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# *'The impact of Sovereign Wealth Funds on economic success*

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# Executive Summary

## *The growing importance of Sovereign Wealth Funds*

*Sovereign Wealth Funds have risen in prominence during the financial crisis. They acted to recapitalise a number of the World's largest banks including Morgan Stanley and Merrill Lynch. Sovereign Funds are also major holders of government debt and are now being actively courted by European governments to aid in solving the Eurozone debt crisis.*

*This prominent role is not an accident. High commodity prices and global current account imbalances mean that Sovereign Funds are growing rapidly; and their ability to act as long term providers of capital has also made them attractive as investors. Despite this, Sovereign Funds have been the subject of relatively little academic research by economists. Research to date has focussed on governance, a debate which contributed to many Sovereign Wealth Funds signing up to the Santiago Principles code of conduct in 2008.*

## *The impact of Sovereign Wealth Funds on economic success*

*In this report we look at a different angle – focussing on a Fund's effects on the economy of the nation which sets it up.*

*The effects we consider are wide ranging. Sovereign Wealth Funds act as overseas investment and savings vehicles – which may affect exchange rates, inflation or economic growth. Funds also provide a system for allocating government funds and in doing so may increase transparency. A Sovereign Wealth Fund is also a store of wealth which may be drawn upon at times of crisis, and so may encourage investors to lend money to the government more cheaply than they would have done otherwise.*

*To understand whether a Fund has a material impact on the host economy in these ways, we analysed the historic performance of 51 countries over 30 years. The countries selected either had a Sovereign Wealth Fund, or had the potential to have a fund, thanks to significant commodity income or trade surpluses over the period. Comparing the two groups enabled us to see how their relative performance had varied over time and helped us isolate the fund's impact.*

*The key findings of our analysis on the impact of a Sovereign Wealth Fund are that:*

- ***Setting up a Sovereign Wealth Fund may help to reduce inflation** – the presence of a fund is linked to lower inflation, even when we account for a number of other factors likely to affect inflation, such as monetary policy stance, the state of the labour market and the current account balance. This result is stronger for commodity rich countries than for those with a non-commodity based trade surplus.*

- ***Exchange rate appreciation may be lessened by a Sovereign Wealth Fund** – in countries with floating exchange rates we found a relationship between the presence of a Sovereign Wealth Fund and a weaker exchange rate. The effect was equally strong for countries with and without commodity wealth. This may occur because monies can be held in foreign currencies (often in US dollars), so not bidding up the value of the local currency.*

- ***Sovereign Wealth Funds may help improve transparency in an economy[1]**– our analysis found levels of transparency to be correlated with measures of economic development such as GDP per capita and the depth of financial markets. Even when these factors are taken into account, however, we see lower levels of perceived corruption in countries where a Fund is present. The effect appears slightly stronger in countries with non-commodity based trade surpluses.*

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[1] Based on a Transparency International measure of corruption perception

## Introduction

Global imbalances and high commodity prices mean Sovereign Wealth Funds are getting bigger; and more and more countries are joining the clamour to start their own Fund. But is this enthusiasm justified? It seems prudent for governments to put money aside for a rainy day. This can be used to pay for pension obligations, provide capital injections in the event of crisis or to ensure future generations benefit from the extraction of finite resources. But there is a cost to this saving – higher taxes and lower government spending today.

To date academic economists have focussed on the governance of Sovereign Wealth Funds. In this report we take a look at a different angle. We focus on some of the economic-related impacts which may arise from a country having a Sovereign Wealth Fund.

To do this, we analysed the historic performance of 51 countries over 30 years. We start, however, with a brief discussion of the global landscape below.

### *Sovereign Wealth Funds control US$4 trillion in assets*

Sovereign Wealth Funds are not new; Kuwait has been squirreling aside some of its oil revenues since 1953. But the recent rapid growth of Funds and their prominent role during the financial crisis have made them front page news. Definitions of what constitutes a Fund vary – but together they marshalled US$4.0 trillion in assets in March 2011, up from US$3.6 trillion in 2010[2]. These assets have grown impressively over the last three years despite the worst global economic crisis since the 1930s.

