

## **GLOBAL ASSET ALLOCATION: WHITHER THE U.S. DOLLAR?**

Rashonda Williams, responsible for global asset allocation at a large pension fund, gazed at the Blue Ridge Mountains from her Crozet, Virginia, home office and pondered the dollar's long-term prospects. At this point—April 2009—there were many conflicting views on the likely path of the dollar over the long term, but most of the commentary was bleak.

A full year earlier, there was already negative talk about the dollar, which at that point was mired in a seven-year downward trend against most major currencies. Jim Rogers, chairman of Beeland Interests, Inc., and erstwhile colleague of George Soros, said he was shifting all his assets out of the dollar and buying Chinese yuan because the U.S. Federal Reserve had eroded the value of the U.S. currency. The prospects Rogers suggested were scary:

The U.S. dollar is and has been the world's reserve currency, the world's medium of exchange. That's in the process of changing. The pound sterling, which used to be the world's reserve currency, lost 80% of its value, top to bottom, as it went through the whole period of losing its status as the world's reserve currency.<sup>1</sup>

In addition, through mid-2008, emerging economies that pegged their currencies to the U.S. dollar (or at least limited their appreciation against the dollar) were facing worrying increases in inflation, in part because of their currency intervention activities. At an investment conference in Saudi Arabia, former U.S. Federal Reserve Chairman Alan Greenspan suggested that the Persian Gulf states and others should delink from the U.S. dollar as a way to contain inflationary pressures.<sup>2</sup> Through mid-2008, the dollar was facing pressure from global investors

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<sup>1</sup> Marcel van de Hoef and Danielle Rossingh, "Jim Rogers Shifts Assets out of Dollar to Buy Yuan," October 24, 2007, Bloomberg.com, [http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aqNT0qIW\\_zQE](http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aqNT0qIW_zQE). (accessed May 18, 2009).

<sup>2</sup> Souhail Karam and Stanley Carvalho, "Greenspan Tells Gulf States to Drop Dollar," Reuters, <http://www.businessday.co.za/articles/world.aspx?ID=BD4A714205> (accessed May 18, 2009).

and, indirectly, because of the inflationary aspects of currency intervention, from the very countries that had—time and time again—supported it.

Fast-forward to April 2009. The Great Recession had eased inflationary pressures to such an extent that deflation, not inflation, was the main concern, and amid the financial crisis, the dollar appreciated sharply. So, had the talk of shifting out of dollars ceased? Not in the least. Now the world's major creditors were worried that the U.S. government's massive response to the crisis would almost surely erode the value of the dollar. Luo Ping, a director-general at the China Banking Regulatory Commission, put it best:

Except for U.S. Treasuries, what can you hold? Gold? You don't hold Japanese government bonds or UK bonds. U.S. Treasuries are the safe haven. For everyone, including China, it is the only option... We hate you guys. Once you start issuing \$1 trillion, \$2 trillion... we know the dollar is going to depreciate, so we hate you guys, but there is nothing much we can do.<sup>3</sup>

Rashonda Williams's fund had been well positioned for the broad decline in the dollar that began in 2001 (**Exhibit 1**). She was able to convince the board early on to increase the allocation to non-U.S. markets, and her fund had performed admirably over the previous few years. Currently, the fund was 60% in dollar-based assets and 40% in foreign markets. In light of the dollar's sharp decline over the previous seven years against a broad array of currencies—and amid talk that central banks might be diversifying reserves away from dollars and that some OPEC members had begun invoicing oil sales in currencies other than dollars—Williams had been asked by the board of directors for an assessment. Should they increase the allocation to foreign-currency-denominated assets? If so, the recent crisis-related surge in the dollar would represent an opportunity to buy foreign assets on the cheap. Or, if the dollar was still far below its “long-term value” and was now more likely to appreciate than depreciate, should the fund take profits on its foreign positions and increase the weighting on relatively cheap U.S. securities? To be sure, not all commentary surrounding the dollar was negative: At a European Central Bank conference in early 2008, Saudi Central Bank Governor Hamad al-Sayyari bluntly declared that the dollar was a “good buy,”<sup>4</sup> and in early 2009, both Saudi Arabia and Bahrain reaffirmed their commitments to the dollar peg.

Before she could address the task at hand, Williams needed to take into account all the commentary and three particularly pressing issues. Might this be the start of a massive repatriation of U.S. investors' foreign portfolios? Would foreign central banks begin to diversify

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<sup>3</sup> Henny Sender, “China to Stick with U.S. Bonds,” FT.com, February 11, 2009, [http://www.ft.com/cms/s/0/ba857be6-f88f-11dd-aae8-000077b07658.html?nclink\\_check=1](http://www.ft.com/cms/s/0/ba857be6-f88f-11dd-aae8-000077b07658.html?nclink_check=1) (accessed May 18, 2009).

<sup>4</sup> “Dollar Undervalued, Says Saudi,” Reuters, March 13, 2008, [http://www.tradearabia.com/news/ECO\\_140142.html](http://www.tradearabia.com/news/ECO_140142.html) (accessed May 18, 2009).

away from dollars? Was the dollar so undervalued (and other major currencies so overvalued) that the Group of Seven (G7) might contemplate coordinated currency intervention? Williams's assessment of these issues would be a large factor in her overall assessment: Should she recommend to the board that it increase the allocation to foreign securities, or should it take this opportunity to repatriate profits and increase the weight on U.S. securities?

### **A Long Wave of Repatriation from U.S. Investors?**

A striking figure in U.S. balance-of-payments data (**Exhibit 2**) was the extent to which U.S. investors in late 2008 liquidated investments in foreign securities and brought money home. After purchasing an annual average of almost \$300 billion from 2005 through mid-2008, U.S. investors on net *sold* \$160 billion (\$319 billion annualized) in foreign securities in the second half of 2008.

Was this repatriation of U.S. investments abroad the beginning of a trend? If so, how far could it extend? Evidently, quite a long time. As of year-end 2007, U.S. investors held more than \$5 trillion in foreign equities, sharply higher than the \$2 trillion they held only a few years earlier (**Exhibit 3**). Would U.S. investors resume adding to their foreign positions, or was this the beginning of a massive repatriation wave?<sup>5</sup>

Most commentators were not focused on the potential repatriation of U.S. investments, but Williams knew not to discount this: In aggregate, U.S. holdings of foreign equities were comparable to the sum of all countries' international reserves.

### **Potential Central Bank Diversification Away from Dollars**

International reserves were looming much larger in many minds, as many pondered the likelihood of central bank diversification out of the dollar. In April 2009, the dollar was still the world's reserve currency. It was the main currency used for world trade and investment; roughly half of world trade was invoiced in dollars, and almost all commodities were priced in dollars. The dollar featured in at least one side of 87% of all foreign-exchange transactions. Although the dollar's share of international-bond issuance had fallen substantially since the early 1980s, more than 50% of international notes and bonds were still denominated in dollars, compared with 28% for the combined euro-area countries. Bank lending showed the same dollar dominance, as 45% of cross-border loans were dollar-denominated and almost half the world's foreign-held bank deposits were in dollars. The dollar's weight in private international transactions also made it the

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<sup>5</sup> At \$2 trillion by year-end 2007, U.S. holdings of foreign bonds were also extensive, but almost all (76%) of those were denominated in dollars.

currency of choice for countries' official reserves: Roughly two-thirds of the world's reserves were in dollars.

The likely actions of foreign central banks weighed heavily on Williams. By the end of 2008, central banks held \$6.7 trillion in foreign reserves. Of that, according to the IMF's Currency Composition of Official Foreign Exchange Reserves dataset (COFER), some \$2.7 trillion was reported to be in dollars, compared with just \$1.1 trillion in reported euro reserves (**Exhibit 4**). The currency composition of another \$2.5 trillion in reserves was not identified, but a significant (and possibly decreasing) portion of those could be assumed to be in dollars.

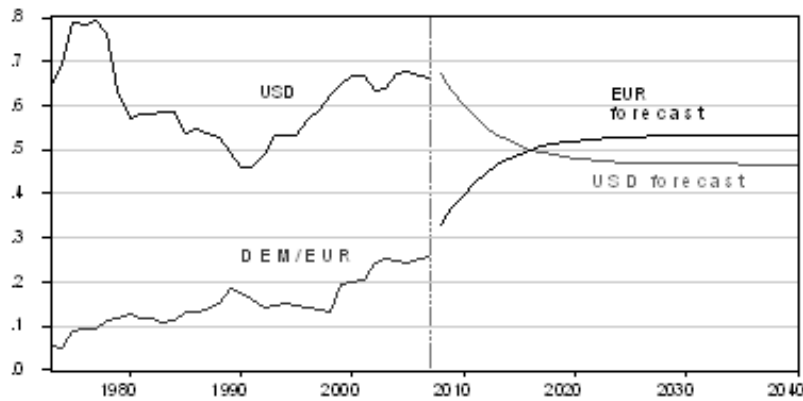
Williams knew she had to be careful with the COFER database.<sup>6</sup> While potentially informative, the COFER relied on voluntary reporting, limited currency identification and country coverage, and included a large portion of *unallocated* reserves—those reserves whose currency composition reporters did not identify. Currencies identified in COFER included U.S. dollar, euro, pound, yen, Swiss franc, and “other.” There were 140 countries (32 developed and 108 emerging) that reported the currency composition of their reserves, but some important ones—most notably, China—did not. Data for individual countries were considered to be strictly confidential, so only major grouping (total, developed, and emerging) were reported. Reserves numbers in COFER were “total” (identical to total reserves in the IFS data), “allocated” (those for which currency composition is provided to the IMF), and “unallocated” (difference between total and allocated). Thus, any statement about the currency composition of international reserves carried an implicit assumption about the composition of the \$2.5 trillion in “unallocated” reserves.

Caveats notwithstanding, the COFER database suggested that, since its inception, the euro had hardly made a dent in global reserve allocations (**Exhibit 5**). If central banks had not been actively adding to dollar positions, based solely on valuation effects—owing primarily to the sharp depreciation of the dollar from 2002 through mid-2008—the dollar would have a much smaller weight in international reserves. Would this bias toward dollar reserves hold, or would countries begin to diversify out of dollars and into euros? Or perhaps into some other currency?

Was there any reason to believe that the dollar could be unseated as the world's reserve currency? Simulations from prominent economists Jeff Frankel of Harvard and Menzie Chinn of University of Wisconsin suggested that the answer to the question was an emphatic *yes*, as shown in **Figure 1**.

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<sup>6</sup> The COFER database is updated quarterly at <http://www.imf.org/external/np/sta/cofer/eng/index.htm>.

Figure 1. Shares of USD and EUR in international reserves.<sup>7</sup>

From Frankel's popular blog:

[R]ankings of international currencies change only very slowly. Although the United States surpassed the United Kingdom in economic size in 1872, in exports in 1915, and as a net creditor in 1917, the dollar did not surpass the pound as number one international currency until 1945. In 2005... even our pessimistic scenarios did not have the euro overtaking the dollar until 2022. But the dollar has continued to lose ground ... [and] at the most recent exchange rates the GDP of euroland has surpassed that of the United States. Now we find that the tipping point could come within the 10-year horizon: the euro could overtake the dollar [as the world's reserve currency] even as early as 2015.<sup>8</sup>

The Frankel and Chinn study raised two questions in Williams's mind. Why would foreign governments diversify out of the dollar? And, other than the U.S. global ascension associated with World War II, what did the United Kingdom do to move forward the "tipping point" that led to the loss of the pound's status as the global currency?

Although Frankel put the timing of the descent of sterling at 1945, some financial historians would argue that the fate of sterling was still in doubt until 1956, when the United States was preoccupied with its own election and with events in Hungary, and the British were

<sup>7</sup> Figure 7 in Chinn and Frankel, "The Euro May Over the Next 15 Years Surpass the Dollar as Leading International Currency," *International Finance* (February 13, 2008): 16, [http://ksghome.harvard.edu/~jfrankel/EuroVs\\$-IFdebateFeb2008.pdf](http://ksghome.harvard.edu/~jfrankel/EuroVs$-IFdebateFeb2008.pdf). Used with permission.

<sup>8</sup> Jeff Frankel, "The Euro Could Surpass the Dollar Within 10 Years," February 23, 2008, [http://content.ksg.harvard.edu/blog/jeff\\_frankels\\_weblog/2008/02/23/the-euro-could-surpass-the-dollar-within-10-years/](http://content.ksg.harvard.edu/blog/jeff_frankels_weblog/2008/02/23/the-euro-could-surpass-the-dollar-within-10-years/) (accessed May 18, 2009).

mired in a crisis surrounding the Suez Canal.<sup>9</sup> Until 1956, the Suez Canal—a vital link between the Mediterranean and the Indian Ocean—was controlled by a British/French firm. On July 26, 1956, Egypt, itself in the midst of increased tensions with Israel, nationalized the canal, putting British access to cheap oil at great risk. Britain, preferring negotiation over armed conflict, tried to reason with Egypt, but the coordinated international persuasion necessary to bring Egypt to the bargaining table was not forthcoming. When negotiation failed, the British turned to subterfuge that was codified in the infamous Sevres Agreement: Israel would invade the Sinai Peninsula, prompting an Egyptian response that would open the door for British and French forces to descend on Egypt and gain control of the canal. Israel held up its end of the bargain, invading the Sinai on October 29. Egypt reacted predictably and, on November 5, 1956, British and French paratroopers landed at Port Said, at the head of the Suez Canal, to be followed by a naval armada.

Pressure on sterling predated the crisis; at that time, Britain was already seeking a then-unprecedented IMF assistance program. During the crisis, things took a turn for the worse. The international community was not on board with Britain's plans and aspirations, and governments and global investors began to run from sterling. On the afternoon of November 6, 1956, Harold Macmillan, British Chancellor of the Exchequer, told the cabinet that \$280 million of foreign exchange reserves had been lost in the previous week and that the sterling exchange rate could not be maintained without help from the United States. The Eisenhower administration was strongly opposed to the invasion, evidently telling Britain that not only would the United States not provide military support, but that it would also block Britain's bid for a substantial IMF package and sell all its remaining sterling reserves to force a currency crisis. Macmillan persuaded his colleagues that there was no choice but to accept the United Nations demand for a cease-fire.

Williams worried that a similar fate could face the United States if geopolitical forces were to work against the dollar. Global sentiment had turned against the United States in the time since President George W. Bush delivered his May 1, 2003, "Mission Accomplished" speech on the USS *Abraham Lincoln*. Only one year earlier, with murmurs that the United States might turn next to Iran—murmurs so loud that former senior U.S. military officials felt obliged to speak out against a potential military attack on Iran, saying it would have disastrous consequences for security in the region—the United States seemed poised to take another blow in the global popularity contest. With the Obama administration, perhaps that outcome would be less likely. Or would it? And suppose for a second that the United States did invade Iran. Would China then take the opportunity to invade Taiwan? Williams felt that a Chinese invasion of Taiwan seemed less and less likely, but not everyone was as sure. Indeed, some in China thought that the U.S. invasion of Iraq gave China the authority to invade Taiwan. Williams imagined what would happen if the United States were to invade Iran!

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<sup>9</sup> This account is drawn in part from Adam Klug and Gregor W. Williams, "Suez and Sterling, 1956," *Explorations in Economic History* 36 (1999): 181–203.

Williams realized she was focusing on worst-case scenarios when pondering geopolitical disasters, but as she recalled the Suez crisis, the potential impact was clear. If the United States were to reach the tipping point, foreign governments would have plenty of ammo: They held roughly half of all marketable U.S. Treasury bonds (**Exhibit 6**).<sup>10</sup> Were foreign governments to sell those Treasury bonds in unison, the effects in the United States could be calamitous, with interest rates skyrocketing and the dollar plummeting. That event, coupled with the prospect of a severe recession, could be the death knell for the U.S. economy, sending it into a protracted slide that would make “the world’s reserve currency” a thing of the past.

Would foreign governments move away from the dollar even if these geopolitical horror scenarios did not play out? A year earlier, inflationary pressures were leading to riots in many countries. In India, rising inflation had hit consumers hard.<sup>11</sup> India had accumulated \$293 billion in international reserves (**Exhibit 6**),<sup>12</sup> many of which were likely in U.S.-dollar securities. To ward off inflation, which put incredible strain on the impoverished even in good times, why wouldn’t India halt the reserves accumulation and maybe even repatriate some of those holdings? In early 2008, South Korea’s new president, Lee Myung-bak, in a change of policy, had declared that economic priority number one was fighting inflation.<sup>13</sup> Korea had \$262 billion in reserves. Why not stop accumulating or even begin to repatriate? In Saudi Arabia, inflation had reached a 27-year high in February 2008. Why not follow Alan Greenspan’s advice and delink from the dollar, which would allow the Saudi Central Bank to set its own monetary policy? The alternative was to follow the Fed as it lowered rates to historical lows.

In United Arab Emirates, inflation was reportedly 14%, almost three times its official target; if it maintained its peg to the dollar, the government would have difficulty addressing the rising inflation. The real wild card was China, where inflation reached a 12-year high in January 2008. With China’s known holdings of U.S. Treasury and agency bonds of \$843 billion, if it allowed more flexibility in its currency (the yuan) and stopped accumulating U.S. bonds, the rout could be on. Moreover, one could easily argue that many countries in East Asia were holding down their currencies (by accumulating U.S. securities) and allowing inflation to rear its ugly head simply because China was. If those countries were to stop accumulating dollars, their currencies would become less competitive vis-à-vis the yuan, and they would lose out in international trade, which was so vital to many emerging economies. But if China were to cease propping up the dollar, so too could the rest of the neighborhood. And Williams shuddered at the thought of such sentiment spreading to Russia, which at one point had \$500 billion in international reserves. And what about petrodollars? The surge in oil prices from 2007 through

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<sup>10</sup> Starting in 2004, foreigners held more than half of all marketable Treasury bonds (Table 2 in <http://www.treas.gov/tic/shl2006r.pdf>), with foreign governments’ holdings reaching roughly \$1.5 trillion by June 2007 (Table 2 in <http://www.treas.gov/tic/shlptab2.html>).

<sup>11</sup> “India Economy May Tap on Brakes,” *Wall Street Journal*, March 25, 2008.

<sup>12</sup> Data on reserves for this and other countries mentioned here are from <http://www.imf.org/external/np/sta/ir/colist.htm> (accessed May 18, 2009).

<sup>13</sup> “South Korea’s New President Switches Focus to Inflation,” *Wall Street Journal*, March 25, 2008.

the summer of 2008 produced huge revenues for oil exporters, many of whom were less than enamored with U.S. actions in the Middle East. Traditionally, a large portion of petrodollars would make their way to America and be parked in U.S. Treasuries and other U.S. assets. Would anti-American sentiment prompt a shift in these oil revenues to euro-denominated assets?

Another consideration came purely from a portfolio perspective. The large foreign accumulations of U.S. assets between 1999 and 2008 meant that foreigners likely had sizeable weights on U.S. securities. Were they overweight U.S. securities and, if so, was a general reallocation away from the United States likely?

Williams realized she might be getting ahead of herself. What would take the place of the dollar as the world's top reserve currency? The euro, as Frankel and Chinn suggested? She did not buy that at all. In fact, she recently had dined with two Darden School of Business alumni who believed the euro area would have substantial problems going forward, so much so that they had helped to set up a fund that would prosper when European long-term interest rates diverged.<sup>14</sup>

As the *Wall Street Journal* noted:

It has become clear that the one-size-fits-all monetary policy, where the ECB [European Central Bank] sets interest rates for all countries that use the euro, could exacerbate slowdowns in more vulnerable economies. Among the hedge-fund managers playing the divergence trade is Corriente Advisors, a \$1.1 billion firm based in Fort Worth, Texas. Last year, it teamed up with Hong Kong based investment adviser GaveKal Capital Management to start a fund based solely on the strategy of European bond-market divergence. Corriente is turning its attention to the euro zone ... the new fund's marketing materials call potential troubles in the euro zone "the next shoe to drop."<sup>15</sup>

Williams knew that such bets could potentially increase long-term interest rates in struggling euro-area countries and decrease them in the better-performing countries, which would complicate the ECB's task of selecting a one-size-fits-all monetary policy. A few years after the launch of the euro—because of convergence to common goals and, perhaps, a general failure of global investors to differentiate risk—interest rates among euro area countries were very similar. But now, differences within the euro area were returning, with countries including Ireland and Spain facing substantial slowdowns, especially in the housing sector (where tight

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<sup>14</sup> Charles Gave, Louis-Vincent Gave, Anatole Kaletsky, and Steven Vannelli. *The End Is Not Nigh*. (GaveKal Research, 2007).

<sup>15</sup> "EU Balance Gets Shaky: Some Economies Outperform Others, Complicating Picture for the ECB and Causing Bond Yields to Diverge," *Wall Street Journal*, February 7, 2008.

ECB policy directly increased borrowing costs on prevalent variable-rate mortgages), and other countries such as Germany performing much better.

Economic historians Michael Bordo of Rutgers and Harold James of Princeton also opined on the cohesiveness of the euro:

Historical monetary unions... were associated with fiscal unions (fiscal federalism). Both fiscal and monetary unions were an important part of the process of political unification. In the past, central banks, and the currencies they managed, have been discredited or put under severe strain as a result of severe or endemic *fiscal problems* creating pressures for the monetization of public debt; low economic growth producing demands for central banks to pursue more expansionary policies; regional strains producing a demand for different monetary policies to adjust to particular regional pressures; severe crises of the financial system; and tensions between the international and the domestic role of a leading currency. There is the possibility for the EMU that low rates of growth will produce direct challenges to the management of the currency, and a demand for a more politically controlled and for a more expansive monetary policy. Such demands might arise in some parts of the euro area but not in others, and would lead to a politically highly difficult discussion of monetary governance<sup>16</sup>

Although Williams believed that differences in growth rates across euro area countries and vast differences in fiscal rectitude meant that divergence in euro area long rates was a distinct possibility, she was unsure that such divergence would lead to the demise of the euro. She did know, however, that there was at least some reason to doubt the inevitability of the rise of the euro.

### **The End of the Dollar as the World's Reserve Currency?**

There was so much talk of the potential downfall of the dollar that Williams felt she had to review international monetary history.<sup>17</sup>

Recently, many people had brought up gold as the only true reserve currency in a world of fiat currencies. The *International Gold Standard* spanned the relatively short period from 1879 to 1913. While there was no treaty that marked the beginning of the gold standard, the accepted rules were as follows:

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<sup>16</sup> "A Long-Term Perspective on the Euro," NBER Working Paper No. W13815 (2008).

<sup>17</sup> The rules in this historical account are based on the Richard Levich, *International Financial Markets: Prices and Policies*, 2nd ed. (Boston: McGraw Hill/Irwin, 2001) adaption of Ronald McKinnon's "The Rules of the Game: International Money in Historical Perspective," *Journal of Economic Literature* 31 (March 1993).

- I. Fix an official gold price or “mint parity” and allow free convertibility between domestic money and gold at that price. This was the centerpiece of the system. For example, in 1879, the United States defined the U.S. dollar (USD) as 23.22 fine grains of gold; with 480 fine grains per troy ounce, USD20.67 equaled one ounce of gold. Other countries linked their currencies to gold in a similar way. Combined, these actions—the setting of mint parities—determined exchange rates. For example, mint parity exchange rates were 4.856 dollars per pound, 5.183 French francs per dollar, and 4.198 German deutsche marks per dollar.
- II. Impose no restrictions on the import or export of gold by private citizens or on the use of gold for international transactions. This, along with Rule I, meant that international arbitrage kept exchange rates within narrow bands around the parity rates (within 1% versus the U.S. dollar and 0.5% within Europe).
- III. In part because of convertibility, issue national currency and coins only with gold backing, and link the growth in national bank deposits to the availability of national gold reserves.
- IV. In the event of a short-run liquidity crisis associated with gold outflows, the central bank should lend freely to domestic banks but at relatively high interest rates (Bagehot’s Rule).
- V. If Rule I is ever temporarily suspended, restore convertibility at the original mint parity as soon as possible.
- VI. As a result of these practices, the worldwide price level will be endogenously determined based on the overall world demand and supply of gold.

The so-called price-specie flow mechanism under the gold standard reveals basic intuition about exchange rates, international reserves, and capital flows. If country A runs a trade surplus (exports exceeding imports) vis-à-vis country B, the gold supply in A must expand and in B it must contract. Because of Rule III, international reserves and the money supply increase in A and contract in B. Goods prices will, hence, tend to increase in A and decrease in B. This change in relative prices will tend to dampen the trade imbalances and stop the flow of gold between the two countries. That is, so long as Rules I–III are adhered to, there was an *automatic adjustment* to trade imbalances. Also, by Rule V and the active commitment to return to original mint parity after any temporary suspension, economic policies were at times managed to justify a particular mint parity rate, which made capital very sensitive to small interest rate differentials. On the other hand, money creation was very passive, with money supply reflecting the amount of gold discoveries. In practice, however, there was active management by the Bank of England.

The gold standard resulted in stable exchange rates, common monetary policy, and equalization of tradable goods prices across countries. That is, purchasing power parity (PPP) tended to hold, and real interest rates tended to be equal across countries. But this came at a price: Internal economic considerations became subservient to external balance considerations. The focus on external considerations, in turn, was conducive to the kind of nationalism that

helped destroy the first attempt at globalization and hastened the downfall of the British and French empires.

The system began to end with the outbreak of World War I in 1914, when European governments ceased to allow their currencies to be convertible into gold or other currencies; the United States formally remained on the system until 1933. Between the first and second world wars, many European countries had flexible exchange rate regimes that were failures, but at the same time there was little appetite for the extreme rigidity of the gold standard.

In 1945, the *Bretton Woods Era* began with the formation of the International Monetary Fund (IMF) and the Bretton Woods Agreement, representing a shift from the tyranny of the gold standard toward greater autonomy for national monetary policies. The accepted rules of the Bretton Woods Era were as follows:

- I. Fix an official par value for domestic currency in terms of gold or a currency tied to gold as a numeraire.
- II. In the short run, keep the exchange rate pegged within 1% of its par value, but in the long run, at least in theory, allow unilateral adjustments to the par value. In practice, adjustments occurred only if the IMF concurred that there was a “fundamental disequilibrium,” a rare occurrence. In general, there was a recognition that exchange rate flexibility must be controlled to avoid the competitive “beggar-thy-neighbor” devaluations of the 1930s.
- III. Permit free convertibility of currencies for current account transactions, but use capital controls to limit currency speculation.
- IV. Offset short-run balance of payments imbalances by use of official reserves and IMF credits, and sterilize the impact of exchange market interventions on the domestic money supply.
- V. Permit national macroeconomic autonomy. This was possible only if capital controls were utilized (Rule III).

Even though the Bretton Woods Agreement permitted each country to set its currency value in terms of gold, in practice, the system quickly evolved into a *fixed-rate dollar system* in which most industrial countries (i) fixed their currencies to the U.S. dollar, (ii) had some controls on international financial flows, (iii) kept official reserves in U.S. Treasury bonds, (iv) gave primary importance to the fixed exchange rate, making domestic monetary policy subordinate, and (v) adjusted fiscal policy to offset imbalances between private savings and investment, thereby limiting current account imbalances. The United States, as the center of this system, the exchange rate component of which lasted from 1950 until 1970, was supposed to (i) be passive in the foreign exchange market and allow for free trade without balance of payments or exchange rate targets, (ii) maintain completely open capital markets, (iii) be an international creditor in dollar-denominated assets, and (iv) pursue an independent monetary policy that established a stable price level for tradable goods. If the United States, as center country, did not provide a

stable world price level and a monetary policy that met the needs of the other countries, tensions would develop.

The system seemed to work reasonably well in the 1950s, when Europe and Japan were happy to borrow heavily in U.S. capital markets and the Marshall and Dodge plans utilized the U.S. dollar as a unit of account and means of settlement. That said, even at its birth, there were stresses on the British pound, and it was widely believed that the deutsche mark was pegged too low. One problem was that by the 1960s, with the United States committed to exchanging gold at USD35 per ounce, the stock of international dollar liabilities was about to exceed U.S. gold reserves. This prompted the United States to enact controls on capital outflows and other capital restrictions that increased the cost of converting from dollars into gold (and, as a side effect, helped foster the growth of offshore capital markets). But such controls did not address the root cause of the tension in the fixed-rate dollar standard: inflationary policy run by the United States during the Vietnam War, a violation of its commitment to maintain a stable price anchor.<sup>18</sup> Other countries, notably Germany, responded by tightening monetary policy to offset U.S. excesses. The surge in U.S. inflation led to a loss in international competitiveness and, in 1968 and 1969, to a sharp deterioration of the U.S. trade and current account balances.

The end of the dollar standard was near, and in August 1971, the United States devalued the dollar to USD42 per ounce of gold and closed the gold window (i.e., did not allow the free conversion of dollars and gold). Currencies floundered for a few years; the market hovered somewhere between trying to find a new equilibrium and contemplating a return to fixed rates.

By 1973, the world was off the fixed-rate dollar standard, and a period of largely floating exchange rates began. The dollar, however, was still at the center of the system, in a sense. From the U.S. perspective, the *floating-rate dollar standard* of 1973–1984 was very similar to the fixed-rate dollar standard, except that the United States could pursue monetary policy independent of the exchange rate or of policies in other countries, so it did not have to strive to maintain a common, stable price level for tradable goods. For other countries, the floating-rate dollar standard was a substantial departure from past policies, as they did not have to maintain an official par value, although they did aim to smooth short-term variability in the dollar exchange rate. Other major changes were that other countries were urged to eliminate capital controls and could use monetary policy to strengthen or weaken their currencies against the dollar over both the short and long terms. Essentially, the exchange rate became the residual variable that bore the brunt of adjusting to offset macroeconomic policy differences across countries. As such, its volatility increased substantially.

Fast-forward to 2008. Countries—especially emerging-market countries—had amassed massive U.S. dollar reserves, and the dollar was clearly at the center of the financial universe.

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<sup>18</sup> At the same time, much of Europe was pursuing inflationary policies in the buildup of the cradle-to-grave welfare state.

There were also massive global imbalances—many countries were running sizeable current account surpluses and one large country in particular (the United States) was running a massive current account deficit. In response to the financial crisis, U.S. policies were becoming extremely stimulative, worrying many international creditors. The debate about whether the dollar was still up to the role of the world's reserve currency was becoming increasingly vigorous.

One salvo was fired by George Soros (and others) who, amid the fall 2008 crisis, proposed an increase in the IMF's Special Drawing Rights (SDRs) to help provide sufficient liquidity to arrest growing deflationary forces.<sup>19</sup> The head of China's central bank went even further, posting a report suggesting that SDRs should have an expanded role in global finance, including as a super-reserve asset. "The crisis again calls for creative reform of the existing international monetary system towards an international reserve currency with stable value, rule-based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability," said Zhou Xiaochuan, chairman of the People's Bank of China. In a presentation to the Council on Foreign Relations in March 2009, U.S. Treasury Secretary Timothy Geithner initially appeared open to such proposals. A combination of nationalism and traditional realist balance-of-power politics lies behind their arguments to grow the SDRs into a super-reserve currency that goes beyond supplementing the dollar and seeks to supersede it as the world's reserve asset.

In spring 2009, it was reasonable to believe that a new allotment of SDRs might be forthcoming. Roughly one-fifth of IMF member countries had joined since 1981 and had never received an SDR allocation, inhibiting their ability to participate in the SDR system. Moreover, given the depth and magnitude of the financial crisis and economic downturn, a new allotment of SDRs could be compelling. Indeed, at the April 2009 G20 meeting, a resolution was passed to make a new SDR allotment of \$250 billion. Was more in the pipeline? Perhaps. And would new issuance of SDRs equate to a dilution of the dollar's role? That remained unclear. In November, the *Financial Times* Alphaville blog endorsed a new issuance of SDRs: "Many dollar holders, including central banks and sovereign wealth funds as well as private investors, clearly want to diversify into other currencies [than than the dollar]." <sup>20</sup>

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<sup>19</sup> SDRs were first issued by the IMF in 1969, when Bretton Woods was straining and fears were growing that there was not enough gold and dollars, the main reserve assets. SDRs are a basket of existing currencies that gets reset every 5 years, the last time being November 2005. The U.S. dollar accounts for 44% of the SDR basket. The euro's share is 34%; the yen and sterling's shares are 11% each. The value of the SDR is calculated and posted by the IMF daily. In spring 2009, it was worth about \$1.51. There have been two allocations of SDRs. The first was in 1970–1972 for 9.3 billion SDRs and the second one was in 1979–1981 for another 12.1 billion SDRs. In 1997, there was a proposal to double the SDR issuance to 42.8 billion (roughly \$64 billion). One hundred thirty one members endorsed the proposal and they had a weighted vote of 77.7%. Approval requires 85%; the United States, with a 16.75% vote share, effectively has veto power and has not approved the proposal.

<sup>20</sup> Izabella Kaminska, "A 'Paper-Gold' Reserve System?" *Financial Times* Alphaville blog, November 5, 2008, <http://ftalphaville.ft.com/2008/11/05/17858/a-paper-gold-reserve-system/> (accessed May 18, 2009).

There were barriers to the SDR becoming a reserve currency. While SDRs have been around for 40 years, an SDR is not really money, because it is not a means of exchange. It is, to be precise, a basket of fiat currencies. Sometimes SDRs were referred to as the IMF's money (or "paper gold"), but issuing SDRs was not the same as the IMF printing money. The IMF does not create money. Any increase in SDRs would simply boost each member's claims on the composite currencies. The IMF is not a central bank, and the SDR clearly could not be a reserve currency in the traditional sense.

Whether one believes the SDR could supplant the dollar as the world's reserve currency, it is clear that discussions about the possible end of dollar domination were increasing in scope and frequency. Would the dollar hold on? If not, what would take its place?

### **Dollar Undervaluation Relative to "Fair Value" and Potential G7 Intervention**

A year earlier, Saudi Central Bank Governor Hamad al-Sayyari had declared at a European Central Bank conference that the dollar was a "good buy," explicitly stating that he believed the dollar's rout was overblown and that the dollar was undervalued. Williams knew that statements about under- or overvalued currencies often arose from a comparison of a currency's current rate with its PPP rate. She knew that, although the foreign-exchange rates of the major industrial countries frequently remained over- or undervalued against long-run measures of fair value for extended periods of time, most reached a point at which they became overstretched relative to fair value and began to converge toward a long-run equilibrium. A year before, many of the major currencies were overstretched against the dollar. The euro, in particular, was overvalued against the dollar by an estimated 30%, the most in two decades. As an investor with a long-term horizon, Williams knew she had to keep such conditions in mind. The relationship between spot and PPP rates as of April 2009 (**Exhibit 7**) suggested that the dollar's recent surge against the British pound did a lot to bring the spot rate in line with PPP, but the dollar still seemed substantially undervalued against the euro. Should she interpret this as one sign that the U.S. dollar might resume an upward trend against the euro? If so, would the process of a long-run reversion toward fair value be imminent?

Williams also knew that when an important currency such as the dollar was significantly out of line with fair value, coordinated intervention could well be used to change the course of the major currencies. The dollar peaked in early 1985; after the peak, G7's Plaza Accord acted to reinforce the incipient downward trend through coordinated action against the dollar. In the 23 years after that coordinated effort, the dollar (on a real, trade-weighted basis) had not returned to the pre-Plaza level (see **Exhibit 1** for the dollar and **Exhibit 8** for the yen and euro). The 1987 Louvre Accord attempted to slow the dollar's descent. In 1995, the United States and Japan teamed up to halt the dollar's slide against the yen, marking the beginning of a long bull market for the dollar. The ascent of the dollar against the yen was halted with further coordinated intervention in 1998, but against many currencies, the dollar continued to appreciate until 2000,

when Larry Summers led coordinated G7 action to support the euro. Between the 2000 action in favor of the euro and early 2008, the euro appreciated roughly 40% in real terms.

Would the G7 act to support the dollar? Many countries—not only emerging ones, but also G7 countries—relied on export-led growth. In the euro area, exports comprised 40% of GDP; in Japan, the amount was smaller (18%) but nonetheless important. How long would exporters in Europe and Japan tolerate a weak dollar? A few years earlier, 90% of the larger German manufacturers reported that they would have problems exporting at a euro-dollar exchange rate above USD1.30.

Although Williams knew that currency interventions were sometimes unsuccessful, past coordinated efforts had seemed to work.<sup>21</sup> Were the major currencies overstretched to the extent that G7 countries would want to act? And, if so, were the other economic policies—monetary and fiscal policies, in particular—of G7 countries consistent with stemming the tide against the dollar?

## **The Decision**

Rashonda Williams's task was clear. Notwithstanding the plethora of scenarios swirling around in her head, she had to take a firm stand on whether she thought the dollar would appreciate or depreciate over the next five to ten years. Although there were many factors to consider, she also had to keep in mind Triffin's Paradox. Triffin, one of the few economists who predicted the end of Bretton Woods, noted the fundamental problem of having a national currency also serve as the reserve asset: As demand for the reserve asset increases (due to increased trade and capital flows), the credibility of the national currency of the core country, which provides the reserve asset by running current account deficits, is naturally undermined. Was the U.S. facing the endgame in Triffin's Paradox?

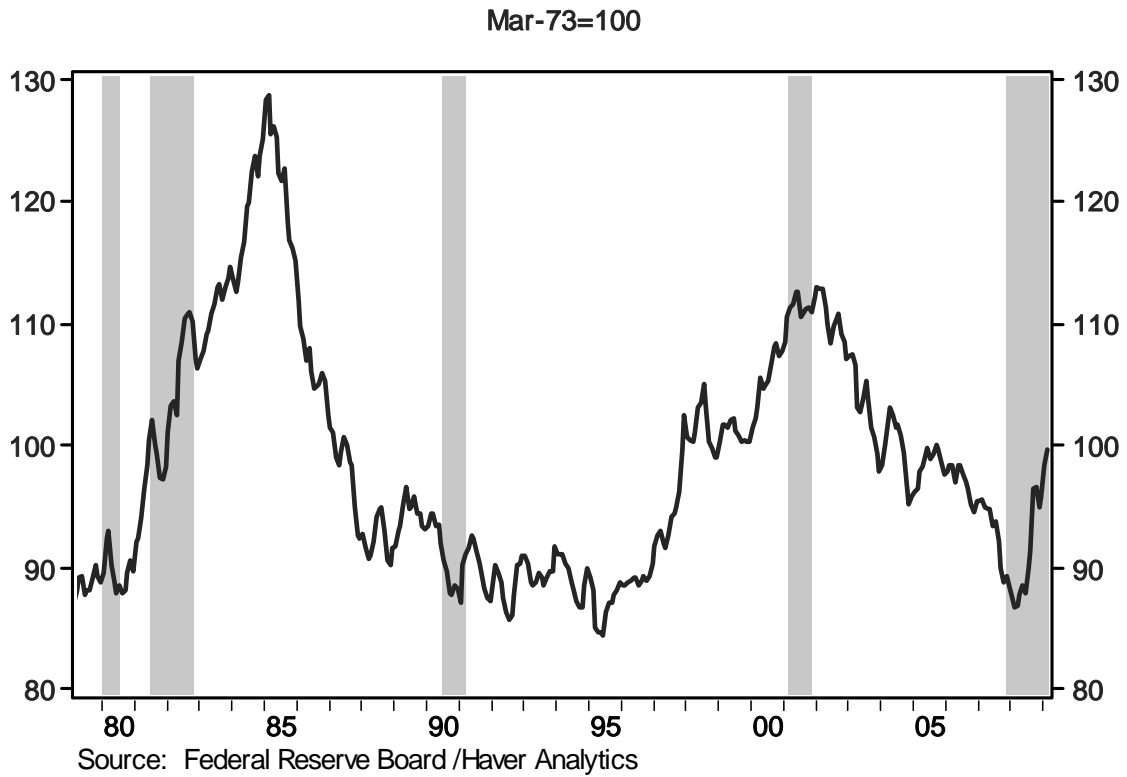
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<sup>21</sup> President George W. Bush was the first U.S. president who did not authorize intervention in the foreign-exchange market. But the swap lines that the Federal Reserve offered and other countries, including the ECB, Switzerland, Japan, and China have also introduced, may be seen as an alternative to intervention.

Exhibit 1

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

Real Broad Trade-Weighted Exchange Value of the U.S. Dollar



## Exhibit 2

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

U.S. Balance of Payments (in billions of U.S. dollars)

	1975–1984	1985–1994	1995–2004	2005	2006	2007	Year	2008 H1	H2
<b>Current Account Balance</b>	<b>-14</b>	<b>-98</b>	<b>-331</b>	<b>-729</b>	<b>-788</b>	<b>-731</b>	<b>-673</b>	<b>-718</b>	<b>-628</b>
<b>Trade balance</b>	<b>-30</b>	<b>-94</b>	<b>-301</b>	<b>-712</b>	<b>-753</b>	<b>-700</b>	<b>-681</b>	<b>-720</b>	<b>-643</b>
Exports of Goods and Services	223	494	971	1,284	1,457	1,646	1,836	1,854	1,818
Imports of Goods and Services	-253	-588	-1,272	-1,995	-2,210	-2,346	-2,517	-2,573	-2,460
<b>Income balance</b>	<b>27</b>	<b>21</b>	<b>27</b>	<b>72</b>	<b>57</b>	<b>82</b>	<b>128</b>	<b>123</b>	<b>132</b>
Income receipts	64	136	291	535	685	818	755	793	718
Income payments	-37	-115	-264	-463	-628	-736	-628	-670	-586
<b>Current transfers</b>	<b>-10</b>	<b>-25</b>	<b>-56</b>	<b>-90</b>	<b>-92</b>	<b>-113</b>	<b>-120</b>	<b>-122</b>	<b>-118</b>
<b>Capital Account Balance</b>	<b>0</b>	<b>-1</b>	<b>-2</b>	<b>-4</b>	<b>-4</b>	<b>-2</b>	<b>-3</b>	<b>-2</b>	<b>-3</b>
<b>Financial Account Balance</b>	<b>-3</b>	<b>97</b>	<b>319</b>	<b>701</b>	<b>809</b>	<b>768</b>	<b>547</b>	<b>637</b>	<b>456</b>
<b>Net DI Inflows</b>	<b>-2</b>	<b>0</b>	<b>-8</b>	<b>76</b>	<b>1</b>	<b>-96</b>	<b>7</b>	<b>14</b>	<b>1</b>
Foreign direct investment in the U.S.	12	43	150	113	242	238	325	375	276
U.S. direct investment abroad	-14	-43	-158	-36	-241	-333	-318	-360	-275
<b>Net Private Securities Flows</b>	<b>5</b>	<b>23</b>	<b>187</b>	<b>331</b>	<b>260</b>	<b>442</b>	<b>275</b>	<b>114</b>	<b>436</b>
Private Flows into U.S. securities	11	61	309	583	625	731	184	251	117
U.S. flows into foreign securities	-6	-38	-123	-251	-365	-289	91	-137	319
<b>Official Flows</b>	<b>4</b>	<b>32</b>	<b>114</b>	<b>279</b>	<b>496</b>	<b>389</b>	<b>-113</b>	<b>558</b>	<b>-784</b>
Foreign official flows into the U.S.	11	33	114	259	488	411	421	638	205
U.S. government assets abroad	-7	-1	-1	20	8	-22	-534	-80	-989
<b>Net Banking Flows</b>	<b>-12</b>	<b>32</b>	<b>12</b>	<b>5</b>	<b>51</b>	<b>44</b>	<b>342</b>	<b>-48</b>	<b>732</b>
<b>Statistical Discrepancy</b>	<b>17</b>	<b>2</b>	<b>14</b>	<b>32</b>	<b>-47</b>	<b>-41</b>	<b>144</b>	<b>105</b>	<b>183</b>
Memo: Nominal GDP	2,700	5,588	9,460	12,422	13,178	13,808	14,265		

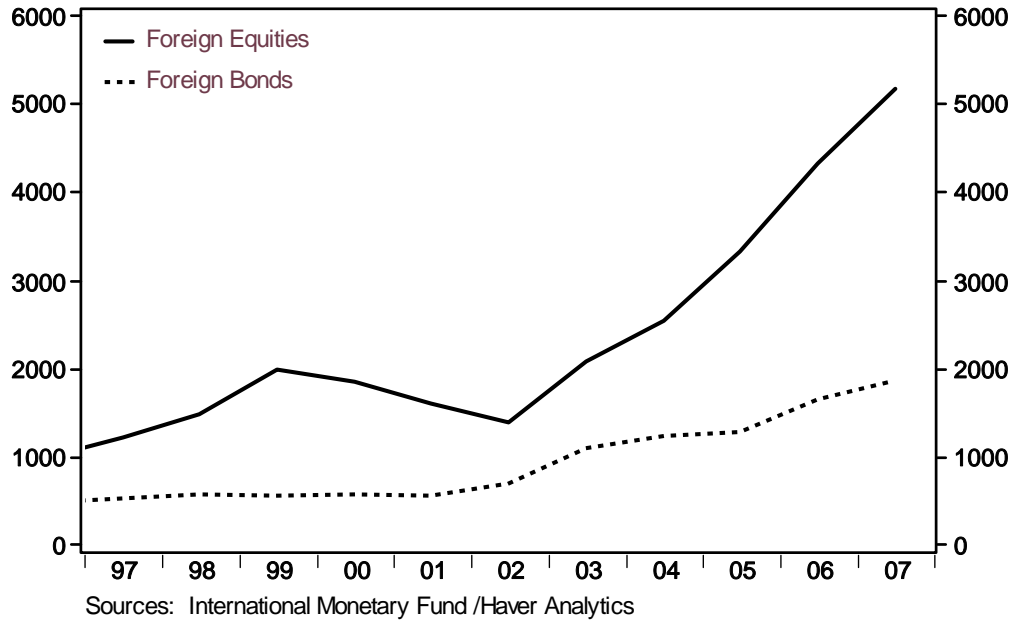
Notes: All data, except memo items, are in balance of payments terms. All data are annual averages.

Sources: Bureau of Economic Analysis and Haver Analytics.

Exhibit 3

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

U.S. International Investment Position: U.S. Holdings of Foreign Securities  
(in billions of U.S. dollars)



Note that as of year-end 2007, 76% of the \$1,964 billion in U.S. investors' foreign bond holdings were U.S. dollar-denominated and 10% were euro-denominated.

## Exhibit 4

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

## A. Currency Composition of Official Foreign Exchange Reserves (in billions of U.S. dollars)

	1995	2001	2006	2007	2008
Total foreign exchange holdings	1,390	2,050	5,037	6,398	6,713
Allocated reserves <sup>1</sup>	1,034	1,569	3,315	4,119	4,213
Claims in U.S. dollars	610	1,122	2,171	2,642	2,698
Claims in pounds sterling	22	42	145	193	172
Claims in Japanese yen	70	79	102	120	138
Claims in Swiss francs	3	4	6	6	6
Claims in euros*	279	301	832	1,082	1,117
Claims in other currencies	49	20	60	76	84
Unallocated reserves <sup>2</sup>	356	480	1,721	2,279	2,499
Memorandum Items					
Exchange Rates					
Pound sterling per USD	0.645	0.689	0.509	0.499	0.686
Japanese yen per USD	102.83	131.8	118.95	114	90.75
Swiss franc per USD	1.151	1.677	1.22	1.126	1.064
Euro per USD	...	1.135	0.759	0.679	0.719

Source: IMF Statistics Department COFER database (<http://www.imf.org/external/np/sta/cofer/eng/index.htm>).

\* Pre-1998 is the sum of legacy currencies.

## B. Top-10 Holders of Foreign Exchange Reserves (in billions of U.S. dollars)

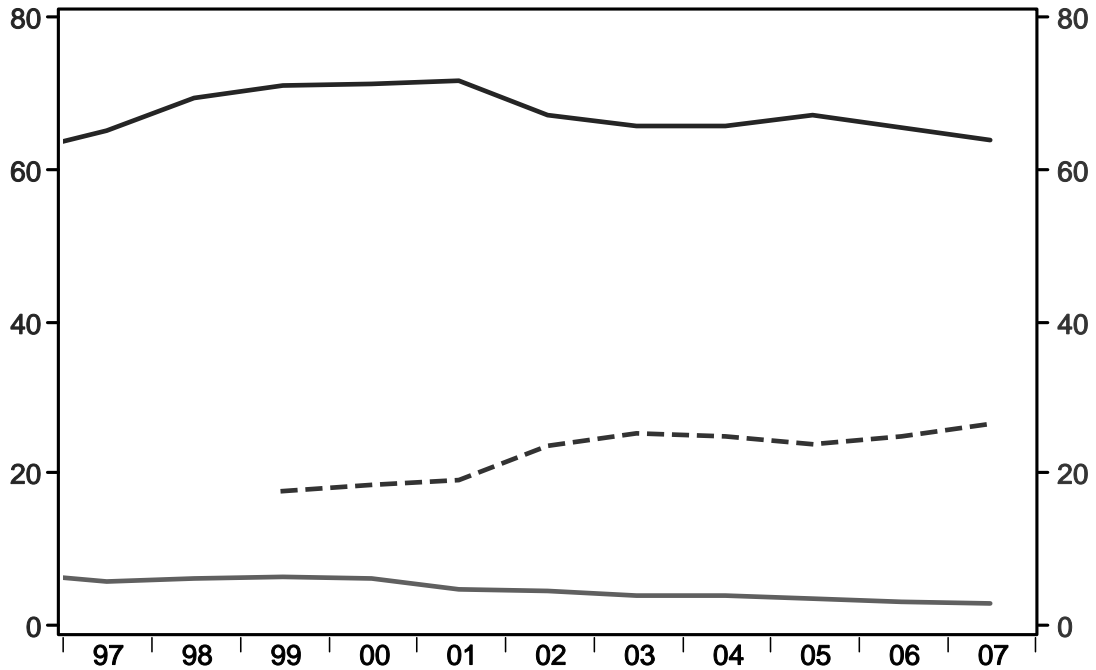
	2001	2005	2006	2007	2008H1	2008
China (Mainland) <sup>3</sup>	216	822	1068	1530	1759	
Japan	402	847	895	973	1002	1031
Eurosystem <sup>4</sup>	346	378	429	511	558	534
Russia	0	182	304	478	568	427
India	0	0	0	275	312	256
Korea	0	210	239	262	258	201
Brazil	36	54	86	180	201	194
Singapore	76	116	136	163	177	174
China, P.R. Hong Kong	111	124	133	153	158	183
Malaysia	30	70	82	101	126	92

Source: IMF Statistics Department Reserves database (<http://www.imf.org/external/np/sta/ir/index.htm>).<sup>1</sup> This line shows reserves data, whose currency composition has been identified.<sup>2</sup> This line captures the difference between the total reserves data reported to IFS (for the world table on Foreign Exchange) and to COFER<sup>3</sup> Not reported through the international reserves template, but available through IFS. Last data point: 4/08.<sup>4</sup> Eurosystem includes the ECB and all member states that had adopted the euro at the time to which the data refer.

Exhibit 5

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

Currency Composition of “Allocated” Reserves  
(in percent)



Sources: International Monetary Fund /Haver Analytics

The lines, from top to bottom, are the dollar, euro, and yen shares in allocated reserves. Last data point: 2007.

## Exhibit 6

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

Foreign Holdings of U.S. Treasury and Agency Securities as of June 2008  
and Known FX Reserves as of 2008 and 2007  
(in billions of U.S. dollars)

	Holdings of U.S. Debt Securities				FX Reserves	
	Total	Treasury	Agency ABS	Agency non-ABS	2008	2007
China	1,049	522	369	158	1,800	1,200
Japan	838	568	121	149	1,031	1,008
Korea	100	40	21	39	201	262
Taiwan	126	65	36	25	190	171
Hong Kong	84	64	9	11	183	133
Russia	138	76	0	62	427	491
India	16	16	0	0	256	293
All Foreign Countries	3,675	2,211	773	691		
Of which: Foreign official	2,651	1,684	435	532		

Note: In June 2007, foreigners held 56.9% of marketable U.S. Treasury bonds and 21.4% of U.S. agency bonds.

Sources: <http://www.treas.gov/tic/shl2007r.pdf> (Table 2), [www.treas.gov/tic/shlptab2.html](http://www.treas.gov/tic/shlptab2.html), [www.imf.org/external/np/sta/ir/colist.htm](http://www.imf.org/external/np/sta/ir/colist.htm), and authors' estimates.

Exhibit 7

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

PPP and Spot Exchange Rates

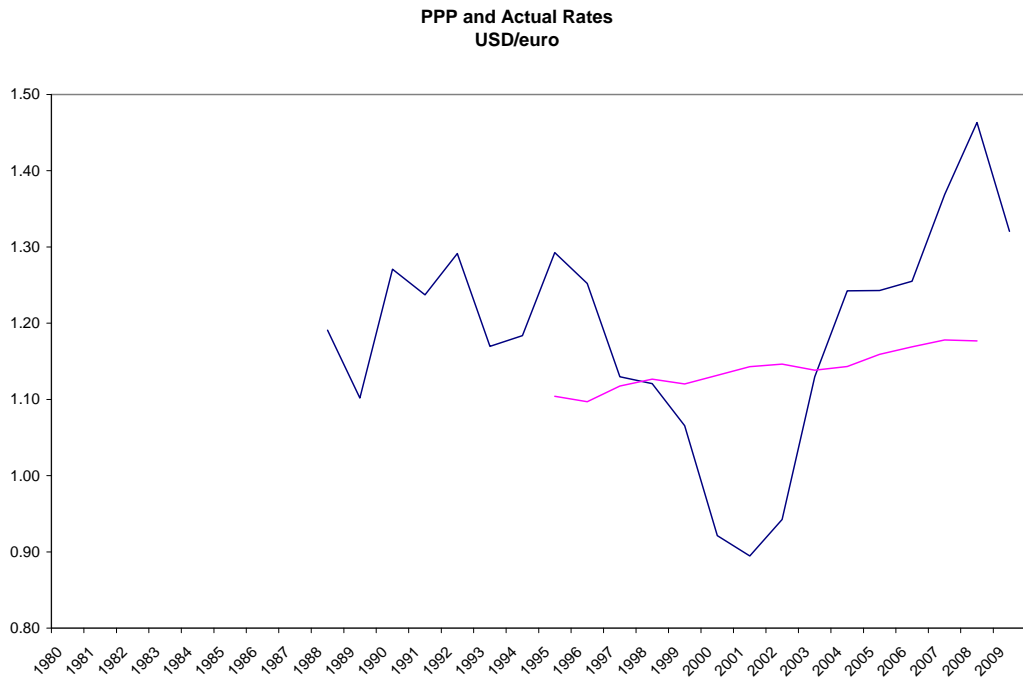
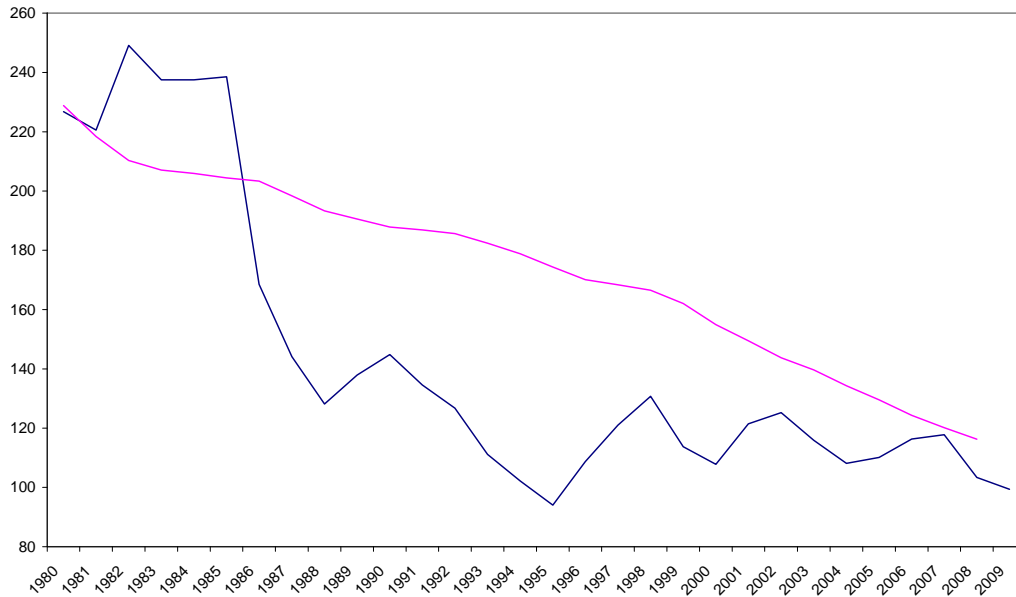
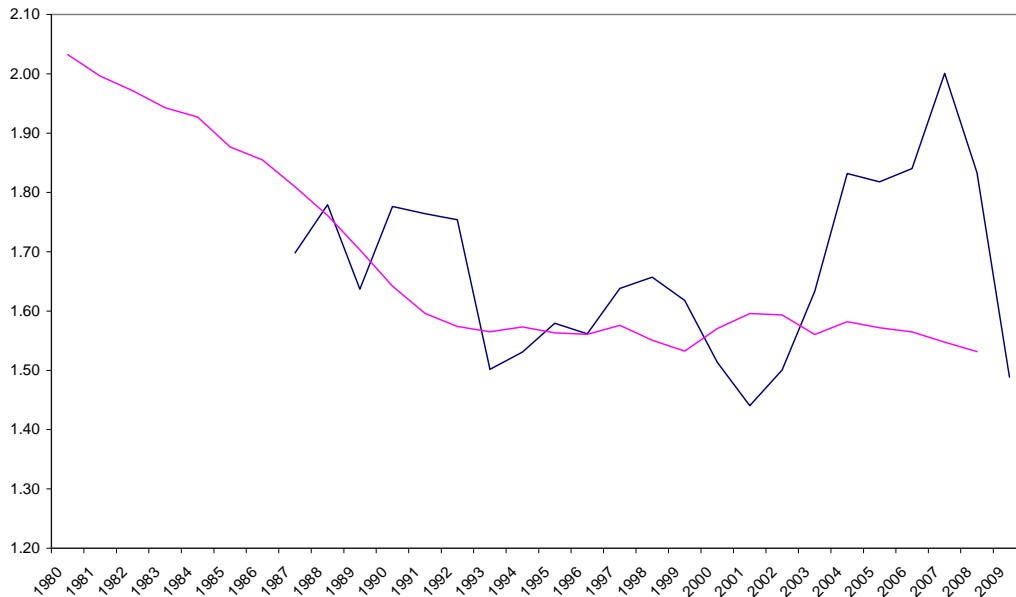


Exhibit 7 (continued)

PPP and Actual Rates  
yen/USD



PPP and Actual Rates  
USD/British pound



Spot rates are annual averages, except for 2009 when it is as of mid-April. PPP rates, which are the less volatile lines, are from the OECD ([http://www.oecd.org/document/47/0,3343,en\\_2649\\_34357\\_36202863\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/47/0,3343,en_2649_34357_36202863_1_1_1_1,00.html)).

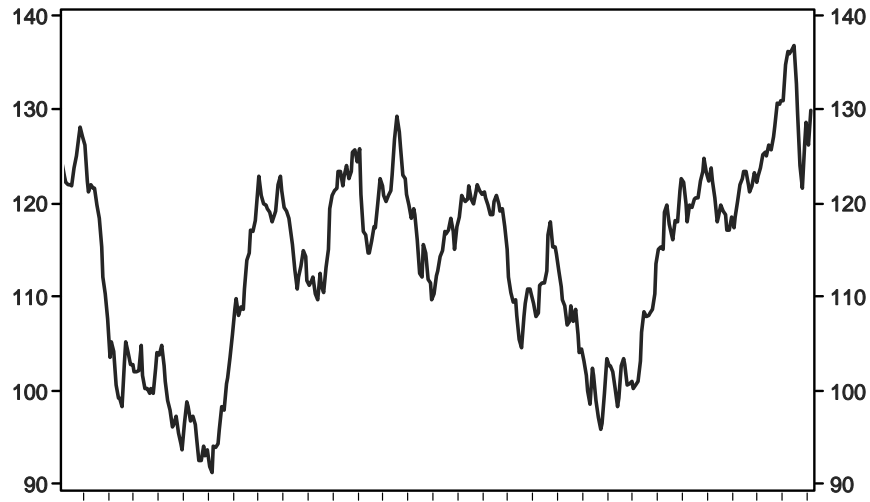
Exhibit 8

**GLOBAL ASSET ALLOCATION:  
WHITHER THE U.S. DOLLAR?**

Broad Real Trade-Weighted Currency Indices

JP Morgan Broad Real Effective Exchange Rate Index: Euro

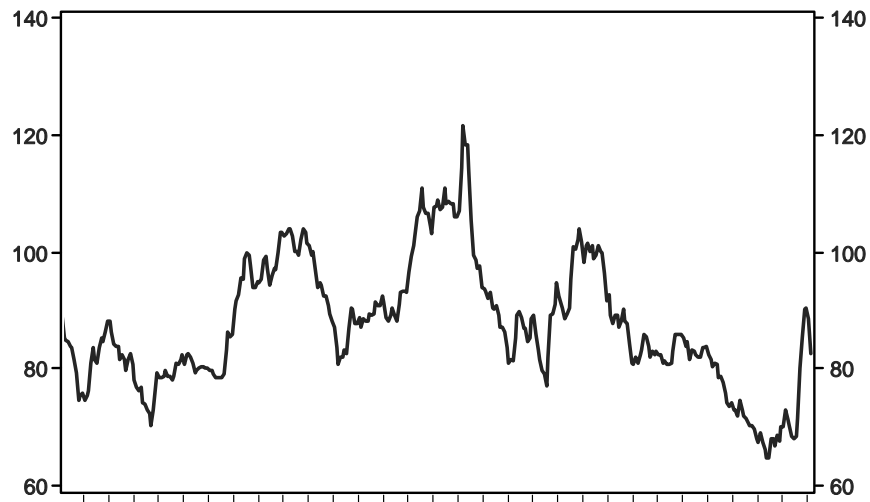
2000=100



Source: JPMorgan /Haver Analytics

JP Morgan Broad Real Effective Exchange Rate Index: Japan

2000=100



Source: JPMorgan /Haver Analytics