

## **HAZARDS AND PRECAUTIONS: TALES OF INTERNATIONAL FINANCE**

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In the wake of financial crises in Mexico (1994-95), Asia (1997-98), Russia (1998) and Brazil (1998-99), respected observers have questioned the benefits of wide-open international capital markets (Bhagwati, 1998; Krugman, 1998; Rodrik, 1998; Eichengreen, 1999). Our purpose is to identify true hazards and suggest appropriate precautions.

### **THE BENEFITS OF FINANCIAL INNOVATION**

International financial magnitudes have expanded far more rapidly over the past twenty years than international merchandise trade (see the comparisons in Table 1). Moreover, financial crises have been frequent (by historical standards) during these two decades.

On the other hand, financial innovation ranks among the foundations of strong economic performance, alongside high savings, disciplined budgets, low inflation, good education, and information technology.

Countries differ enormously in their degree of financial maturity. At one extreme, in countries at a low stage of financial development, banks dominate the financial system and each bank lends most of its funds to related business firms. The stock and bond markets are small, futures and options markets do not exist, private mutual funds and pension funds are tiny, securitized mortgages and equipment leasing are unknown, and concept of a market for corporate control (through hostile mergers and acquisitions) seems alien. In these settings, it is no surprise that scarce capital is poorly allocated, while banks pay low or negative real rates of interest to households. At the other extreme, in countries with mature financial systems, the “missing” financial markets are well established. Capital is allocated more efficiently between competing uses and households earn better returns on their savings.

A simple example illustrates the value of efficient capital markets. If country A has net annual savings equal to 20 percent of GDP, and financial intermediaries allocate those savings so

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that the return on capital is 5 percent on average, capital formation will contribute 1.0 percent annually to national growth (20 percent times 5 percent equals 1.0 percent). By contrast, if country B has net annual savings equal to 15 percent of GDP, but financial intermediaries allocate those savings so that the return on capital is 15 percent on average, capital formation will contribute 2.25 percent annually to national growth (15 percent times 15 percent equals 2.25 percent). In rough terms, the difference between country A and country B is the difference between Japan and the United States, or between Korea and Australia, over the past decade. Japan and Korea save far large proportions of GDP than the United States and Australia, but their financial systems are relatively immature, and capital is poorly allocated. High savings are not translated into faster GDP growth, or even good returns to thrifty households.

### **LIBERALIZED FINANCIAL SERVICE MARKETS**

While the benefits of financial innovation and efficient capital markets are straightforward, in order to acquire these benefits a country must liberalize its financial service markets, allowing new firms to enter and compete. Effective competition often requires the presence of foreign financial firms. The process of liberalization and competition entails costs – costs that have a larger political than economic dimension. In particular, the power inherent in financial intermediation can be translated into wider business and political influence. The leaders in some societies are unwilling to see this financial power transferred to “the market”, especially not a market with substantial foreign presence. In addition, competition will result in the absorption and closure of established, but poorly run, banks, insurance companies, and other financial service firms.

But, in economic terms, the benefits far exceed the costs. Dobson and Jacquet (1998) estimate that, on a global basis, over a 10 year period, liberalization and competition in financial service markets could bring benefits of \$1.3 trillion to households, business firms and governments in the form of lower costs, higher quality services, and more choice. Table 2 portrays just one slice of these benefits – the reduction in net interest margins resulting from foreign bank competition in local markets. Using country cross-section analysis, Francois and Shuknecht (1999) find that moving from a closed to a relatively open financial service regime is associated with an increase in national GDP growth rate of 1.3 to 1.6 percent annually.

To summarize, economic evidence is beginning to show that open markets for financial services translate into higher national income, much the same as open markets for goods. The controversy surrounding recent financial crisis has focused not so much on financial service markets as free international capital flows. To that subject we now turn.

