other funds lie between the two extremes and are regulated by their government according to their set procedures.

SWFs rarely publicize their assets, or in-fact, any information regarding their objectives or missions (apart from Norway's GPFG). Their founders do not explicitly explain their policies and criteria. The assets and the returns of SWFs impact the economy of the country as well as its fiscal policy, monetary policy, balance of payments, and the overall balance sheet. Therefore, SWFs need to resonate with the policy of the country. The policies and rules for each type of fund are different according to the purpose it serves. For example: Saving Funds usually receive excess revenues from the government; the policy is to spend that wealth on future generations. These funds are a part of the budget due to the certainty of their use as a sustainable measure (Mulder et al., 2009).

As Sovereign Wealth Funds are state-owned entities, they are formed and managed differently. They may seek non-financial purposes, such as developing the economy, national strategic interests, and others. The objectives and behaviour of these funds are often not known due to lack of transparency (Kotter and Lel 2009). Hence, Kotter and Lel (2011) noted that there is a relationship between the degree of transparency and the investment objectives of Sovereign Wealth Funds. According to the Sovereign Wealth Fund Institute (SWFI), these funds differ from each other in terms of the reason they are created, but are consistent with common objectives, such as stabilizing the state budget and the economy from excessive fluctuations in revenues and exports; financing social and economic development; political strategy; increasing savings for future generations; and diversification of exports of non-renewable goods.

Size and Transparency of the Sovereign Wealth Funds
The lack of transparency is a major concern with the Sovereign Wealth Funds, as most of the SWFs do not disclose the size of their assets or holdings. They also do not announce their investment objectives, policies, activities, or performance to the general public (Jen, 2007; Gangi et al., 2018). As a result, stakeholders are unsure if the foreign investment in their homeland will ultimately harm them or save them. The individual figures and the total asset size managed by these state-owned funds cannot be accurately determined. It is challenging to analyze the performance of most of the SWFs because the available data are limited. However, the market estimates that, in 2007, the approximate value of assets managed under SWFs amounted to more than US$ 3.1 trillion (Kern, 2007). However, some funds do not provide accurate data about their managed assets. The Abu Dhabi Investment Authority (ADIA) was the largest fund among the SWFs in 2007 and was estimated to be between $500-$900 billion (Weiss, 2008).

The data limitation of SWFs has prevented a comprehensive statistical analysis involving all sovereign funds. In contrast, the transparency and accurate data of Norway's Government Pension Fund Global (GPFG) allow most of the literature review to analyze the dynamics of the investment policy in the Norway fund. Currently, the GPFG is the largest fund in the world, and it is a notable exception in terms of its transparency among sovereign funds (Caner & Grennes, 2010). As mentioned previously, the Saudi Public Investment Fund aims to become the largest fund in the world, but, at this stage, it lacks transparency compared to the GPFG. Table 2 shows the difference in transparency between the GPFG and the Public Investment Fund.

Table 2
Ten largest funds of SWFs in Feb 2019 , (Value $Billions)

Country	Fund Name	2019Assets (US$ billion)	Inception Year	ource of unds	Transparency Index
Norway	Government Pension Fund - Global	1074.60	1996	Oil	10
China	China Investment Corporation	941.4	2007	Other	8
UAE	ADIA	697	1976	Oil	6
Kuwait	Reserve Fund for Future Generation	592	1953	Oil	8
China – Hong Kong	Hong Kong Monetary Authority Investment Portfolio	522.6	1993	Other	8
Saudi Arabia	SAMA Foreign Holding	515.6	1952	Oil	4
China	SAFE Investment Company	441	1997	Other	4
Singapore	Government of Singapore Investment Corp.	390	1981	Other	6
Singapore	Temasek Holdings	375	1974	Other	10
Saudi Arabia	Public Investment Fund	360	2008	Oil	5
Qatar	Qatar Investment Authority	320	2005	Oil, Gas	5
Total of SWFs		$8,144.71			
Total oil & gas-related funds		$4,332.43			
Total non-oil related funds		$3,712.28			

