The Investment Strategy of Global Sovereign Wealth Funds During the Period of the Pandemic (COVID-19)

Maroua Benyakoub 1*, Farah Elias Elhannani 2

1 University Center of Nour El-Bachir El-Bayadh, (Algeria), m.benyakoub@cu-elbayadh.dz
2 Laboratory of Innovation Management and Marketing, Sidi Bel Abbes, (Algeria), faraheliaselhannani@yahoo.fr

Received: 08/06/2022  Accepted: 04/09/2022  Published: 31/12/2022

Abstract:
This study aims to determine the extent of the contribution of sovereign wealth funds during the COVID-19 crisis, and its ability to continue post-Covid and to remedy the changes in the economic environment resulting from the outbreak of the epidemic. The most important results reached in general, included the application of sovereign wealth funds to different strategies by allocating huge expenditures to the investment activity that contrast between mitigating and adapting to global economic changes and seizing opportunities to enhance returns on its investment portfolios and the growth of investment in biotechnology was noticeably higher than the rest of the industries, as it financed research and development for the manufacture of respirators and supported the development of vaccines.

Keywords: sovereign wealth funds, investment strategy, financial market, financial stability, COVID-19 crisis.
(JEL) Classification: G51, D5, F21.

1. Introduction:
The global economy faced several crises, the most recent of which was the Covid-19 disease, at the beginning of the year 2019, which hit the health sector, was recorded emergency cases and the imposition of sanitary isolation measures that affected various sectors and caused a slowdown in economic growth, which required additional government support to mitigate the effects of the crisis and to intervene with monetary and other financial policies by increasing spending and reducing taxes, thus sovereign wealth funds were invited to help address the emergency obligations of governments.

Sovereign wealth funds initially were established as a mechanism to cover the financial deficit to mitigate the impact of crises but they have known significant growth in the past few years because they are diverse and have different structures and work formations, goals and governance policies, which require the necessary clarity around them by determining their origin and degree of development and growth where the top axes Research for economic analysts and experts, and stir debate about its investment and business strategies and political motivations, as well as more uncertain revenue. These funds, leaving two sides between supporters and concerned about its activity and its potential impact on the financial markets.

Through this article, we shall attempt to answer the following problematic:

1.1. Research Problematic:
- What is the the investments strategies of global sovereign wealth funds during the COVID-19 crisis? How much do they contribute to supporting their economies?

The main question of the study is divided into the following questions:
How is the response of global sovereign wealth funds in light of the COVID-19 crisis?
How extensive is SWFs investment activity in facing the coronavirus crisis?
Has the investment strategy of global sovereign wealth funds succeeded in reducing the effects of COVID-19?

1.2. Research Aims:
This study aims to define the role of the global sovereign wealth funds during the COVID-19 crisis, with its investment and linking it to statistics and examples, to mention if it has proven its effectiveness and its ability to continue facing other economic crises resulting.

1.3. Methodology of the study:
In order to answer the questions set above, we follow in this study a descriptive-analytical approach to provide the theoretical aspect of the sovereign wealth funds, because are diverse and have different structures and goals, and to analyze assessing some investment strategies that could help in the study and answer the problematic.

2. Literature review:
2.1. The Origins of SWFs:
The first sovereign wealth funds (SWFs) date back to the nineteenth century, the modern wave of funds has steadily increased over the last 50 to 60 years thanks to a commodity boom in places such as the Middle East, Norway and many others. (Rajiv, 2017, p. 03). In the public debate, “sovereign wealth fund” has been used to refer to many types of government-controlled investment vehicles with different revenue sources, goals, and investment approaches. (Das, Mazarei, & Hoorn, 2010, p. 04). And we can mention that the first fund, was created in 1953 to invest the Kuwaiti government’s oil revenues in behalf of its future generations. (The Kuwait Investment Authority, ) (Das, Mazarei, & Hoorn, 2010, p. 04) And following the recent global financial crisis, SWFs suddenly came into great demand due to their provision of long-term capital for all sorts of industries and sectors in most countries. (Rajiv, 2017, p. 03).