## **FREE CAPITAL FLOWS**

Risks are inherent in the free inflow and outflow of capital. In the wake of the Asian, Russian and Brazilian crises, many commentators blame short-term capital movements. Specifically, it is claimed that banks and portfolio managers exhibit strong herd instincts; that these instincts create manias and panics in equity, debt and foreign exchange markets; and that financial crashes in one country can spread like bubonic plague to another. With these hazards in mind, many commentators want to limit the inflow and outflow of short-term capital, while keeping the advantages of financial innovation through liberal and competitive financial services markets.

In principle, it might be possible for a country to develop a mature financial system, without permitting large gross inflows and outflows of foreign capital. In practice, it may be hard to have one without the other. As financial services are liberalized, numerous new avenues are created for arbitrage between domestic and foreign capital markets. Insurance companies, for example, may hedge their domestic portfolio investments by entering into offshore swap arrangements. Offshore markets may develop in domestic shares and bonds. The possibilities are limited only by the imagination of the financial mind. Nevertheless, on a temporary basis, it may be possible to slow down capital inflows and outflows, especially interbank transfers.

With that possibility in mind, we discuss two hazards that are associated with totally free capital flows: first, the problem of asset bubbles, and their association with capital *inflows*; second the problem of contagion, and its association with the capital *outflows*.

## **BUBBLES**

### **The Historical Record**

Financial scholars have long recognized the existence of asset market manias and panics. The terminology has changed somewhat – “bubbles” is now the preferred name – and the mathematical exposition has gotten much more complicated. Kindleberger’s classic study (third edition, 1996) contains an account of the coinage mania of 1618-23, centered around the debasement of subsidiary coins and rising bids for the solid silver Reichstaler. Since that episode, by Kindleberger’s record, world-class manias and panics have occurred about once every 9 years. The total count since 1618, including four episodes not covered in Kindleberger’s 1996 edition,<sup>1</sup> is 46 world class manias and panics. Of course, if purely national episodes in smaller countries were recorded, the total count

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<sup>1</sup> The episodes added to Kindleberger’s list are the Latin American debt crisis of 1982/86, the ERM crisis of 1992/93, the Mexican peso crisis of 1994/95, and the Asia/Russia/Brazil crisis of 1997/99.

would be far larger. For example, the IMF has identified 143 banking and currency crises between 1970 and 1998 (see Table 3).

Manias and panics can erupt in any asset market – tulips, shares, bonds, property, and money itself (in the sense of large exchange rate misalignments). Of the 46 world-class manias and panics since 1618, 4 have centered on currency values. Since the breakdown of the Bretton Woods system, exchange rate problems have spawned their own substantial literature (e.g., Williamson, 1994). However, numerous manias and panics are centered in debt, equity, commodity and property markets with only ancillary ripples in the foreign exchange market. Such events accounted for 36 out of the 46 world-class episodes in Kindleberger's account.

Increasingly, however, manias and panics involve an admixture of securities, property and currency markets. Security market crashes are often associated with the collapse of a currency peg; and a poorly conceived currency regime often contributed to the prior mania. That was the Mexican story in 1994/95. The mania phase in the debt and equity markets was importantly abetted by an appreciating real exchange rate for the peso between 1992 and 1994. Much the same story was retold, in starker terms, in Russia in 1998. Turning again to Kindleberger's list, 6 of the 46 world-class episodes involved security, property and currency admixtures: 3 in the 19<sup>th</sup> century and 3 in the 20<sup>th</sup> century.<sup>2</sup>

### **The Simple Theory of Bubbles**

The starting point to understand bubbles is that asset values typically vary, year-to-year, to a far greater extent than nominal GNP or its major components (personal consumption, investment, government expenditure). For example, in the United States, between 1950 and 1998, the average annual absolute variation in nominal GNP was 7.4%, whereas the average annual absolute variation in the popular S&P 500 stock market index was 15.8%. The ratio between the two annual variations is 2.1. Ratios well above unity similarly characterize other asset markets and other countries. Greater fluctuations in asset values than nominal income flows can be explained by the tendency of investors to swing from optimism to pessimism in their evaluation of future events, and hence their collective projection of future income flows and the discount rates they apply to those flows. In the early 1980s, for example, most investors expected high inflation to endure, and accordingly applied a high discount rate to dividends. The dividend yield on the S&P 500 in 1981 was 5.6%. In the late 1990s, the prevailing optimistic view holds that low inflation will endure,