Source: Sovereign Wealth Fund Institute, 2019

The size and number of SWFs have increased over time, reaching more than $6 trillion of state-owned investment funds by 2015 (Benedictow and Boug, 2017). According to recent statistics, the SWF investment value (in financial and industrial firms) reached US$ 7.46 trillion in February 2018. In addition, the assets managed by private equity firms amounted to about US$3 trillion in 2017 (Gangi et al., 2018). Figure 1 below shows the ten largest funds among the SWFs, and the assets under their management.
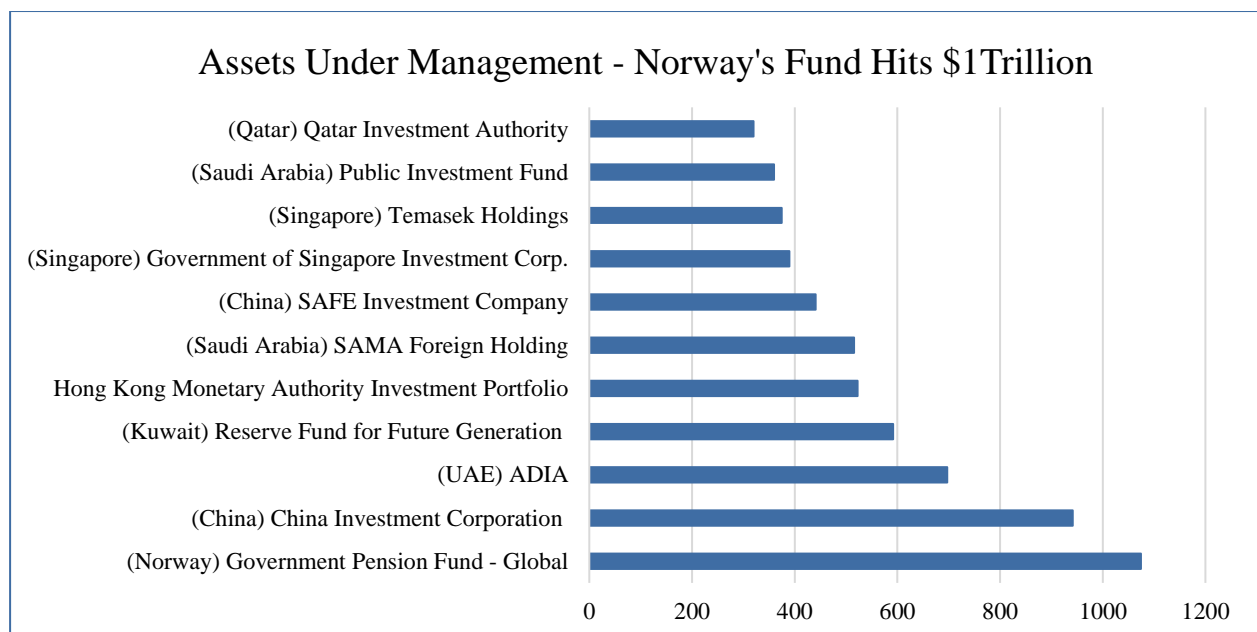
Assets Under Management - Norway's Fund Hits $1Trillion

Figure 1. Largest SWFs by assets under management (US$ billion)
Source: Sovereign Wealth Fund Institute, 2019

Norway Government Pension Fund Global (GPFG)

As Saudi Arabia aims to be the world's largest sovereign fund, the existing largest fund will be analyzed. According to the Socioeconomic Index of international organizations (such as the United Nations, the World Bank, and the Organization for Economic Co-operation and Development – OECD), Norway is considered to be one of the most developed countries in the world. Norway's Government Pension Fund Global (GPFG) currently has the most shares among the various SWFs. The GPFG, which consists of oil revenues and its financial performance, has become a success story after the failure of a previous fund (the National Insurance Fund NIF), which was established in 1960. The NIF was initially designed to enhance sustainable growth in the Norway economy. However, many authors attribute the failure of the National Insurance Fund to the fact that it was in the middle of the Keynesian policies, and, thus, the fund did not receive enough deposits (Silva & Costa, 2019).

In 1969, however, oil was discovered in the North Sea. Soon after that, Norway's oil production began exploiting this naturally occurring resource and revenues were generated. As a reaction, the government of Norway passed a law that dealt with the exploitation of oil production revenues. This law was termed the Government petroleum fund law and has proven to be a long-term strategic tool for planning revenues (Eriksen, 2006; Skancke, 2003). The Norwegian Sovereign Wealth Fund (Petroleum Fund of Norway) was established in 1990 to invest surplus oil production revenues in long-term investments (Caner & Grennes, 2010). Initially, starting as a fiscal policy tool, the fund grew to become extremely large in its value and one of the most important SWFs globally. In May 1996, when excess revenue was generated, the first capital from the Norwegian government was transferred to the fund (Eriksen, 2006; Nbim.no, 2019).

In 1998, Norges Bank Investment Management (NBIM) was established as a separate agency within the Central Bank of Norway (Norges Bank) to become responsible for investing the Norwegian Fund's assets (Caner & Grennes, 2010). However, the fund was not legalized

as a separate entity and was managed by the Norwegian Central Bank. The first authorized transfer was in 1998 and was done by benchmarking 40 percent of equities as central bank currency reserves. Later, five more countries were added to the investing equity benchmark, and, by 2002, non-government bonds were added as well (Backer, 2009). The equity share increased gradually, reaching 60 percent in 2007. In the second quarter of 2008, it reached 50 percent (Caner & Grennes, 2010).

In 2006, the Norwegian fund was changed from its initial name (Norway petroleum fund) to become the Government Pension Fund. It comprised two separate entities, the Government Pension Fund-Global (GPFG) and the Government Pension Fund-Norway. Unlike the name suggests, it is not a pension fund; instead, it utilizes the budget surplus generated by the petroleum sector and invests it in global and national markets (Chesterman, 2007). The fund has grown since its initiation, and, nowadays, it has over $1trillion in assets and holds up to 1.4 per cent of the global stock share. The fund has surpassed the Chinese CIC and Abu Dhabi's ADIA and has become the world's largest SWF (Sovereign Wealth Fund Institute, 2019). In addition, Norway holds various non-governmental bonds and real estate portfolios besides the assets that it holds.