2.2. Definition and Types of SWFs:
The concept of SWFs is not new. Many of these funds were originally established three or so decades ago as oil price (or commodity price) stabilization funds to help block out disturbances from volatile oil prices on the budget, monetary policy and economy of oil exporting countries. However, with the sharp and possibly permanent rise in oil prices in recent years, these funds have evolved from ‘stabilization funds’ to ‘wealth accumulation’ or ‘wealth preservation’ funds. The key difference between official reserves and SWFs is that the former hold mostly ‘risk-less’ assets such as sovereign bonds, while the latter may have equities, corporate bonds and other assets in their portfolios. (Jen, 2007, pp. 01-02)

2.3. Selected Definitions of SWFs:
Defining a definition for SWFs is a very hard, if not impossible, task due to their different nature and peculiarities (jin, 2016, p. 91). So we selected some definitions we think that's close to the meaning as follows:

In 2005, The financial analyst, Andrew Rozanov was the first one who uses the term “sovereign wealth funds", in his famous article « Who holds the wealth of nations? », where he said that they are: "sovereign wealth funds are a by-product of national budget surpluses, accumulated over the years due to favourable macroeconomic, trade and fiscal positions, coupled with long-term budget planning and spending restraint. Usually, these funds are set up with one or more of the following objectives: insulate
the budget and economy from excess volatility in revenues, help monetary authorities sterilise unwanted liquidity, build up savings for future generations, or use the money for economic and social development” (Rozanov, 2005).

In 2007, The American economist Edwin M. Truman (specializing in international financial institutions) — before the U.S. House Committee on Banking, Housing, and Urban Affairs, where he said that they are: “Separate pools of international assets owned and managed by governments to achieve a variety of economic and financial objectives. They sometimes hold domestic assets as well.” (International Monetary Fund, 2008, p. 37)

In 2008, A working paper published by the OECD set out a broad definition of SWFs as: … pools of assets owned and managed directly or indirectly by governments to achieve national objectives. They may be funded by: foreign exchange reserves; the sale of scarce resources such as oil; or from general tax and other revenue. (Kryvoi & others, 2021, p. 10)

In general, these various definitions of SWFs include the following characteristics: (International Monetary Fund, 2008, p. 11)
- a degree of State ownership and/or control
- is typically in the form of an investment fund
- is managed separately from the official reserves of a State
- is funded via sales of a commodity or commodities, foreign exchange reserves, privatisations and/or other public funding
- has a long-term investment outlook
- can invest domestically and/or internationally
- has a commercial objective, which is to produce returns on investments

2.4. The different types of SWFs:

SWFs are a heterogeneous group and may serve various purposes. Five types of SWFs can be distinguished based on their main objective: (International Monetary Fund, 2008, p. 05)
1) stabilization funds, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings;
2) savings funds for future generations, which aim to convert nonrenewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease;
3) reserve investment corporations, whose assets are often still counted as reserve assets, and are established to increase the return on reserves;
4) development funds, which typically help fund socio-economic projects or promote industrial policies that might raise a country’s potential output growth;
5) contingent pension reserve funds, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government’s balance sheet.

2.5. The objectives of SWFs:

We can also set a number of potential objectives of SWFs, which are not always easy to attribute to a particular fund; and some funds may have more than one of the distinguishable objectives. Some of these are: (Kryvoi & others, 2021, p. 10) diversify assets; get a better return on reserves; provide for pensions in the future; provide for future generations when natural resources run out; price stabilisation
The top five largest SWFs by total Assets included: (swf institute, 2021)
1) Norway Government Pension Fund Global- Europe : $1,339,280,000,000
2) China Investment Corporation- Asia : $1,222,307,000,000
3) Kuwait Investment Authority-Middle East : $692,900,000,000
4) Abu Dhabi Investment Authority-Middle East : $649,175,654,400
5) Hong Kong Monetary Authority Investment Portfolio- Asia : $585,734,000,000

