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Dancing in step

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Individual stockmarkets are increasingly being driven by global rather than local factors

AMERICA'S stockmarket has slumped as its economy has slowed abruptly, and Wall Street appears to be dragging the rest of the world's markets down with it. But why do other markets not have a mind of their own? They did have once.

Traditionally, one way that investors sought to reduce risk was by diversifying overseas: when American shares slumped, the loss there would be offset by a gain in, say, European shares. That, at any rate, was the theory. In recent years, however, stockmarkets seem to have moved more closely in step with one another. Globalisation and the information-technology (IT) boom appear to have increased the importance of worldwide factors in steering share prices, at the expense of local country factors. A severe profits warning from a big high-tech firm in America, for example, is now likely to hammer high-tech share prices all around the world.

The correlation between changes in American and European share prices has risen from 0.4 in the mid-1990s to 0.8 last year. Crudely, that means that movements on Wall Street can explain 80% of price movements in Europe. (A correlation coefficient of zero implies no relationship at all; a value of one means that they move perfectly in step.) Markets were as highly correlated as this for a while in the late 1980s, but the long-term trend is upward.

The health of a market's home economy may matter less than it used to for a number of reasons. First, the scrapping of controls on capital (combined with more efficient trading systems) has increased cross-border trading of shares, creating something closer to a global equity market. Secondly, it has become increasingly common for big companies to be listed on more than one market. Thirdly, as a result of the wave of cross-border mergers and acquisitions, overseas profits account for a bigger slice of many companies' overall profits—high-tech firms are especially global in their reach. And finally, the Internet has made it easier for investors to get information on foreign firms. So firms in the same industry, but in different economies, are valued on a similar basis.

By breaking down movements in share prices into global effects, country-specific effects (such as different economic cycles), and firm-specific effects, a new study* by economists at the IMF tries to find out what percentage of a stock's performance is due to global rather than country factors.

The study is more geographically comprehensive than previous studies on the subject. It includes around 5,500 firms in 21 developed and 19 emerging economies, covering nine-tenths of these countries' total stockmarket capitalisation. Firms were grouped into ten industrial categories, such as basic industries, IT, and financials. The authors then calculated the monthly returns in dollar terms during the period from March 1986 to August 2000.

They used the data to build a model that estimates over time the percentage of the total movement in share

prices that is explained by changes in global factors, as opposed to country-specific ones. The model distinguishes between two kinds of global factor: the global business cycle; and global-industry effects that similarly influence firms in the same sector, but in different countries. The authors also measured the relative importance of what they call the global “new economy” factor—that is, of movements in the prices of high-tech stocks in determining overall returns.

High-tech contagion

The study finds that there has indeed been a big increase in the importance of global factors—of both kinds—in explaining movements in share prices since the mid-1990s. In developed countries, the country-specific factor has meanwhile fallen. But in some emerging markets it has sharply increased since Asia’s financial crisis in 1997-98.

The increased importance of global factors in the IMF’s model could be confirmation that equity markets have become more integrated. Alternatively, it could simply reflect the fact that stockmarkets tend to be more correlated at times of high volatility in share prices; during calmer periods, correlations tend to be weaker. That partly explains why the importance of global factors follows a U-shape: high in the late 1980s and early 1990s, then high again in the second half of the 1990s. The early period covered the 1987 stockmarket crash and the Gulf war; the latter period, the Asian crisis.

The importance of the global-industry effect on share prices has been increasing. In recent years, it has accounted for 28% of the variation in stock returns, compared with 11% in 1988-91. The fact that a firm belongs to a particular industry—be it telecoms or utilities—has become more important in explaining variations in returns over time. A firm’s home country has become less important. It seems that if investors are to reduce risk these days, they should diversify more by industry than by country. Diversification by country offers less protection than it used to.

The increased correlation between shares in recent years is due to more than just the Asian crisis. By far the most important global factor explaining increased correlation has been information technology; movements in IT shares are much more highly correlated than non-tech stocks. According to other IMF work, the correlation between European and American IT shares between January 1999 and May 2000 was 0.85; for non-IT stocks it was just 0.54. IT shares in Asia and America had a correlation of 0.75, non-IT shares only 0.35.

The paper, written before the latest plunge in markets, is silent on the question of how much of the surge in high-tech shares was a bubble. But it warns that if it was a bubble, then high-tech stocks may be a new channel for financial contagion to spread throughout the world economy.

* “The New Economy and Global Stock Returns” by Robin Brooks and Luis Catao, IMF Working Paper 216, December 2000.