Sovereign Wealth Funds and the International Monetary System

by Anthony Elson

Since the end of last year, much public attention has been focused on the growing importance of sovereign wealth funds (hereafter SWFs), which are large investment pools managed by national governments primarily among oil exporters and emerging market economies. Many of these governments have accumulated substantial foreign reserves because of large trade surpluses, some of which they have begun to invest in a range of financial instruments that is more diversified than is typically the case for central bank international reserves in order to improve the yield on their foreign asset positions.

While SWFs have been in existence for many years, their recent growth reflects two significant developments in the international economic system: one is a redistribution of economic power and wealth away from the industrial economies toward rapidly growing emerging market economies, such as Brazil, China, India and Russia; and the other is a loss of confidence in, and diminished authority of the International Monetary Fund (IMF) which was created to exercise surveillance over the international monetary system. This article is intended to explain the nature of these two phenomena and how they are related, as well as the implications of these developments for the international economic reform agenda.

Sovereign Wealth Funds and the Balance of International Economic Power

Sovereign wealth funds are currently estimated to hold assets of around US$3 trillion, spread among some 25 non-industrial economies, prominently China, Kuwait, Norway, Saudi Arabia, Singapore, and the United Arab Emirates (UAE), which maintain some of the largest such funds. Based on this estimate, the pool of resources managed by SWFs would be somewhat larger than that managed by hedge funds and private equity funds. While the financial resources managed by SWFs currently represent only around 1–2 percent of total financial assets traded in international markets, a number of analysts expect their value to grow to US$12-15 trillion by 2015.[1] In view of the rising influence of these state-run investment funds,

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some concerns have been raised as to whether their investment activity will be guided by purely commercial, as distinct from political or strategic, criteria.

Many of the existing SWFs have been established by commodity exporters (primarily oil) either as stabilization funds to insulate domestic economic activity from potential volatility in commodity export prices or as endowment funds to support future generations as finite natural resources are depleted. Other SWFs of the oil exporters have been established as development funds to support public investment in large scale infrastructure and investment projects. The SWFs created by non-oil emerging market economies are predominantly associated with the high-export, high-saving economies of East Asia (e.g., China, South Korea, and Singapore), which view these investment funds as a means of accumulating resources to deal with future contingencies such as the burden of aging populations in these societies (Table 1).

In a broader sense, the recent growth of SWFs reflects the increasing impact of economic and financial globalization which has accelerated during the last 15–20 years with the collapse of the former Soviet Union and the opening to trade of China and India. Just as the integration of the states within economic unions such as the United States and the European Union promoted the growth and income convergence of member states, so too has integration of the global economy promoted growth and convergence in national incomes among politically stable and open economies within the international system. This process has led to a shift in the distribution of economic power within the global economy, as lagging economies have grown more rapidly than advanced economies.

This shift in the balance of economic power is reflected in a number of economic indicators. For comparisons of the economic size of nation-states, measurements of GDP on a purchasing power parity (PPP) basis are commonly used. According to this measure, the relative share of the G-7 industrial countries fell to less than one-half of global output in 2007, while the combined share of Brazil, China, India and Russia (the so-called BRIC economies) has risen to match that of the United States and significantly exceed that of the European Union. China's economy, as measured by GDP on a PPP-basis, is now the second largest in the world with a share in global output of around half that of the United States, while the BRIC economies are among the largest ten economies in the global economic system.[2]

A similar shift can be seen in the distribution of official international reserves, which broadly reflect a country's degree of participation in the international economic system and the size of its economy. At the end of 1990, total foreign exchange reserves, as compiled by the IMF, amounted to nearly US$1 trillion, of which close to two-thirds were maintained by industrial countries and the remainder by emerging market economies, oil exporters and other developing countries. By 2007, the size and distribution of global foreign reserves had changed dramatically, with around 70 percent of official international reserves under the control of non-industrial countries. Total foreign asset positions of the largest non-industrial

TABLE 1-THE LARGEST SOVEREIGN WEALTH FUNDS[3]