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<sup>2</sup> The three 20<sup>th</sup> century admixture episodes were the Latin American debt crisis of the 1980s, the Mexican crisis of 1994/95, and the Asia/Russia/Brazil crisis of 1997/99.

and accordingly a low discount rate is appropriate. The dividend yield in 1998 accordingly dropped to 1.3%

Bubbles involve something more than normal fluctuations in sentiment. The core idea of bubble analysis is that there are two camps of investors: fundamental investors who buy and sell on the basis of projected cash flows and appropriate discount rates; and momentum investors who buy and sell on the basis of recent asset price changes. Most investors, of course, have a foot in each camp, and their buy/sell decisions depend on which foot bears the greater weight. As the normal cycle of pessimism turns to optimism, usually based on a shift in fundamentals, more investors join the momentum camp. But sometimes, for reasons idiosyncratic to the time and place, the momentum camp continues to attract new members even as the fundamentals call out for a price correction.

In fact, if fundamental predictions of a downturn prove wrong two or three times in a row, that provides a further drawing card for the momentum camp. An internet stock example may be cited to illustrate how fundamental analysis can be wide of the mark. Assuming that Amazon.com revenues grow at 70% annually, in 2000 they will reach \$2.3 billion. A generous price/sales multiple would then value the company at \$16.1 billion. But as of July 1999, Amazon.com shares were already valued at \$20.3 billion. Sophisticated investors know these fundamentals, but anyone who sold Amazon.com short in July 1998 was much poorer a year later! Out of such experience, the mania feeds on itself either until a severe shock drives investors back to the fundamental camp, or until the momentum camp runs out of fresh recruits. The stage is then set for panic.

### **The Role of International Capital**

What do international capital flows have to do with bubbles? As mentioned earlier, in Kindleberger's list, some 10 out of 46 episodes involved an element of currency fluctuation (including the 6 admixture episodes) -- indicating that capital flows were part of the story in about a fifth of the world class manias and panics. Out of these 10 episodes, 6 were 20<sup>th</sup> century events.

Examining Kindleberger's data through a different filter, over the three centuries 1600 to 1900, only 7 out of the 31 manias/panics had significant international dimensions (whether or not currency fluctuations played a central role). But in the 20<sup>th</sup> century, significant international dimensions characterized 9 out of 15 episodes.<sup>3</sup> Even though the 19<sup>th</sup> century was, by many

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<sup>3</sup> Recall that the Latin American debt crisis, the ERM crisis, the Mexican peso crisis, and the Asia/Russia/Brazil crisis are all added to the list in Kindleberger's Appendix B.

measures, a golden period for international capital, manias and panics had a much stronger international flavor in the 20<sup>th</sup> century than the 19<sup>th</sup> century (when the score was 4 out of 21 cases).

The international dimension of manias and panics is largely associated with international flows of bank lending and portfolio investment (bonds and shares). Minsky (1982) laid out the monetary mechanics. As the bubble expands, the values rise for collateral that is suitable for bank loans (shares, buildings, etc.). Even prudent financial institutions – those which periodically mark their collateral to market – are comfortable extending larger loans. Some asset holders, drawn into the momentum camp, increase their borrowings and add to their portfolios. Prices rise, encouraging others to follow. International lenders bring liquidity to the party either by lending to local financial institutions or by buying bonds and shares directly.

A look at the data charts for five recent stock market bubbles in OECD countries provides casual support for the role of international capital flows in supporting higher share prices (see Charts 1 to 5; the bubble periods are indicated by vertical lines). The five bubbles, identified by King (1999), are Japan, Spain, Sweden and the United Kingdom (all roughly 1986/87 to 1989), and, by King's reckoning, the United States from 1996 until (perhaps) 2000. In these episodes, with the exception of Sweden, gross foreign purchases of debt and equity securities rose during the bubble years.<sup>4</sup> Foreign participation in the local securities market probably did not launch these share market bubbles. Moreover, over the past two decades, foreign participation has generally increased in these five (and other) security markets – year-in and year-out, not just during bubble periods. Nevertheless, foreign money probably contributed to rising share prices during the stock market booms. After the four bubbles dating to the late 1980s broke, somewhat more discordance appears between movements in the stock market index and gross foreign purchases of debt and equity securities. However, aside from the Japanese case, there was no sharp drop in gross foreign purchases. In other words, while foreign portfolio investors (including banks) may have contributed to rising share prices, they did not as a rule rush for the exit when share prices started falling.

