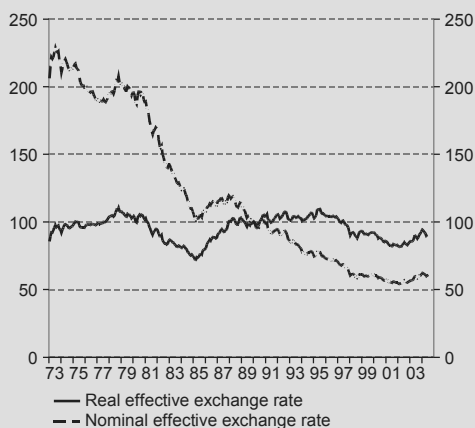


Diagram 48 Effective Exchange Rate, US Dollar
Index January 1990=100, monthly values



Note: A higher value signifies a weaker exchange rate.

Source: Federal Reserve.

Diagram 49 Real Effective Exchange Rate
Index 1990=100



Note: A higher value signifies a weaker exchange rate.

Sources: EcoWin and NIER.

Dollar Overvalued in a Long Term Perspective

The US dollar strengthened in the second half of the 1990's, in both nominal and real terms (see Diagram 48). At the same time, the deficit in the US current account grew rapidly, and the dollar was widely regarded as overvalued. Since then, however, the dollar has weakened considerably, while the deficit on current account has continued to increase. This tendency raises the question of the long-term value of the dollar.

In a long-term perspective, the equilibrium value of the real exchange rate, that is, the relationship between domestic and foreign prices expressed in a common currency, is set by its so-called fundamental determinants. A variety of fundamental variables have been proposed in academic literature.³ Differences in the development of productivity are one such factor. Another is the terms of trade, that is, the ratio between prices of exports and prices of imports. Furthermore, it is assumed that the real long-term equilibrium exchange rate is affected via the flows of capital arising from the country's net foreign position.

Calculating the Real Equilibrium Exchange Rate of the Dollar

A number of different methods for determining equilibrium exchange rates have been advanced in various studies.⁴ With the so-called BEER model, it is possible to calculate the real long-term equilibrium exchange rate of a currency. This method is described in greater detail elsewhere, including *The Swedish Economy*, March 2002 and June 2003, where it is applied to the Swedish krona.⁵ Results of such calculations are shown below for the equilibrium exchange rate of the dollar.⁶ The study is based on the real effective exchange rate of the dollar against other G7 countries during the period 1963–2003 (see Diagram 49).⁷ However, since the choice of countries is governed by the availability of data, the index for the real exchange rate is rather narrowly based. Consideration is not given to countries like Mexico and China, which became increasingly significant US trading partners during the period.

³ See, for example, Stein, J., ed. "Fundamental Determinants of Exchange Rates", Oxford 1997 and Williamson, J., ed., "Estimating Equilibrium Exchange Rates", Institute for International Economics 1994.

⁴ See above.

⁵ See also Clark, P. and MacDonald, R. "Exchange Rates and Economic Fundamentals: A Methodological Comparison of BEERs and FEERs" i MacDonald, R. and Stein, J. eds, "Equilibrium Exchange Rates", Kluwer Academic Publishers 1999.

⁶ Memorandum "Dollarns reala jämviksväxelkurs" (The Real Equilibrium Exchange Rate of the Dollar), NIER, August 2004.

⁷ The other G7 countries are Canada, France, Germany, Italy, Japan and the UK.

The fundamental determinants included in the model are the following:⁸

- The relative price of internationally traded goods and services compared to nontraded goods and services, in relation to other G7 countries. The change in this relative price serves as an approximation of differences in the development of productivity (see Diagram 50). Thus, if the relative price between internationally traded and nontraded goods and services is rising compared to other countries, this tendency reflects lower productivity growth in the export sector than in other countries, weakening the real equilibrium exchange rate.
- Terms of trade in relation to other G7 countries (see Diagram 51). An improvement in the terms of trade strengthens the real equilibrium exchange rate.
- The net foreign position in relation to GDP (see Diagram 52). An improvement in net foreign position strengthens the real equilibrium exchange rate.

