

Asia's Sovereign Wealth Funds and
Reform of the Global Reserve System

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Executive Summary

Developing Asia's foreign exchange reserves have grown explosively since 1990. The reserve growth mirrors the transformation of the region from a current account deficit region to a surplus region since the Asian financial crisis. The region's reserves now comfortably exceed all plausible estimates of what the region needs for traditional liquidity purposes. The emergence of excess reserves has led to widespread calls for more active reserve management. This, in turn, has resulted in the creation of new SWFs such as CIC and KIC in the region. The establishment of SWFs and, more generally, reorientation of excess reserve management from passive liquidity management to active profit-seeking investment will dilute the dominant role of the US as a global reserve currency and thus speed up the reform of the global reserve system. This is because whereas dollar-denominated assets enjoy a much more dominant position in the global market for reserve assets – i.e. US government bonds – than they do in the global market for riskier assets – i.e. equities and corporate bonds. At the same time, SWFs can help redesign and restructure reserve portfolios to make them more robust and resilient to the reform of the global reserve system. That is, by exposing reserve managers to a more diverse mix of currencies and asset classes, SWFs and more active reserve management will better prepare them for the less dollar-centric global reserve system of the future. In addition to SWFs, other policy options for more active reserve management include transferring some excess reserves into national pension funds or into exchange traded funds which are distributed among local investors. Regardless of the exact form of returns-oriented reserve management, it will require that countries build up a critical mass of skills and expertise in wealth preservation and managements.

1 Background for the rise of sovereign wealth funds in developing Asia

Understanding the role of developing Asia's sovereign wealth funds (SWFs) in the reform of the global reserve system requires a good understanding of why these funds have emerged in the region in the first place.¹ Key to the rise of Asia's SWFs was the massive accumulation of foreign exchange reserves prior to the outbreak of the global financial crisis: in the aftermath of the Asian financial crisis of 1997-98, and particularly since 2000, there has been an explosive growth in Asia's reserves, driven primarily by large and persistent current account surpluses, but often also augmented by capital account inflows. This is a relatively recent phenomenon: before the Asian financial crisis in the late 90's, the region as a whole ran a current account deficit. That is, Asia as a whole has switched from being a net capital importer to a net capital exporter relatively recently.

Figure 1 below shows the growth in Asia's FX reserves between 1990 and 2008 in both nominal and inflation-adjusted terms. During this period, Asia's reserves rose from US\$202 billion to US\$3,371 billion in nominal terms. The average annual nominal growth rate of reserves was therefore 16.9%, 13.4% and 21.5% for 1990-2008, 1990-2000 and 2000-2008, respectively. The pattern was similar in inflation-adjusted terms, with reserves growing from US\$267 billion to US\$2,697 billion. The overall picture is very clear – secular growth in Asia's reserves since 1990, punctuated by a further noticeable acceleration since 2000.

[Figure 1]

To get a more accurate perspective on Asia's reserve growth, one can scale the region's reserves by its GDP. After all, Asia has grown more rapidly than other parts of the world since 1990, so the reserve growth may simply reflect the growth of its output over time. Figure 2 below shows the amount of FX reserves relative to GDP. Asia's reserves-to-GDP ratio rose from 13.1% in 1990 to 21.9% in 2000 and further to 40.2% in 2008.

[Figure 2]

There is yet another measure worth examining – the share of the region's reserves as

¹ Throughout this chapter, developing Asia refers to the 44 developing member countries (DMCs) of the Asian Development Bank. Please refer to www.adb.org for a full list of those countries.

part of global reserves. Figure 3 below shows that the share of global reserves accumulated by developing Asia rose from 22.4% in 1990 to 34.7% in 2000 and further to 48.1% in 2008. This means that Asia has indeed been building up reserves more than twice as fast as the rest of the world. The People's Republic of China (PRC) accounts for more than 50% of Asia's reserve growth between 1990 and 2008. Table 1 below lists the region's top 10 reserve holders as of the end of 2008.

[Figure 3]

[Table 1]

2 Why did Asia accumulate so much in reserves?

To some extent, the accumulation reflects the determination of the region's central banks to avoid a repeat of the Asian crisis. It is impossible to overstate the enduring psychological impact of the devastating Asian crisis on the region's collective self-confidence. The one universal lesson drawn from the crisis by the region's governments is that the best guarantee against the catastrophic risks of volatile capital flows is to build up a large war chest of reserves. Using reserves to insure or protect oneself against Asian crisis-type financial turmoil is known as the precautionary or self-insurance demand for reserves. Disillusionment with the IMF's handling of the Asian crisis has led Asian countries to buy less efficient self-insurance in the form of reserve accumulation.

