The Economist April 4, 1998

Admiring Those Shapely Curves

The gap between short-term and long-tenn interest rates has narrowed in America and reversed in Britain. Is that a warning signal?

AMERICA'S economy is entering its eighth year of uninterrupted growth. The average upturn since 1945 has lasted for four years, so how much longer can the party last? Conventional forecasts produced by running numbers through complex economic models are notoriously bad at predicting recessions. Some economists reckon that a single indicator, the yield curve, can do a better job.

A yield curve is a line drawn through the effective interest rates on government securities with different maturities. In normal times, this line slopes upward: long-term rates are higher than short-term ones, to compensate for the higher risksmainly inflation-of investing for a longer period. The exact slope changes day by day, as investors spurn 30-year bonds or favour six-month notes. At present, the gap between yields on ten-year bonds and three-month bills is unusually small in America, while Britain's yield curve slopes downward, with long rates lower than short-term rates. On past experience, this points to a sharp slowdown in America next year, and perhaps a recession in Britain.

A simple measure which captures the shape of the yield curve is the "spread" between short-term and long-term interest rates. In America there has been a close link between yield spreads and economic growth (see chart) As a rule, a large spread (ie, a steeply sloping yield curve) has signalled rapid growth a year or so later. A negative spread (an "inverted" yield curve with short-term rates higher than long-term ones) has signalled recession. Since 1955 every American recession has been preceded by an inversion of the yield spread. Only once, in the mid-1960s, has an inverted spread not been followed by recession.

Why should the slope of the yield curve predict economic growth? One theory is that it reflects the stance of monetary policy. A tightening of policy pushes up short-term interest rates, but has less effect on long-term rates, so the yield curve flattens or inverts. Higher short-term interest rates then choke off growth. A second theory is that the shape of the yield curve reflects market expectations about future inflation and growth. If investors expect a recession, they also expect inflation to fall, so yields on long-term bonds fall relative to short-term yields.

The predictive power of yield curves has long been established in America, but a spate of recent studies have found that it holds in other countries, too. Sharon Kozicki of the Federal Reserve Bank of Kansas City has examined the relationship between yield spreads and the economic cycle in ten countries.[1] She found that in all the countries except Japan the yield spread was a significant predictor of growth rates a year later. But its predictive power varied by country. In America, Canada and Germany, 30-50% of the variation in GDP growth could be predicted by the yield spread a year earlier. In contrast, it predicted only 20% of the variation in Britain and France.

One reason the predictive power of yield

[1] "Predicting Real Growth and Inflation with the Yield Spread." Federal Reserve Bank of Kansas City *Economic Review*. Fourth quarter, 1997.

spreads differs between countries is financial-market regulation. In America, Germany and Canada financial markets have long been relatively free, but Japan's remained heavily regulated until the 1980s. As a result, interest rates failed to give an accurate reading of market expectations about Japan's economy.

The exchange-rate regime may also affect the economic information captured in yield curves. If a country is forced to raise short-term interest rates to support a fixed exchange rate, as within Europe's exchange-rate mechanism, then this will blur the relationship between the yield curve and the economic cycle.

A third reason for differences between countries is the increasing integration of financial markets and economies. Bond yields in smaller European economies are pushed around by those in America or Germany. A study by Henri Bernard and Stefan Gerlach, of the Bank for International Settlements (BIS) found that swings in American spreads helped predict recessions in Britain in particular.[2]

The shape of the future

What can be learned from yield curves right now? In continental Europe longterm bond yields remain well above short-term interest rates. America's yield spread is the smallest since 1990, when America was last in recession. In Britain, ten-year bond yields are more than a percentage point below three-month rates.

According to the BIS study, yield spreads on this scale imply a 30% probability of recession next year in America and 40-50% in Britain. In other words, it may be time to start worrying.

One glimmer of hope, however, is that unlike the typical pattern before recessions, the narrowing of the yield spread in America has been due largely to a fall in long-term rates rather than a rise in shortterm rates. If the flattening of a yield curve is caused not by tighter monetary policy but by lower long-term rates, it may not be cause for concern. This makes America's situation less worrying than Britain's, where short-term rates have risen sharply over the past year even as long-term rates have fallen.

