What Drives The Dollar Index?

Never let the facts get in the way of a good story. This might be good advice in some endeavors, but it is inexcusable in financial markets, including the currency market. How many other fields have such a wealth of data so readily available?

Yet myths and urban legends abound. Consider the primary one in relation to the U.S. dollar, that its long-term depreciation is connected to the so-called twin deficits, those of the current account and the federal budget. Let's slay one dragon at a time here, beginning with the current account deficit. The current account, reported quarterly as part of the GDP statistics, subsumes the monthly merchandise trade deficit and includes trade in services and official transactions. As the U.S. tends to be a net exporter of services, this number is a more complete and accurate measure of the U.S. external balance.



The Dollar And The Current Account Deficit

Many subscribe to the notion that a strong dollar leads to deeper current account deficits as a percentage of GDP and to its opposite, that a weaker dollar either reduces this deficit or leads to a surplus. However, we can see just how strong the non-relationship between the dollar index (DXY) and the current account deficit has been since the start of the floating exchange-rate era in the early 1970s.

The surge higher in the dollar in the early 1980s certainly preceded a deepening of the current account deficit; but that is not the direction of causality assumed by many. They would have you believe a deeper current account deficit would cause a weaker dollar by the mechanism of putting excess dollars out into world markets. Has this happened? Hardly: The deeper deficit in the late 1970s preceded the surge in the DXY and the narrowing of the deficit in the late 1980s preceded a further weakening in the DXY.

Most tellingly, however, is the post-1991 pattern. The U.S. recorded its last quarterly surplus in the current account in the immediate aftermath of the Persian Gulf War on the basis of foreign government contributions for that war effort (the last month of a merchandise trade surplus was April 1976). Ever since that time, the current account deficit has deepened on a continual basis, but the DXY weakened between 1992 and 1995, strengthened between 1995 and 2001, weakened again into the end of 2004 and strengthened in 2005. This would strongly suggest currency traders look elsewhere for a driver of the dollar.

Budget Deficit

We can repeat the exercise for the federal budget deficit as a percentage of GDP. The idea here has been an increasing percentage of each additional dollar the federal government has to borrow must come from foreign investors. As American dependence on foreign borrowing increases, so too does the potential for moral hazard: We can drive the value of the dollar down and repay our creditors in increasingly worthless currency.



The Dollar And The Federal Deficit

For a relationship to be causal, it must work at all times and in all market conditions. The deepening of the federal deficit in the late 1970s and early 1980s both led and coincided with the surge higher in the DXY. The deficit's small closure in the late 1980s both led and coincided with dollar weakness. Finally, the narrowing of the federal deficit and its move toward a surplus during the 1990s led an eventual move higher in the dollar by too long of a period – more than three years – to be causal in fact.

Interest Rates

Despite the temptations to do so, we should not analyze currency markets as some sort of morality play. Nor are they some sort of international report card on how various governments are performing in their various tasks. A spot exchange rate and its associated forward market equilibrates the expected inflation differential and the expected return on assets between two economies, nothing more and nothing less. This holds true for individual currencies and it certainly holds true for the DXY.

At the very broadest and over a long period of time, we can correlate the DXY with the movements of the target federal funds rate. This comparison obviously is only one part of the equation – we will drill down to some key differentials shortly – but it is instructive nevertheless. The DXY's course follows the federal funds rate with the usual long and variable lags associated with monetary policy.

The Federal Funds Rate And The Dollar



Case Study: The Dollar-Euro Rate

As the euro (EUR) comprises 57.6% of the DXY and the closely linked British pound, Swiss franc and Swedish krona account for another 19.7%, we can use the relative interest rate movements of the dollar and euro to highlight this critical driver of the DXY. Unfortunately, the history of the EUR as a separate currency extends back only to January 1999; blending various national interest rates to create a synthetic euro interest rates is something of an indefensible assumption.

On first blush, the basic course of interest rate differentials, here represented by the gap between USD and EUR 3month LIBOR, continues to favor the dollar. Trends do not persist indefinitely, however, so let's see whether this one is starting to abate. The left-hand chart depicts the EUR against the commonly examined three-month rate gap between the USD and EUR, while the right-hand chart depicts the rate gaps across a range of money market maturities as a percentage of the USD rate. Here a positive number indicates USD rates greater than EUR rates.



Two items are apparent from these charts. First, the movement of the currency occurs well in advance of the movement in the rate gap; this is a forward-rate concept we will address shortly. Second, the closure of the rate gap in 2003-2004 was led by the longer money market maturities. By the late summer and fall of 2005, the USD rate advantage ceased growing at these maturities. Nor is this an isolated phenomenon. If we extend the interest rate comparison out from money market maturities to note maturities, we find the interest rate gap between the USD and EUR has been shrinking since September 2005.

Rate Gap Now Narrowing At Note Maturities



Interest Rate Expectations

How can we link the maturity-dependent interest rate gaps back to the movement of the EUR? Yes, by the mechanism of the forward-rate ratio (FRR). This measure is constructed by taking the forward rate between six and nine months, the rate at which you can lock in borrowing for three months starting six months from now, and dividing it by the nine-month rate. The more this ratio exceeds 1.00, the looser the monetary policy is expected to be. Critically, these forward-rate ratios are comparable across economies and across interest rate levels.

We can compare these FRRs for the USD and EUR to the three-month yield spread. While the USD FRR had been consistently higher – the yield curve steeper – than its EUR counterpart since mid-2001, this relationship has reversed. For the first time since 2000, a period of great weakness for the EUR, the USD FRR exceeds that of the EUR FRR. This is dollar-bullish: It is not the absolute interest rate differential that is critical for an exchange rate's movements, but rather the relative monetary policy expectations as measured by the shapes of the two money market curves.

USD Forward Rate Curve No Longer Steeper



Follow The Money

This begs the question, of course, as to what drives the interest rate expectations embedded in the money market curves. The answer, unsurprisingly, is money. The U.S. money supply as measured by M2 grew far more rapidly than did its European counterpart from late 1999 on through late 2002. This was a period of EUR weakness. Once the American economy started to recover after the bear market lows of October 2002, the situation reversed. European M2 growth greatly outpaced that of the U.S. all through 2005. As a result, the EUR weaknesd and the EUR FRR increased relative to the USD FRR.

Relative Money Supply Growth Matters



Returns On Assets

A reasonable person could ask why the currency market would not react more rapidly to very different money supply growth rates. After all, if you create more dollars, should not every one be worth less, all else held equal? The answer lies in anticipated returns on assets. If the money supply is growing because of increased bank lending and other extensions of credit, then the underlying economy should be stronger and assets denominated in that currency should have a greater return.

We can check this out with a little comparison between U.S. and American stock indices. Let's compare the very broad Russell 3000 index to the Morgan Stanley Capital International Euro Index. The pattern has been clear and distinctive: The relative performance of the stock indices leads the movements in the currency and the periods of outperformance coincide with the periods of more rapid money supply growth. As the respective central banks relax their policies and as the respective commercial banking systems create new credit, the expected returns on assets increase. This makes the easy-to-follow returns of broad stock market indices a good leading indicator for the DXY.