The other major traditional motive for holding reserves is the mercantilist motive of promoting exports and discouraging imports.² The general tendency among Asian countries has been to prevent their currencies from becoming stronger in order to preserve their export competitiveness. Accumulating reserves in order to promote exports and discourage imports is known as the mercantilist demand for holding reserves. Asia, in particular East Asia, has traditionally relied heavily on exports as an engine of economic growth. In truth, in light of the two stylized facts – Asia's export-led growth strategy and its deep-seated fear of a recurrence of the traumatic Asian crisis – both precautionary and mercantilist motives are likely to have been in play. Furthermore, the two motives are by

² For an extended discussion of the mercantilist and precautionary demands for reserves, please refer to Aizenman and Lee (2007).

no means mutually exclusive. Reserves which are the consequence of rapid export growth due to competitive exchange rates can serve precautionary self-insurance purposes as well.

In addition to the precautionary and mercantilist motives for holding reserves, there is a third possible incentive. A widely cited theoretical advantage of fixed exchange rates over flexible exchange rates is that the former provides a more conducive environment for international trade and capital flows by reducing the volatility and uncertainty of exchange rates. For example, promoting intra-European trade and financial integration were two of the most important objectives behind the creation of the euro. East Asia in particular is highly integrated into the world economy, in terms of both trade and capital flows. Furthermore, FDI has been an important ingredient of economic growth in many Asian countries. Therefore, it should come as no surprise that the region has long had an inclination toward rigid exchange rates, especially with respect to the US dollar.

3 Did Asia have "too much" reserves prior to the global financial crisis?

Reserve accumulation not only yields benefits but entails costs as well. The three major costs of reserve accumulation often cited by economists are the risk of domestic inflationary pressures, fiscal costs related to the issuance of sterilization debt, and the potential for higher domestic interest rates. One additional risk which has come to the fore more recently is the prospect of a sustained depreciation of the main reserve currency, the US dollar, which would entail large balance sheet losses. Since reserves entail both costs and benefits, the optimal level of reserves is neither infinite nor zero. There is a great deal of uncertainty about what constitutes the optimal level of reserves.

Notwithstanding such uncertainty, there was a fairly strong consensus prior to the recent crisis that Asia's unprecedented reserve build-up since 2000 led to sub-optimally large reserves. That is, Asia's reserves may have reached levels which were substantially higher than all plausible estimates of what the region may need for traditional liquidity purposes. The conventional way to test for the existence of surplus or excess reserves is to use several traditional measures of reserve adequacy. According to Park and Estrada (2009a), all such measures – i.e. ratio of reserves to short-term debt, ratio of reserves to

M2 money supply, and the number of months of import cover – suggested that the region had more than adequate reserves. In addition, the balance of evidence from formal econometric research also implies the presence of surplus reserves in Asia prior to the recent crisis.

4 Asia's SWFs as a policy response to surplus reserves

Much of the research strongly indicated that at the margin, additional reserves were subtracting from rather than adding to national welfare in the region. Therefore, it would be logical to surmise that many reserve-rich Asian countries could improve their welfare by slowing down or even reversing their reserve build-up. The best way to have done this would have been not to accumulate so much reserves in the first place, for example by not running large and persistent current account surpluses or by liberalizing restrictions on capital outflows. However, *given* that there is a substantial amount of surplus reserves already accumulated and managed by regional central banks and monetary authorities, the second-best solution might be to manage at least a portion of such reserves more actively with the goal of maximizing returns rather than managing liquidity. The notion that developing Asia should reallocate some of its reserves from safe and liquid but low-yielding assets to less safe and liquid but high-yielding assets is not only politically popular, but also economically sound.

Sovereign wealth funds (SWFs) are a natural blueprint for the proposed shift of surplus FX reserves from passive liquidity management to active profit-seeking investment. In contrast to central banks, which traditionally manage reserves for liquidity purposes, SWFs use reserves to pursue commercial profits. As their name implies, SWFs have two defining qualities – (1) ownership and control by the government and (2) pursuit of high risk-adjusted returns or long-run wealth maximization as the central objective.³ The predictable response of regional policymakers to the emergence of large and growing surplus reserves has been to set up SWFs as a means of using those resources more

³ This fairly straightforward and simple notion should not mask the fact that SWFs typically have very complex and often undefined liability profiles, which are much more varied and at times even contradictory in nature compared to typical liability profiles of other institutional investors, such as pension funds, endowments, foundations, etc.

productively. More generally, even when they did not set up SWFs, many Asian countries were exploring ways to manage their surplus reserves more actively. One way to do this is by setting up separate portfolios – for liquidity and investment – within central banks.

Although the term SWF has been coined only recently by Rozanov (2005), these funds have been around for a long time. In fact, the world's oldest SWF – the Kuwait Investment Authority (KIA) – was created way back in 1953. Most of the earlier well-established SWFs, including KIA, started out as investment vehicles for managing excess revenues from exporting natural resources, especially oil. The two notable exceptions were the two Singaporean SWFs – Temasek and GIC. The commercial success of some well-established SWFs has been a major driving force behind the establishment of SWFs in Asia. In particular, due to their impressive long-term investment track records, Temasek and GIC have attracted the attention of regional policymakers as a potential benchmark model. New SWFs have already been established in Asia and more may be in the planning stages.⁴ the Republic of Korea (Korea) set up the Korea Investment Corporation (KIC) in 2005 and the PRC followed suit with the China Investment Corporation (CIC) in 2007. Table 2 below lists the major SWFs of developing Asia. In short, Asian countries are setting up SWFs as a policy tool for coping with the relatively new phenomenon of surplus reserves.