The calculated real long-term equilibrium exchange rate is shown together with the actual real exchange rate in Diagram 53. Until the end of the 1970's, the calculated equilibrium exchange rate agrees rather well with the actual real exchange rate. In the early 1980's, the dollar strengthened substantially, contributing to a considerable overvaluation of that currency in a long-term perspective, according to the results obtained with the model. From the late 1980's to the mid-1990's, the value of the dollar was roughly in line with its long-term equilibrium value; in the period 1999-2002, however, the dollar again strengthened appreciably in relation to its equilibrium value. Factors driving this increase included rapid economic growth, which attracted massive inflows of capital to the US and contributed to progressive deterioration of the current account. Because of this development and the continuing decline in the US net foreign position, the long-term real equilibrium exchange rate weakened further during the same period (see Diagrams 51 and 52). The results indicate that in 2003 the dollar was overvalued by some 28 percent in relation to its long-term equilibrium value at that time.

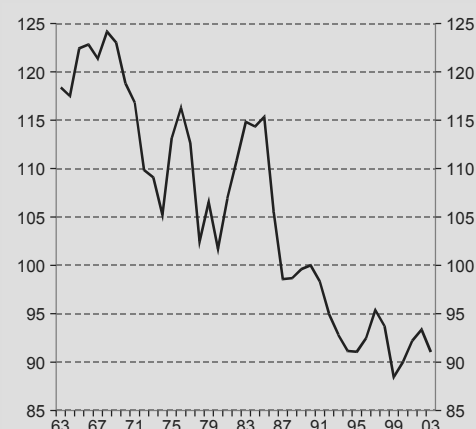
⁸ The price relationship between internationally traded and nontraded goods and services is approximated by the relationship between producer prices and consumer prices. The net foreign position is calculated as the accumulated current account and thus reflects the relationship in regard to all other countries, not just the rest of the G7 countries as is the case with the other variables. In view of this factor, the results must be interpreted with caution.

Diagram 50 Relative Prices of Internationally Traded and Nontraded Goods and Services Index 1990=100



Sources: EcoWin and NIER.

Diagram 51 Terms of Trade Index 1990=100



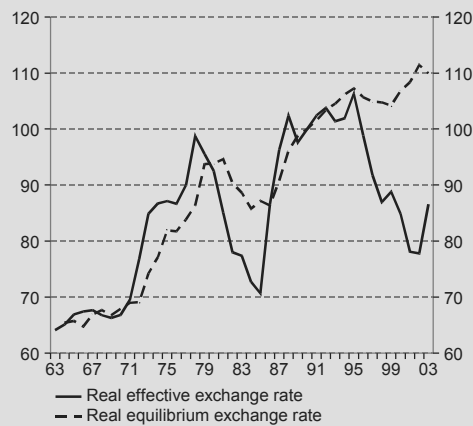
Sources: EcoWin and NIER.

Diagram 52 Net Foreign Position Percent of GDP



Sources: EcoWin and NIER.

Diagram 53 Real Effective Exchange Rate and Real Equilibrium Exchange Rate Index 1990=100



Note: A higher value signifies a weaker exchange rate.

Sources: EcoWin and NIER.

The Future Tendency of the Dollar

Although the dollar has weakened appreciably this year, it is still overvalued compared to its estimated real long-term equilibrium exchange rate. Reflecting this situation are the massive deficits in the US current account and the rapid deterioration of the country's net foreign position (see Diagram 52). As long as other countries are still readily willing to invest in US assets, the dollar can remain strong and the immense current-account deficits can persist. But in a longer-term perspective, such deficits are untenable. It is therefore reasonable to assume that in time the dollar will depreciate in real terms and move closer to its long-term equilibrium value.

On the other hand, it is less certain how this weakening in real terms will come about. Depreciation in real terms can occur through a weakening of the nominal exchange rate and/or a higher inflation rate in other countries than in the US. Since differences between the US and other countries in regard to the development of prices are unlikely to be very sizable in the future, the dollar will have to weaken in nominal terms.

In the short run, however, the strong tendency of the US economy, with ensuing increases in interest rates, will provide support for the dollar. Consequently, it is difficult to forecast the tendency of the dollar in the next few years, as is reflected in the widely ranging expectations of different analysts.⁹ On the one hand, the stronger US economy will provide support for the dollar in a shorter-term perspective. On the other hand, the fundamental determinants suggest that the dollar will weaken in the longer term.

⁹ See, for example, *Foreign Exchange Consensus Forecasts*, June 14, 2004.