Norway Investment Strategy
Initially, investment in equities was at 40 per cent before being raised to 60 per cent of the stock in 2009. It was further increased to 70 per cent in 2014, after the suggestion of the governor of the Central Bank (Mohsin, 2014). Then, during 2010, the Norwegian government decided to invest 5% in real estate stocks. Norway's investments have broadly been carried out by publicly traded securities. Asset allocation is rigorously followed as per the portfolio policy (developed by the finance ministry), allowing for low tracking errors (Chambers, Dimson & Ilmanen, 2012). As they also invest in foreign currency, GPFG is the largest stockholder in Europe, holding 2.33 per cent of European stocks.

Their strategy for investment has two major factors (Chambers, Dimson & Ilmanen, 2012). Firstly, a long-term strategy is articulated as per the benchmark portfolio's asset mix, and secondly, the funds' risk tolerance is based upon the allocation towards each asset. The NBIM actively manages the funds to gain returns in outperforming the benchmarks.

Saudi Sovereign Wealth Funds (PIF)
As most of the literature review mentioned, it is difficult to understand and analyze SWFs, and some funds are challenging to analyze because they combine the functions of SWF and the central banks into one foundation. Norway provides clarity by setting up a separate fund within the central bank (Norges Bank) (Caner & Grennes, 2010). On the other hand, most of the Saudi sovereign fund assets were managed by the central bank (SAMA) for a long time. After Vision 2030, however, the Saudi fund split from SAMA, and a clear goal was set for the Fund (PIF, 2019).

Why Saudi Arabia had few SWFs
As mentioned earlier, when oil was discovered in Saudi Arabia 80 years ago, the Saudi economy became heavily reliant on it. As a result, Saudi Arabia suffered extensively after the first Gulf War, and it moved from a surplus country to a debtor. It faced financial difficulties, and its GDP debts reached 100%. In 1998, the Kingdom of Saudi Arabia passed this crisis by

borrowing from Sheikh Zayed, the ruler of Abu Dhabi. In 2003, oil prices rose, which helped Saudi Arabia come out of its fiscal deficit (Diwan, 2009; Yang & Zhang, 2012). At that time, Saudi Arabia did not have an effective sovereign fund; it was a conservative investor in SWFs.

Some academics and critics believe that the reason behind the conservative attitude is the financial crisis during the first Gulf War. Previously, foreign assets and reserves of oil revenues were managed by the Saudi Central Bank (SAMA) and invested heavily in US Treasury bills (Diwan, 2009). When the Saudi Public Investment Fund was established in 1971, it aimed to finance projects of strategic value for the Saudi economy. In 2015, the Saudi Council of Economic and Development Affairs was established, and the PIF was transferred from the Ministry of Finance to the Council for Economic Affairs and Development, which is now led by Crown Prince Mohammed bin Salman (PIF, 2019). SWFs have generally lacked transparency, but since the Saudi Sovereign Fund has changed its strategy and is keen for greater transparency, this may move other sovereign funds towards transparency (Diwan, 2009).

Differences between PIF and GPFG
We find many differences when comparing the Saudi Public Investment Fund strategy to the Norwegian Government Pension Fund Global. Although both funds rely on oil as a source of wealth, which indicates that both funds use natural resources, the GPFG aims to enhance government savings to promote sustainability. In addition, it focuses on providing resources for future generations. In contrast, the PIF seeks to invest actively to provide the maximum sustainable return and the development and diversification of the Saudi economy. Further, there is a considerable difference in the transparency between the PIF and the GPFG. While the Norway fund scores 10 in transparency, the Saudi fund scores 5. The Ministry of Finance recommends the decisions made by the Norway Fund, and the recommendations are approved by Parliament. This is not the case with the Saudi PIF, which means that the legal structure of the Norway fund is the main difference between the PIF and the GPFG (PIF, 2019; Silva & Costa, 2019).

The Impact of Sovereign Wealth Funds on Target Firms
Several academics have studied the impact of SWFs on target firms. Using a sample of 417 investments in 326 unique firms, Kotter and Lel (2011) examined sovereign wealth fund investments on targeted firms from 1980 to 2009. They found that SWF investments had achieved positive initial returns. According to Gangi et al (2018), the findings of Kotter and Lel (2011) demonstrate that SWFs are passive shareholders and have a limited impact on investee firms. In contrast, Dewenter et al (2010); Fernandes (2014) demonstrated a positive relationship between SWF investments and the performance of targeted firms. Critics have claimed that investment decisions in sovereign wealth funds are politically motivated. Fernandes (2014) contradicts these arguments by studying the impact of SWF investments on the performance and value of the firms that invest in SWFs. He used a large sample of SWF investments in more than 8,000 firms across 58 countries from 2002 to 2007. Fernandes (2014) found significant improvements in the operating performance of the targeted firms by measuring the returns on equity (ROE), return on assets (ROA), and operating returns.