3. The global sovereign wealth funds and COVID-19 Crisis:
   Coronavirus Disease (COVID-19) is believed to have first appeared in Wuhan, the capital city of Hubei province in China, in December 2019, later has spread across Asia like wildfire, and after few days the virus ravaging many countries, like EU countries, USA, Arab gulf countries, and many countries in Africa and South America, and it still to this day. (khouldat & others, 2020, p. 02) this pandemic has created significant uncertainty in the global economy and investment landscape, particularly for institutional investors such as state-owned sovereign wealth funds (SWFs), which manage more than $8 trillion in assets under management (AUM). As a result, the roles of SWFs has shifted in recent years in response to the global economic and geopolitical dynamics. (Sidra Capital, 2021, p. 01). During 2019, in the aggregate, equity-focused sovereign funds realigned portfolios to be more defensive in public stocks, while splurging more in real assets. The coronavirus emerging out of China and spreading to the U.S. and Europe changed the game. Cash-rich sovereign funds became opportunistic, including a cadre of Gulf sovereign investors. Clear signals by heads of states, then measures by the Federal Reserve, European Central Bank, and other monetary institutions – money printing and swap lines became a reality. Sovereign funds and pensions started to “buy the dip” after the March 2020 COVID crash. (SWF institute, 2021)

In 2020, the number of deals concluded by SWFs has reduced, possibly as a result of the immediate effect of the Covid-19 outbreak (Kryvoi & others, 2021, p. 16). That’s what the graph below presented:

Figure(01): SWFs Investment Activity Between 2015 and 2020

Source: (Kryvoi & others, 2021, p. 17)

3.1 The investment strategy of global sovereign wealth funds during the coronavirus (COVID-19):
   The IFSWF’s database of sovereign wealth funds’ publicly disclosed direct investments, suggests that they entered the COVID-19 crisis in defensive mode, with high levels of liquidity enabling them to support local economies or investing counter-cyclically in international markets in March 2020.
According to Enrico Sodo, a publisher specializing in the study of public government funds, there are four main approaches that countries with sovereign wealth funds have taken during the pandemic, which we summarize in the following table with mention some examples: (Soddu, 2021)

**Table (01): The approaches that countries with sovereign wealth funds have taken during the pandemic**

<table>
<thead>
<tr>
<th>The main approaches</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Governments tapping their stabilisation and saving funds for spending purposes.</strong></td>
<td>– The sovereign fund, Norway’s made its largest ever contribution to the government. In October 2020, Norway’s Ministry of Finance announced that it would be withdrawing almost 3% from GPFG: $37 billion to cushion the country's rising spending due to the pandemic.&lt;br&gt;– the State Oil Fund of Azerbaijan (SOFAZ) distributed $8.7 billion to the government to help finance the COVID-19 response.</td>
</tr>
<tr>
<td><strong>Strategic funds directly involved in the pandemic relief efforts.</strong></td>
<td>– the Russian Direct Investment Fund (RDIF), spent approximately $200 million to develop the world's first coronavirus vaccine – Sputnik V – developed with the Gamaleya National Research Institute of Epidemiology and Microbiology. RDIF maintains a license to sell it abroad, where it is approved in 67 countries.&lt;br&gt;– In May 2020, the Ireland Strategic Investment Fund (ISIF), allocating €2 billion ($2.4 billion) to the Pandemic Stabilisation and Recovery Fund (PSRF) as part of the government’s relief measures to the Covid pandemic.</td>
</tr>
<tr>
<td><strong>Strategic funds pursuing the domestic agenda, regardless of COVID-19.</strong></td>
<td>– In 2020, the Turkey Wealth Fund (TWF) invested a total of $5.8 billion to consolidate the local insurance and banking sector, and take a 26.2% stake in mobile phone operator Turkcell.&lt;br&gt;– The Sovereign Fund of Egypt, established in 2018, and only recently funded with the objective of attracting private investments in Egypt’s underused assets, has already closed two deals in 2021, investing in the Arab Investment Bank and to establish the Lighthouse Education platform, attracting several local and regional partners</td>
</tr>
<tr>
<td><strong>Hybrid strategic and saving funds’ opportunistic investments in international markets.</strong></td>
<td>– Abu Dhabi’s Mubadala Investment Company took advantage of the market volatility by triggering a series of tactical trades and public equity investments, according to its 2020 annual review.</td>
</tr>
</tbody>
</table>
– Saudi Arabia’s Public Investment Fund (PIF) invested more than $10 billion in US and European blue-chip companies when the stock market crashed in March, in the sectors most hit by the pandemic such as leisure, travelling and energy companies. PIF disclosed a total of over $2 billion in stakes of four oil and gas companies – BP, Royal Dutch Shell, Suncor Energy and Total. The Saudi fund also invested $1 billion in travel and leisure companies Marriott International and cruise company Carnival. Its purchases in public markets made sovereign wealth fund direct investments in the public market jump five times from $6 billion in 2019 to $28 billion in 2020.

