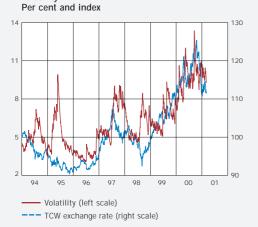


Figure B1. SEK: TCW exchange rate and its

Source: The Riksbank

Figure B2. EUR: TCW exchange rate and its volatility.

--- TCW exchange rate (right scale)



Sources: ECB and the Riksbank.

## SEK AND EUR VOLATILITY

Volatility is a term for the degree to which prices of financial assets fluctuate. In the foreign exchange market, to some extent volatility can be presumed to mirror general uncertainty about a currency. This notion is supported by, for instance, the fact that volatility tends to increase in periods of financial unrest, of which autumn 1998 is one example. The Swedish krona is commonly considered, not least in the public debate, to be a currency that fluctuates comparatively markedly. As exchange rates can be measured in a variety of ways, registered volatility depends on the choice of method for measuring it. The volatility of the Swedish krona is studied here in trade-weighted terms (TCW).7 The results are compared with a corresponding measure of the euro's volatility. This shows that in trade-weighted terms, the krona in recent years has not fluctuated to a remarkable extent.

Since the beginning of 1999 the krona's volatility has been comparatively stable (Fig. B1). Moreover, the fluctuations have been less pronounced than earlier in the 1990s. Up to mid March this year the krona's annual volatility has averaged about 5.4 per cent. And as the currencies of other countries that target inflation have displayed approximately the same degree of volatility, neither can the krona's exchange rate fluctuations be said to be high in an international perspective.<sup>8</sup>

The euro's volatility has increased in conjunction with the weakening of its exchange rate since the introduction in January 1999 (Fig. B2). In the period up to mid March this year, annual volatility has averaged 8.2 per cent. No signs of diminishing volatility are yet discernible.

To sum up, in a historical perspective the tradeweighted volatility of the Swedish krona in the past two years has been comparatively low; neither has it been remarkably high compared with the currencies of other countries with a flexible exchange rate regime. The volatility of the krona has been considerably lower than the euro's.<sup>9</sup>

- Volatility is estimated with a GARCH (1,1) model (Generalised AutoRegressive Conditional Heteroscedasticity); see Inflation Report 1998:4, box on pp. 24–25.
- 8 Comparisons in trade-weighted terms have been made with e.g. NZD, CAD and GBP. Even compared with European currencies prior to their incorporation in the ERM, the krona has not been conspicuously volatile.
- 9 It should be noted in this context that the economic significance of exchange rate fluctuations has to be considered in relation to the degree of openness: Sweden's export share is about 47 per cent of GDP as against about 16 per cent for the euro area.