The share price of target firms can be affected by SWF investments in three different directions. The first direction or outcome is that the target firm's share price follows the index

movements of the global market in the days immediately after the announcement. This indicates that SWF transactions do not influence the market. This outcome is likely to occur if the sovereign wealth fund takes a small stake in a firm. The second outcome is that the share price of the target firm outperforms the market index in the days following the announcement directly. The announcement of this outcome has a short-term effect and occurs when the fund takes a large share. The last outcome is that the announcement influences the behavior of the target firm's share price. In this situation, the market anticipates that the SWF has a significant authority on the management of the firm and its profitability. The SWF may be affected by the long-term impact in both cases, whether positive or negative. The long-term returns of the firm improve if the fund is a long-term shareholder. Otherwise, if the SWF seeks to achieve strategic objectives that conflict with maximizing the firm's profitability (which is as a state-owned entity), there will be a negative effect (Raymond, 2008).

Bertoni and Lugo (2014) have mentioned that target firms are significantly affected by SWF investments, and in a positive way, but only in the short term. Regardless of their short-term impact, Kotter and Lel (2009) found that SWF investments do not influence the profitability of the target firms, their growth, and governance in the following three years of their investments. Concerning the long-term impact of sovereign wealth funds, Knill et al. (2012) argue that targeted firms do not benefit from SWFs compared to other institutions. Furthermore, Dewenter et al. (2010) indicate that the returns on SWF investments in the long term are slightly negative and unnatural. The abnormal negative returns occur in the oil-producing countries because of their investments in non-financial targets (Knill et al., 2012). These findings are strongly consistent with Chhaochharia and Laeven (2008), who also documented the poor long-term performance of the SWFs' target firms. Thus, if sovereign wealth funds have strategic goals that are inconsistent with maximizing corporate profits, they may negatively affect firms.

Future of Saudi Sovereign Wealth Funds: Initial Public Offering (IPO) of Saudi Aramco
In February 2019, the assets under the management of the Public Investment Fund were estimated at USD360 billion (Sovereign Wealth Fund Institute, 2019). The PIF plans to reach US$2 trillion in 2030, and it seems that it will reach US$400 billion in 2020, becoming the world's largest sovereign wealth fund (Vision 2030, 2016; the national, 2018). However, what the strategy is for the Public Investment Fund to achieve US$2 trillion remains a question. In March 2019, Saudi Aramco acquired a 70% majority stake in Saudi Basic Industries Corporation (SABIC) from the Public Investment Fund of Saudi Arabia. This acquisition amounted to USD69.1 billion and will raise the capital of the fund (saudiaramco, 2019). Saudi Arabia planned for 5% IPO of Saudi Aramco in 2016 with the launch of the Vision 2030. Saudi Aramco's IPO is one of the largest in the world, with an initial offering of at least US$2 trillion. The 5% of the IPO of Saudi Aramco will be invested in cash in the PIF, while 95% of it would be assets under the management of PIF. Therefore, the fund's assets could reach US$2 trillion in 2030 (Bloomberg, 2019).

Methodology
The quantitative research design was used to conduct this study to examine the relationship between the PIF investments and the impact performance on the target firms. In conducting this study, the researcher relied on secondary data collected through the financial statements of the target firms listed on Tadawul (The Saudi Stock Exchange). The financial

statements are reliable data that can provide an overview of the performance of the target firms. Therefore, a quantitative design was used to collect the data of the target firms and analyze them. The research question (RQ) that this study intends to cover is as follows:

RQ: Do PIF investments impact the firms positively or negatively by analyzing the performance of listed firms.

The Return on Assets (ROA), Return on Equity (ROE), and Return on Investment (ROI), Leverage, Sales Growth, Log of Total Assets of the target firms, and PIF were calculated to achieve the study objectives. Based on these variables and the empirical evidence review, the conceptual framework is as follows: the dependent variables are, ROA, ROE, and ROI, while Leverage, Sales Growth, Log of Total Assets, and PIF, are the independent variables.

The data for this study were collected through public sources. Firstly, the annual financial statements of the target firms between 2010 to 2018 (the study period) were gathered manually from the Tadawul official website (https://www.tadawul.com.sa). Secondly, the Thomson Reuters database was used to collect the data of PIF's domestic and foreign investments corresponding to 25 unique target firms that invested by means of PIF. After excluding banks from the list, and the firms not listed on Tadawul, the final sample of the current research comprised 17 unique firms, which were considered as domestic investments. These firms were categorized into financial firms (Saudi banks), the petrochemical sector, and other sectors. Table 3 provides the adopted investee firm classifications and summary statistics of PIF ownership for the last trading day, according to Tadawul.