Country	Fund Name	Assets ($USBN)	Start Year	Source
UAE	Abu Dhabi Inv. Authority	875	1976	Oil
Norway	Gov't Pension Fund-Global	380	1996	Oil
Singapore	Gov't Investment Corp.	330	1981	Non-Commodity
Saudi Arabia	Various Funds	300	...	Oil
Kuwait	Kuwait Investment Authority	250	1953	Oil
China	China Investment Corp.	200	2007	Non-Commodity
Singapore	Temasek Holdings	159	1974	Non-Commodity
Russia	Stabilization Fund	127	2004	Oil
Australia	Future Fund	54	2006	Non-Commodity
Qatar	Qatar Investment Authority	50	2005	Oil
Libya	Oil Reserve Fund	50	2005	Oil
Algeria	Revenue Regulation Fund	43	2000	Oil
Brunei	General Reserve Fund	30	1983	Oil
South Korea	Korea Investment Corp.	20	2005	Non-Commodity
Malaysia	Khazanah Nasional	18	1993	Non-Commodity
Kazakhstan	Khazakhstan National Fund	18	2000	Oil
Taiwan	National Stabilization Fund	15	...	Non-Commodity
Venezuela	National Development Fund	15	2005	Oil
Iran	Oil Stabilization Fund	13	1999	Oil
New Zealand	Superannuation Fund	11	2001	Non-Commodity
Chile	Econ. and Social Stab. Fund	10	2006	Copper
	Total	2968		

countries, including the holdings of their SWFs, amounted to US$4.7 trillion in mid-2007, or the equivalent of nearly 80 percent of global foreign exchange reserves.[4]

The growth and redistribution of foreign reserves in the international system reflects not only the rising economic power of emerging market economies, but also a problem of large imbalances in the international financial system, in particular since the beginning of the current decade. On the one hand, the US economy has been running a large current account deficit for many years, which was on the order of US$740 billion in 2007, or around 5 1/2 percent of its GDP. This deficit was largely offset, on the other hand, by large current account surpluses of the oil exporters and emerging market economies which control the majority of the SWFs.

These imbalances reflect, in a fundamental sense, a failure of the international system to bring about an adjustment or reduction of these imbalances through a realignment of exchange rates. Under a system of relatively flexible exchange rates, the currency value of surplus countries would tend to appreciate over time in a manner that would lead to a reduction in their payments imbalance; in the case of deficit countries, a process of currency depreciation would lead over time to an improvement in their payments position. However, this pattern of adjustment has not been observed in recent years.

Notwithstanding a sustained, large increase in the real price of oil since 2001, the real effective exchange rates of oil exporters have remained relatively unchanged.[5] As a result, growing export surpluses associated with oil exports have been reflected in large international reserve accumulations. A similar pattern of exchange rate behavior can be observed among the high export surplus economies of East Asia, especially China (table 2).

Table 2-Changes in Real Effective Exchange Rates and Oil Price in Real Terms(in percent from early 2002 to mid-2007)[6]

Country	Change
The United States	-17
Euro Area	+25
Japan	-20
China	-8
Emerging Asia	+2
Oil Exporters	-5
Oil Price (in real terms)	+180

Note: minus sign indicates real currency depreciation

The maintenance of inflexible exchange rates creates a dilemma for export surplus countries: either these economies will need to engage in increasingly costly sterilization exercises to limit the expansion of domestic liquidity associated with large reserve gains, because the interest cost of selling bonds to absorb liquidity will over time exceed the interest earned on foreign reserves as large imbalances are sustained indefinitely; or they risk the build-up of inflationary pressures which will lead over time to a real appreciation of the currency through an increase in domestic prices rather than an upward adjustment of the nominal exchange rate. Indeed, the rise of inflationary pressures is already a concern among many oil exporters and in China. This latter pattern of exchange rate adjustment is very disorderly, as domestic inflation may overshoot what is needed for real exchange rate realignment, while the problem of dealing with inflation will lead to downward pressures on output and employment.

The rigidity of exchange rate policy on the part of surplus countries has led to increased volatility on the part of G-3 (US, Japan, and the Euro countries) exchange rates which potentially could be destabilizing to the global economy. The real depreciation of the US dollar, which has been necessary to deal with the large US payments imbalance, has been reflected predominantly in a significant upward adjustment of the euro (even though the euro zone is close to current account balance) and sharp volatility of the yen which threaten the stability of all three economies, and thus of the global economic system. A more orderly process of exchange rate adjustment would have called for a broader range of exchange rate appreciation among surplus countries more generally.

This problem of exchange rate misalignments, in turn, reflects a failure of the IMF to exercise its proper role in the international system, which is discussed in the next section of this paper.