Although comparable data are not readily available, contemporary accounts suggest that foreign portfolio investments in Asian share and property markets expanded during the 1992-96 run up. Foreign portfolio money probably left Asia during the 1997/99 crisis, more closely resembling the Japanese scenario than the European episodes.

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<sup>4</sup> Gross purchases do not, of course, reflect net security acquisitions by foreign holders, since sales are also taking place. Gross purchase data is more readily available than net acquisition data. Gross purchase figures in Charts 1 to 5 include interbank loans.

## **Monetary and Fiscal Policy to Control Bubbles**

What can public leaders do about manias? It depends. It depends on the state of the economy, the strength of their grip on all macroeconomic levers, and their resolve.

Let's start with the state of the economy. If labor markets are tight, production capacity is strained, and prices are broadly rising, it's easier to step on the monetary brakes, boost interest rates, and sprinkle cold water on stock and property markets. But quite often – not only in the late 1980s and the 1990s, but also in the early decades of this century – asset booms have corresponded to strong but not overly tight labor and capacity conditions, good productivity performance, low inflation, and talk of a “new economy”. The new economy story can be traced to the Dutch East India Company (1636-37) and the South Sea Company (1720). Recent manifestations include the Roaring Twenties with autos, radios and telephones, the Japanese industrial model (1986-89), the Mexican conversion from statism to capitalism (1992-94), the Asian savings/investment/export miracle (until 1997) and the current U.S. information technology boom (1994-?). In these circumstances, it takes great resolve to target monetary policy on asset prices – in other words, to run the risk of derailing a well-functioning economy simply because there *might* be an asset bubble. To be sure, banks can be directed to curtail lending based on property and share collateral. This can help. But in an efficient capital market, other financial institutions may fill the gap. The only sure remedy is a sharp tightening of credit and rise in interest rates – with attendant consequences for the real economy.

The second qualifier is the strength of the leadership's grip on *all* macroeconomic levers (monetary policy, exchange rate policy, and fiscal policy). Exchange rate policy and fiscal policy are important, because they may prove critical *after* the bubble bursts. Unfortunately, an asset bubble can only be definitively diagnosed after it bursts. If a period of rising asset prices was indeed a bubble, the aftermath will be financial panic and crash; otherwise, the aftermath will be a sharp but short correction. In advance, the authorities have no real way of knowing whether they are dealing with a true bubble or just a normal bout of cyclical optimism. Academics may freely recommend stern measures, but for those sitting in finance ministries and central banks, the prospect of bursting a true bubble is frightening: it may break the leadership's hold on political power. Moreover, the impact of decisive monetary policy is asymmetric: tight credit can burst a bubble, but easy credit may not arrest a panic. In the 1930s, the Federal Reserve failed to boost the money supply and slash interest rates, as Friedman and Schwartz have argued (1963). But even

when the central bank changes course, and appropriately floods the system with money, a long recession may ensue. This seems to have been the sad experience of Japan after 1991.

If the exchange rate regime is precarious, and the regime has few reserves and little recourse to international credit, bursting an asset bubble will probably precipitate an exchange rate crisis. This was the unhappy fate of several Asian countries and Russia, where asset prices began their collapse before the exchange rate systems cracked.

The government's only remaining lever is fiscal policy. In some situations, fiscal policy is constrained by skittish financial markets and IMF strictures. In other cases, fiscal policy is constrained by a divided government. In the late 1980s and into the middle 1990s, the Japanese Finance Ministry was a power unto itself, and could effectively sabotage the fiscal stimulus packages proposed by various prime ministers (Posen, 1998). In the late 1990s, Republican control of the Congress and Democratic control of the White House probably means that fiscal policy cannot be quickly adjusted to arrest a U.S. recession, if one occurs.