Table 3

The Investee Firms

Firm Name	Total ownership on last trading day (%)	Value Held (US $)
Financial Sector – Not included in the Study		
1. Riyad Bank	21.75%	3,942,600,750
2. Samba Financial Group	22.91%	4,435,146,900
3. Alinma Bank	10.00%	965,550,000
4. Alahli Takaful Co.	44.29%	18,246,505,620
Petrochemical Industries		
5. Saudi Basic Industries Corp. (SABIC)	70.00%	68,764,290,000
6. National Gas and Industrialization Co.	10.91%	64,583,654.25
Materials		
7. Southern Province Cement Co. (SPCC)	37.43%	581,981,852.2
8. Eastern Province Cement Co.	10.00%	56,642,180
9. Yanbu Cement Co. (YCC)	10.00%	N/A
10. Qassim Cement Co. (QACCO)	23.35%	204,534,792
Others		
11. Saudi Real Estate Co.	64.57%	526,457,289.6
12. Saudi Public Transport Co.	15.72%	76,605,525

13. Dur Hospitality Co.	16.62%	86,242,842
14. Saudi Telecom Co. (STC)	70.00%	37,480,660,000
15. Saudi Arabian Mining Co. (Maaden)	65.43%	11,212,598,637.58
16. National Shipping Company of Saudi Arabia (Bahri)	22.55%	751,719,189.38
17. National Agricultural Development Co. (NADEC)	20.00%	126,929,726
18. Saudi Fisheries Co. (SFICO)	39.99%	71,911,432.45
19. Saudi Ceramic Co.	5.40%	17,538,120
20. Almarai Co.	16.32%	2,349,949,440
21. Saudi Electricity Co.	74.30%	N/A
Foreign Investments – Not included in the Study		
22. Tesla Inc	4.79%	2,754,612,224
23. Clariant AG	24.99%	1,782,696,374.22
24. Hapag Lloyd AG	10.20%	556,903,205.96
25. Zain Bahrain	8.5%	7,144,352

Source: Tadawul.com.sa, 2019; Thomson Reuters Eikon, 2019

The essential variable of this study is the *(PIF)*, the set value is the outstanding percentage for all the targeted firms from 2010 to 2018. The firm's performance is measured through *(ROA)* by dividing the net income on total assets, *(ROI)* by dividing the net income on PIF Investment, and *(ROE)* net income divided by the equity. Then, to measure the growth opportunities of the firms through *(sales growth)* by using two years sales growth among the study period between 2010 and 2018. After that, the financial risks are measured through *(leverage)* by calculating the total debt to shareholders equity. Further, the *(current ratio)* is calculated to measure the firms' risk of financial distress by dividing current assets by current liabilities. A natural logarithm of the total assets *(Log Total-Assets),* is calculated to measure the size. These data are collected to conduct descriptive analysis using SPSS software, which is used for an interactive or batched statistical analysis. The SPSS is used to determine the correlation, means, median, and standard deviation. The statistical analysis is undertaken between all the variables between 2010 and 2018. Further, three equations for the dependent variables are regressed with the independent variables to answer the objective of this study.

The multivariate analysis contains more than one variable and is a set of techniques used for the analysis of data sets. This technique is more valuable when it works with correlated variables. Further, an empirical method is provided by this technique for information extraction, regression, or classification (Grimnes & Martinsen, 2015). Therefore, a linear regression analysis fully explains whether each independent variable (Xs) influences the dependent variables (Y). Three dependent variables are used to measure this influence in specific models. The estimated regression models are as follows:

Model 1
$$ROA = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$$

Model 2

$$ROI = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$$

Model 3

$$ROE = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$$

Where:
β_0 = intercept or the constant
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Coefficients of the independent variables or the slopes.

Results and Discussion

In order to examine whether the effect of the PIF investments on the listed firms in Saudi Arabia, the three linear regression models are used to determine the relationship between the variables. Multiple linear regression is employed using the same independent variables to test the impact of PIF investment on the listed firms' performance, where ROA, ROI, and ROE capture performance.

Table 4 shows the multiple linear regression results to estimate the linear regression model, which examines the relationship between the independent variables (Sales Growth, Leverage, Current Ratio, log Total Assets, and PIF) and the dependent variable (ROA).

Table 4
Regression Between the independent variables and the dependent variables (ROA, ROI, ROE)

Dependent Variable	ROA	ROI	ROE
Variable	Coefficients		
Constant (β_0)	-3.662 (2.553)	-37.770 (16.389)	1.664 (2.406)
log Total Assets (β_1)	.542 (.152) ***	2.184 (.979)**	.023 (.151)
Sale Growth (β_2)	-.002 (.075)	.081 (.497)	.009 (.070)
Leverage (β_3)	-.167 (.158)	1.264 (1.232)	.302 (.149)**
Current Ratio (β_4)	-.671 (.271)**	.869 (2.467)	-.540 (.254)**
PIF (β_5)	.830 (1.509)	1.635 (10.873)	2.128 (1.402)
R square	0.39	0.225	0.260
F test	5.435	1.373	2.338
Durbin - Watson	1.25	1.82	1.15
Probability F	0.000	0.248	0.045

Note: ***, **, * significant at 1%, 5%, and 10%, respectively

Impact on Return on Assets (ROA)
Model 1: ROA Regression Model

$ROA = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$

$ROA = -3.662 + 0.542\ Log\ (Total\ Assets)_{t-1} - 0.002\ (Sales\ Growth)_{t-1} - 0.167\ (Leverage)_{t-1} - 0.761\ (Current\ Ratio)_{t-1} + 0.830\ (PIF)_{t-1} + \varepsilon$

Based on Table 4 above, the results of the estimated regression model with the five independent variables (Sale Growth, Leverage, Current Ratio, Log Total Assets, and PIF) are used as explanatory variables, and two variables show statistical significance in this model with different directions. The former has a significant positive response ($\beta 1$ (log total assets), and the latter has a significant negative response (β_4 (*current ratio*). This indicates that when the current ratio increases, the ROA decreases.

