

Box 4

LONG-TERM AND SHORT-TERM NOMINAL INTEREST RATES IN THE LARGEST EURO AREA COUNTRIES FROM A HISTORICAL PERSPECTIVE

Recently it has been emphasised that the prevailing level of euro area nominal interest rates across the maturity spectrum is very low from a historical perspective. This box analyses developments in long-term and short-term nominal interest rates in the largest countries of the euro area since the beginning of the 20th century.

Several caveats should be borne in mind from the outset when comparing these interest rate series across time. First, money and, in particular, bond markets have developed gradually and, as a result, the liquidity of the bond markets has varied over time. Second, for several periods no or insufficiently representative data are available, giving rise to gaps in the time series. This is the case, in particular, during and in the immediate aftermath of both world wars. Thus, these periods are excluded from the sample altogether. In addition, periods of exceptionally high inflation have been evident in some cases. Most notably, Germany entered a period of hyperinflation in the early 1920s, which meant that the interest rates recorded were not comparable with those recorded in the rest of the sample. Furthermore, there are some gaps in the data where specific events in some countries had an impact on the production of statistics. Third, to construct such long time series, different time series for different instruments had to be used (see also the note in Tables A and B).

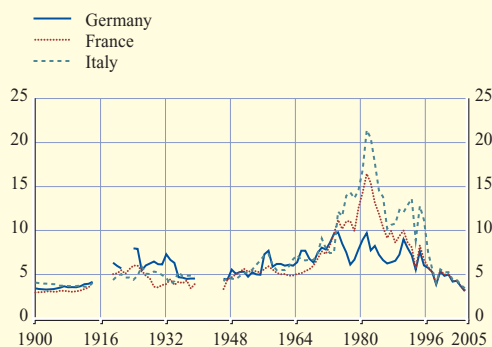
An additional important caveat is that the examination takes account only of nominal interest rate levels. While real interest rates would add important information, data limitations on the countries' consumer price indices and inflation expectations would restrict the comparison to a considerably shorter sample.¹

Chart A shows nominal long-term interest rates for Germany, France and Italy from 1900. For the period from the beginning of the sample to the start of the First World War, perpetual government bonds are used. Thereafter, long-term yields are calculated from bonds with finite maturity, wherever possible from bonds with a ten-year maturity.

Table A shows that the level of long-term nominal interest rates currently prevailing in the three largest euro area countries is indeed close to and, in one case, below the historical minimum value. For France and Germany the lowest values were recorded in February 1901 and July 1902 respectively, i.e. at the time of the Gold Standard. For Italy, the current level

Chart A Long-term interest rates

(in percentages per annum; annual data)



Source: Global Financial Data.
Note: Data for 2005 cover the period up to July.

¹ For a similar analysis which also covers real interest rates for the period 1950-2003, see Box 3 in the September 2003 issue of the Monthly Bulletin.

Table A Long-term interest rates

(monthly data)

	Current level ¹⁾	Average				Minimum			
		1900-14	1919-39	1950-98	1999-2004	1900-14	1919-39	1950-98	1999-2004
Germany	3.24	3.55	5.93	6.98	4.58	3.23	4.50	3.63	3.55
France	3.29	3.14	4.65	7.96	4.68	2.93	3.34	3.73	3.68
Italy	3.45	3.81	4.83	9.69	4.84	3.53	3.87	3.89	3.83

Source: Global Financial Data.

1) Average level of daily data from 1 July to 3 August 2005.

Note: For Germany from 1900 to 1914 the 3% Imperial Loan is used; 5% mortgage bonds are used from 1924 until 1927, and 6% mortgage bonds from 1928 until 1935; 5% tax-free bonds are used from 1950 to 1955 and the series for 6% government bonds is used from May 1956 to 1967, when ten-year government bonds are used. For France the 3% consol bond is used from 1900 to 1950; 5% consols are used from 1951 until 1971, and an index of public and semi-public bond yields for issues guaranteed by the government is used as from the beginning in 1972; from 1987 ten-year government bond yields are reported. For Italy the 3.5% consol bond is used from 1900 to 1953; for 1954 the 5% reconstruction loan is used; an index of government treasury bonds begins in 1955; the average maturity of these bonds is six years; from 1991 ten-year government bonds are used.

Table B Short-term interest rates

(annual data)

	Current level ¹⁾	Average				Minimum			
		1900-14	1919-39	1950-98	1999-2004	1900-14	1919-39	1950-98	1999-2004
Germany	2.12	3.61	4.54	5.80	3.23	2.19	2.83	3.22	2.11
France	2.12	2.64	3.70	7.06	3.23	1.75	1.30	2.43	2.11
Italy	2.12	4.82	5.27	8.43	3.23	4.34	3.10	3.50	2.11

Sources: NBER online macro history database, Deutsche Bundesbank, Banca d'Italia, BIS and Homer S., Sylla, R. (1996): A History of Interest Rates, third edition, Rutgers University Press, New Jersey.

1) Average level of the daily three-month EURIBOR from 1 July to 3 August 2005.

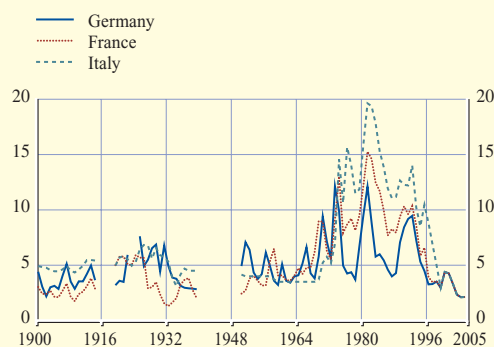
Note: For Germany: private discount rate (prime bankers' acceptances) (1900-39) except for 1923-24 and 1945-48 for which data are not available; three-month money market rate (1949-98). For France: open market discount rate (1900-39), except for 1919-24 where the official discount rate of the Bank of France is used; money market day-to-day interest rate (1946-69); three-month money market rate (1970-98). For Italy: official discount rate (1900-70) adjusted up to 1968 for reductions of the rate; three-month money market rate (1971-98). From 1999 onwards the three-month EURIBOR is used for all three countries.

is the lowest value in the sample. If the period of the Gold Standard, i.e. 1900 to 1914, is excluded from the sample, current levels of ten-year government bond yields are at historical lows in all three countries. For the period between 1950 and 1998 long-term interest rates reached their highest average levels. However, in the late 1990s long-term government bond yields declined significantly.

Chart B shows nominal short-term interest rates for the same group of countries since 1900. Various private or official short-term interest rates need to be used in different periods, since the available time series

Chart B Short-term interest rates

(in percentages per annum; annual data)



Sources: See Table B.

Note: Data for 2005 cover the period up to July.

change over time and various rates have been regarded as representative of the money market across time.² Overall, nominal short-term interest rates in the three countries observed were relatively low and stable until the second half of the 1960s, except for some volatility in Germany after the period of hyperinflation. Between the end of the 1960s and the 1980s, nominal short-term interest rose significantly during periods when inflation was high and, in some cases, persistent. By the start of Stage Three of EMU, short-term interest rates in the three countries had again fallen to levels observed before the 1970s.

As shown in Table B, the current level of nominal short-term interest rates is at a historical low in Germany and Italy, while in France it is slightly above the historical low reached in 1932.³

² A detailed data and source description can be seen under Table B.

³ Though the analysis of short-term interest rates is based on annual data, monthly data available from 1960 onwards would lead to the same conclusions for the corresponding period for all three countries.