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A Review of the Trade Weighted Dollar

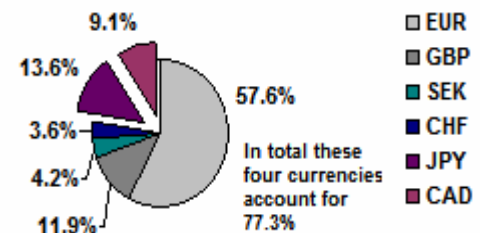
Companies and investors often have exposure to individual currencies, such as the euro, Japanese yen, British pound and the Brazilian real. The bilateral movement of a foreign currency against one's base currency can be substantial and have significant financial impact. However, from a broader economic perspective, and especially to understand the impact of currency movement for a country as a whole, it is often preferable to look at a currency on a trade-weighted basis.

The Dollar Index

There are two main trade weighted indices for the U.S. dollar. But to be clear, neither is the frequently cited U.S. Dollar Index (DXY), for which futures trade on the Intercontinental Exchange (ICE). DXY is based on a 36-year old index initially created by J.P. Morgan.

There are a number of reasons why DXY is largely a speculative vehicle and is not very useful as a true trade weighted index. First, it is heavily weighted to the euro and other currencies that move in the euro's orbit, like the Swiss franc, British pound and the Swedish krona. Second, it under-represents Canada, the largest trading partner of the United States. Third, many significant trading partners are not represented at all, like East Asia, including China, South Korea, and Taiwan for example

Dollar Index DXY Comparison



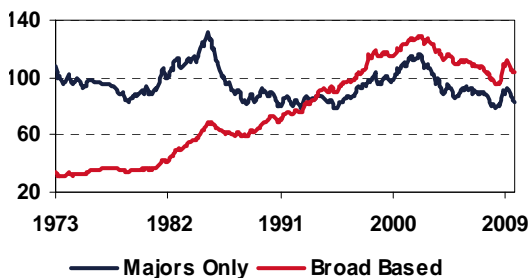
Source: ICE

In addition to not being an accurate trade-weighted index, DXY tends to be a poor hedging vehicle because rare is the company or investor who has exposure that duplicates the components. In addition to the interbank market, there are a number of exchange traded instruments that offer investors and corporations potentially more suitable hedging vehicles.

Trade Weighted Indices

There are two main trade-weighted indices for the dollar that may be more useful in assessing the economic impact of currency movement, a major one and a broad one. The key difference between them is in terms of comprehensiveness. The first is an index that includes only the major countries. In this regard, it is similar to DXY, though the weightings are different.

Trade Weighted Dollar Index



Source: Bloomberg

Even though DXY was created in 1973 and has only changed its composition once and that was for the advent of the euro, it is highly correlated with the major trade-weighted dollar index. Using a 52-week rolling correlation, conducted on the basis of percent change, the correlation reached a low in 1976 at around 69% and a high of 99% just a couple months before the Plaza Agreement was struck in September 1985. Currently the correlation stands at almost 93%.

The second index is a broader measure that includes many more countries. Again, The trade off is that a more comprehensive index also tends to be more distorted by different currency regimes and inflation differentials, which increase as more developing countries are included.

Recent Performance

The major trade-weighted dollar index bottomed in March 2008 (~69.69). The dollar bottomed against half the G7 currencies (Canadian dollar and British pound) in November 2007 and did not bottom out against the euro until mid-July 2008. The greenback proceeded to appreciate about 23% (almost 85.00).

In the last seven months, the major trade-weighted index has fallen about 14.5% (~73 currently). The vast majority of this decline (~12 percentage points) took place in the March to July period. The dollar's decline since March against the major currencies hardly seems like a crisis. It may be better understood as more a partial unwinding of the rapid appreciation caused by the Great Short Squeeze as the world realized that rather than a surfeit of dollars, there was actually a shortage.

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Arguably one of the Federal Reserve's most successful operations was the dollars it made available via swaps to meet this shortage, as the dollar carry trade brutally unwound. At its peak, the Federal Reserve provided around \$650 billion, which is roughly the size of the Swedish and Hungarian economies put together, almost the size of TARP. Today it stands at less than \$2 billion.