Finally, there is the matter of resolve. What finance minister wants his party to run for reelection in the midst of a financial crash? And what central banker wants to be remembered for targeting an asset market when he should have focused a flagging real growth? Looking at Charts 1 to 4, who could have said in 1986 or 1987 that Japan, Spain, Sweden and the United Kingdom, were on the threshold of a stock market bubble? In December 1996, Alan Greenspan famously commented on the danger of "irrational exuberance", but even the canny Chairman refused to target monetary policy on the stock market. Indeed, in July 1999, Greenspan once again suggested that the stock market rise might be "overdone", but reiterated his stance that monetary policy would be solely targeted to contain inflation.

### **Restrictions on Short-Term Capital**

If monetary policy is not assigned the task of bursting bubbles, what else can be done? This question has led many economists to endorse preemptive measures: specifically, containing bubbles while they are still small by controlling capital *inflows* to avoid unwanted exchange rate appreciation. While the Chilean experience with capital controls is often praised, Edwards (1999) has shown that even Chile had difficulty with implementation and that the impact of controls was smaller than commonly supposed.

If implementation and modest results were the only difficulty, most observers would quickly embrace capital inflow controls as a means of containing bubbles. But there is a more serious long-term difficulty. Innovations in the financial sector might be badly retarded if restraints

on capital inflows were imposed for extended periods, rather than on an episodic basis. As noted earlier, many emerging countries have immature financial systems: for example, prudential supervision is weak, credit assessments are primitive, money market and mutual funds are few, mortgage security markets do not exist, commercial paper and long-term debt markets are thin, and so on. Table 4 gives Dobson's post-crisis scorecard for a number of emerging countries. Better prudential supervision, credit market assessments, and bad loan write-offs are first orders of business. In addition, new financial market should be allowed to flourish. Individually, perhaps, no great economic damage results from the absence of one of the new markets. But financial maturity across a range of markets is essential for the efficient allocation of capital.

In our view, the emergence on new financial markets depends both on financial service market liberalization and two-way international capital flows. Based on this view, we think capital *inflow* restrictions should be limited to infrequent periods when two conditions are met. First, the financial authorities declare that designated asset markets run a severe risk of forming a bubble; and second, for identified reasons, the authorities state it is inappropriate to sterilize the capital inflows and build precautionary foreign exchange reserves. In making such determinations, it would help national authorities if they could turn to guidelines formulated by the IMF or the BIS, based on the experience of a large number of countries.

Further, we suggest that capital inflow restrictions should apply *only* to assets that are explicitly or implicitly guaranteed by the government (sovereign debt; bank deposits; interbank borrowing). In immature financial markets, apart from sovereign debt issues, nearly all financial intermediation will be performed by banks. Limits on bank deposits and interbank borrowing will, therefore, cover the bulk of short-term capital inflows. As the financial market matures, however, many assets will be created that *are not* covered by a government guarantee (and *should not* be covered) – corporate shares and bonds, mutual funds, private pension funds, life insurance, etc. These markets are at the heart of financial innovation; as they boom and bust, the joy and grief will properly accrue to private investors. With few exceptions, we see no compelling reason for governments to limit *inflows* to these asset markets. The benefits in terms of bubble control are likely to be outweighed by the costs in terms of repressed financial innovation.

We are especially skeptical of limits on foreign equity purchases, masquerading as bubble control, but in fact designed to prevent foreign control of local corporations. Limits of this sort were characteristic of Asia before the 1997/99 crisis, and are still too common. Hostile takeovers and better corporate governance rank among the best outcomes of financial innovation since the 1970s.

## CONTAGION

### Intellectual History

The intellectual history of contagion boils down to the history of bank failures. In this story, the failure of a bad bank prompts some depositors to withdraw their funds from good banks; to raise money, the good bank must call in loans and sell assets. Some borrowers cannot pay and many asset prices drop. In the ensuing chaos, the good bank becomes a bad bank, spreading the infection. The concept of international financial contagion simply extends the bank run story to additional institutions and financial instruments across international borders. However, in extending the story, some commentators have carelessly failed to distinguish between *correlation* and *contagion*.