There is a significant response with a positive direction of β_5 (*PIF*) and a negative response to β_2 (*sale growth*) and β_3 (*leverage*). This is indicated by a correspondingly signed coefficient and p-values that are respectively less than 0.05. The R square (R^2), which shows the model's goodness of fit is 39 per cent, indicating that the regressors explain the variation in ROA. The F-statistic of 5.435, Probability F= 0.000, shows that the overall regression is significant and can be used for meaningful analysis. The Durbin Watson statistics (DW) value of 1.25 indicates no evidence of first-order serial autocorrelation AR(1). According to the DW's rule, if the DW statistics are approximately equal to 2, it is evidence against first-order serial correlation.

The results show that PIF has a positively insignificant impact on the performance of listed firms on Tadawul

Impact on Return on Investment (ROI)
Model 2: ROI Regression Model

$ROI = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$

$ROI = -37.770 + 2.84\ Log\ (Total\ Assets)_{t-1} + 0.081\ (Sales\ Growth)_{t-1} + 1.264\ (Leverage)_{t-1} + 0.869\ (Current\ Ratio)_{t-1} + 1.635\ (PIF)_{t-1} + \varepsilon$

Based on model 2 of the regression equations, the estimated regression of model 2 shows the significance of the independent variables in explaining the effect of ROI in the 17 firms with a strong relationship. Table 4 demonstrates that one variable out of five independent variables is positive and statistically significant in the ROI model, which is $\beta_1 log$ *(Total Assets)*, while other independent variables β_2 (*Sale Growth*), β_3 (*Leverage*), β_4 (*current ratio*), and β_5 (*PIF*) are positive but not significant.

The R square (R^2) of 0.23 shows that the above regression model could explain 23 per cent of the variation in ROI. The F-statistics of 1.373, Probability F= 0.248 show that the overall regression is not significant and cannot be used for meaningful analyses. However, the Durbin Watson statistics (DW) value of 1.82 indicates no evidence of first-order serial autocorrelation AR(1). Further, 1.82 is relatively normal and is not a cause for concern because the value is between 1.5 and 2.5.

The above results indicate that the PIF also has a positively insignificant impact on the performance of listed firms on Tadawul in model 2.

Impact on Return on Equity (ROE)
Model 3: ROE Regression Model

$$ROE = \beta_0 + \beta_1 Log\ Asset_{t-1} + \beta_2 Sales\ Growth_{t-1} + \beta_3 Leverage_{t-1} + \beta_4 Current\ Ratio_{t-1} + \beta_5 PIF_{t-1} + \varepsilon$$

$$ROE = 1.664 + 0.023\ Log\ (Total\ Assets)_{t-1} + 0.009\ (Sales\ Growth)_{t-1} + 0.302\ (Leverage)_{t-1} - 0.540\ (Current\ Ratio)_{t-1} + 2.338\ (PIF)_{t-1}$$

Table 4 examines the relationship between the independent variables and the dependent variable ROE. However, the ROE model demonstrates a negative and significant response to β_4(*current ratio*), and positive with a significant response to β_3(*leverage*). On the other hand, the other independent variables, β_1 (*log total assets*), β_2(*sale growth*), and β_5(*PIF*), show a positive and statistically insignificant relationship with ROE.

The R square (R^2) of 0.26 shows that the above regression model could explain 26 per cent of ROE. The F-statistic of 2.338, P-value = 0.49, is above the critical value of 0.05, which shows that the overall regression is not significant; further Probability F = 0.045. The Durbin Watson statistics (DW) value of 1.15 shows that there is no evidence of first order serial autocorrelation AR(1).

Model 3 exhibits that PIF has a positively insignificant impact on the performance of listed firms on Tadawul.

Conclusion

In order to measure the relationship between the investments of the PIF and the 17 non-financial firms in Saudi Arabia, multiple regression analysis was performed through SPSS. The results demonstrate that the log (total assets) is related to ROA and ROI positively and significantly. Furthermore, there is an insignificant positive relationship between the log (total assets) and ROE. This indicates that there is no relationship between these variables. The results also suggest that there is an inverse relationship between the current ratio and ROA, and ROE and there is an insignificant positive relationship between the current ratio and ROI. Additionally, there is a positive direct relationship between leverage and ROE. This indicates that as the value of the leverage (independent variable) increases, the mean of the ROE (dependent variable) also tends to increase.

On the other hand, there is an inverse relationship between the sales growth and all the dependent variables – ROA, ROI, and ROE. The sales growth is inversely correlated to the ROA (dependent variable). Further, there is an insignificant positive relationship between the PIF variable and the dependent variables ROA, ROI, and ROE. It can be inferred that the PIF investment influenced the listed firms' performance positively. These findings are strongly inverse with Knill et al (2012), who argue that the SWF investments do not benefit the targeted firms in the long term. Furthermore, Dewenter et al (2010), and Chhaochharia and Laeven (2008) are strongly consistent with Knill et al (2012), in that there is a slightly negative impact on the targeted firms. As mentioned earlier, Knill et al (2012) believe that the oil-producing countries have negative returns from the SWF investments because of their investments in non-financial targets, while Kotter and Lel (2009) found that the growth and profitability are not positively affected by the SWF investments for the following three years.

