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Testimony of

Brad Setser
Fellow, Geoeconomics
Council on Foreign Relations[1]

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Sovereign Wealth Funds: New Challenges from a Changing Landscape

[1] The Council on Foreign Relations takes no institutional position on policy issues. All statements of fact and expressions of opinion contained in this testimony are the sole responsibility of the author. The author would like to thank Arpana Pandey for help with the preparation of the charts in this testimony.

Over the last few years, capital has flowed—in broad terms—from poor countries to rich countries, from fast growing countries to slow growing countries, from countries that offered a high return on financial assets to countries that provided a low return and, increasingly, from autocracies to democracies. This unusual—even unnatural—pattern of global capital flows has not been the product of private investment decisions. Private demand for emerging market assets, until very recently, has been strong—and in many ways stronger than private demand for US financial assets. The current flow of capital flows from emerging economies to the US is a reflection of unprecedented growth in the foreign assets of emerging market governments.

The US slowdown, together with the rise in oil prices, initially intensified this pattern. The increase in the foreign asset growth of the major emerging markets rose from around $800 billion a year in 2006 to an annual pace of around $1.6 trillion. In the past month, a welcome fall in oil prices combined with a reduction in private inflows to the emerging world to slow the pace of official asset accumulation. Yet so long as the oil-exporters and China continue to run large external surpluses, key emerging market governments can be expected to continue to accumulate foreign assets and to provide large amounts of financing to the US.[2]

A sharp reduction in central bank purchases of US debt—absent an offsetting increase in private demand for US financial assets—would lead US interest rates to rise, possibly significantly. Central banks and sovereign funds, in my judgment, have been willing to accept a lower interest rate on their dollar holdings than private investors would require to provide an equivalent amount of financing. A sharp, sudden fall in official demand for US assets is consequently not in the United States' interest. At the same time, the goal of US policy should not be to sustain a large deficit through ongoing financing from central banks and sovereign funds. A world where China's government continues to add roughly $700 billion to its foreign assets a year at a time of record growth in the foreign assets of the world's large oil-exporting economies is unlikely to be a world that evolves in ways favorable to US interests.

The debate over sovereign funds should not be limited to a debate over whether the CFIUS process strikes the right balance between protecting US security interests and maintaining capital inflows. That leaves out the question of whether the same policies—exchange rate intervention, stockpiling the oil windfall in government hands— that have fueled the growth in sovereign funds also hinder global adjustment. It also ignores the potential shifts in geopolitical influence associated with a world where the US relies heavily on other governments for financing. The national security implications of relying so heavily on central bank demand to finance the United States' fiscal deficit and the "Agencies" (Freddie Mac, Fannie Mae, Ginnie Mae, the Federal Home Loan Banks) purchases of private mortgages warrant at least as much attention as the national security implications of sovereign wealth fund investments in US banks. The US should aim to bring its external deficit down to a size that can more easily be financed by private demand for US financial assets.

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[2] Brad W. Setser, "Sovereign Wealth and Sovereign Power: The Strategic Consequences for US Indebtedness, (New York: Council on Foreign Relations Press, 2008)

My testimony will emphasize three key points:

- The majority of the growth in "official assets" continues to come from the growth in central bank reserves, not the growth in sovereign funds. This is true both for China and the oil-exporting economies—the two main centers of official asset growth. While the purchase of large stakes in US and European banks late last year and earlier last year attracted enormous attention, the magnitude of these investments remains small relative to central banks' ongoing purchases of US Treasury and Agency bonds. A narrow focus on the national security concerns that arise from direct investment is a mistake; there is a risk that the US now needs central bank financing more than some countries need more central bank reserves.
- It is getting harder, not easier, to assess how central banks and sovereign funds influence global and US markets. A rising share of the total growth in central bank reserves comes from countries that do not disclose data on the currency composition of their reserves to the IMF. A few large sovereign funds do not disclose their size, let alone information about the currency composition of their assets. As a result, we know less about how sovereign investors are impacting markets than we used to. Without a significant increase in the transparency of sovereign funds—along the lines proposed by Ted Truman—any further shift in official asset growth toward sovereign funds will reduce the transparency of the international financial system. It is not clear whether the new Generally Accepted Practices and Principles (GAPP) for sovereign wealth funds will result in this kind of shift.
- Both the set of countries with sovereign funds and the investment styles of sovereign wealth funds are evolving rapidly. Until recently, the set of countries with large sovereign wealth funds—as opposed to state pension funds—was generally quite rich, very small and strategically dependant on the US for protection from larger regional neighbors. Looking forward, though, the largest sovereign funds are likely to come from countries that are much poorer, much larger and much less aligned with the US that the countries with the largest existing funds. At the same time, the increased size of sovereign funds and emergence of new players has led to a proliferation of investment styles—with some funds using leverage, taking large stakes in individual companies and making external investments intended in part to support economic development. There is little the US can do to change this, but it does suggest the need for ongoing scrutiny of sovereign investment.

Let me turn to each point in turn.

Central banks and risk-averse flows still dominate

In the four quarters that end in June 2008, central banks, sovereign wealth funds and state banks likely added $1.5 trillion to their total assets—a sum roughly twice the size of the US current account deficit. There is more uncertainty about the increase in the dollar

assets of central banks and sovereign funds over the last four quarters, but the total increase could have exceeded $1 trillion. Not all of that made its way into US assets, but much did. It is possible that the buildup of dollar assets by sovereign funds and central banks—counting funds that they have handed over to private fund managers—provided all the funds needed to support the United States current account deficit and ongoing purchases of foreign assets by US residents over the last four quarters (see Chart 1 and 2). The monthly US capital flows data systematically understates official inflows as a result of flows through London and the use of private fund managers.

The exceptional pace of current official asset growth is a by-product of a second feature of the current environment: Asia, which imports oil, is adding more to its foreign assets than the oil exporters (See Chart 3). During previous oil shocks, Asia's current account balance deteriorated and the increase in the growth of the official assets of the oil exporter was matched by a fall in the growth in the official assets of Asian oil-importers. The combination of large surpluses in the oil-exporting regions of the globe and oil-importing Asia necessarily implies large deficits in other oil-importing regions.