[Table 2]

The immediate impact of the global financial crisis has been the re-emergence of safety and liquidity rather than investment returns as the dominant objectives of FX reserve management in Asia. The severe disruption of global financial markets predictably encouraged Asian central banks to join the global flight to safety and quality, thus refocusing on liquid asset classes. This meant a temporary lull in the region's pre-crisis quest for more active, returns-seeking reserve management, including the establishment and expansion of SWFs. However, along with their private sector counterparts, Asia's central banks are gradually regaining their risk appetite as global financial markets and the world economy return to normalcy. This suggests that while the global crisis had a clearly

⁴ Park (2007) provides a comprehensive review of the emergence of SWFs in developing Asia.

negative impact on Asian SWFs, this impact is likely to be temporary. For example, there are reports that the PRC may be planning to inject US\$200-250 billion of new capital into CIC.

5 One Alternative to SWF: Active Management of Pension Fund Assets

However, not all nations with excess monetary reserves will necessarily view the creation of a sovereign wealth fund, or indeed a much more active approach to central bank reserve management, as the optimal solution: there may be various political, institutional or structural constraints that can present insurmountable obstacles.⁵ For these countries, there may be an alternative. If politicians and policymakers were prepared to be open-minded and innovative in thinking about excess reserves in the context of broader national asset and liability management (ALM), there may be a number of ways to optimize the broader public sector balance sheet, while at the same time shrinking the overall size of foreign exchange reserves.

For example, it may be constructive to explore whether some foreign assets currently residing in FX reserve portfolios and sterilized with local currency-denominated debt might be more optimally swapped against such debt with the national pension reserve funds. This would help local monetary authorities, who are reluctant holders of reserves in the first place, to shrink their balance sheets, while at the same time helping national pension reserve funds expand their allocations to foreign assets in one fell swoop, without the associated market impact. Let us consider this option in more detail.

Many reserve-rich countries in Asia, including some with sovereign wealth funds, have established large and systemically important state pension funds, with the objective of pre-funding at least some future sovereign liabilities with respect to old age provision and insurance. These funds will only grow in importance, given the rapidly changing demographic profile of the region, resulting from dramatic increases in life expectancy, decreasing birth rates, and increasing old age dependency ratios.⁶

⁵ For example, while there are ongoing public debates in Japan, India and Thailand about the pros and cons of setting up reserve funded SWFs, some key stakeholders appear to be either hesitant or downright hostile to these plans for various reasons specific to each country.

⁶ For an excellent introduction to the subject and analysis of recent trends in Asia, see Wang J. (2009)

These pension reserve funds are still in the accumulation and growth phase: for example, Japan's Government Pension Investment Fund (GPIF) – which at US\$ 1.3 trillion is the largest pension plan in the world – is expected to peak out in 2050; in Korea, assets in the National Pension Service (NPS) – which at US\$ 230 billion make it the 5th largest pension fund in the world – will probably accumulate until mid-2040's; the PRC's National Social Security Fund (NSSF) – currently at US\$ 100 billion and growing fast – is unlikely to start decumulation prior to 2030.⁷ Other similar pension funds in the region include Hong Kong, China's Mandatory Provident Fund (MPF), Malaysia's Employee Provident Fund (EPF), Singapore's Central Provident Fund (CPF), Thailand's Government Pension Fund (GPF), and Taipei, China's three state pension plans – Public Service Pension Fund, Labour Insurance Fund and New Labour Pension Fund.

While the decision to set up these funds was, without a doubt, fiscally prudent and politically responsible, many of them have been criticised over the years for a number of deficiencies stemming from their public ownership: the extremely conservative nature of investments, severe restrictions on asset allocation and insufficiently robust governance, which occasionally resulted in political meddling, non-commercially motivated investments and poor investment results.⁸

For purposes of our discussion, we focus on deficiencies related to the long-term investment policy of these funds: rigid asset allocation frameworks, over-reliance on government bonds and cash, and extreme home bias. In many cases, the resulting investment returns are simply too low to meet the future liability shortfall targets these funds were originally set up to address. There has been some progress over the last ten years, as the funds started to gradually diversify their investment portfolios to include more

⁷ Ibid.

⁸ For example, Iglesias and Palacios (2000) analysed 34 publicly-managed pension funds and found that only five held less than half of their assets in government bonds. They also found that these funds were often used to achieve objectives other than pension provision, as it was difficult to insulate them from political interference. As a result, they tended to earn poor rates of return relative to relevant indices and private sector peers.

risk exposures and foreign assets.⁹ However, given the very large size of these funds and their potential market impact, the pace of diversification has been glacial at best.¹⁰

In this context, one can look at the challenges of dealing with excess foreign exchange reserves and growing sovereign wealth in a completely different light. Unlike the assets of strongly 'home-biased' national pension reserve funds, excess foreign exchange reserves – by definition – are invested exclusively in foreign assets, predominantly government and quasi-government bonds and cash. To the extent that the central bank has ventured beyond just government bonds and money markets, and especially if some kind of an SWF-type arrangement has been set up, such reserves would also include various credit and equity instruments in foreign markets.

