## Do sovereign wealth funds effectively dampen exchange rate variability?

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**Abstract:** Sovereign wealth funds (SWFs) are receiving significant attention from nations with substantial and sustained foreign reserves derived via natural resource development and/or manufacturing based export-led economies as a means of achieving intergenerational equity, government savings, and stable currency exchange rates. Based on an analysis of currency variability for representative export-led nations with and without SWFs between 1999 and 2012, the case for SWF-based currency sterilization requires further investigation. Furthermore, several nations undergoing active policy debates regarding the possible implementation of SWFs may not have current account balances suitable for accruing all perceived SWF benefits.

Sovereign wealth funds (SWFs) are receiving significant attention from nations with substantial and sustained foreign reserves derived via natural resource development and/or manufacturing based export-led economies [1,2]. In addition, regions affected by SWF investment and the broader international community are beginning to take a closer look at the socio-economic impacts from these instruments. While SWFs are intended to promote the intergenerational transfer of resources and government saving, their role is also often claimed to provide a mechanism for dampening exchange rate variability in the source country [1,3-6]. Despite these claims, there has been little work completed to assess how effective SWFs are at meeting these objectives [6]. In Canada, concerns over potential exchange rate variability due to volatile and generally increasing oil export revenues [4, 7, 8] have led some to recommend the application of a national SWF as a means of counteracting changes in Canadian currency valuation [4].

Norway and Chile established their SWFs in 1990 and 1985 [4], respectively, whereas neither Canada nor Australia have national SWFs. As shown in Figure 1, it is difficult to see how the presence of the Norwegian and Chilean SWFs dampened (i.e., sterilized) their exchange rate variability over this time frame relative to the non-SWF dampened currencies. Indeed, the standard deviation for the normalized USD/NOK exchange rate between 1999 and 2012 is 16.9, equivalent to that of the USD/CAD exchange rate (16.9), and about the same as the USD/EUR exchange rate (17.2). Similarly, the normalized USD/CAD exchange rate range (51.5) over this period is lower than that of the USD/NOK exchange rate (62.9) and about equal to that of the USD/CLP exchange rate (52.8). One accepts that Norway's currency variability may have been higher over this period absent any SWF balancing, but this counterfactual is difficult to prove.

In addition, SWFs are based on current account surpluses and are less important with countries running sustained current account deficits [5, 6, 10]. Australia has had continuous current account deficits averaging -4.2% of gross domestic product (GDP) since 1980 (Figure 2). Canada also generally runs current account deficits (20 out of 32 years between 1980 and 2011 and each year from 2009-2011) averaging -1.1% of GDP over this time frame. The International Monetary Fund (IMF) is projecting continuing Canadian current account deficits out to 2017 [11]. In contrast, Norway generally maintains a current account surplus (in all but 5 of 32 years between 1980 and 2011) averaging +6.6% of GDP (the Norwegian average was +13.9% of GDP from 2000 to 2011). As a result,

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Figure 1: Normalized currency exchange rates [9] over the period from 31 December 1998 to 30 September 2012 between the US dollar (USD) and the Australian dollar (AUD), the Canadian dollar (CAD), the Norwegian kroner (NOK), the Chilean peso (CLP), and the euro (EUR).

suggestions that SWFs could have dampened Australian and Canadian currency rises during the natural resource export boom of the past decade [4] may not be accurate.

There are possible merits to the use of SWFs for intergenerational equity and government finance purposes, but the case for SWF-based currency sterilization requires further investigation, particularly given the relatively small current size of these funds compared to the annual GDP of major nations and the global value of traded securities [10]. Furthermore, several nations undergoing active policy debates regarding the possible implementation of SWFs may not have current account balances suitable for accruing all perceived SWF benefits.



Figure 2: Current account balances (as a percentage of gross domestic product [GDP]) [11] between 1980 and 2011 for Australia, Canada, Chile, and Norway.

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