The scale of the increase in China's foreign assets over the past 12 months is truly mind boggling. The foreign assets of the People's Bank of China (PBoC)—counting a line item called "other foreign assets"—increased by $680 billion between June 2007 and June 2008. That total includes some valuation gains on China's existing holdings, but it excludes funds shifted to China's sovereign wealth fund, the China Investment Corporation and some funds shifted to the state banks. It is reasonable, in my judgment, to think that China alone added close to $750 billion to its foreign assets—a total that likely implies a roughly $450 billion increase in China's dollar assets (Chart 4). If China's likely purchases through London and Hong Kong are factored into the US data, it is not unreasonable to think that China added between $325 and $350 billion to its Treasury and Agency holdings over this period (Charts 5 and 6). China's total foreign asset growth almost certainly exceeded the combined increase—excluding valuation gains (and losses) in the central bank reserves and sovereign funds of the oil-exporting economies.

While the rise in oil prices—and, to a lesser degree, the creation of the China Investment Corporation (CIC)—have increased the funds available to sovereign wealth funds, central banks still hold far more assets and account for more of the growth in official assets than sovereign funds. The average monthly increase in central bank's custodial holdings at the New York Federal Reserve in 2008 easily exceeds total sovereign wealth funds investment in US banks and broker-dealers.[3] As a result, the pattern of central bank purchases continues to have a bigger impact on financial markets than the actions of sovereign funds. The central bank "buyer's strike" on Agency bonds in the month of August is an obvious example. While public attention has focused on the willingness of sovereign wealth funds to take risk, recent moves in financial markets reflect—at least in

[3] Sovereign wealth funds have injected about $35 billion of equity capital into Merrill Lynch, Citigroup and Morgan Stanley. That total would rise if the investments sovereign funds have made in UBS and Barclays are counted. The average monthly increase in central banks' custodial holdings of Treasury and Agency bonds at the Federal Reserve Bank of New York is above $40 billion.

part—a sharp increase in central bank demand for Treasuries and other safe assets. Most sovereign equity holdings currently seem to be managed by private fund managers and thus do not appear in the US capital flows data as official flows. But the fall in total foreign purchases of US equities—counting the capital injected into US banks and broker-dealers by sovereign funds—is indicative of a broad reduction in sovereigns' appetite for risk over the last 12 months. This flight from risk intensified recently; net purchases of US equities over the last few months have been close to zero, while purchases of Treasury and until very recently Agency bonds increased (Chart 7).[4]

The global pace of official asset growth clearly slowed last month, as the price of oil fell and private capital began to move out of some emerging economies. However, the underlying surplus of China and the oil exporters remains large. That implies continued growth in the foreign portfolios of central banks and sovereign funds and ongoing official demand for US assets, even if those flows are somewhat more subdued than a few months ago.

Less transparency

The increased scale of official asset accumulation suggests that official investors have a greater capacity to influence markets than before. Official purchases of "safe" US assets—-notably Treasury bonds—have likely reached record levels over the past 12 months, as there is good reason to think that central banks account for the majority of Treasury and Agency bonds purchased by London. If that is the case, total central bank purchases of Agency and Treasury bonds reached $500 billion over the 12 months through June. This is higher than back in 2003 and 2004, at the peak of Japanese intervention in the foreign exchange market. Some studies suggest that central bank demand reduced the interest rate on the ten-year Treasury note by over 100 basis points in 2003 and 2004. Data limitations make it difficult to make a comparable assessment now, but it isn't unreasonable to think that central bank purchases of Treasuries and Agencies currently have a similar impact on the market.[5]

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[4] The latest Treasury data on the composition of capital inflows comes from the month of June; central banks started to lose confidence in the Agencies in mid July. The capital flows data for August likely will show strong evidence of a shift from Agencies toward Treasuries. Such a shift already apparent in foreign central banks' custodial holdings at the New York Federal Reserves Bank.

[5] Japanese purchases of Treasuries didn't to register in the TIC data as official purchases and Japan purchased few Agencies. China purchases more Agencies and its purchases do not tend to register in the monthly TIC data as official purchases; rather they tend to show up only in the Treasury's annual survey. As a result, there is a growing gap between measured official flows in the monthly TIC data and the increase in official holdings in the annual survey data—as well as a consistent gap between the TIC data and the Federal Reserve's custodial data. The balance of payments data is revised after the survey data, but the monthly TIC data is not. On the assumption that Chinese US bond purchases are now close to $350b—the amount required to keep the dollar share of China's reserves roughly constant—China alone would be having an impact on the US market comparable to the impact all Asian central banks together had back in early 2004. Francis Warnock has estimated that such demand lowered US long-term rates by more than 100 basis points. It consequently is not unreasonable to think Chinese demand is reducing US interest rates by 50 to 100 basis points. Such an assessment though requires combining two controversial estimates, as there is debate over both the scale of Chinese purchases and the market impact of central bank purchases.

The difficulties estimating central bank purchases of Treasuries and Agencies highlight a more general problem: the quality of the data on the activities of central banks and sovereign funds has deteriorated markedly since 2003 (Chart 8). Global reserve growth has shifted from countries that generally meet the IMF's Special Data Dissemination Standard (SDDS) for reserve disclose and report data on the currency composition of their reserves to the IMF to countries that do not. Over the last four quarters, countries that do not disclose data on the currency composition of their reserves to the IMF accounted for slightly more of the increase in global reserves than countries that report the currency composition of their reserves to the IMF. The IMF data templates were also designed for a time when it was assumed that reserves would be held in fairly safe assets—and thus are not able to help evaluate whether central banks have been, for example, increasing or reducing their (aggregate) holdings of equities. Central banks do not need to keep their aggregate equity holdings a secret: both Norway and the Swiss National Bank disclose the bond/ equity split as well as the currency composition of their reserves portfolio. If more countries disclosed this data, whether publicly or privately to the IMF, it could be aggregated and reported.

Moreover, some countries seem to have asked their state banks to build up significant "reserve-like" foreign assets that are not counted in the official reserves data. The $200 billion increase in "other foreign assets" reported by the People's Bank of China is the obvious example.[6] This is the second most rapidly growing pool of official assets in the world over the last 12 months—as it is topped only by the increase in China's formal reserves.

The shift in reserve growth toward central banks that fall short of current best practice for reserve disclosure has been augmented by a second trend: many sovereign funds disclose less data, and less timely data, than most central banks. Ted Truman's work has illustrated that standards for disclosure for sovereign funds are far from uniform: Norway's fund discloses far more than a typical central bank; others disclose far less.[7] But a few large sovereign funds have never disclosed their total size, let alone their portfolio composition. If the standard of disclosure by sovereign funds does not change, and if more of the growth in governments' foreign assets is channeled through sovereign funds, the transparency of the international financial system will fall.

The absence of data about the currency and portfolio composition of a growing share of central bank reserves and a majority of the assets of sovereign funds calls into question the often made statement that sovereign funds have had a stabilizing effect on the market. That may be the case, but it difficult to demonstrate in the absence of solid data on how central banks and sovereign funds have adjusted their aggregate portfolios during the crisis. Indeed, it is quite likely that a retreat from risk assets by many central banks and some sovereign funds (particularly after initial losses on their investments in the banks)

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[6] The growth in "other foreign assets" of the People's Bank of China seems to correspond with the increase in China's reserve ratio; it likely reflects the dollars the state banks now hold with the PBoC to meet this requirement.

[7] Edwin M. Truman, "A Blueprint for Sovereign Wealth Fund Best Practices," Peterson Institute for International Economics, March 2008

has offset some of the positive effect of the capital sovereign funds provided to US and European financial institutions.

The content of the new Generally Accepted Practices and Principles (GAPP) for sovereign wealth funds have not been made public. This makes it difficult to determine whether these principles will address these concerns. Some recent improvements in sovereign fund transparency have been modest: the agreement between the Treasury and Abu Dhabi Investment Authority (ADIA) did not include any commitment to disclose the size of ADIA—and little information has been disclosed about the broad contours of ADIA's portfolio. Other changes have gone in the wrong decision: over the past year, China has taken a series of policy decisions that have had the effect of making the growth in its foreign assets far less transparent. Assessing how sovereign funds are influencing the overall market doesn't require that sovereign funds disclose their holdings of individual companies. It does require consistently disclosing—with an appropriate lag—their size and basic information about the allocation of a country's external portfolio across different asset classes.

New countries, new strategies

Today's large sovereign funds are generally found in the countries that are:

- Rich
- Small
- Strategically allied with the US
- With the exception of Norway, not democracies

Arpana Pandey of the Council on Foreign Relations and I plotted sovereign wealth fund transparency—using Ted Truman's ranking[8]—against the Economist's index of democracy and an index of a country's strategic ties to the US.[9] There is a clear correlation between "democracy" and "sovereign fund transparency"—but no correlation between a country's strategic ties with the United States and its transparency (Charts 9 and 10).

However, the enormous increase in the size of sovereign wealth funds many investment banks now project is not possible if the expansion of sovereign funds is limited to the Gulf's small monarchies, Singapore and Norway. These projections implicitly assume that a growing share of the increase in the foreign assets of the governments of China, Russia and Saudi Arabia will be challenged through sovereign funds rather than central banks.

The set of countries that recently have created sovereign funds are, generally speaking, also much larger, much poorer and less closely aligned with the US than the set of countries that currently have large funds. Russia has a far larger population relative to its

[8] Edwin M. Truman, "A Blueprint for Sovereign Wealth Fund Best Practices," Peterson Institute for International Economics, March 2008.
[9] This is based on a country's willingness to host US bases as well as formal treaty commitments.

oil production than a country like Norway—let alone Abu Dhabi. It also is far poorer. Saudi Arabia is also poorer than the small Gulf monarchies. And China is poorer still: The average per capita income of the countries that currently host the five largest funds is over $50,000 (PPP); China's per capita income is still only around $5,000 in PPP terms, and less at market exchange rates.

As the composition of the countries with sovereign funds changes, the way sovereign funds typically invest could also change. Indeed, some countries with large existing funds already seem to be changing the way they invest—several countries in the gulf now place a premium on investments that can be argued to support their countries' efforts to develop and diversify their own economies. Here it is important to note that the most obvious way to support domestic economic development is to invest more at home, and to build up a smaller foreign portfolio. The decision to build up foreign assets, whether to prevent exchange rate appreciation as a part of China's strategy of supporting its export sector or to try to limit the risk that an oil windfall will lead to a large real appreciation and "Dutch disease,' implies investing abroad rather than at home. But this doesn't preclude making investments abroad that can be argued to further a country's development plans, to enhance its regional profile or to help secure mineral or other strategic resources.

Two cases, one at each end of a ranking of sovereign investors by per capita income, are instructive: Abu Dhabi and China.

Abu Dhabi's sovereign fund—ADIA—is generally believed to be the largest fund in the world. Both Abu Dhabi's emir and the IMF have indicated that the widely reported estimate that it has $800 billion in foreign assets are too high; especially after some of its assets were spun off to a new, smaller fund, a more realistic estimate, in my view, would puts its total foreign assets in vicinity of $500 billion. ADIA isn't renowned for its commitment to openness, but it is generally thought that its portfolio has been modeled on the portfolio of a large US or European pension fund— or perhaps the portfolio of a US university endowment. It traditionally has relied heavily on external fund managers, avoided taking large positions in individual companies and shied away from flashy domestic investments. It also is thought to have significant investments in private equity funds and hedge funds.[10]

Abu Dhabi though seems to have made a conscious decision to broaden the way it invests not by changing ADIA's investment style but rather by creating a host of new funds and ambitious state firms. Several of these funds have a much stronger focus on supporting Abu Dhabi's efforts to diversify its economy away from oil (and capture some of the attention that its less wealthy neighbor Dubai has gathered). A new fund, the Abu Dhabi Investment Council (the "Council") was set up to manage ADIA's regional investments, but it already has made forays into the US and Europe. Another fund, Mubadala, has made a series of investments designed to support Abu Dhabi's domestic tourist industry (notably by an investment in Ferrari linked to Ferrari's willingness to build a theme park

[10] Both the 2008 Business week and 2006 Euromoney profiles of ADIA provide more information about ADIA's portfolio than its website.

in Abu Dhabi) and aircraft parts industry. Taqa—a state-owned firm that some suggest should be viewed as another sovereign fund—has been buying oil and gas facilities globally—a strategy that doesn't obvious help to reduce Abu Dhabi's exposure to swings in commodity prices. Several of these new institutions, it should be noted, explicitly use leverage.

Like Abu Dhabi, China has begun to experiment both with new investment strategies and new institutions for managing its rapidly growing foreign assets. And, as with Abu Dhabi, trying to fit these activities into a single coherent strategy is difficult.

In 2006, China shifted—through the use of foreign exchange swaps with the domestic banking system—the management of up to $100 billion of its foreign exchange reserves to the state banks. The state banks previously had received $75 billion of China's reserves as part of their recapitalization. These funds appear to have been invested in bonds that yield a bit more than US Treasuries. After taking losses on some of these investments during the subprime crisis, though, China's data indicates that the state banks have been shrinking their foreign securities portfolio. China also has created a sovereign fund— the CIC—that at least initially was willing to take significant risks with its external portfolio.[11] However, after seeing the current market value of its investments in Blackstone and Morgan Stanley slide, it too seems to have become more cautious: Stephen Green of Standard Charted recently reported that the CIC has discovered that it could "lend out some of its huge dollar reserves domestically for huge premiums on top of LIBOR, … at substantially less risk than investing abroad."[12] China's central bank—through the State Administration of Foreign Exchange—has supposedly been given the authority to invest up to 5 percent of its foreign assets in equities. That implies it could have an equity portfolio of up to $100 billion—a sum that places it among the world's largest sovereign equity managers.

Finally, Chinese state firms have been increasing their investment abroad—often with the support of China's state banks. Chinalco's (a state owned aluminum company) purchase of a large stake in the Anglo-Australian mining firm Rio Tinto was financed in part by a large loan from the China Development Bank. And the China Development Bank had just received a large infusion of foreign exchange from the China Investment Corporation as part of its recapitalization. At this stage, it isn't clear fully whether the China Investment Corporation will primarily be a passive external portfolio manager, a vehicle for managing the state's stake in China's domestic state banks or a vehicle for indirectly channeling funds to Chinese firms looking to expand abroad. China itself probably doesn't know. And even if China opts to limit the CIC's support for state firms, it could

[11] Roughly $70 billion of the $210 billion China's Ministry of Finance raised for the CIC was used to purchase the PBoC's existing stakes in the state banks. Another $20 billion was injected into the China Development Bank, and additional $20 to $30 billion has been set aside to recapitalize the Agricultural Bank of China. The CIC is reportedly still in the process of selecting portfolio managers to manage its remaining funds; its impact on global markets to date has been limited.

[12] The CIC can only help the PBoC sterilize China's reserve growth if it manages a true foreign portfolio—or if its domestic loans to China's banks and state firms finance a buildup of their foreign assets. Green's report raises questions about how effectively the CIC and the PBoC are coordinating their activities.

easily create another vehicle for channeling funds to state firms looking to expand abroad. China's government is not cash-constrained.

In his past testimony before the Senate Banking Committee, Ted Truman noted that the "dramatic increase in the role of governments in the ownership and management of international assets" was "disquieting" to the US, as "it calls into question our most basic assumptions about the structure and functioning of economies and the international financial system …. We presume that most cross-border trade and financial transactions will involve the private sector on both ends of the transaction. Unfortunately, our orientation is not congruent with certain facts, and we are being called upon to recalibrate our understanding of the world."[13] The complex inter-relationship between China's sovereign fund, China's state banks and its state firms is a prime example.

Generalizing about the investment strategies of sovereign funds ("don't use leverage," "passive long-term investors," "interested only in returns") is becoming harder as new countries create new funds—and countries with large existing funds experiment with new investment strategies. Focusing solely on sovereign funds is mistake. China's central bank now has one the biggest sovereign external equity portfolios in the world. Investments by state banks, state firms and new sovereign investment vehicles that are interested in taking large stakes in individual companies likely pose more security risks than passive investments by traditional sovereign funds.

At this stage, further revisions to the CFIUS review process do not appear to be necessary. Nor is the CFIUS process the only way of regulating sovereign investment. The China Investment Corporation, because if its ownership of the Chinese state banks, had to apply for an exemption from certain provisions of the US bank holding company act when ICBC and CCB, two of China's largest state banks, sought to establish US branches. The Federal Reserve granted this exemption, but it also indicated that it would monitor the ICBC lending for transactions with related parties. The Federal Reserves' letter—at least in my reading, and I most certainly am not a lawyer—seems to restrict the CIC's ability to take a large stake in a U.S. bank so long as it also owns China's state banks.[14] That seems reasonable: China's recent propensity to use the state banks as a vehicle for holding some of the reserves accumulated to support its exchange rate policy suggests that its state banks continue to be managed on less-than-commercial principles.

One final point is worth making. Many governments clearly expected the US government to protect their central banks from taking losses on their holdings of the bonds issued by Freddie Mac and Fannie Mae. It is, unfortunately, not inconceivable that the US government might need to take over a US bank or broker-dealer owned in part by a

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[13] Edwin M. Truman, "The Rise of Sovereign Wealth Funds: Impacts on US Foreign Policy and Economic Interests," Testimony before the Committee on Foreign Affairs, US House of Representatives, Washington May 21, 2008 available at http://www.iie.com/publications/papers/truman0508.pdf

[14] Letter from Robert deV. Frierson, Deputy Secretary of the Board of Governors of the Federal Reserve System to H Rodgin Cohen, Esq. The letter notes: "CIC and Huijin and any company, including any foreign bank, that is controlled by CIC or Huijin (either separately or in combination) are required to obtain prior Board approval to make a direct or indirect investment in 5 percent or more of the voting shares of a bank holding company or a U.S. bank …"

sovereign wealth fund (or state bank) at some point in the future. The US should make it clear that it will not protect sovereign investors in the banking system in such an event even if this complicates the banks' current efforts to raise capital.

Conclusions

Governments now account for a large share of gross capital inflows to the United States. Chinese purchases have been especially large. Most of this inflow, particularly in the last six months, has gone into the Treasury and Agency bond market. This has reduced concerns associated with large scale investment by government funds in US firms. But it remains likely that, over time, foreign governments will increase their equity holdings, particularly if official asset growth remains at its current elevated levels.[15] China alone could, if it so desired, easily purchase more than $200 billion of US equities a year – more than all foreign investors combined in 2007, let alone in 2008. Such a shift, if it materializes, will pose challenges to US policy. But so too have large purchases of U.S. bonds by central banks and sovereign funds; the recent difficulties of Freddie Mac and Fannie Mae are an obvious example. The best way to address these concerns is the obvious: policy shifts here in the US and abroad that would reduce surpluses abroad and deficits here, and bring the US external deficit back to a level that could be more easily be financed by private demand for US assets.

[15] China's holdings of equity remain very small relative to its holdings of bonds—and relative to foreign holdings of Chinese equity. Total Chinese direct investment abroad at the end of 2006 totaled $82.4b, while foreign direct investment in China totaled $544.2b. The roughly $30b in outward direct investment by Chinese firms in 2007 is still significantly smaller that the over $80b in inward direct investment by foreign firms in China. Foreign portfolio equity investment in China was $106.5b at the end of 2006 while Chinese portfolio equity investment abroad was $1.5b. It is likely that China will want to move toward a more balanced portfolio over time. This shift though will be difficult so long as China's government accounts for all of China's foreign investment.

CHARTS

CHART 1: Emerging market reserves growth and current account balances as a share of World GDP

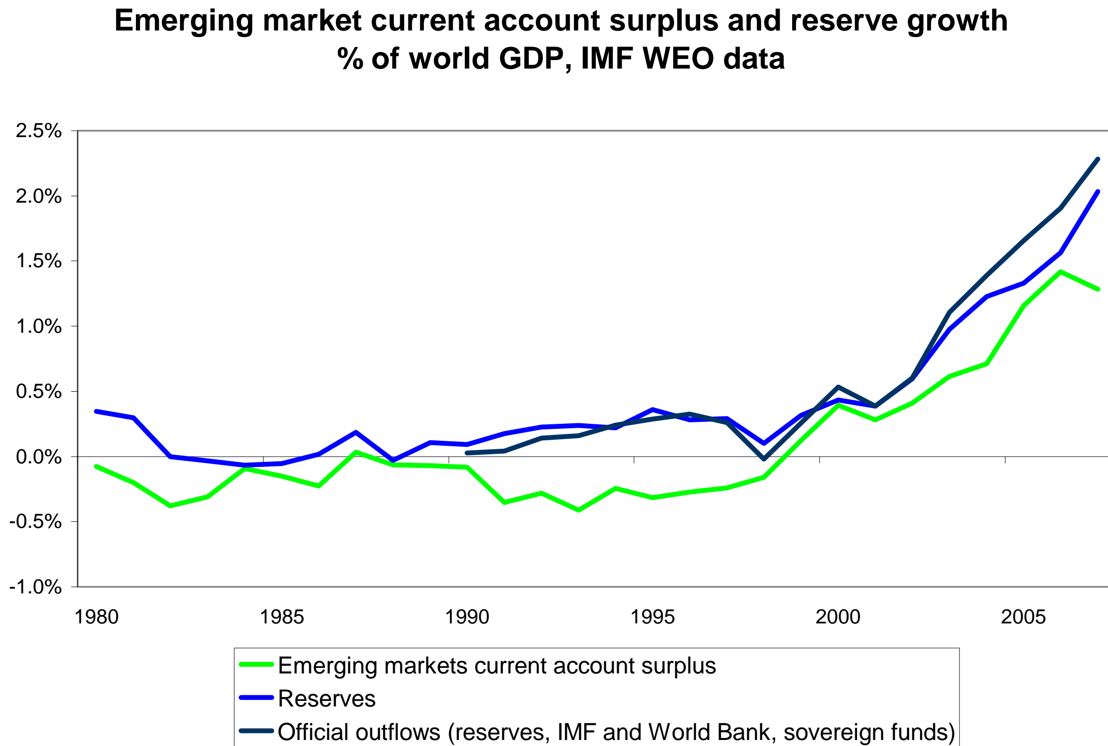

CHART 2: Estimated increase in central bank and sovereign fund assets

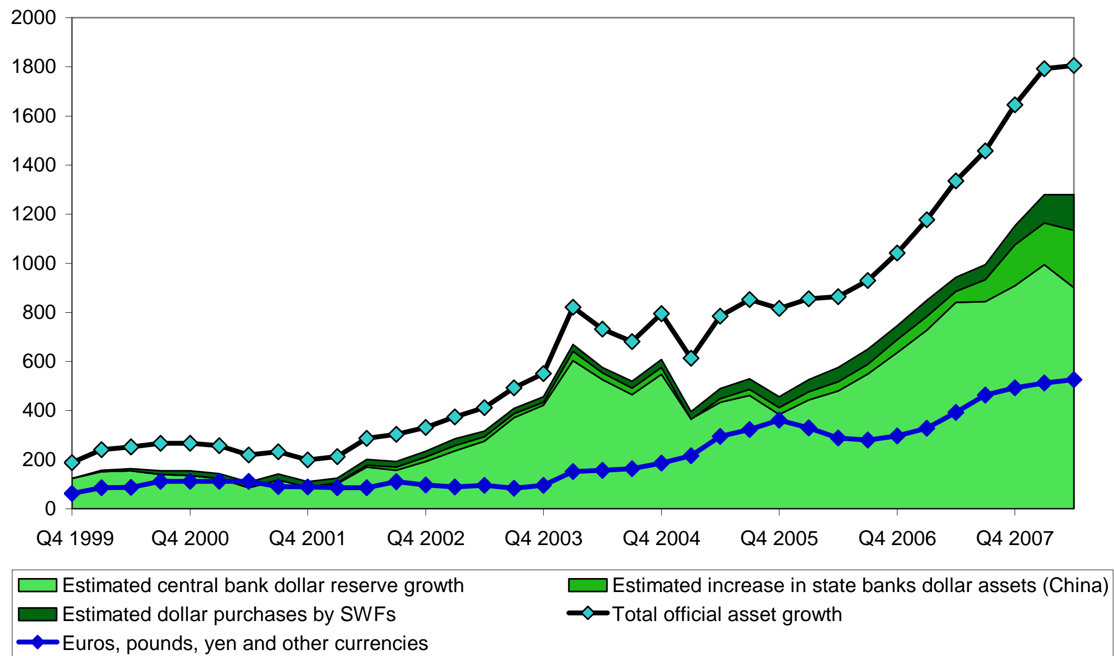

CHART 3: Growth in the foreign assets of central banks and sovereign funds in Asia relative to central banks and sovereign funds in the oil exporting economies. Rolling 4q sums

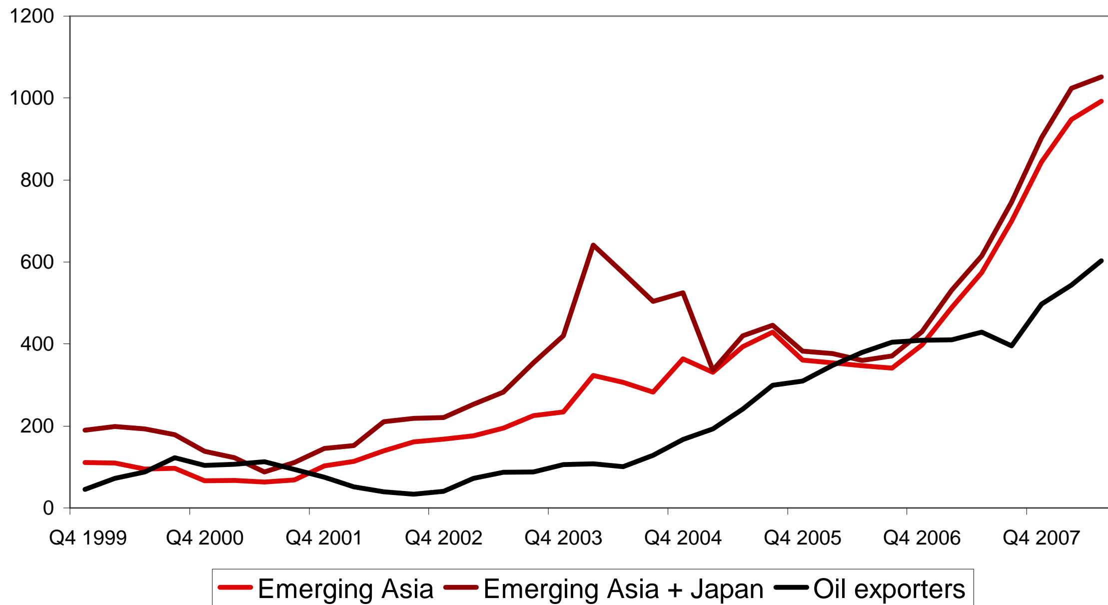

CHART 4: Estimated dollar reserve growth v US financing need (Current account deficit and long-term capital outflows). Data is presented as a rolling four quarter sum in $ billion. Estimate for official asset growth come from the author.

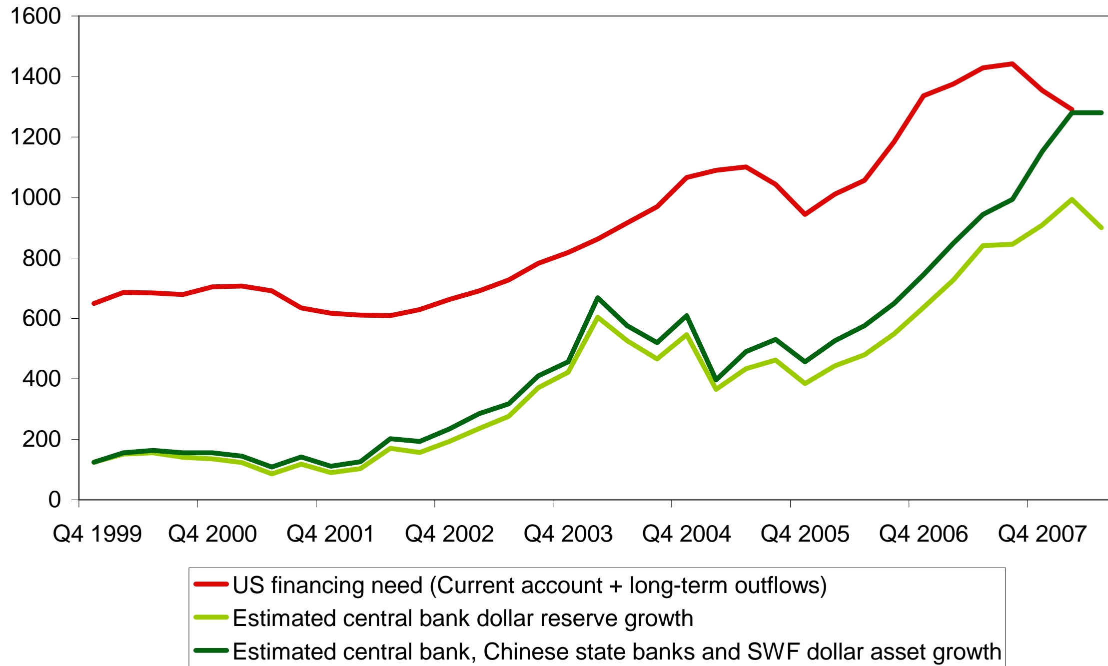

CHART 5: China's current holdings of US Treasury and Agency bonds, including likely purchases through the UK

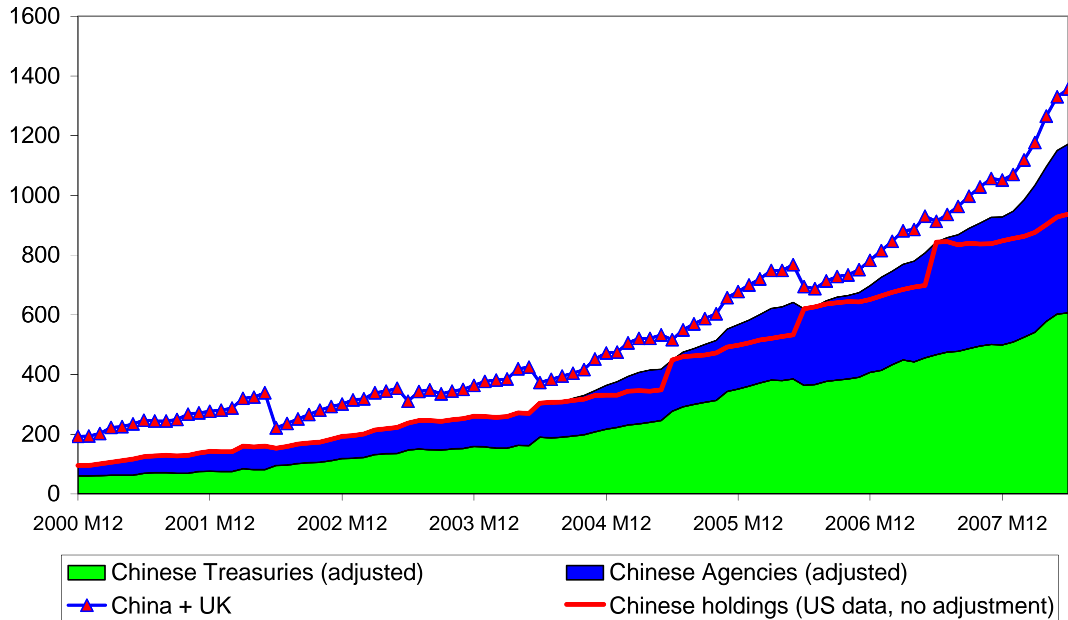

CHART 6: Estimated Chinese purchases of Treasury and Agency bonds, including likely purchases trough the UK

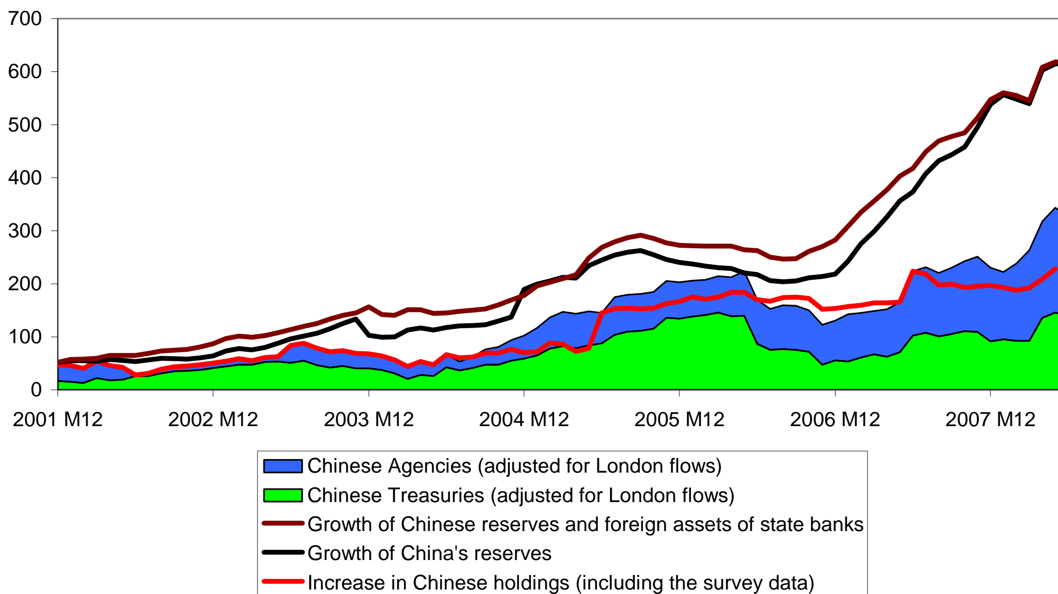

CHART 7: High-frequency capital flows data. US Treasury capital flows data.

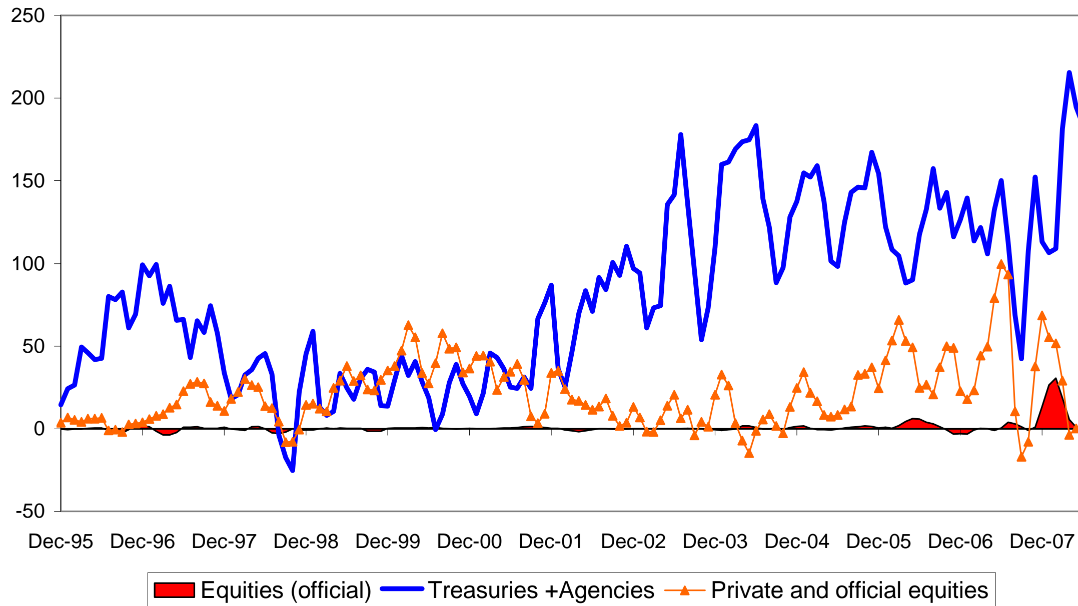

CHART 8: Deteriorating quality of aggregate data on central banks and sovereign funds. Data from the IMF (COFER) and the author. Central banks that disclose more information than central banks disclose to the IMF are considered transparent.

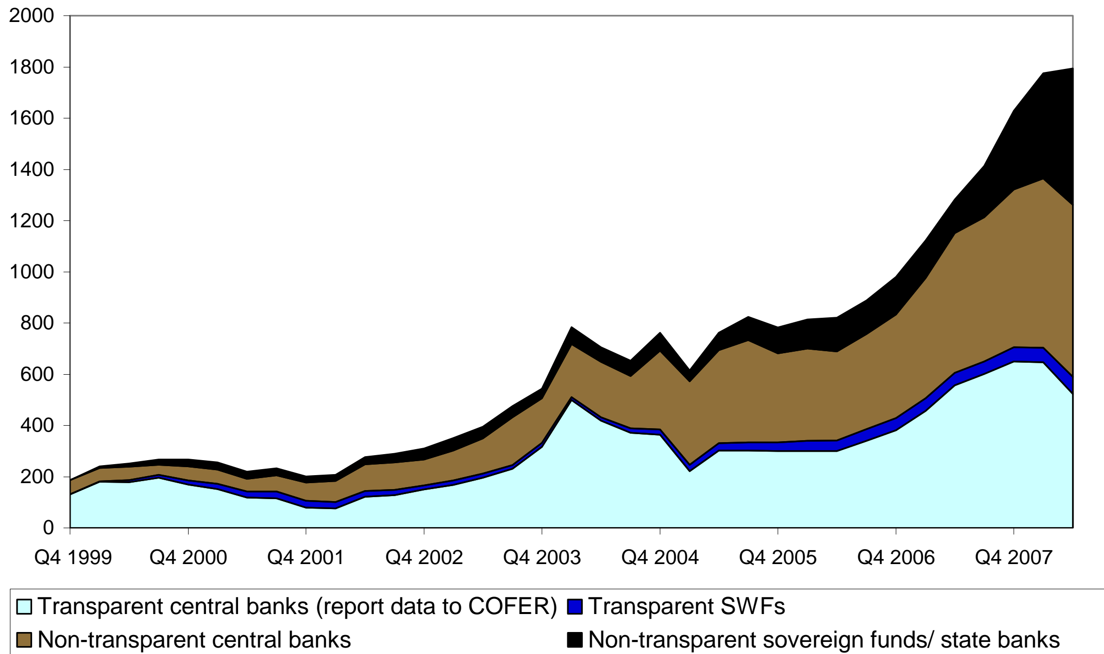

CHART 9: Sovereign fund transparency v. the form of government of their home country

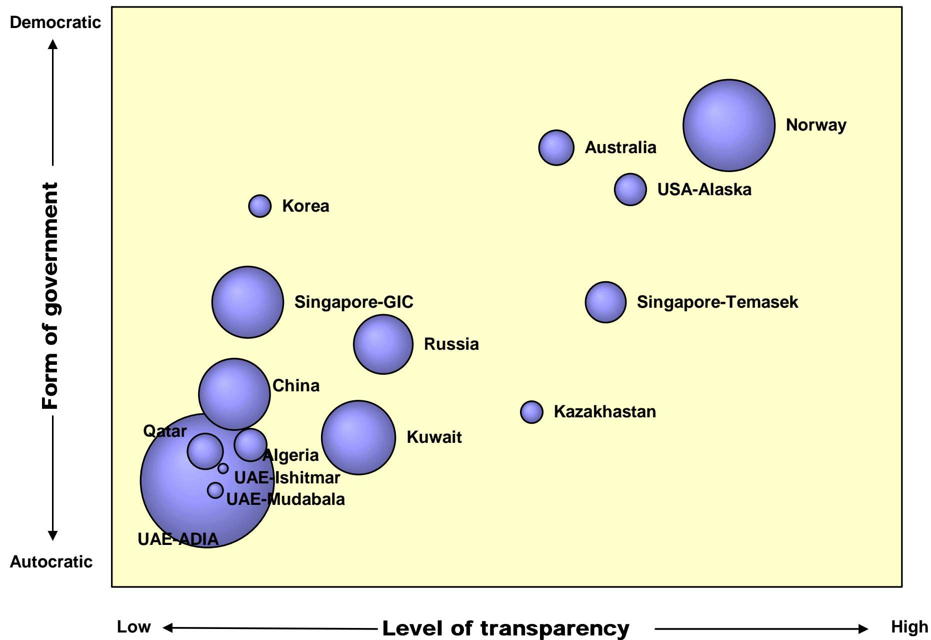

CHART 10: Sovereign fund transparency v. their home country's strategic ties to the US