If the principal stakeholders in a reserve-rich Asian nation do not have the political will, the risk appetite and the necessary consensus to set up a sovereign wealth fund to manage a large portion of national savings with a long-term return objective, then they might want to consider restructuring and transferring some of the excess reserves into the national pension fund, which may be a politically more palatable and viable vehicle for such long-term wealth management. In this scenario, the transfer of excess foreign exchange reserves into the pension fund would be matched by a counter-transfer of local government bonds and cash of equivalent value to the local monetary authorities, who would then be able to shrink their balance sheet by the same amount.

6 Another Alternative to SWF: Exchange Traded Funds

The above approach is limited in the sense that it focuses only on restructuring and rearranging public sector assets and liabilities. One could be more ambitious and consider broader ALM solutions that seek to engage the local private sector. Governments of many developing Asian nations have long recognised that their massive accumulation of reserves is at least partly driven by the underdeveloped nature of local financial markets, which are simply not capable of intermediating massive surplus savings efficiently. In light

⁹ For a more recent analysis of these issues, and specific examples of some improvements in various Asian countries, see Brown and Baker (2009) and Wang J. (2009).

¹⁰ Still, some private sector experts forecast further significant shifts in strategic asset allocation at some of these funds, leading to a sharp decline in 'home bias', a bigger risk appetite, and increased investments in equity assets and foreign assets. For a more detailed discussion of these points, see Jen and St-Arnaud (2007).

of this recognition, the authorities have worked hard in the years following the Asian financial crisis to develop local and regional financial markets, not least by introducing new financial instruments and investment vehicles for local companies and households. In this context, more ambitious and creative ALM solutions may include the innovative use of exchange-traded funds (ETFs) or exchangeable bonds to dispose of a portion of excess reserves in an orderly and market-friendly way, which could also contribute to the broadening and deepening of local and regional financial markets.

For example, instead of transferring a foreign bond or stock portfolio from the central bank's reserves to the state pension fund, the authorities may choose to put these assets in a special purpose vehicle, which can then be used as the basis for a newly launched ETF, denominated in the local currency and distributed among local investors. The same approach could be used with respect to sovereign investments in alternative assets, such as real estate and commodities.¹¹ The local currency amounts raised through such a public offering could then be used to retire some of the sterilization debt, helping shrink the public sector balance sheet further.

Apart from ETFs, the authorities may want to consider disposing of excess reserves by issuing bonds exchangeable into baskets of foreign government bonds, stocks or commodities. This route may be particularly attractive in the current environment of low interest rates, high volatility of risk assets and increasing competition among sovereign debt issuers.¹² These instruments could also provide local investors with a very attractive potential payoff: a meaningful participation in the upside of the foreign asset, combined

¹¹ As the People's Republic of China, the Republic of Korea, India, Singapore and other fast-growing, resource-poor Asian nations look to secure a stable supply of natural resources, many commentators have focused on how excess reserves and sovereign wealth can be used to acquire large minority or even controlling stakes in various energy and mineral companies. Another way to achieve this objective, with much less controversy, is to build up and develop Asia's strategic petroleum reserves (SPR) and other commodity reserves. This would be in line with a key recommendation from the International Energy Agency (IEA), which prescribes a minimum of 90-day petroleum reserves for oil-importing countries. Typically, such reserves are either carried on the public sector balance sheet or mandatorily required of the broader industry. One possible innovation to this approach would be to create an ETF based on a strategic commodity reserve pool, denominated in the local currency and distributed widely among local and international investors. For a general discussion of SPR and related issues, see Houssin (2009); for a discussion of the People's Republic of China's FX reserves and SPR plans, see Hsiao (2009).

¹² A new instrument like this can offer the issuing government several potential benefits: it can tap into new sources of capital, thus broadening the investor base and diversifying the government's sources of funding; it can be issued with very low or even zero coupons, thus lowering annual debt servicing costs; it can be structured in a way that maximises the probability of conversion into the underlying assets during the tenor of the bond, thus removing the need to pay back the principal amount at maturity.

with the downside protection of the local government bond. For domestic investors not used to owning foreign assets, such exchangeable bonds may serve as a useful intermediate step to getting more familiar and comfortable with overseas risk exposures.