In fact, it is rare to find zero correlation between the price movements of similar assets. Instead, price changes between pairs of similar assets are normally correlated, positively or negatively, for reasons that may be illustrated with a few examples. If one software company reports rapid sales growth and its share price rises, investors may reasonably expect that its competitors will also report better sales and accordingly bid up their shares. Likewise, if countries in a region have similar banking structures, and one country reports huge banking losses, money center banks located in London and New York may conclude that the banking systems in neighboring countries are also distressed, and withdraw their overnight funds from the entire region. Finally, if low-grade bond prices drop because the overall economic climate suddenly becomes more volatile, high-grade bond prices may rise as investors “flee to quality”.

Charts 6 and 7 illustrate the persistent strong correlation between major financial markets during the 20<sup>th</sup> century. Total returns both on bonds and stocks have moved up and down together in France, Germany, Japan, the United Kingdom and the United States during most decades. Financial contagion must mean something more than correlation, since price correlation is a normal characteristic of asset markets. One common definition of financial contagion is that, in the aftermath of a bad news shock in one country, financial prices become far more highly correlated within a region than in normal times. The financial prices of most concern are the exchange rate, the interest rate spread for sovereign bonds compared with U.S. Treasury bonds, and the share price index. Another common definition is that a currency or banking crisis in one country adds to the probability (all other things being equal) of a crisis in another country in the region. There are obvious overlaps between these two definitions, but they are not entirely coincident.

### **Price Contagion**

Charts 8, 9 and 10 give indexes of national currency values per U.S. dollar over the last twenty years. The charts are scaled so that by a drop in the index shows appreciation against the dollar, while a rise shows depreciation. Among the industrial countries (Chart 8), there is one possible currency contagion period: 1984, when other industrial currencies depreciated sharply against the dollar. Within Latin America (Chart 9), there were bouts of pronounced depreciation (usually associated with wild inflation), but no obvious contagion. The famed “tequila effect”, after the Mexican peso devaluation of 1994/95, is barely a blip on the chart. Within emerging Asia (Chart 10), the one strong currency contagion period was 1997/98. This casual survey of three major regions suggests that currency contagion is not a common event – only a few pronounced cases appear over a twenty year period characterized by rapid growth in international financial markets.

Charts 11 and 12 show interest rate spreads for sovereign bonds compared to U.S. Treasury bonds in 1997 and 1998. Chart 11 compares spreads in Philippines and Korea. Within a few months in the middle of 1998, credit dried up and spreads widened from 400 basis points to about 1000 basis points. Elsewhere in emerging Asia, spreads also soared. In Latin America (Chart 12), the same thing happened in the middle of 1998. These spikes are not rare, but they are not common either. Similar spikes characterized the debt crisis in the 1980s, but for most years, interest rate spreads reflected the national economic and political characteristics of the issuing country, not the problems of its neighbors.

Charts 13 and 14 show share price indexes for low inflation economies in Europe and Asia (because of low inflation, the local currency indexes approximately equate to dollar indexes). Inspection reveals a tendency for European shares to drop sharply together (1987, 1990, 1998). To a lesser extent, the same tendency shows up in Asia.

### **Crisis Contagion**

Kaminsky and Reinhart (1999) apply sophisticated analysis to determine whether a currency crisis in one country increases the probability that a currency crisis will occur in another country in the same region, holding everything else constant. Their currency crisis index reflects a combination of a sharp depreciation and/or a sharp drop in foreign exchange reserves. Their data consists of 80 episodes, essentially the currency crisis cases summarized in Table 3. After taking account of the fundamentals in each country, it turns out that a crisis in a neighboring country only modestly raises the probability of a currency crisis in Europe or Latin America, but significantly raises the probability in Asia.

## **Policies to Combat Contagion**

Within a national economy, when financial contagion strikes, the accepted policy answer is the lender of last resort, and the classic recipe for action is Walter Baghhot's famous maxim (1873): *lend freely to temporarily illiquid but nonetheless solvent banks at a penalty rate and on good collateral*. As Giannini (1999) shows, most elements of this famous recipe are not fully applied in response to national financial crises. The injunction to "lend freely" may be limited by concern over exploding monetary aggregates; the distinction between illiquid and insolvent institutions is difficult to make in a crisis; penalty rates may compound the financial distress; and good collateral may be scarce. In an international crisis, there is no lender of last resort (despite the aspirations of the International Monetary Fund); lending is seldom done freely and is usually done late; the distinction between illiquid and insolvent is even harder; and concept of collateral is at odds with the concept of sovereignty. This is not the place to review flaws in the international financial system, nor repairs currently underway. Instead, our comments are confined to a remedy often endorsed by critics: national self-help by restricting capital *outflows* in the midst of a crisis.

We think capital outflow restrictions in the midst of a crisis should be used even more sparingly than capital inflow restrictions in the midst of a suspected bubble. There are two reasons for our skepticism. If a country acquires a reputation – by self-proclamation, by inclusion in an IMF eligibility list, or otherwise – for favoring restrictions on capital outflows, it will become all the more susceptible to contagion. The domestic analogy would be a bank that announces it might suspend withdrawals: the next day, that bank will face a run by its depositors.

Our second reason for skepticism is that capital outflow restrictions are likely to delay necessary reforms – reforms in the exchange rate regime and the financial system – and they are likely to breed corruption. These problems become more acute the longer restrictions are in place.

Bearing these cautions in mind, the crisis of 1997/99 perhaps justified capital outflow restrictions in a few instances. Hong Kong, Singapore and Brazil weathered the storm without controls. Russia chose the worst possible policy combination: default, devaluation and duplicity. Between these extremes, Malaysia imposed controls, while Thailand, Indonesia and South Korea did not. As of mid-1999, Malaysia had not devalued as much, its stock market recovered more quickly (in dollar terms), and it lost fewer percentage points of GDP growth than the other three (*Financial Times*, August 4, 1999). To Malaysia's credit, the controls are now being unwound, and could be totally removed by the end of 1999. If the breathing space is used to reform the banking system and strengthen the exchange rate regime, no permanent harm will be done. Unfortunately,

Prime Minister Mahatir Mohamad's bombastic rhetoric and his political decision to arrest and imprison Finance Minister Anwar Aziz will forever color historical appraisals of the Malaysian test case with capital controls.

Even if economic historians judge Malaysia as a successful test case, we think capital controls should remain a last resort, not the primary instrument of anti-contagion policy. Instead, we counsel emerging countries to concentrate their energies on advancing the agenda of financial reform and liberalization. With this approach, the parts of the financial system that enjoy explicit government guarantees – notably, the commercial banks – will shrink relative to the parts where the investor is at risk—the commercial paper market, the private bond market, the stock market. As the examples from Europe and Asia indicate, genuine price contagion may strike these markets during sharp downturns. But the loss of asset value in those markets is not, and should not become, a government problem.

Meanwhile, with exchange regime reform, strong prudential supervision of the financial system, and brisk competition, the incidence of crisis contagion in the banking and currency systems will dwindle. It is revealing that, between 1970 and 1998, crisis contagion in Europe and Latin America was much weaker than in emerging Asia. It is no coincidence that exchange regimes were somewhat more flexible in these regions than in Asia, and financial supervision, while far from perfect, was somewhat stronger.

Continued progress on the reform agenda will not eliminate contagion, but it will reduce the incidence. Reform will have the further benefit of enhancing the efficiency of the financial system and improving the allocation of national savings. Unlike capital controls – a cure that can prove worse than the disease – financial reform will deliver lasting benefits to the economy.