Source: (Soddu, 2021)

In another way Javier Capapé the Director of the Sovereign wealth research at the center for the governance of change analyzes how different sovereign wealth funds have reacted to the Covid-19 pandemic from seeking to cushion the blow from the crisis, investing in biotechnology, or spotting an opportunity to put money into industries that have collapsed during lockdowns, and said that, Sovereign wealth funds have responded to the COVID-19 crisis with three different strategies: mitigation, adaptation, and opportunity. The three strategies (mitigation, adaptation, and opportunity) have involved outlays in excess of $70 billion between March and August, 2020. Beyond the usual vision of sovereign wealth funds as global liquidity helicopters. (Aguilar, 2020)

Direct Sovereign Wealth Fund Investments by Sectors:

Despite COVID-19 pandemic, 2020 has been a bumper year for SWFs in terms of direct investments. According to the International Forum of Sovereign Wealth Funds (IFSWF), direct investments by SWFs totaled $65.9 billion in 2020, up from $35.9 billion in 2019, with a sizeable portion invested in domestic markets to cushion the impact of the coronavirus pandemic on their respective economies (Sidra Capital, 2021, p. 02)

In the first half of 2021, sovereign wealth fund direct investments ex-open market totaled US$ 47.187 billion. Some noteworthy transactions include Singapore’s GIC Private Limited investing in the Equinix GIC xScale data center program, while Mubadala Investment Company invested in Aramco Oil Pipelines Company. Other key mentions include ADIA and GIC investing in Medline Industries, Inc. Australia’s Future Fund partnered with QIC on Tilt Renewables Limited. (SWF institute, 2021)

Figure(02): First Half of 2021 vs. First Half of 2020- Direct Investments by Sovereign Wealth Funds

Source: (SWF institute, 2021)
SWFs have sought relatively ‘safe’ investments in the real estate and infrastructure industries. Another sector in which SWFs have invested is transportation, but over the last six years with SWFs investing more in oil and gas but also renewables, the latter possibly being part of some SWFs’ strategy to take action on climate change through their portfolio assets. (Kryvoi & others, 2021, p. 15) Between 2020 and mid-2021 SWFs have turned their investment strategy away from traditional ‘safe’ industries such as real estate and infrastructure. SWFs have increasingly invested in other sectors, including regulated sectors such as the technology, media, and telecom (TMT) and healthcare industries. (Kryvoi & others, 2021, p. 16)

**Figure(03): Sovereign Wealth Fund Direct Investments by Sector**

sovereign wealth funds have enlarged their investor role as financial backers of biotech companies. For example, Abu Dhabi-based Mubadala Investment Company, which has a presence in San Francisco, made notable investments in Recursion Pharmaceuticals, Inc., Outpace Bio, Alloy Therapeutics, Evotec SE, and Science 37, Inc. Other Gulf sovereign funds interested in biotech include the Qatar Investment Authority (QIA), which invested in Bright Peak Therapeutics, Entrada Therapeutics, Century Therapeutics, LLC, and OncoResponse. Entrada Therapeutics is a privately-held biotechnology company dedicated to transforming the treatment of devastating diseases using intracellular biologics. Century Therapeutics Inc is a biotechnology company harnessing the power of adult stem cells to develop curative therapies for cancer. (SWF institute, 2021)(industry Type(s): Biotechnology, Pharmaceuticals, Life Sciences Tools and Services.

**Figure(04): Sovereign Wealth Fund Direct Investments in Biotech – U.S. Dollar**

**Source:** (swf institute, 2021)
Sovereign wealth funds and public pension funds are major institutional investors in the healthcare sector. From the last twelve months of October 2021, global swfs and large public pension funds invested US$ 30.39 billion in the healthcare sector. Some notable deals include Qatar Investment Authority investing in Siemens Healthineers. In July 2021, Mubadala Investment Company decided to invest US$ 250 million in U.S. biosimulation software company Certara as part of its strategy to expand its healthcare and life sciences investment portfolio. (SWF institute, 2021), and also Singapore’s GIC Private Limited is keen on larger capital plays. With its big balance sheet and large private equity deal team, GIC inked a deal with Grifols in which GIC would invest around US$ 1 billion in Grifols’ wholly-owned US subsidiary Biomat USA. Biomat is a global leader in plasma collection, with a network of 296 U.S.-based plasma collection centers. (SWF institute, 2021). In June 2021, Abu Dhabi Investment Authority and GIC joined in a major buyout of acquiring medical supply company Medline Industries, Inc.