Such actions by the official sector would not be entirely unprecedented: for example, the Hong Kong Monetary Authority (HKMA) partially disposed of its local share portfolio, which it had accumulated during the defence of Hong Kong, China's markets against the so-called 'double play' speculators in 1998, via a creative ETF-based solution¹³, while some European states in the past issued exchangeable bonds to reduce their stakes and lower their debt burdens. More recently, the UK Financial Investments (UKFI), the newly created entity to hold and manage the shares acquired by the British government in bailed out domestic banks, is reportedly considering issuing an exchangeable bond as one possible disposal option.¹⁴

Some countries that have accumulated massive FX reserves and sovereign wealth, such as the PRC, may be in a position to implement all of the above approaches simultaneously: the Chinese authorities may want to consider innovative solutions to shrink the overall size of reserves by swapping a portion of these assets with NSSF and by releasing another portion into the broader market in the form of an ETF or some other financial vehicle, while at the same time working to achieve better diversification of the remaining reserves and sovereign assets held by SAFE and CIC, respectively. The following quote from Ms. Wu Xiaoling, currently vice-president of the financial and economic affairs committee of the National People's Congress and formerly Deputy Governor of PBOC and Chief of SAFE, suggests that innovative ALM solutions along these lines may be of direct interest and relevance to the PRC:

¹³ In August and September of 1998, HKMA intervened heavily in the local FX and equity markets, successfully squeezing out a group of global macro hedge funds that had put on massive short positions in both markets. In a matter of just 10 days, HKMA ended up owning a large local share portfolio, comprising almost 10% of Hong Kong, China's total stock market capitalization. Subsequent disposal presented a series of challenges, not least the potential to disrupt the local stock market due to the massive size of the position in question. HKMA came up with a novel idea of putting a large portion of their position in an ETF structure called 'The Tracker Fund' or TraHK, which was then offered to retail and institutional investors at an attractive discount. For an excellent discussion of this episode, see Goodhart and Dai (2003).

¹⁴ Aldrick (2009)

“We should encourage businesses to pool resources into forming a Renminbi Equity Investment Fund, which can then buy foreign currency and embark on investment abroad. To reduce investment risk, the government may alternatively set up an industrial fund to help businesses explore overseas markets... The best way to minimize risk [of the foreign reserve portfolio] is to scale down the size of foreign currency reserves.”¹⁵

Whichever approach is chosen to restructure and strengthen reserve portfolios, one thing is certain: it will require a set of skills and expertise that have much more in common with wealth preservation and management than liquidity management. This is why the practice of sovereign wealth management, whether it is deployed in the context of a formal SWF or from within the central bank, will be crucial, as it will enable and facilitate reform of the global reserve system.

7 Other Positive Externalities of SWF

Another way in which sovereign wealth managers can become part of the broader solution is by contributing to free and open flows of capital across borders, and by helping facilitate a more commercially sensible and effective intermediation of surplus savings from developing countries. The current process of automatically borrowing and channelling these savings into US government paper is dictated by policy objectives of a dollar-centric global reserve system, not market considerations of return and risk. By managing excess reserves less as liquidity and more as sovereign wealth, such national savings can be allocated more efficiently to assets and projects that promise better risk-adjusted returns.

One potential downside risk to increased sovereign investment in global equity and other non-traditional asset markets is the risk of a protectionist backlash. Prior to the global financial crisis, SWFs and their investment activity aroused a great deal of concern and unease in recipient countries. The overall stereotype of SWFs in these countries was one of opaque, well-endowed state-owned entities from countries with different political systems and potentially non-commercial political investment objectives seeking to take over firms and industries vital to the national interest.

The establishment of the Santiago Principles in October 2008 was a direct response to

¹⁵ Wang, B. (2009)

recipient-country concerns about investment activities of SWFs. The principles are a voluntary set of practices that commit SWFs to refrain from investments that harm the national welfare of countries in which they invest. These principles play a valuable role in creating a more conducive and friendly environment for SWF investments by allaying fears and suspicions of recipient countries toward SWFs, primarily by signalling the goodwill and good faith of the SWFs. By reducing the risk of financial protectionism and economic nationalism through their concerted collective efforts, best exemplified by the Santiago Principles, SWFs can play a crucial role in maintaining a free and open system of cross-border capital flows. Financial globalization will, in turn, enable SWFs to diversify the currency and asset class composition of their portfolios.¹⁶

As they help restructure large reserve portfolios to make them more diversified and resilient, and as they help intermediate national savings more efficiently, Asian SWFs could also play the role of a catalyst in regional financial integration. As with trade linkages, developing Asian countries depend to a disproportionate degree on financial linkages with distant industrialized countries. There is a lot of scope for growth in intra-regional financial linkages. For example, it is a well-known stylized fact that developing Asia invests much more of its savings outside the region than within the region. Just as the lack of robust intra-regional trade creates a risk that potentially large gains from trade are not fully exploited, under-development of intra-regional financial linkages potentially entails similarly large opportunity costs.

Unlike central banks, which invest in safe and liquid but low-yielding traditional assets such as US government bonds, SWFs are free to invest in higher risk assets such as public and private equity. As such, developing Asia's SWFs are in a unique position to invest in equity and other asset markets of other developing Asian countries - it should be remembered that most of the region's capital outflows are intermediated by the official sector rather than the private sector. This is where the unique nature and comparative advantages of SWFs can become relevant.

¹⁶ For information on 'Santiago Principles', see the web-site of the International Forum of Sovereign Wealth Funds at www.ifswf.org ; for a discussion of how perceptions of SWFs changed in recipient countries throughout 2007-09, see Nugee (2009).