THE CRISIS OF THE INTERNATIONAL MONETARY FUND

The IMF was created as part of the post-WWII planning process to facilitate the recovery of war-torn economies and to oversee an international system of fixed, but adjustable exchange rates among its members. This system worked effectively for a time, but broke down towards the end of the 1960s, with the growth of international capital flows and the failure of the United States to live up to its commitment under the so-called "Bretton Woods system" to surrender gold in exchange for dollars accumulated by other countries in financing its sustained current account deficit position.

As a result of this earlier problem of unsustainable global imbalances, the IMF Agreement was revised in the early 1970s to call for a system of more flexible exchange rate arrangements which the Fund was expected to oversee through an enhanced surveillance mechanism. Countries were free to choose a fixed or flexible exchange rate system, but the IMF was supposed to ensure that member countries managed their exchange operations and macroeconomic policies in a manner that would avoid sustained payments imbalances or severe exchange rate misalignments.

Until recently, the revised IMF system worked reasonably effectively as an unprecedented period of trade and financial liberalization unfolded during the past 30 years or so without major systemic disruption. During this period, the Fund assisted many countries in establishing current account convertibility for their exchange rate regimes to support the expansion of trade, while also functioning as an international "lender of last resort" to support countries confronting financial crises.

However, the adjustment mechanism to deal with payments imbalances through exchange rate realignments has worked asymmetrically, in that the IMF has only been able to exercise effective leverage over the exchange rate and/or macroeconomic policy choices of its members when they were confronting large external deficits and needed access to IMF financing. In exchange for balance of payments assistance, the IMF is empowered to impose policy conditions on the phased disbursement of those resources to ensure that policies are being adjusted to resolve the balance of payments problems that gave rise to the need for IMF assistance. Typically, most borrowing from the Fund in recent years has been undertaken by low-income or emerging market countries.

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When countries were not in need of IMF financial assistance, the Fund was expected to influence members' exchange rate and macroeconomic policies through its annual Article IV consultation or surveillance mechanism. In practice, however, the IMF has been reluctant to call attention to exchange rate misalignments in its annual consultation exercises or to exercise its authority to call for "special consultations" outside the normal cycle in cases of severe misalignment.

This situation is particularly notable in the Fund's handling of the case of China. Since 2000, China's current account and overall balance of payments surplus has increased sharply. In 2007, its current account surplus reached the equivalent of 9 percent of GDP, while its gross international reserves increased to US$1.5 trillion. During this period of time, the value of the Chinese currency actually depreciated in real terms by a small amount, instead of appreciating as would be expected by its large surplus position.

In mid-2005, the Chinese authorities announced a shift from a fixed exchange rate system (under which the value for the renminbi had been pegged at 8.28 yuan per dollar) to a managed floating exchange rate system under which the value of the yuan would be allowed to appreciate. However, through the end of 2007, the renminbi had appreciated in real terms by only around 5 percent on a trade-weighted basis, while its current account surplus and foreign reserve position continued to expand.

During this time, the IMF has failed to call attention to the very slow pace of exchange rate adjustment in its annual surveillance exercises or to characterize the Chinese currency as undervalued when most outside analysts have argued that the currency is significantly undervalued. For example, according to studies conducted at the Peterson Institute of International Economics, as of mid-2007 the Chinese currency was undervalued in real terms by at least 30 percent.[7]

This failing of the IMF to exercise effective surveillance over exchange rates has been clearly identified outside and within the IMF. One important study was completed by the IMF's Independent Evaluation Office in 2007, which criticized the institution for the quality of its exchange rate advice and the ineffectiveness of its policy dialogue on exchange rate issues, in particular with advanced countries and large emerging market economies.[8] At the end of June 2007, the Executive Board of the IMF decided to revise its procedures for exchange rate surveillance to provide more guidance to members on exchange rate misalignments and to allow for more critical assessments in annual consultation exercises, but it remains unclear whether this change will invigorate the Fund's consultation procedure.

The weakness of the Fund's bilateral surveillance has been paralleled by a failing to exercise effective multilateral surveillance. As part of its international monitoring efforts, the IMF prepares on a semi-annual basis economic assessments of the global economy and its key regions which are discussed by its membership and provide a context for its annual consultation exercises with each member country. In mid-2006, the Fund decided to supplement these analytical studies with a multilateral consultation exercise among five countries which were important participants in the problem of global imbalances: the US, China, the Euro region, Japan, and Saudi Arabia. While potentially an important initiative, the countries involved were reluctant to grant the IMF any real authority to criticize or recommend policy adjustments, and used the exercise simply to reiterate policy intentions that they had already announced in other contexts.

This weakening in the authority of the IMF and its inability to exercise effective surveillance has been paralleled by a loss of confidence on the part of its non-industrial country membership. Very simply, these countries, predominantly the emerging market economies which have established SWFs, feel that they are under-represented in the decision-making of the IMF. Unlike the United Nations which operates on an equal voting basis, voting power in the IMF is mainly distributed according to a set of economic criteria (such as GDP and international reserves, among others) in the form of "quotas" which should reflect broadly the economic importance of its members in the global economy.[9]

While a mechanism exists to revise IMF quotas over time, in practice this system has operated very slowly and inadequately. To a large extent, this result reflects the strong resistance on the part of the industrial countries or G-7 to diminish their dominant share of power in the IMF. While developing and emerging market economies account for close to 50 percent of global output and nearly three-fourths of global foreign reserves, as discussed earlier, their share in IMF voting power is

only two-fifths. More specifically, members of the European Union as a group hold around one-third of voting shares in the IMF, whereas the BRIC economies have only around 10 percent.

In September 2006, a decision was made by the Fund's membership to revise the formula for determining quota shares in the IMF and to increase by 1.8 percentage points the quotas for four countries deemed to be significantly under-represented in the IMF: China, Korea, Mexico and Turkey. However, under the revised quota formula that was approved by the Fund's Executive Board at the end of March 2008, the voting shares of the emerging market and developing economies would increase by only 2.65 percentage points (including the increase already authorized in September 2006), thus leaving the distribution of shares between the industrial and non-industrial country groups largely unchanged.[10] As a result, the problem of the distorted distribution of economic power in the IMF will remain.

The crisis of confidence in the Fund among its membership is compounded by reluctance on the part of many emerging market economies to use its facilities. While these issues are related, they also reflect lack of satisfaction on the part of many emerging market countries with its past decisions. In particular, the tendency of emerging market economies to pursue a policy of "self-insurance" through large reserve accumulation reflects to some extent dissatisfaction with the range and extent of conditionality imposed by the IMF during the series of emerging market crises of the 1990s.

In addition, when the IMF established a Contingent Financing Facility in 1999 to minimize the need for self-insurance or precautionary reserves on the part of emerging market economies, no country expressed interest in being certified to use the facility in part because of the limited access it provided and the conditions that would be attached to drawings after an initial draw-down. The facility was closed in 2003, and subsequent attempts to revive the idea of an automatic, contingent reserve facility in the Fund have languished.

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Along with the tendency for many emerging market countries to rely on "self-insurance", one can also observe a growing trend of regional financial cooperation mechanisms. Perhaps the most prominent of these is the so-called Chiang Mai Initiative among East Asian countries which has created a reserve pool of US$70 billion to provide balance of payments assistance to participating countries.[11]

In the context of this weakness of the IMF, the rise of SWFs must be seen as a reflection of an inadequate coordinating mechanism at the center of the international economic system and growing distrust on the part of many emerging

market countries in the existing system centered in the IMF. Accordingly, in the concluding section of this paper, some recommendations and implications are drawn for the reform of the international system.

Implications and Recommendations for the Reform of the International Monetary System

In the light of the foregoing discussion, this paper lays out a four-point plan to deal with the current disorder in the international monetary system. The thrust of these recommendations is to restore the IMF to its intended central role in the international monetary system for the effective surveillance of a multilateral system of exchange rate arrangements. Such a change, however, will not take place without a fundamental reform in its governance system which recognizes the recent shifts taking place in the distribution of economic power in the international system. The second proposal is to implement forcefully the new surveillance mandate of the Fund and to give it an increased role in multilateral surveillance. The third element of the reform plan would be to establish a substitution account in the IMF to allow countries to exchange excess (dollar) reserves for SDRs (special drawing rights), which were established by the IMF many years ago as an interest-bearing, multi-currency asset that can be used in official international transactions. Finally, work should be completed on developing an international code of conduct for SWFs to ensure their transparency and accountability and to allay concerns that such investment pools could operate according to political rather than commercial criteria. Each of these points is examined in the paragraphs that follow.

