

## Box 9

## HOW RISK-TOLERANT ARE INVESTORS?

The possibility of a reappraisal of the pricing of a wide array of financial securities prices has over the past couple of years been considered to be one of the major risks to global financial stability. Since this assessment has been largely based on questions about whether investors have perceived risks as being very low and/or whether they have been prepared to accept less compensation for holding risky assets, the degree of risk appetite in global and euro area financial markets needs to be assessed in order to shed some light on this question. From a financial stability viewpoint, excessively high risk appetite may push asset prices beyond their intrinsic value and, if it persists, could sow the seeds of financial market stress if it leads to a misallocation of capital in the economy and disorderly conditions in financial markets. This Box assesses recent patterns in two risk appetite indicators.

Conceptually, the degree of risk appetite prevailing in financial markets is unobservable. The inverse of risk appetite (or risk tolerance) is also known as risk aversion. Risk aversion is a concept that explains the behaviour of investors under uncertainty, and refers to the reluctance of an investor to accept an investment with an uncertain return rather than another investment with a more certain but possibly lower expected return.

Broadly speaking, two different practical concepts can be applied to measure the degree of risk appetite in financial markets.<sup>1</sup> The first approach is to examine a wide set of financial market variables that have historically shown a high degree of sensitivity to swings in risk appetite. The second is to interview financial market participants about their views on the pricing of a risky asset, such as equity, or about their degree of risk appetite. An example of the first approach is the risk aversion indicator developed by Merrill Lynch, which tracks weekly changes in global risk aversion on the basis of eight components. Each component is expressed in terms of the number of standard deviations from its 52-week moving average.<sup>2</sup> An example of the second approach, applied to Germany, is the so-called G-Mind Stocks constructed by the Zentrum für Europäische Wirtschaftsforschung (ZEW) in its Financial Market Test. On a monthly basis, the ZEW asks about 350 German analysts about their qualitative views on whether the likely direction of German stock price markets over the subsequent six months is up, unchanged, or down. A value of +10 indicates unlimited optimism among the respondents about the near-term stock market outlook and thus a very high degree of risk appetite, whereas a value of -10 indicates extreme pessimism and thus a very high degree of risk aversion. Between December 1991 and April 2006, the historical average for this indicator stood at about 6, indicating that, on average, financial market experts tended to be optimistic about the return performance of risky equity over this period.

1 For a more extensive overview, excluding survey-based measures, see M. Illing and M. Aaron (2004), "A brief survey of risk-appetite indexes", *Bank of Canada Financial System Review*, June, pp. 37-43.

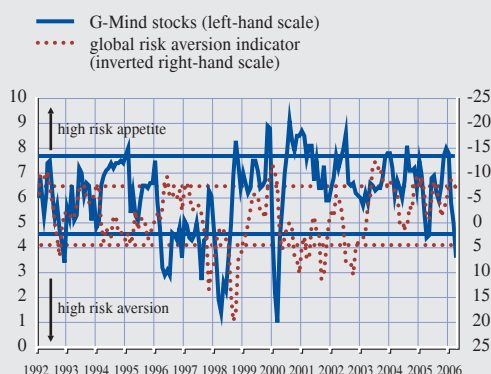
2 The composite indicator is constructed by summing the standard deviations of the US high-yield spreads (see Chart S21), US ten-year swap spreads, implied US stock market volatility (see Chart S15), TED spreads (see Chart 1.15), emerging market bond spreads (see Chart 1.27) and the trade-weighted Swiss franc, while subtracting those of emerging market equities (see Chart S23) and US small cap stocks.

Since the finalisation of the December 2005 FSR, risk appetite appears to have increased well above average levels, especially in early 2006 (see Chart B9.1). Nevertheless, it is important to bear in mind that these indicators frequently send conflicting messages, a fact that most likely reflects conceptual differences in their construction. Hence, a wide array of different indicators should be considered when assessing the degree of risk appetite prevailing in the financial system. In this vein, other risk appetite indicators, such as the global risk appetite indicator developed by Credit Suisse First Boston based on historical risk/reward across a broad spectrum of global asset classes, and the survey-based risk appetite indicator as published in the Merrill Lynch Global Fund Manager Survey, also suggest that the level of risk appetite was very high in early 2006. This could mean that in their search for yield, investors have become increasingly willing to accept less compensation for holding risky assets. To the extent that this is the case, this could leave some markets vulnerable to a reappraisal of underlying risk in the period ahead.

For a comprehensive assessment, it is important to verify whether global risk appetite tends to co-move with euro area stock price developments, especially across sectors with different sensitivities to risk appetite. Euro area sectors which tend to be most sensitive to swings in global risk appetite, such as the financial sector, have outperformed since the December 2005 FSR sectors that are comparatively unaffected by changes in risk appetite, such as the healthcare sector (which contains non-cyclical consumer goods) (see Chart B9.2).

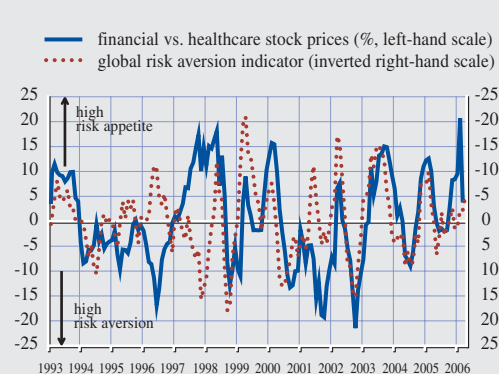
All in all, several risk appetite indicators suggest that investors became very risk tolerant in early 2006. Given that such levels of risk appetite have rarely been sustained in the past, it cannot therefore be excluded that a reappraisal of the pricing and risks of financial assets may take place in the period ahead.

**Chart B9.1 Global asset prices-based and German survey-based risk appetite indicators**



Sources: Merrill Lynch, ZEW and ECB calculations.  
 Note: Horizontal lines refer to the sample average plus or minus one standard deviation.

**Chart B9.2 Six-month changes in the euro area financial vis-à-vis healthcare stock prices and in the global risk aversion indicator**



Sources: Merrill Lynch, Thomson Financial Datastream and ECB calculations.