Fundamentally, Asian SWFs are commercially operated institutions whose overriding objective is typically to maximize risk-adjusted returns over a certain investment horizon. At the same time, they are public sector agents, who have explicit or implicit policy objectives and are ultimately accountable to political authorities. While in and of itself explicit support for regional financial integration cannot and should not be a hard-wired policy objective for Asian SWFs, authorities in developing Asian countries would do well to continue their efforts to improve the investment climate for domestic and foreign players. This would provide an attractive market environment and a set of incentives for regional SWFs to invest increasingly in regional markets. To the extent that regional currencies and currency unions become a material part of the debate on reforming the global reserve system, increased regional financial linkages facilitated by SWFs can play a role.

In a similar vein, if the SDR – or a modified version thereof – is increasingly viewed as a legitimate reserve currency alternative, SWFs may be able to play a role in facilitating the private sector's use of SDRs. For example, SWFs could potentially become an important source of demand for SDR-denominated investment instruments. This would make perfect sense in terms of their overriding objective of diversifying currency exposure away from the US dollar. A permanent increase in demand for SDR-denominated paper could then lead to increased supply of such instruments by private sector issuers seeking long-term, stable financing. SWFs could further promote broader acceptance of the SDR by using the currency basket as a unit of account. Such use would have the clear benefit of making SWF accounts considerably less volatile compared to the use of any single currency for such reporting.

To be sure, there will be many hurdles complicating this process: safeguard clauses that specify what happens if the IMF changes the composition of the SDR; currencies used to repay interest and principal; the absence of clear market-making and liquidity provisions; and other constraints. However, by virtue of their origin, ownership structure, and investment and policy objectives, some SWFs may be uniquely positioned to promote private use of the SDR in the ways described above. This could in turn facilitate greater public use of the SDR, and in particular the development of an IMF-sponsored 'substitution

account' in which official holders of US dollars could exchange their surplus reserves for SDRs at the IMF. The IMF would then manage these reserves to meet the liabilities of its membership with respect to the new SDR-based reserve currency.¹⁷

8 Concluding Observations

Sovereign wealth management expertise and techniques, whether deployed by stand-alone, independent SWFs or by reserve managers from within central banks, might help – on a very practical and pragmatic level – Asia's policymakers to deal with a whole set of issues that will inevitably arise in the process of reforming the global reserve system. At a broader level, the creation of SWFs, and a more active approach to managing foreign exchange reserves should lower the demand for US Treasuries and thus dilute the dominant position of the US dollar as the global reserve currency. While dollar-denominated assets such as US Treasuries dominate the global supply of traditional reserve assets, the supply of riskier assets such as equities and corporate bonds is not characterized by such dominance of dollar-denominated assets. Therefore, the shift of reserves from central banks to SWFs will speed up the reform of the current dollar-centric global reserve system.

This profound shift in the management of excess foreign exchange reserves in Asia would be completely in line with the widely held view on what needs to happen for global macroeconomic rebalancing to occur: Asia needs to stop the flow of uneconomically cheap financing for its main trading partners by switching to domestic and regional investment and consumption and by introducing greater exchange rate flexibility, while the United States needs to cut back on borrowing and consumption by increasing its national saving rate. Failure by either side to make significant adjustments may re-ignite the build-up of global imbalances which, as the global financial crisis painfully illustrated, is in nobody's interest.

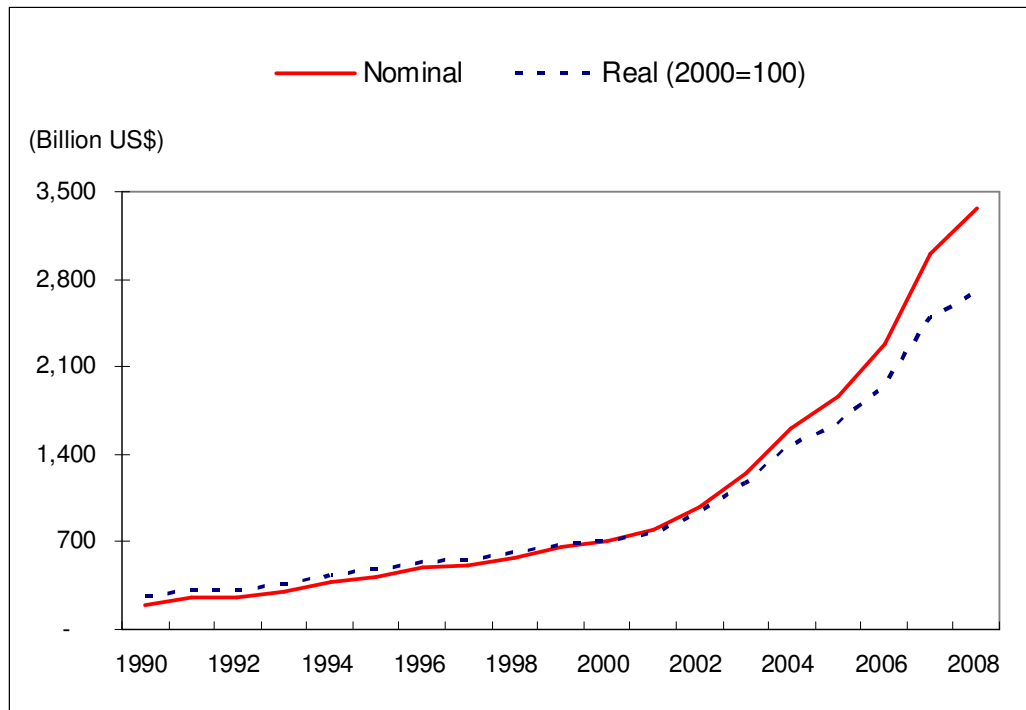
¹⁷ For a more detailed discussion of the potential role of SWFs in promoting broader acceptance and use of SDRs, see Hoguet (2009)