The broad trade weighted dollar index tells a different story. It appreciated steadily for almost 30 years. From July 1973 until February 2002, the broad dollar index appreciated markedly, moving from a low of 30.63 to a peak of 129.52.

It has fallen in recent years, by the middle of last year it had fallen about 25%. It bottomed in July 2008, the same month the euro recorded its high against the dollar around 95.00. It then appreciated 21% to 115.0 in March. It has trended lower since, depreciating around 12.5%. And again, as we saw with the major dollar index, the lion's share of this broader index decline was recorded in the March-July 2008 period, with the loss since then being about 2.5%.

As noted before, the broad traded weighted dollar is distorted by the inclusion of many countries that have higher inflation than the U.S. Adjusted for inflation, the real broad traded weighted dollar has had six sustained trends. It fell from 1973 (the dissolution of Bretton Woods) until 1978. It then appreciated until March 1985—six months before the Plaza Agreement (officials may have had the wind to their back more than is generally appreciated). It fell for the next decade to record the historic lows in 1995. That low was approached last July but not taken out.

The real broad trade weighted index appreciated from 1995 through 2002, whence many would date the current bear market. The crisis drove the dollar higher by 15.5% from the July 2008 low to the March 2009 high. Since then, it has unwound about 2/3 of its rise.

A Note on Trade and the Dollar

The correlation with these trade weighted dollar indices and the U.S. trade balance or U.S. exports does not appear particularly consistent. Admittedly it is hard to deny the graphs we have all seen. And yet our eyes can be deceiving. Correlation is a descriptive statistic. It is not something that can necessarily be eyeballed.

Indeed, there have been three general phases of correlation since 1992 and each phase is roughly five years. In the first period, 1992-1998, the 12-month rolling correlation of the percentage change in the broad dollar index and the balance of payments trade balance was negative, with a couple of brief exceptions. The correlation swung positive in 1998 and remained so until 2004, with a couple exceptions. Since 2004 correlation has been negative again, with the exception of May 2005 to March 2006. Using the inflation adjusted broad trade weighted index of the dollar does not show as clear patterns, but the sign of the correlation swings away more.

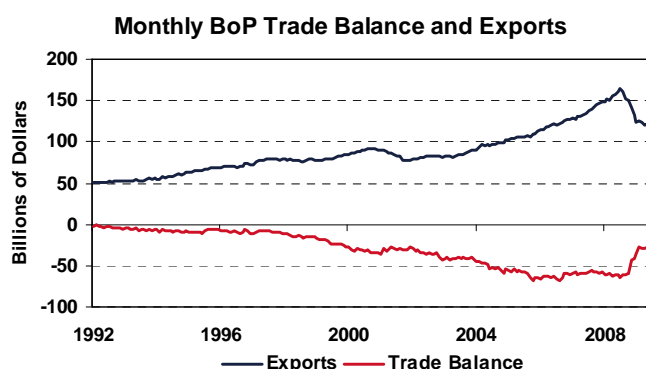
Appreciating that the market for money adjusts much quicker than the markets for goods and services, we tried lagging the broad trade weighted dollar index and the trade balance. While there was some improvement, it did not change the general picture.

Of course, there are numerous factors that influence the U.S. trade balance and many of these may simply be more important than the broad trade weighted measure of the dollar. Surely relative growth levels and terms of trade are important considerations.

But about U.S. exports? Here too three distinct phases are evident in the correlation studies covering roughly the same years. The phases show that U.S. exports appear to be more sensitive to the strength of foreign demand than to the dollar price.

Businesses and investors operate in a world of bilateral nominal exchange rates. To try to grasp the economic impact of currency movement, economists have created trade-weighted indices (both nominal and real). Using elementary statistical tools, a prima facie case that a weaker trade weighted dollar will reduce the U.S. trade deficit or boost exports is not immediately clear as evidence of a weaker claim of correlation is not particularly strong. Moreover, an attempt to weaken the dollar or for the U.S. to "embrace a weaker dollar", as a recent essay in Foreign Affairs suggests, would seem to risk retaliation and unleashing unintended consequences that could push the U.S. precisely to the fate it seeks to avoid.

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Source: Bloomberg