Messrs Bernard and Gerlach suggest that the relationship between yield spreads and economic activity may be changing. In the past, yield-curve inversions were accompanied by higher yields. This time the opposite has happened. Previously most recessions followed periods in which central banks were forced to tighten policy in response to sharp rises in inflation. But in the 1990s most central banks have managed to keep inflation low. To this extent, the usefulness of term spreads as a predictor of economic growth may have weakened. That does not mean that America's economic dream will last forever. But, flat though it may be, the yield curve does not offer cause to expect a recession just yet.

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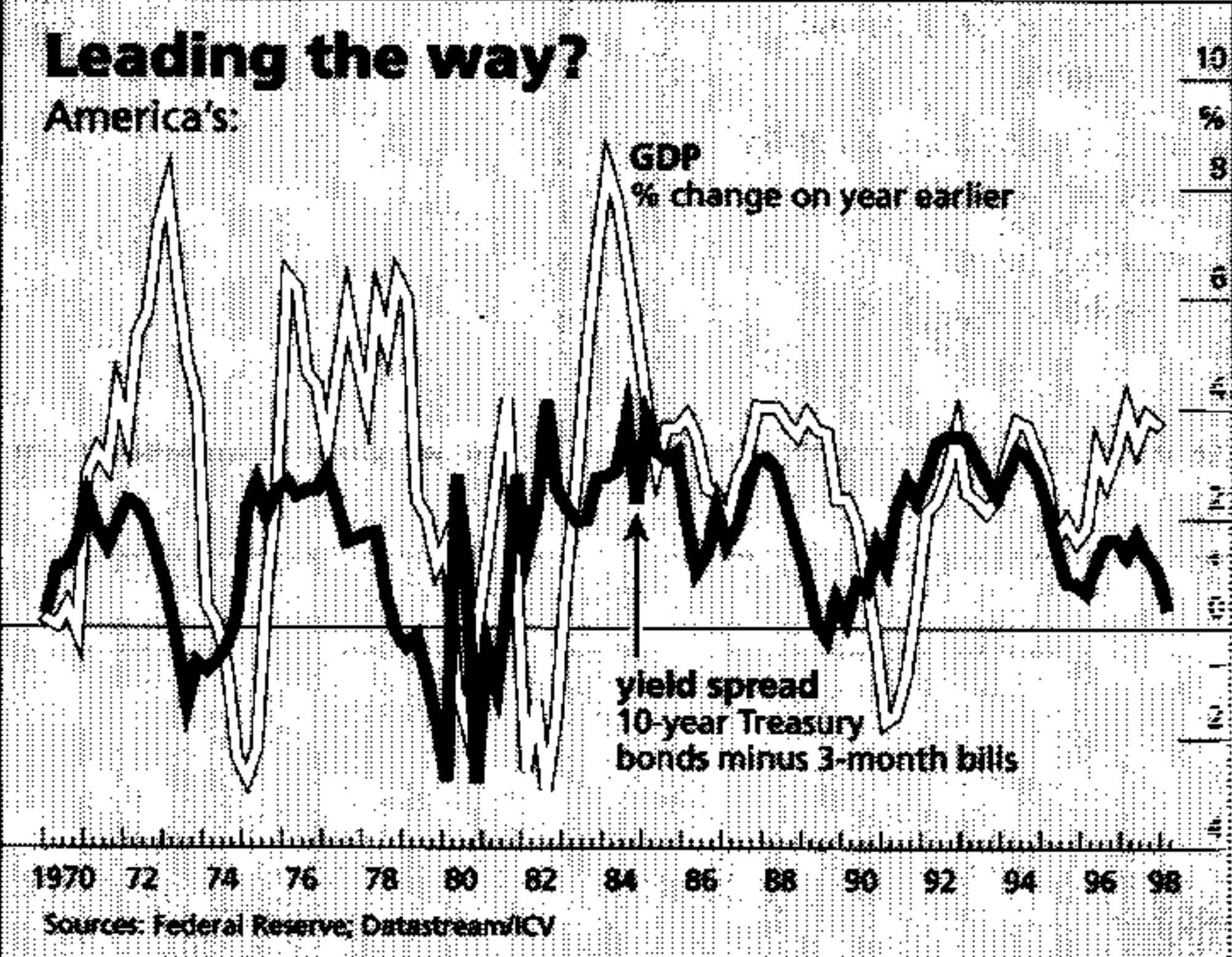
[2] Does the Term Structure Predict Recessions? The International Evidence." BIS working paper 37.1996.

Leading the way?

America's:



Sources: Federal Reserve; Datastream/ICV