Accordingly, the Public Investment Fund changed its strategy six years ago (since 2015). Therefore, the impact of the Public Investment Fund's investments on the targeted firms may change to positive over the coming years or within Vision 2030. Moreover, Bertoni and Lugo (2014) argue that the target firms are affected significantly positively by the SWF investments in the short term. There is a relationship between total assets with ROA and ROI for the firms. This indicates that the total assets of firms are positively affected by the PIF's investments. Furthermore, the results indicate an inverse relationship between the sales growth variable with the ROA, ROI, and ROE. In turn, this shows that the sales growth for the firms is negatively affected by the PIF investments.

This study has highlighted several recommendations for further research that would be beneficial. As many areas lack information in the literature review concerning PIF strategy, the study results provide some useful recommendations to guide other researchers in this field. In addition, researchers can use this study to further analyze the PIF and its impact on various firms.

The Public Investment Fund strategy structure has begun to comply with Vision 2030, as mentioned earlier. Thus, in the coming years, the assets under the management of the PIF will significantly increase following the IPO of Saudi Aramco. There should, therefore, be additional studies on the PIF's investee firms in the near future.

References

Alhashel, B. (2015). Sovereign Wealth Funds: a literature review. *Journal of Economics and Business, 78*, 1-13. doi.org/10.1016/j.jeconbus.2014.10.001

Backer, L. C. (2009). Sovereign wealth funds as regulatory chameleons: The Norwegian sovereign wealth funds and public global governance through private global investment. *Georgetown Journal of International Law, 41(2)*, 425.

Balin, B. J. (2008). Sovereign Wealth Funds: a Critical Analysis, Working Paper Series, The Johns Hopkins University School of Advanced International Studies (SAIS).

Beck, R., & Fidora, M. (2008). The impact of sovereign wealth funds on global financial markets. *Intereconomics*, *43*(6), 349-358. https://doi.org/10.1007/s10272-008-0268-5

Benedictow, A., & Boug, P. (2017). Calculating the real return on a sovereign wealth fund. *Canadian Journal of Economics/Revue Canadienne d'Économique, 50*(2), 571-594. doi:10.1111/caje.12270

Bertoni, F., & Lugo, S. (2014). The effect of sovereign wealth funds on the credit risk of their portfolio companies. *Journal of Corporate Finance, 27*, 21-35. doi:10.1016/j.jcorpfin.2014.04.004

Bloomberg. (2019). Bloomberg - Saudi Aramco's $2 Trillion Zombie IPO. Retrieved from https://www.bloomberg.com/news/articles/2018-07-07/saudi-aramco-s-2-trillion-zombie-ipo

Bortolotti, B., Fotak, V., & Megginson, W. L. B. (2015). The rise of sovereign wealth funds: definition, organization, and governance. In *Public Private Partnerships for Infrastructure and Business Development* (pp. 295-318). Palgrave Macmillan, New York.

Caner, M., & Grennes, T. (2010). Sovereign wealth funds: The Norwegian experience. *World Economy*, *33*(4), 597-614.

Chambers, D., Dimson, E., & Ilmanen, A. (2012). The norway model. *Journal of Portfolio Management, 38*(2), 67-81.

Chesterman, S. (2007). The turn to ethics: Disinvestment from multinational corporations for human rights violations-the case of Norway's sovereign wealth fund. *Am. U. Int'l L. Rev., 23*, 577.

Chhaochharia, V., &Laeven, L. (2008). Sovereign wealth funds: Their investment strategies and performance.

Dewenter, K. L., Han, X., & Malatesta, P. H. (2010). Firm values and sovereign wealth fund investments. *Journal of Financial Economics, 98*(2), 256-278. doi:10.1016/j.jfineco.2010.05.006

Diwan, K. S. (2009). Sovereign dilemmas: Saudi Arabia and sovereign wealth funds. *Geopolitics*, *14*(2), 345-359.

Eriksen, T. (2006). The norwegian petroleum sector and the government pension fund–global. *Ministry of Finance, Norwegian Government, Oslo*.

Fernandes, N. (2014). The impact of sovereign wealth funds on corporate value and performance. *Journal of Applied Corporate Finance, 26*(1), 76-84. doi:10.1111/jacf.12056

Gangi, F., Meles, A., Mustilli, M., Graziano, D., & Varrone, N. (2018). Do investment determinants and effects vary across sovereign wealth fund categories? A firm-level analysis. *Emerging Markets Review,* doi:10.1016/j.ememar.2018.12.004

Gieve, J. (2009). SOVEREIGN WEALTH FUNDS AND GLOBAL IMBALANCES. *Revue d'Économie Financière*.

Grimnes, S., & Martinsen, Ø. (2015). *Bioimpedance & bioelectricity* (3rd ed.). London: Academic Press.

Jen, S. (2007). Sovereign wealth funds. *World economics*, *8*(4), 1-7.

Johnson, S. (2007). The rise of sovereign wealth funds. *Finance and development*, *44*(3), 56.

Kern, S. (2007). Sovereign wealth funds–state investments on the rise. *Deutsche Bank Research*, *10*, 1-20.

Knill, A. M., Lee, B. S., &Mauck, N. (2012). Sovereign wealth fund investment and the return-to-risk performance of target firms. *Journal of Financial Intermediation, 21*(2), 315-340. doi:10.1016/j.jfi.2011.10.001

Kotter, J. &Lel, U. (2009). Sovereign Wealth Funds: The New Intersection of Money and Politics.

Kotter, J., &Lel, U. (2011). Friends or foes? target selection decisions of sovereign wealth funds and their consequences. *Journal of Financial Economics, 101*(2), 360-381. doi:10.1016/j.jfineco.2011.03.007

Machado E Silva, Isabela Morbach, & Medeiros Costa, Hirdan Katarina de. (2019). Brazilian social funds: The lessons learned from the Norway fund experience. *Energy Policy, 129*, 161-167. doi:10.1016/j.enpol.2019.01.062

Milhench, C. (2018). Global sovereign fund assets jump to $7.45 trillion: Preqin. 2018, from https://www.reuters.com/article/us-global-swf-assets/global-sovereign-fund-assets-jump-to-7-45-trillion-preqin-idUSKBN1HJ2DG

Mohsin, S. (2014). Norway Wealth Fund Wins Labor Backing to Buy New Asset Classes. 2019, from https://www.bloomberg.com/news/articles/2014-05-07/norway-wealth-fund-wins-labor-backing-to-buy-new-asset-classes

Mulder, M. C. B., Sy, M. A. N., Lu, Y., & Das, M. U. S. (2009). *Setting up a sovereign wealth fund: some policy and operational considerations*: International Monetary Fund.

Nbim.no. (2019). The fund. Retrieved from https://www.nbim.no/en/

PIF (2019). *PIF - Public Investment Fund*. [online] Pif.gov.sa. Available at: https://www.pif.gov.sa/ar/Pages/AboutPIF.aspx [Accessed 10 Feb. 2019].

Quandl. (2019). Quandl. Retrieved from https://www.quandl.com/data/OPEC/ORB-OPEC-Crude-Oil-Price

Raymond, H. (2008). The effect of Sovereign Wealth Funds' involvement on stock markets. *Bank of France Occasional Paper*, *7*, 1-17.T

Salameh, M. G. (2016). Saudi Arabia's Vision 2030: A Reality or Mirage.

Saudiaramco. (2019). Saudi Aramco signs share purchase agreement to acquire 70% majority stake in SABIC from the Public Investment Fund of Saudi Arabia. Retrieved from https://www.saudiaramco.com/en/news-media/news/2019/aramco-sabic

Shields, L. and Twycross, A. (2003). The difference between quantitative and qualitative research. *Paediatric Nursing*, 15(9), pp.24-24.

Skancke, M. (2003). Fiscal policy and petroleum fund management in Norway. *Fiscal Policy Formulation and Implementation in Oil-Producing Countries, 316*, 318-320.

Statista, N. (2017). Infographic: Norway's Sovereign Wealth Fund Hits $1 Trillion. Retrieved from https://www.statista.com/chart/11281/norways-sovereign-wealth-fund-hits-dollar1-trillion/

Statista. (2018). Leading SWFs worldwide by assets 2018 | Statistic. Retrieved from https://www.statista.com/statistics/276617/sovereign-wealth-funds-worldwide-based-on-assets-under-management/

SWC. (2019). Sovereign Wealth Center. Retrieved from https://www.sovereignwealthcenter.com/fund/17/kuwait-investment-authority-swf.html#.XH59Ai2B3Uo

Sovereign Wealth Fund Institute. (2019). Sovereign wealth funds rankings 2019 from https://www.swfinstitute.org/sovereign-wealth-fund-rankings/

Tadawul.com.sa. (2019). Retrieved from https://www.tadawul.com.sa/Resources/Reports/MajorStakeHoldersPageArabic_ar.html

The national. (2018). Saudi Arabia's PIF targets $2 trillion portfolio by 2030. Retrieved from https://www.thenational.ae/business/economy/saudi-arabia-s-pif-targets-2-trillion-portfolio-by-2030-1.783557

Urban, D. (2011). The Role of Sovereign Wealth Funds in Global Management of Excess Foreign Exchange Reserves. *Comparative Economic Research, 14*(2), 143-158.

Vision2030. (2016). Vision2030. Retrieved from https://vision2030.gov.sa

Weiss, M. A. (2008). Sovereign Wealth Funds: Background and Policy Issues for Congress. Congressional Research Service, Library of Congress.

Yang, L., & Zhang, J. (2012). Political and Economic Analysis on SWFs of Saudi Arabia. *Journal of Middle Eastern and Islamic Studies (in Asia)*, *6*(3), 28-57.