The crux of the problem, as with many complicated tasks, is the timing and sequencing of such policy shifts and adjustments. Act too quickly, and the social stress and economic costs can become too overwhelming, not least in terms of Asian nations incurring unacceptably high losses on current massive reserve portfolios. But procrastination and failure to act would not solve the problem either: sooner or later, the same stresses and costs would still materialise, except they will do so at a timing of nobody's choosing. Therefore, Asia's policymakers need to start planning macroeconomic policy adjustments and reform of the global reserve system as soon as possible, and as they do so, they need to consider how to protect and enhance the region's massive savings, accumulated primarily in FX reserve portfolios, from the inevitable impacts and risks that will come from reforming the global reserve system. Looking more closely at sovereign wealth funds and how they might be able to help in this process would be a constructive step in the right direction.

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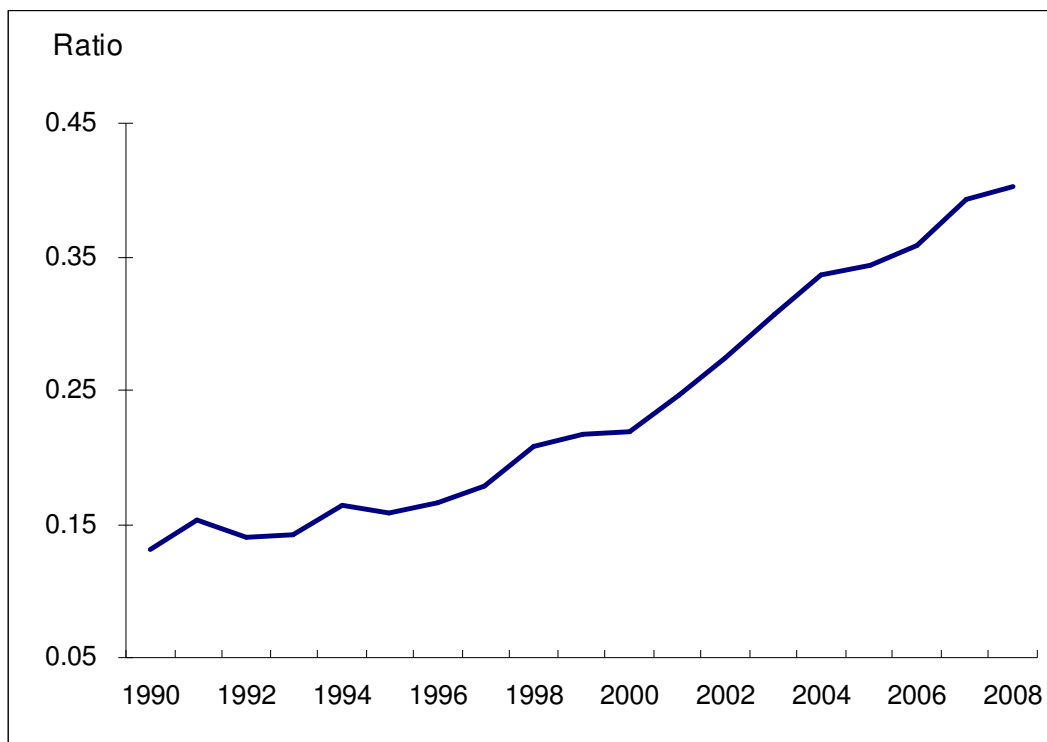
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Figure 1
Nominal and Real Foreign Exchange Reserves
of Developing Asia, 1990-2008



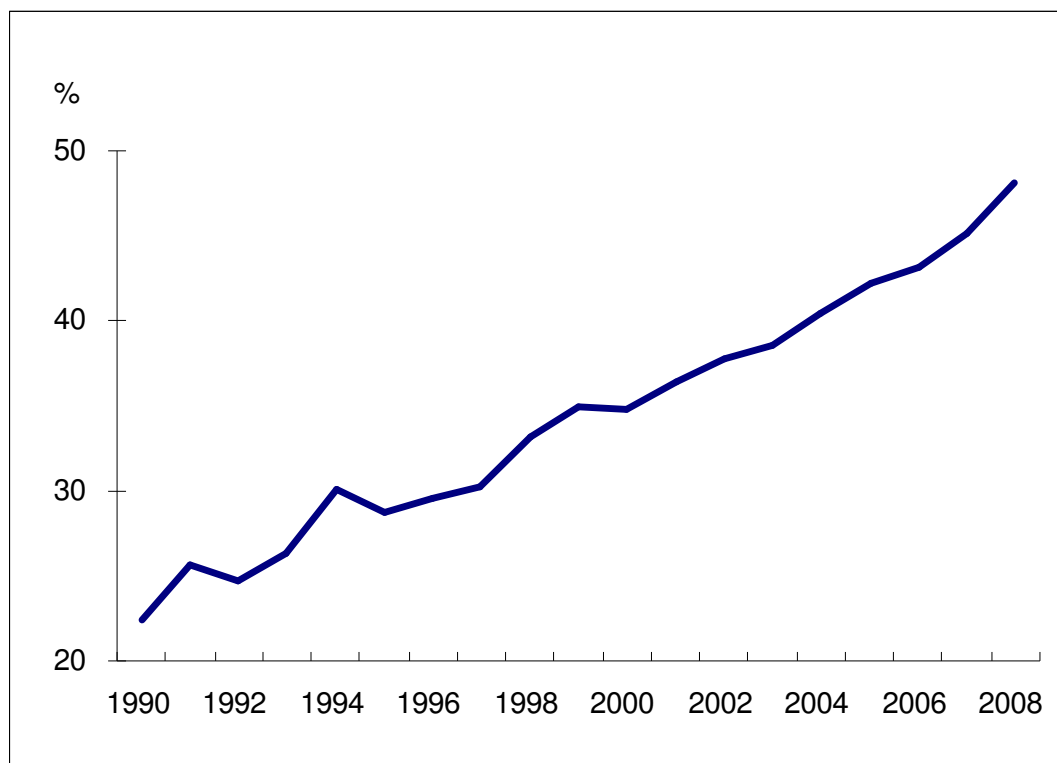
Sources: Author's estimates based on data from CEIC Data Company Ltd. and International Monetary Fund, *International Financial Statistics* online database, both downloaded 15 June 2009.

Figure 2
Ratio of Foreign Exchange Reserves to GDP,
Developing Asia, 1990-2008



Sources: Author's estimates based on data from CEIC Data Company Ltd. and International Monetary Fund, *International Financial Statistics* online database, both downloaded 15 June 2009.

Figure 3
Developing Asia's Share of World Reserves, 1990-2008



Source: Author's estimates based on data from CEIC Data Company Ltd., International Monetary Fund (IMF), *International Financial Statistics* online database, and IMF, Currency Composition of Official Foreign Exchange Reserves, available: <http://www.imf.org/external/np/sta/cofer/eng/index.htm>; all downloaded 15 June 2009.

Table 1
Asia's Top 10 Reserve Holders, 31 December 2008

| Rank | Country | Stock of Foreign Exchange Reserves (Billions of US\$) |
|------|-------------------------|---|
| 1 | China, People's Rep. of | 1,946 |
| 2 | Taipei, China | 292 |
| 3 | India | 247 |
| 4 | Korea, Rep. of | 200 |
| 5 | Hong Kong, China | 182 |
| 6 | Singapore | 174 |
| 7 | Thailand | 108 |
| 8 | Malaysia | 91 |
| 9 | Indonesia | 49 |
| 10 | Philippines | 33 |

Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database; both downloaded 15 June 2009.

Table 2
Sovereign Wealth Funds of Developing Asia

| Country | Name of fund | Assets (US\$ Bn) | Year of inception | Type |
|-------------------------|--|------------------|-------------------|-----------------------------|
| Singapore | Government of Singapore Investment Corporation | 330 | 1981 | Non-commodity |
| China, People's Rep. of | China Investment Corporation | 200 | 2007 | Non-commodity |
| Singapore | Temasek Holdings | 100 | 1974 | Non-commodity |
| Hong Kong, China | Investment Portfolio (HKMA) | 100 | 1998 | Non-commodity |
| Brunei Darussalam | Brunei Investment Agency | 30 | 1983 | Commodity: Oil |
| Korea, Rep. of | Korea Investment Corporation | 20 | 2005 | Non-commodity |
| Malaysia | Khazanah Nasional BHD | 15 | 1993 | Non-commodity |
| Kazakhstan | National Oil Fund | 15 | 2000 | Commodity: Oil, gas, metals |
| Taipei, China | National Stabilization Fund | 15 | 2000 | Non-commodity |
| Azerbaijan | State Oil Fund | 1.6 | 1999 | Commodity: Oil |
| Timor Leste | Petroleum Fund | 1.22 | 2005 | Commodity: Oil and gas |
| Uzbekistan | Fund for Reconstruction and Development | 0.5 | 2006 | Commodity and non-commodity |
| Kiribati | Revenue Equalization Reserve Fund | 0.47 | 1956 | Commodity: Phosphate mining |
| Nauru | Nauru Phosphate Royalties Trust | 0.07 | 1968 | Commodity: Phosphate mining |
| India | To be named | n.a. | n.a. | Non-commodity |
| Thailand | To be named | n.a. | n.a. | Non-commodity |

Source: Park and Estrada (2009b)