Sovereign wealth funds have been steady investors in the semiconductor industry, but in recent years have opted for higher growth industries in the IT sector such as software, data storage, and internet services. Sovereign investors differ from many other investors in their mandate, risk tolerance, priorities, and time horizons. Some wealth funds historically have taken a direct approach such as Mubadala Investment Company and its adventures with GlobalFoundries Inc. In 2020, SWFs directly invested US$ 2.147 billion in the semiconductor industry vs. US$ 782 million in 2019. (SWF institute, 2021)


Analysts are far from a consensus on the benefits of setting up such funds. A recent study by the IMF concludes that oil funds have ‘limited fiscal benefits and are largely redundant. Oil funds have not been effective in addressing volatile exchange rates. Equally important, oil funds’ investments abroad have ignited a mounting anxiety over their commercial and strategic impacts. ‘Their air of secrecy has led to rising concern. (Bahgat, 2009, p. 290)

According to The Linaburg-Maduell Transparency Index (LMTI) Which is a widely used scoring benchmark system to rate the transparency of global sovereign wealth funds. and from late 2019 and into 2020, scores dropped. This is causing a wider gap from very transparent SWFs from sovereign investors that provide little information besides stated goals and a formal website. (SWF institute, 2021)

like the Oil funds, as the Economist put it, are being ‘set up as the next villains of international finance. The soaring of their cross-border investment represents a potential structural shift in the global economy. Accordingly, economists and policymakers seek to assess the implications of this shift and the appropriate response. The challenge Western financial markets face is how to ensure the steady inflow of
badly needed foreign investment while simultaneously addressing popular scepticism that these investments might be driven by strategic interests. Such scepticism might strengthen calls for protectionism and imposing restrictions on capital flows from oil funds and weaken the overall global financial markets (Bahgat, 2009, p. 290), and it is quite challenging for any country to save funds for future generations whenever there are high demands to deal with critical issues on present generations experiencing poverty and a lack of basic needs. However, such decisions might be much easier in a developed economy like Norway or Canada in comparison with Nigeria or Guyana. Nevertheless, most governments tend to face challenges when implementing SWFs for various reasons: (Pereira & others, 2021, p. 17)

- transparency on the amount of money they collect into the funds,
- maintain a constant flow of income inside the fund so it can continue to increase,
- avoid large and/or constant withdrawals

Instead, the IMF suggests that any benefits could be achieved by ‘improving fiscal policy and administration’. To ensure sound allocation of oil revenues, oil funds should be integrated with the budget, enhance coordination of the funds’ operations with those of the rest of the public sector, adopt a clear and comprehensive asset-management strategy, and establish mechanisms to ensure transparency and accountability (Bahgat, 2009, p. 290).

In so many ways, the pandemic has revealed and accelerated powerful trends that, while long at work, have only now come to wider attention. Among these trends: the little known yet potent rise of sovereign wealth funds (SWFs). (Winston & Downs, 2021). In addition, in the last 12 years, since the previous global crisis, the funds have continued to take increasingly risky positions, and in turn becoming increasingly professional, increasingly influential. (Aguilar, 2020)

According to SWF institute, Not all sovereign wealth funds navigated the COVID crisis smoothly. Some experienced changes in management such as the Kuwait Investment Authority, while others took the opportunity to shift organization structure such as the Korea Investment Corporation (KIC) and China Investment Corporation (CIC). CIC and KIC will continue their push to allocate more overseas assets into alternatives such as real estate, infrastructure, private credit, and private equity. All in all, sovereign wealth funds (the larger ones) benefitted greatly from central bank QE COVID policy as equity markets sharply spiked back to new highs. (SWF institute, 2021) but we can’t escape the role of SWF playing in this crisis as what Pauline Yeung is programme director at the Asia Business Council, said: “As Covid-19 crisis shows, sovereign wealth funds have a role that goes beyond providing money: (Yeung, 2021)