### *Non-commodity Funds are challenging for ascendency*

Sovereign Funds are traditionally associated with commodity wealth, but another species of Funds has recently moved into the limelight. Commodity based Funds, centred largely in the Middle East, are being challenged for ascendency by Funds which are financed from trade or fiscal surpluses.

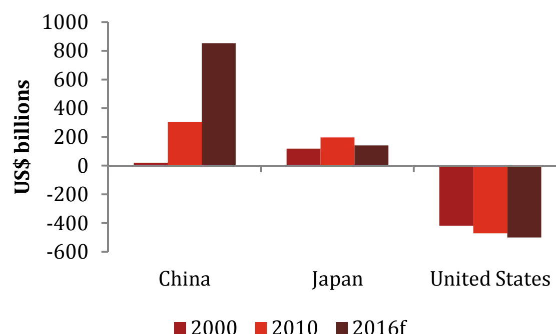
Whilst Singapore has been saving in this type of Fund since the early 1980s, the establishment of a number of Funds in China and elsewhere mean that non-commodity Funds now account for around 40% of total assets under management by Sovereign Wealth Funds.

### *The clamour to start new Funds*

The prospects for Sovereign Wealth Funds appear bright. Papua New Guinea, Nigeria, Bolivia and Angola have all either recently started Funds or stated their intention to do so. Australia and Brazil are debating whether to set up new Funds to add to those they already have. The pace of recent expansion means that 50% of global Sovereign Funds are less than seven years old[3].

Growth in the value of Sovereign Fund assets has been fuelled by high current account surpluses and commodity prices. There are no signs of global current account balances unwinding in the short run – indeed according to the International Monetary Fund, the imbalances will rise (Chart 1 below highlights some of the largest imbalances).

**Chart 1: Current account balances in China Japan and the United States**




*Source: IMF*

The outlook for commodity prices is more uncertain. Prices have quickly rebounded from the global recession in 2009, but slowing growth in developed countries and now some emerging economies is likely to weigh on prices.

Looking forward, we may also see changes in the types of commodities that finance Sovereign Wealth Funds. There are already some non-energy Funds, such as in Chile, where revenues from copper extraction are used. But non-energy funds are small,

[2] Prequin Sovereign Wealth Fund Review, March 2011

[3] *ibid:* based on the number of Sovereign Wealth Funds, not value of assets under management

and to date oil and gas revenues have fuelled all of the largest Funds.

This is likely to continue, but different commodities and countries may grow in importance. For example, lithium (a key component of rechargeable batteries) is already hot property. Chile, Argentina and Bolivia are thought to have the world's largest lithium reserves so may benefit from the rising importance of electric cars. Looking even further afield, another potential source of finance is solar power. In the future we may see Sovereign Wealth Funds in North Africa, financed by exporting solar power in the form of electricity or hydrogen.

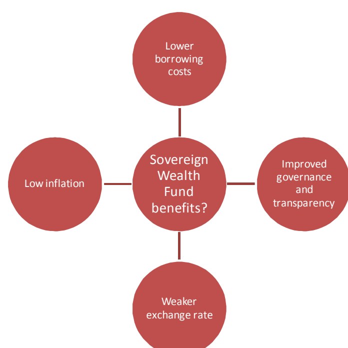
## How does a Fund impact the country which sets it up?

Each Sovereign Wealth Fund is unique. They have varied investment portfolios, strategies and stated objectives. But the overriding objective of many funds is to ensure that the proceeds from extracting finite resources are shared with future generations. Shorter term objectives like economic stability are also important.

We have performed an analysis of some of the potential impacts that Funds may have on the national economy in which they are based. This provides some insights into the impact of a Fund, whether intended, unintended or implicit.

Economic theory suggests that the potential impacts may centre on inflation, exchange rates, government borrowing and growth. There may also be wider impacts on governance and corruption. These impacts are summarised in Chart 2, with some of the potential rationale for them described below.