Governance Reform of the IMF

The failure of recent efforts to re-align quota shares in the IMF in a meaningful way must be addressed if the institution is to regain its legitimacy and the confidence of its members. A realignment of voting shares in the Fund can effectively occur only in the context of a significant increase in total quotas or assets of the Fund which, at the equivalent of around US$300 billion, are smaller than the foreign reserve position of some of its individual members. An increase of, say, 50 percent in the overall size of the IMF would allow for a significant redistribution of quotas without a reduction in the absolute size of any individual member. Further revisions of the quota formula may be needed to improve its measurement of the shifting economic weight of countries and thus allow for a significant realignment of relative voting shares. At the same time, the European Union should reduce its representation in 8 of the 24 country constituencies in the Fund to allow for a reduction in the overall size of the Executive Board and an increased voice to emerging market and low-income countries. The simplest way to accomplish this result would be for the euro region, consistent with its single currency and economic system, to adopt a single "chair" or constituency in the Fund's Board and to accept a quota and voting share similar to that of the United States.

Another important element of governance reform in the Fund is to end the

current informal arrangement whereby the Managing Director of the IMF is always chosen from among European candidates, while the US government is given the choice of selecting the First Deputy Managing Director, or number two position in the Fund. These arrangements are not specified anywhere in the IMF Agreement, but were developed in the early history of the Fund when the institution was dominated by its Atlantic membership, even more than is the case today. In today's world, such arrangements are anachronistic and have served to undermine the credibility and authority of the institution.[12]

Strengthening the Fund's Surveillance Function

In line with its revised surveillance framework, the Fund should adopt a more pro-active approach in identifying misalignments in the exchange rate positions of its members and in calling for policy adjustments in the cases of sustained imbalances. In contrast with the current situation, a more even-handed approach by the Fund is required both for sustained surplus and deficit countries. In cases of reluctance on the part of countries to follow the advice of the Fund, it should follow a more public campaign to promote its views and invoke its authority to call for "special consultations" for a more frequent monitoring of a country's policy framework.

As an incentive to an enhanced surveillance function of the Fund, countries which are deemed to be pursuing appropriate exchange rate and macroeconomic policies could be authorized to have automatic—unconditional—access to an enhanced contingent reserve facility in the Fund in the event of unforeseen balance of payments disturbances. Such an arrangement in the Fund would mitigate the need for individual countries to maintain large pools of excess reserves for precautionary reasons.

In the case of multilateral consultations, the Fund should be given authority to participate on an equal basis with the member countries involved in the process. Such a role would involve, instead of note-taking, a more interventionist stance for the Fund (and its Managing Director) in proposing policy adjustments for consideration and debate among the participants.

The Creation of a Substitution Account in the IMF

The idea of a Substitution Account in the IMF was first proposed in the context of the creation of Special Drawing Rights (or SDRs) as a new international reserve currency in the mid-1970s. While three issues of SDRs were agreed during the 1970s, as a supplement to (then) existing reserve currencies (the US dollar, the UK pound, the Deutsche mark and the French franc), their use in international transactions has remained minimal, and the SDR has served mainly as an accounting unit for IMF operations. The idea of a Substitution Account was advanced in the 1970s to allow countries to diversify their holdings of international reserves at an earlier time of dollar overhang into an alternative interest-bearing asset which would also minimize the exchange risk of holding a single reserve currency, as the SDR is denominated in terms of a basket of the four major currencies (currently the US dollar, UK pound,

the Euro and Japanese yen). SDRs acquired by countries through this mechanism would be usable in official foreign exchange operations, as most members of the Fund have agreed to accept their use in international transactions.

These features of a Substitution Account have relevance for the current situation of excess reserve holdings by many emerging market countries, which are predominantly invested in US dollars. The resources generated by the Account would be managed by the IMF and invested in government bonds of the countries whose currencies are used to define the SDR basket. As current imbalances are reduced through a more effective exchange rate adjustment mechanism, countries with high reserve holdings would have the option of investing their excess reserves in a relatively risk-free, diversified reserve asset. Such a development would help to promote the role of the SDR in the international monetary system, which over time could lead to its increasing use in international transactions, as an alternative to single country reserve currencies.[13]

A Code of Conduct for Sovereign Wealth Funds

Notwithstanding the reforms outlined above which over time would reduce the incentives for countries to accumulate large pools of reserves, SWFs are likely to be a significant factor in cross-border financial flows for the foreseeable future. Indeed, in the wake of sub-prime financial crisis in the United States, SWFs have played a stabilizing role in the international financial system through their capital infusions to major banking institutions in the advanced countries. As large state-owned entities, however, it is important that they continue to operate according to strictly commercial criteria, free of political interference in their investment activity by the governments which own them. Maintaining the commercial nature of SWF operations is essential to avoid protectionist fears and investment barriers in the countries in which these funds wish to invest. One way to promote the commercial orientation of the SWFs is to establish a code of conduct for their transparency and accountability, which would identify good practices in terms of reporting, disclosure, auditing, and management structures. The Norwegian Pension Fund-Global has established a high standard for the transparency of its operations which could serve as a model for others.

Similar transparency standards have been established by the IMF for foreign reserve management, and it would seem appropriate to define a similar set of principles for SWFs which in most cases are linked to reserve assets. An effort is currently under way in the IMF to define a Code of Good Practice for SWFs, drawing on the inputs of selected SWFs, and it is to be hoped that this code receives wide endorsement among its members.

Notes

[1] Stephen Jen, "Currencies: How Big Could the Sovereign Wealth Funds Be by 2015?" *Morgan Stanley Research Global*, May 3, 2007, Available at: http://www.morganstanley.com/view/perspectives/files/soverign_2.pdf (accessed May 20, 2008); Gerard Lyons, "State Capitalism: the rise of sovereign wealth funds," (2007). Available at: http://www.banking.senate.gov/public/_files/111407_Lyons.pdf (accessed May 20, 2008).

[2] World Bank, "PPP GDP 2006," *World Development Indicators Database, World Bank*, April 11, 2008. Available

at: http://siteresources.worldbank.org/DATASTATISTICS/Resources/GDP_PPP.pdf (accessed June 20, 2008).

[3] Deutsche Bank, "Sovereign Wealth Funds – State Investments on the Rise," *Deutsche Bank*, September 10, 2007. Available at: http://www.dbresearch.de/PROD/DBR_INTERNET_DE-PROD/PROD0000000000215270.pdf (accessed July 10, 2008).

[4] Edwin Truman, "Sovereign Wealth Fund Acquisitions an Other Foreign Government Investments in the United States: Assessing the Economic and National Security Implications," (Testimony before the Senate Committee on Banking, Housing and Urban Affairs, November 14, 2007).

[5] The real effective exchange rate is a measure of the trade-weighted value of a country's currency in relation to the currency value of its major trading partners, adjusted by the ratio of changes in consumer prices in the country whose currency is being measured and consumer price changes among its trading partners.

[6] IMF

[7] Morris Goldstein, "A (Lack of) Progress Report on China's Exchange Rate Policies," (working paper Peterson Institute for International Economics, Washington DC May, 2007).

[8] IEO, "IMF Exchange Rate Policy Advice," *International Monetary Fund*, 2007. Available at: http://www.ieo-imf.org/eval/complete/pdf/05172007/exrate_full.pdf (accessed June 20, 2008).

[9] Each member of the IMF is also granted the same amount of "basic votes", which in the early history of the Fund accounted for around 14 percent of total voting power. However, as the size of the Fund expanded with increases in quota shares, the allocation of basic votes remained unchanged with the result that their share in the determination of voting rights in the Fund has fallen to around 2 percent.

[10] The revised quota formula introduces, for the first time, the use of PPP-based GDP measures, which is a significant improvement. The decision also proposes a tripling of "basic votes" in order to increase their weight in the determination of voting shares in the Fund from around 2 per cent to 5 per cent, thus increasing the relative shares of low-income countries. IMF, "The Reform of Quota and Voice Policy Paper," March 28, 2008. Available at: http://www.imf.org/external/np/exr/facts/quotas.htm (accessed June 20, 2008).

[11] Anthony Elson, "The Emergence of a Regional Financial Architecture in Asia," W*orld Economics* 7, no. 3, (July–September 2006): 167–184.

[12] Anthony Elson, "Reform of the IMF and World Bank: Where Do Things Stand?" *World Economics* 7, no. 3 (April—June 2007): 65–95.

[13] The establishment of a Substitution Account in the IMF has also been proposed by C. Fred Bergsten. C. Fred Bergsten, "How to Solve the Problem of the Dollar," Op-ed, *Financial Times*, December 11, 2007.