- Singapore’s Temasek is one of several government funds to go beyond their traditional mandate and fight the pandemic, not just by investing in the search for a vaccine, but also by supporting the production of medical goods
- As Hong Kong prepares to launch its own Growth Portfolio, it needs to consider if there’s a larger firefighting role for public investors in a crisis”

5. Conclusion:

Sovereign wealth funds are entities owned and managed by governments to achieve their objectives, as stated in most definitions, they help in promoting economic development and achieving financial stability by working to balance budgets if they have sufficient financial capacity to increase spending and provide incentives for companies or families and allocate large sums to local investments to reduce the effects of economic crises. Also, they are exploited large capitals in foreign investments to enhance long-term investment and explore future opportunities.

The severe shocks that the economies of countries have been faced, the latest of which is COVID-19, have enhanced their importance due to the effective role they played in light of the market turbulence
caused by the pandemic by recording different responses that characterized the fact that one of them adapted to the situation by selling part of its assets and properties to support the budgets and its local economy, and the other took advantage of the opportunities by gaining shares at discounted prices in the developed markets according to a clear opportunistic approach to ensure stability through appropriate governance and control of its investment strategies.

**Results:**

* We saw through our study the readiness of most of the sovereign wealth funds to fill the local budget gaps through strong governance and support the stability of their economies and adapt to the new economic environment.

* Investments of sovereign wealth funds affected foreign markets and local economies and most countries were affected too, directly and indirectly.

* some SWF faced several challenges represented in the decrease in the accumulation of assets for funds based on currency reserves due to the collapse of oil prices and the liquidation of parts of their portfolios at low selling prices to support local economies.

* The current crisis has generated varying reactions and divergence in the investment activity of sovereign wealth funds during the epidemic period, one of which was slow to respond and another took advantage of the situation, as it includes in general funds that reduced their activity and others adapted to the situation and another that accelerated their activities during the epidemic and seized opportunities and acquired shares in the affected listed companies at discounted prices for example the Public Investment Fund for the Kingdom of Saudi Arabia, which emerged on the scene as a strong sovereign investor by exploiting several opportunities and increasing its allocations.

* During the COVID19 crisis, some of the sovereign wealth funds witnessed management changes, in the organizational structure and even a change in the patterns and method of investing and researching asset classes, sectors and other industries. And it corrected its relative distance from contracting deals to return strongly in 2021 to the deal schedule. Sovereign wealth funds played an important role in supporting the stability of the economy, but they did not go to all sectors, as we noticed that they supported the health care sector and system. We mention as an example one of the investors who helped biotechnology companies, which is the Sovereign Fund in Singapore (Temasek Holdings) to develop anti-virus vaccines.

* Judging the success and failure of sovereign wealth funds is linked to the study of each fund separately to determine its challenges in light of the slowdown in global trade, and the degree to which it controls its investment strategies through risks, returns, investment prospects, and asset size.

**Recommendations:**

- Sovereign wealth funds must have rules and legislation to ensure the proper allocation of oil revenues, reduce unclear withdrawals, and control the relationship between the Ministry of Finance and sovereign funds.

- With the Corona crisis, the roles of sovereign wealth funds have varied between preserving wealth, diversifying resources, achieving financial stability and seizing investment opportunities, which indicated the need to define the main objective of each fund, a fundamental reform of governance and setting priorities.
The effects of the response and contribution of sovereign wealth funds during the pandemic must be evaluated for each country separately, and whether it is appropriate to address the concerns of governments about excessive monetary stimulus and government spending that may have dire effects and consequences that lead to inflation, for example.

It is necessary for governments to re-evaluate the investment strategies of global sovereign wealth funds in light of the new challenges imposed by the Coronavirus crisis and to establish mechanisms to ensure transparency and accountability to avoid long-term consequences regarding their commercial effects, serve their interests and serve the general state of the economy.

The need to remedy the effects of the investment behaviour of some sovereign funds, which led to increased anxiety and raised the challenge facing Western financial markets about how to ensure the continuous flow of foreign investment in light of the uncertainties that may impose restrictions on capital flows and weaken global financial markets in general.

6. Bibliography List:


