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Historical context

Under the terms of the Bretton Woods Agreement, signed in July 1944, the United States agreed to exchange U.S. dollars for gold at a fixed rate of \$35 per ounce. Currencies of signatory nations were pegged to the U.S. dollar within a 1% deviation limit. Central banks would buy or sell U.S. dollars to keep their currency within the permitted fluctuation band. Thus, the U.S. dollar became the world's official reserve currency.

The arrangement continued until August 1971 when the United States, lacking sufficient gold reserves to back the dollar, unilaterally broke the terms of the agreement. Since then, the U.S. dollar has remained the most important currency for international transactions. According to the Bank for International Settlements, 86% of all foreign exchange transactions that took place in the month of April 2007 were against the U.S. dollar. In effect, the U.S. dollar is still the world's reserve currency even though it is no longer backed by gold.

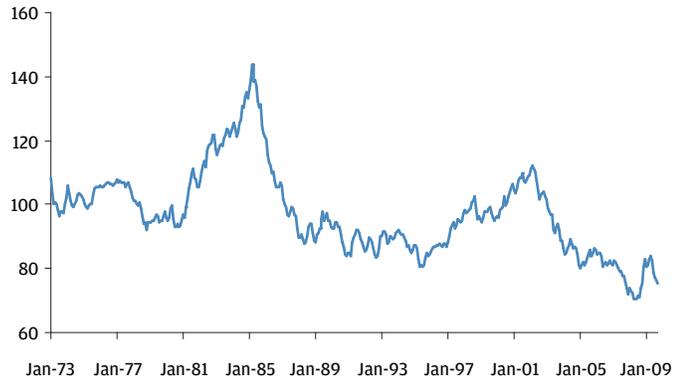
More recently, a prolonged period of U.S. dollar weakness against the currencies of its major trading partners, persistent current account and budget deficits, and a policy of quantitative easing by the U.S. Federal Reserve have led investors to question how much longer the dollar's status as the world's de facto reserve currency will remain unchallenged. This question has important implications for the U.S. economy since worldwide reserves held as foreign exchange total \$6.5 trillion. A rapid reallocation of these reserves would weaken the U.S. dollar and cause interest rates in the U.S. to rise.

In this discussion piece, we will review the arguments for replacing the U.S. dollar as the world's reserve currency. We will also consider factors supporting maintaining the dollar as a reserve currency. Finally, we will evaluate potential alternatives to the dollar.

The Weak Dollar Trend

The U.S. dollar has had periods of strength and weakness since we entered the floating rate period. There have been two periods of great dollar strength in the post-Bretton Woods era. The first episode, from 1981-85, corresponded with the tight monetary and loose fiscal policy adopted during the first Reagan administration. The second period of dollar strength, from 1997-2001, roughly coincided with the technology bubble. As shown in **Exhibit 1**, the dollar entered a persistent downtrend in early 2002. As of August 2009, the U.S. dollar stood only 7% above its all-time low and 23% below its average level since January 1973, according to the Federal Reserve's dollar index.

EXHIBIT 1: US\$ MAJOR CURRENCY INDEX



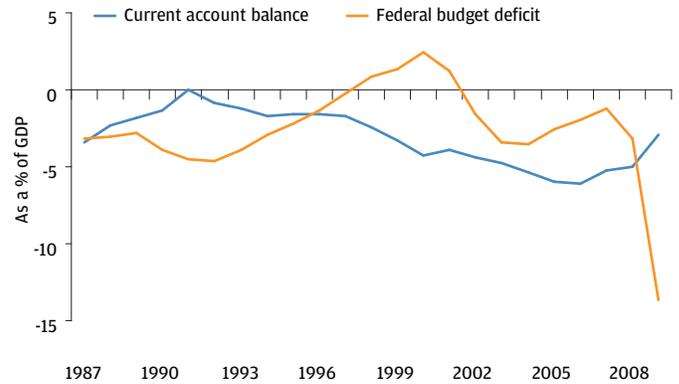
Source: U.S. Federal Reserve

The low level of the nominal dollar exchange rate in recent years has raised concerns among the reserve managers at the world's Central Banks. If the dollar continues to weaken, their countries will endure an opportunity cost, or a loss that could have been avoided had they switched into a stronger currency. U.S. dollar weakness, if uncompensated by high interest rates on U.S. government bonds, amounts to a tax on foreigners.

Persistent Current Account and Budget Deficits

The United States has run a budget deficit at the federal government level for 18 out of the last 22 years and a current account deficit in 21 out of the last 22 years.

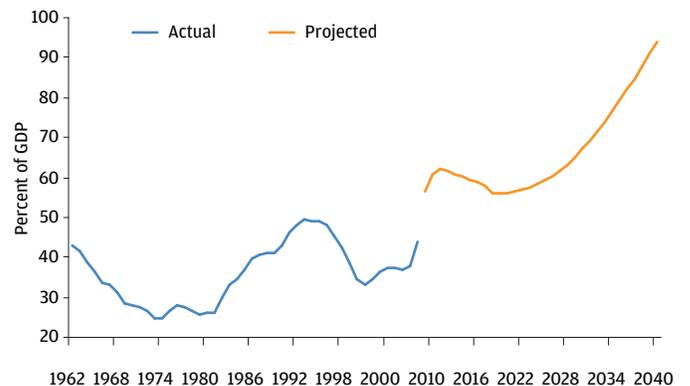
EXHIBIT 2: CURRENT ACCOUNT VS. BUDGET DEFICIT



Source: Economist Intelligence Unit

According to the Congressional Budget Office's "extended-base-line" scenario, the United States debt-to-GDP ratio will rise rapidly, reaching nearly 1 times GDP around the year 2040. The projection is based on scheduled spending under current law.

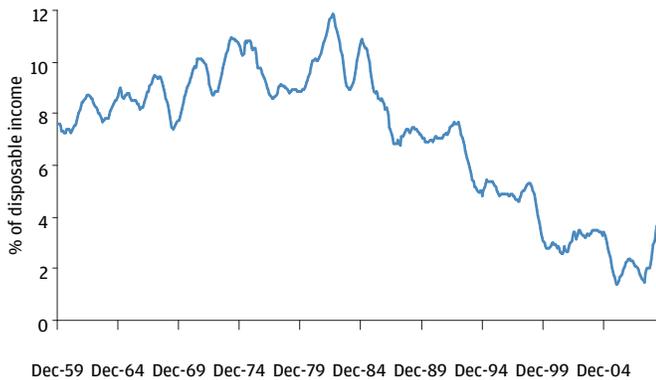
EXHIBIT 3: FEDERAL DEBT HELD BY THE PUBLIC



Source: CBO

At the same time, the U.S. personal savings rate as a share of disposable income has declined from over 10% in the 1980s to below 5% for most of this decade.

EXHIBIT 4: U.S. PERSONAL SAVINGS RATE



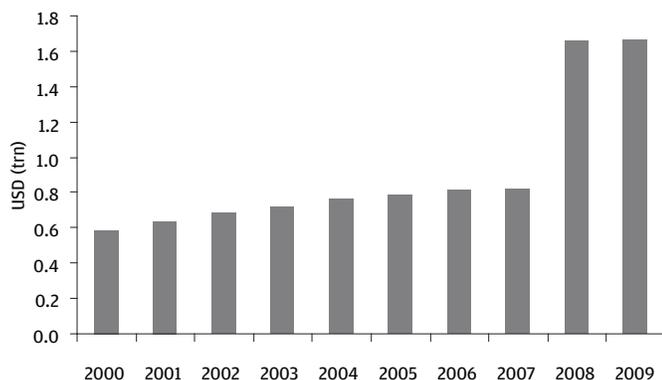
Source: U.S. Department of Commerce

Lower savings by Americans means these deficits must be financed externally. It is natural to question whether the currency of a country that is reliant on external financial flows is an appropriate sole reserve asset.

The Federal Reserve Has Embarked On a Policy of Quantitative Easing

In an attempt to fight deflation in the United States the Federal Reserve has announced the purchase of \$1.75 trillion of mortgage-backed, agency, and Treasury securities by the end of 2009, equivalent to 12.4% of GDP and 20.9% of M2 money supply.

EXHIBIT 5: U.S. MONETARY BASE



Source: U.S. Federal Reserve

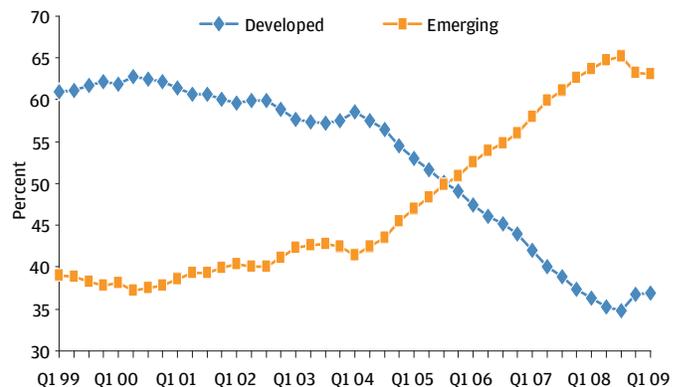
So far, the growth of the monetary base (**Exhibit 5**) has not filtered through to overly rapid growth in the broad monetary aggregate, “M2” money supply, which is growing moderately at a 4.1% annualized rate so far this year. Nevertheless, the rapid and unprecedented expansion of the monetary base has alarmed the world’s reserve managers, who fear that the value of their dollars may be eroded by renewed inflation.

It is important to note that other countries, notably Japan and the United Kingdom, have embarked on quantitative easing programs of similar magnitude to that of the United States in order to combat or avoid deflation in their own economies and to deliberately weaken their currencies.

Why Now?

Some of the trends we have discussed so far have been in place for several years. Why has the rather arcane issue of international reserve management been in the news so much recently? As we’ll show in the next section, reserve managers have already been diversifying out of the dollar for 10 years. However, since the fourth quarter of 2005, the majority of global reserves have been held by the central banks of emerging economies, as shown in **Exhibit 6**.

EXHIBIT 6: SHARE OF GLOBAL RESERVES BY STAGES OF DEVELOPMENT



Source: IMF

Developing countries now hold a much larger share of their GDP as foreign exchange reserves than do advanced economies. According to the IMF, advanced economies held reserves equivalent to 5.5% of GDP in 2008. For developing economies, the figure was 21.9%. As such, they have a correspondingly higher incentive to preserve the purchasing power of their reserves. In

Questioning the U.S. Dollar's Status as a Reserve Currency

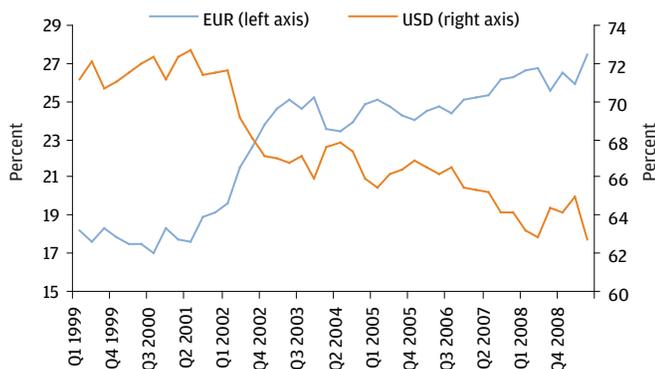
fact, much of the “noise” surrounding the dollar’s status has come from developing countries with large reserve balances.

Emerging economies hold a larger share of GDP as reserves for two reasons. The first is mercantilism. Lacking a domestic consumer base, some countries have pursued a policy of export-led growth. Maintaining an undervalued exchange rate keeps export products competitive on international markets. The second reason emerging economies have high reserve/GDP ratios is self-insurance. During past financial crises, the IMF played a key role as lender of last resort. However, IMF loans come with strings attached, such as budgetary constraints. By holding reserves against foreign liabilities, countries reduce their reliance on the IMF.

Some Reserve Diversification Has Already Occurred

As seen in **Exhibit 7**, some diversification of foreign exchange reserves out of the U.S. dollar has already occurred. Since 1999, the U.S. dollar’s share of global reserves excluding gold has fallen steadily from about 72% to 63%, according to the IMF. Central bank holdings of euros and British pounds have risen accordingly. Informatively, central bank holdings of the Japanese yen and the Swiss franc have actually fallen by more, in percentage terms, than their holdings of U.S. dollar denominated assets. This reflects the sensitivity of central bank reserve managers to the nominal yields available on currency deposits and short-term government debt. It also suggests that higher short-term interest rates might temporarily halt or slow diversification out of the dollar.

EXHIBIT 7: CURRENCY COMPOSITION OF INTERNATIONAL RESERVES



Source: IMF. Data through Q2 2009.

Factors Supporting the U.S. Dollar

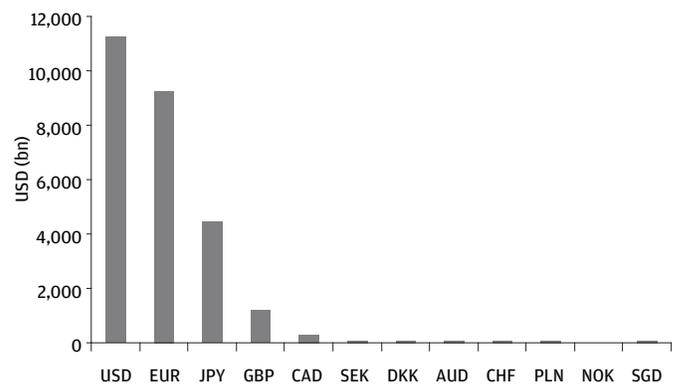
Why does the U.S. dollar remain the largest component of international reserves? The dollar holds several advantages compared with other currencies. First, nearly all commodities are priced and settled in dollars. Much international trade is invoiced in U.S. dollars, even when the United States is not the source or destination of the goods or services involved in the transaction. Second, the United States has the largest, most liquid and most transparent financial markets in the world. Third, many countries, including several with significant international reserves, rely on the U.S. for military protection. Fourth, certain mercantilist economies rely on the U.S. as a destination for their exports. These countries manage their exchange rates against the U.S. dollar in order to keep domestic costs low, thereby accumulating large dollar reserve balances. Finally, since a high proportion of the external liabilities of many countries are U.S. dollar-denominated, holding reserves as dollars is a form of asset-liability matching.

What Are the Alternatives?

Practically, reserves must be invested in safe, liquid securities or other assets that can be readily sold and have low storage costs, such as precious metals. Most foreign exchange reserves are currently invested in highly-rated government, government-sponsored, and supranational fixed income securities. Let’s investigate the currency denomination of available investment grade bonds.

According to Citi (**Exhibit 8**), as of August 31, 2009, 97% of the global outstanding stock of investment grade bonds are

EXHIBIT 8: SIZE OF INVESTMENT GRADE BOND MARKET



Source: Citi

denominated in four major currencies, with 42% in U.S. dollars, 35% in euros, 16% in Japanese yen, and 4% in British pounds.

In addition to these “big 4” currencies, the Canadian dollar, the Swedish krona, the Danish krone, the Australian dollar, the Swiss franc, the Polish zloty, and other currencies have smaller investment grade bond markets.

The IMF created the SDR¹ as an international reserve asset in 1969. The SDR is a currency basket weighted to ensure that it reflects the relative importance of currencies in the world’s trading and financial systems. Perhaps not coincidentally, the SDR currency basket has a similar breakdown to bond market capitalization, with 40% dollars, 38% euros, 13% yen, and 9% pounds as of August 31, 2009. The SDR currently contains only four currencies but its composition is reviewed once every five years by the IMF. The next scheduled review will take place in late 2010.

The SDR is often mentioned as a candidate to replace the U.S. dollar as a reserve currency. This statement is misleading, because the SDR is not a currency but a basket of currencies which includes the U.S. dollar as its largest constituent.

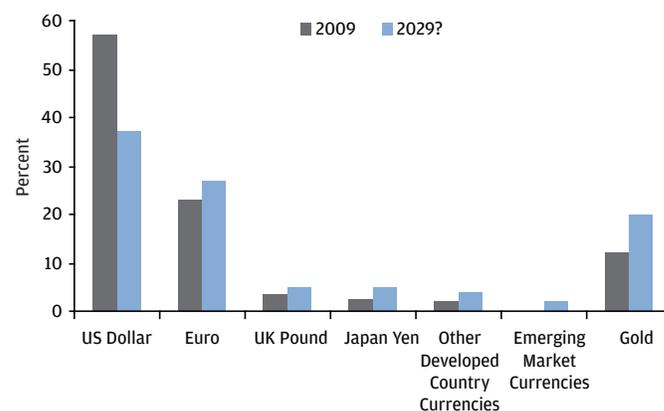
Other proposed replacements for the dollar include emerging market currencies. However, the largest developing economies, including Mexico, Brazil, Korea, China, Taiwan, India and Russia, suffer from hurdles to investment that are too great for their currencies to be viable international reserve assets. Obstacles to reserve currency status include lack of convertibility, closed or opaque domestic asset markets, domestic political instability, and military tension with neighboring countries. It will require many years to overcome these hurdles.

Precious metals, especially gold, have always played a major role as reserve assets. Traditionally, advanced countries have held a larger share of their reserves as gold than have emerging countries. According to the World Gold Council, developed countries hold 21.3% of their total reserves in the form of gold, compared with only 3.4% for emerging countries. It is likely that the developing world will invest a higher proportion of their total reserves in precious metals in the future.

Where Do We Go From Here?

We believe that the advantages, discussed above, conveyed by holding reserves in the form of U.S. dollar deposits and U.S. dollar-denominated securities will secure the dollar’s place as the largest component of international reserves for the foreseeable future. However, the concerns also enumerated earlier in this article ensure that the trend to diversify the foreign exchange component of total reserves into other currencies will continue. Initially, the beneficiaries of this trend will be the countries with the largest, most liquid and transparent securities markets, including the euro-zone, the United Kingdom, Japan, and Switzerland. Eventually, emerging market currencies may benefit from this trend. Finally, the unconventionally easy monetary policies adopted by several of the world’s most important industrialized country central banks, including the Federal Reserve, the Bank of England, and the Bank of Japan, have diminished the appeal of “fiat” currencies and will drive developing countries to hold a greater proportion of their total reserves in the form of gold. **Exhibit 9** shows how the breakdown of global total currency reserves may appear in 20 years time.

EXHIBIT 9: COMPOSITION OF GLOBAL TOTAL RESERVES



Source: IMF, World Gold Council, J.P. Morgan Asset Management forecast.

If the above scenario materializes, approximately \$1.3 trillion U.S. dollars will be sold by reserve managers over the next two decades, assuming no further reserve accumulation takes place. This amount is roughly equal to 10% of U.S. GDP and 10% of U.S. bond market capitalization.

¹Special Drawing Rights are the IMF’s unit of account. See www.imf.org.

Questioning the U.S. Dollar's Status as a Reserve Currency

Considering the balance between the arguments for and against holding reserves in the form of U.S. dollars, we expect the transition out of the dollar to occur gradually over the next 20 years and therefore to have only a limited impact on the dollar's value and the level of domestic U.S. interest rates. However, a more rapid redeployment of reserves would have a noticeable impact on domestic U.S. interest rates, on the price of gold, and on the value of the U.S. dollar on the foreign exchange markets. For example, a recent study² estimated that the U.S. 10-year Treasury yield would be 90 basis points higher had there been no foreign official flows into U.S. government bonds over the past year.

An amelioration of the U.S. current account and budget deficits, a higher personal savings rate, and an orderly withdrawal of quantitative easing measures including a normalization of the Fed Funds rate will lower the probability of a disorderly exit out of the dollar by the world's reserve managers.

² Warnock, Francis E. and Veronica Cacadac Warnock, "International Capital Flows and U.S. Interest Rates," NBER Working Paper No. 12560 (October 2006)



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