

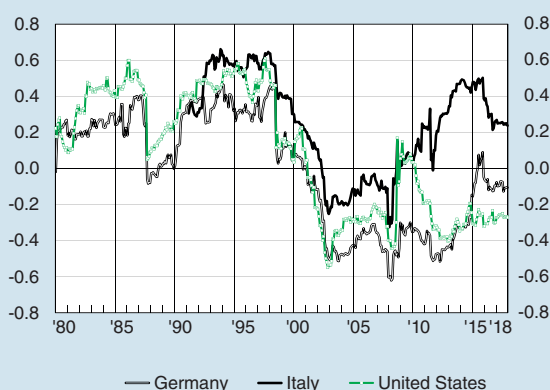
THE RELATIONSHIP BETWEEN SHARE PRICES AND THE PRICES OF GOVERNMENT SECURITIES OVER THE BUSINESS CYCLE

The correlation between share prices and the prices of government securities is a key variable in investors' decisions since it contributes to determining the overall risk of their portfolio of financial assets. This correlation has an effect on the term premiums of the government bond yield curve and, as a result, on the level of long-term interest rates which consequently influence macroeconomic trends. In fact, all things being equal, a negative correlation between share prices and the prices of long-term government bonds offers benefits in terms of financial risk diversification, increasing the investors' demand for government securities and driving down term premiums (see the box 'Long-term yields and term premiums', in the *Annual Report for 2016, 2017*).

In the twenty years 1980-1999, share prices and the prices of government securities were positively correlated in the main advanced countries (see the figure). Since the early 2000s, the correlation has turned negative: the downturn in stock prices was coupled with a growth in government securities prices. This has made it easier for investors to use government securities to mitigate the risks of holding equity shares, risks that are especially high during a recession or crisis.

Over the last ten years, securities purchases by central banks as part of their monetary policy operations have helped to stabilize the prices of government securities, bringing the correlation to nil or to very low levels, as observed in the United States between 2009-13 and in Germany since 2015. In Italy the trend differed somewhat as a result of the effects that the long period of financial instability had on the yield spread between Italian and German government securities: the correlation between share prices and the prices of government securities has been positive since the autumn of 2008, concurrently with the onset of the most serious phase of the global financial crisis, followed shortly thereafter by the sovereign debt crisis. In that period, during the generalized worsening in macroeconomic conditions, the fall in Italian share prices was accompanied by a fall in the prices of government securities because of sovereign debt's higher risk premiums.

**Correlation between trends
in share prices
and in government securities prices (1)**
(monthly data; correlation indices)



Source: Based on data from Thomson Reuters Datastream.
(1) The correlation between the monthly percentage changes in the capitalization ratio of shares and of government securities, calculated with an exponential moving average (using a decay factor of 0.96). The capitalization ratios include reinvested dividends for shares and reinvested coupons for government securities.

A recent study¹ assessed the role of macroeconomic variables in determining the correlation between equity and government securities markets.² Government securities prices fall in the presence of inflationary pressures and robust economic growth; in contrast, these factors help to drive up share prices. Until the end of the 1990s, inflation was countercyclical, reflecting the predominance of supply shocks. In that period the phases of contraction of the business cycle, which had a negative effect on share prices, tended to coincide with increases in inflation which in turn pushed down the prices of government securities. This contributed to the positive correlation between the prices of shares and government securities. Since the start of the 2000s, as a result of the higher incidence of demand shocks, inflation has become pro-cyclical. It follows that during declines in economic activity and in share prices, for instance, inflation also tends to fall, driving up the prices of government securities and making the correlation with share prices negative. The cyclical trend in inflation therefore influences the relationship between share prices and the prices of government securities.

¹ M. Pericoli, 'Macroeconomic determinants of bonds and stocks correlation', Banca d'Italia, Temi di Discussione (Working Papers), forthcoming.

² For a summary of the theoretical models, see S. d'Addona and A.H. Kind, 'International stock-bond correlations in a simple affine asset pricing model', *Journal of Banking & Finance*, 30, 2006, pp. 2747-2765; J.Y. Campbell, A. Sunderam and L.M. Viceira, 'Inflation bets or deflation hedges? The changing risks of nominal bonds', *Critical Finance Review*, 6, 2017, pp. 263-301.