**Chart 2 Possible impacts of a Sovereign Wealth Fund**




*Source: PwC*

**Funds may insulate against inflation;** inflation may rise when a lot of money is flowing into an economy from abroad, which could be thanks to payments for exports of commodities or other goods and services. Unless the majority of this money is not spent on locally produced goods and services this will boost domestic demand and could cause the economy to heat up if it does not have enough capacity to meet the extra demand. An additional mechanism that could put upwards pressure on inflation is the money inflow causing a rise in money deposits in the local banking system triggering an increase in credit supply.

One mechanism by which a Fund could influence inflation is if it is used to reduce foreign currency inflows. Instead of these inflows being converted into the local currency and spent, some of them may be kept in a foreign currency and invested abroad using the Sovereign Fund. In this way the Fund may reduce the impact on domestic demand from inflows of money – and so limit the feed through to inflation in the short term.

**Funds may reduce government borrowing costs;** investors in sovereign debt will take a number of factors into account when choosing where to put their money. They will consider, amongst other things, the yield on the bonds, the likelihood of the principal being repaid in full and the currency in which the debt is denominated.

Investors may be willing to lend money on better terms to countries which have a Sovereign Fund, whose assets will often be held in 'safe' currencies like US dollars or euros. It may be perceived to reduce the risk of default as the Sovereign Fund could be raided in the event of a crisis.

For countries which borrow in international reserve currencies like the US dollar (common in developing countries whose own currency can be considered too volatile), having a ready supply of foreign currency may also be looked upon favourably by foreign investors; in the event of a currency crisis, resulting in a sharp depreciation of the domestic currency, the foreign currency reserves could be raided to pay the foreign denominated debt.

**Funds may limit exchange rate appreciation;** sudden inflows of foreign currency into an economy can lead to "Dutch Disease", where appreciation of the domestic currency can damage the competitiveness of export-reliant sectors like manufacturing.

The mechanisms for this are that the influx of foreign currency is used to buy domestic currency – thus bidding up its value (an exchange rate appreciation). Also any inflation resulting from these inflows will increase the cost of producing

goods and in doing so further damage international competitiveness.

As with the potential inflation mechanism, by holding wealth in a foreign currency like US dollars rather than converting it to local currency, a Fund may reduce pressure on the local currency to appreciate (there is less demand for it than if the dollars were sold and used to buy local currency).

**Funds may boost transparency;** having money channelled into a Fund may help to increase the transparency of a country's financial policy and reduce the potential for corruption.

This is because a clear rule based system where, for example, all of the proceeds of an oil export tax are channelled directly into a Sovereign Fund, may reduce the discretionary power of politicians and government officials over these monies.

Furthermore, running a Fund is not easy; it requires a professional and financially literate organisation. The experience provided by running a Fund may create a conveyer belt of competent bureaucrats, able to assist in running the country. An example of this conveyer belt in action is Tony Tan, who recently became President of Singapore, having previously run the Government Investment Corporation.

We developed econometric models to test each hypothesis, using data on the economic performance of 51 countries since 1980. Our methodology is described in more detail in the appendix below, whilst the results of our analysis are presented in the following section.

## The Results

### *Funds help to lower inflation*

A key finding of our work is that countries with Sovereign Wealth Funds have lower inflation levels than those without a Fund.

This result holds when we account for a number of the other factors which influence inflation levels, such as key changes in exchange rates, monetary policy and the labour market.

We found the impact of a Fund's presence on inflation is stronger in commodity rich countries than in those with non-commodity based trade surpluses. The volatility of commodity prices mean that money raised from their sales will itself be volatile. A sudden surge of inflows may lead to a spending splurge which causes the economy to overheat.

### *Funds help to counter exchange rate appreciation*

We found a relationship between exchange rate movements and the presence and size of a Sovereign Wealth Fund.

When analysing this relationship we filtered out all countries operating any form of fixed exchange rate system. We also included other factors that influence exchange rates in our models to help us isolate the impact of the Sovereign Fund. These included the impact of different levels of inflation, overall economic growth, and monetary policy.

When separating out the countries with and without commodity wealth we found that the impact of Sovereign Funds on limiting exchange rate appreciation was equally strong for both groups.

### *Funds help to boost transparency*

Another interesting finding from our analysis is the relationship between transparency and Sovereign Wealth Funds.

We constructed a model to understand the linkages between Sovereign Wealth Funds and transparency, as measured by the Transparency International Corruption Perceptions Index. We also included a number of proxies for economic development in the model, which has a strong relationship with corruption, such as the level of GDP per capita, the depth of financial markets and the development of the service and manufacturing sectors. The purpose of this was to isolate the impact of the Sovereign Fund. Our analysis showed Sovereign Wealth Funds had a significant negative relationship with perceived corruption.

We also tested this hypothesis whilst restricting the sample according to the type of Sovereign Wealth Fund. The results suggested that the effect of the Fund on reducing the perception of corruption was slightly stronger in countries with non-commodity trade surpluses than in those with commodity wealth.

### *But Funds are not a panacea…*

We could not find relationships between the presence of a Sovereign Wealth Fund and all of the variables tested. For example, no significant relationship was found between the presence of a Sovereign Wealth Fund and exchange rate volatility or a country's risk premium charged on sovereign debt.

Overall, however, the findings from our analysis support the view that starting a new Sovereign Wealth Fund is beneficial to the country which sets

it up. The recent clamour by countries to start new Funds may indeed be justified.

But more research is needed. Each Sovereign Wealth Fund is different. The details of the Fund's objectives, its funding structure, investment strategy, governance and accountability, will all have a profound impact on how it operates and what impact it will have. Getting a firmer understanding of this detail is not something which can be done through top-down analysis of macroeconomic outcomes. What we can say from our analysis is that, on average, Sovereign Funds are associated with some positive economic outcomes. Within this average there is a range of effectiveness.

Another area we did not consider in our initial modelling is the impact of the growth of Sovereign Wealth Funds on the rest of the world. These impacts could be wide ranging and the sheer size of Funds means that they may increasingly affect overall capital market behaviour and economic performance globally.

# Methodological Appendix

This section outlines our approach to understanding the impact of Sovereign Wealth Funds on the national economies in which they are based.

Through mapping out the way in which Sovereign Wealth Funds operate, a series of hypotheses were developed on what their impact may be. These hypotheses, shown in Chart 3 in the main document, are based on the role of funds in receiving inflows of money into an economy and then channelling it into investments, often overseas. The potential impact this may have on domestic demand, capital flows, currency exchange rates, and social factors like corruption were considered.

For each of these hypotheses a number of econometric models were tested to see what macroeconomic factors were important, and whether or not Sovereign Wealth Funds had an impact. The specification of these models was based on economic theory where possible. For example, for exchange rates, the selection of variables was underpinned by a number of theoretical models such as Purchasing Power Parity, Uncovered Interest Rate Parity and the Balassa-Samuelson model. For inflation, the selection of variables was guided by empirical relationships such as the Phillips curve and the Non-Accelerating Inflation Rate of Unemployment (NAIRU).

For social factors such as corruption perceptions, there is less theoretical guidance on potential drivers. In this case a broad range of factors were tested, and the model specification was derived from the relationships observed.

The model type used was a fixed effects panel data model using annual data. The dataset used covered 51 countries since 1980. Out of this sample, 28 countries already have a Fund and the rest had the potential to have established one over the period.

We arrived at this sample of 51 countries based on four filters. The value of their natural resource endowment (proven reserves multiplied by market prices); the cumulative value of resources extracted over the last twenty years; a country's cumulative current account balance; and whether the country already has a Sovereign Wealth Fund. The data on resource endowment and production were obtained from the BP Statistical Review of World Energy and the U.S. Geological Survey. The data on Funds were obtained from the Sovereign Wealth Fund Institute.

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