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**Table 1. Growth of Trade and Finance**

	<b>Net international bank lending: amount outstanding at the end of year</b>	<b>Average daily turnover in the global foreign exchange and derivatives markets<sup>a</sup></b>	<b>World merchandise imports</b>	<b>Foreign Direct Investment (stock)</b>
	<b>Billions of US\$</b>	<b>Billions of US\$</b>	<b>Billions of US\$</b>	<b>Billions of US\$</b>
<b>1980</b>	810	60	2,077	479
<b>1985</b>	1,485	na	2,012	745
<b>1990</b>	3,535	590 <sup>b</sup>	3,622	1726
<b>1995</b>	4,755	1190	5,135	2866
<b>1998</b>	5,485	1490	5,465	3456 <sup>c</sup>
<b>Growth factor 1980 - 1998</b>	<b>6.8</b>	<b>24.8</b>	<b>2.6</b>	<b>7.2</b>

Notes:

a. Figures are the average daily turnover for April.

b. This is 1989 figure.

c. The figure is 1997 figure.

Source: Bank for International Settlements (April 1999) *Central Bank Survey of Foreign Exchange Market Activity*, Basle, Switzerland: Bank for International Settlements.

BIS (various issues) *International Banking and Financial Market Developments*. Basle, Switzerland: Bank for International Settlements.

International Monetary Fund (June 1999) *International Financial Statistics* (CD-ROM version). Washington, DC: International Monetary Fund.

United Nations (1998) *World Investment Report*. New York and Geneva: United Nations.

**Table 2. The effect of restrictions on net interest margins (NIMs) for selected countries (1990s)**

<b>County</b>	<b>Percent increase in NIMs on account of impediments to foreign banks</b>
European Union	5.3
Japan	15.3
United States	4.8
Australia	9.3
Canada	5.3
Switzerland	6.0
Argentina	5.3
Chile	34.0
Columbia	18.4
Hong Kong	6.9
Indonesia	49.3
Malaysia	60.6
Philippines	47.4
Singapore	31.5
South Korea	36.7
Thailand	33.1

Source: K. Kalirajan, G. McGuire, D. Nguyen-Hong, and M. Schuele, 1999. "The Price Impact of Restrictions on Banking Services,' in C. Findlay and T. Warren (eds), *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, Sydney (forthcoming, November). (as cited in Tony Warren and Christopher Findlay "How Significant are the Barriers? Measuring Impediments to Trade in Services," paper presented at the "Services 2000: New Directions in Services Trade Liberalization" Conference at the University Club in Washington, D.C., 1-2 June 1999.

**Table 3. Financial crisis and IMF programs (1970 - 1998)**

<b>Country</b>	<b>Number of</b>		
	<b>Banking crises<sup>a</sup></b>	<b>Currency crises<sup>b</sup></b>	<b>IMF programs<sup>c</sup></b>
Argentina	6	5	2
Bolivia	0	3	3
Brazil	0	6	3
Chile	7	7	5
Colombia	0	2	0
Peru	0	3	1
Uruguay	5	2	2
Venezuela	3	5	1
Mexico	4	3	3
Denmark	0	4	0
Finland	4	4	1
Norway	0	4	0
Russia	1	1	1
Spain	9	5	0
Sweden	4	4	0
Turkey	2	3	1
Indonesia	1	4	3
Israel	0	4	2
Korea	1	1	1
Malaysia	4	1	0
Philippines	7	4	3
Thailand	6	4	3
<b>Total</b>	<b>64</b>	<b>79</b>	<b>35</b>

Note:

a. Banking crises are defined as (1) bank runs that lead to the closure, merger, or public takeover of one or more financial institutions; and 2) large scale government assistance to one or more important financial institutions.

b. Currency crises are defined by an index of significant exchange rate depreciation and decline of foreign reserves. Note that banking and currency crises often coincide.

c. IMF program is assumed whenever a country's borrowing from the IMF increased by more than 100 percent from the previous year's level.

Sources: International Monetary Fund. (June 1999) *International Financial Statistics*, CD-ROM version.

Morris Goldstein (1998) *The Case for an International Banking Standard*. Washington, DC: Institute for International Economics.

Graciela Kaminsky and Carmen Reinhart (1996) "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems" *International Finance Discussion Papers*, Board of Governors of the Federal Reserve System, #544.

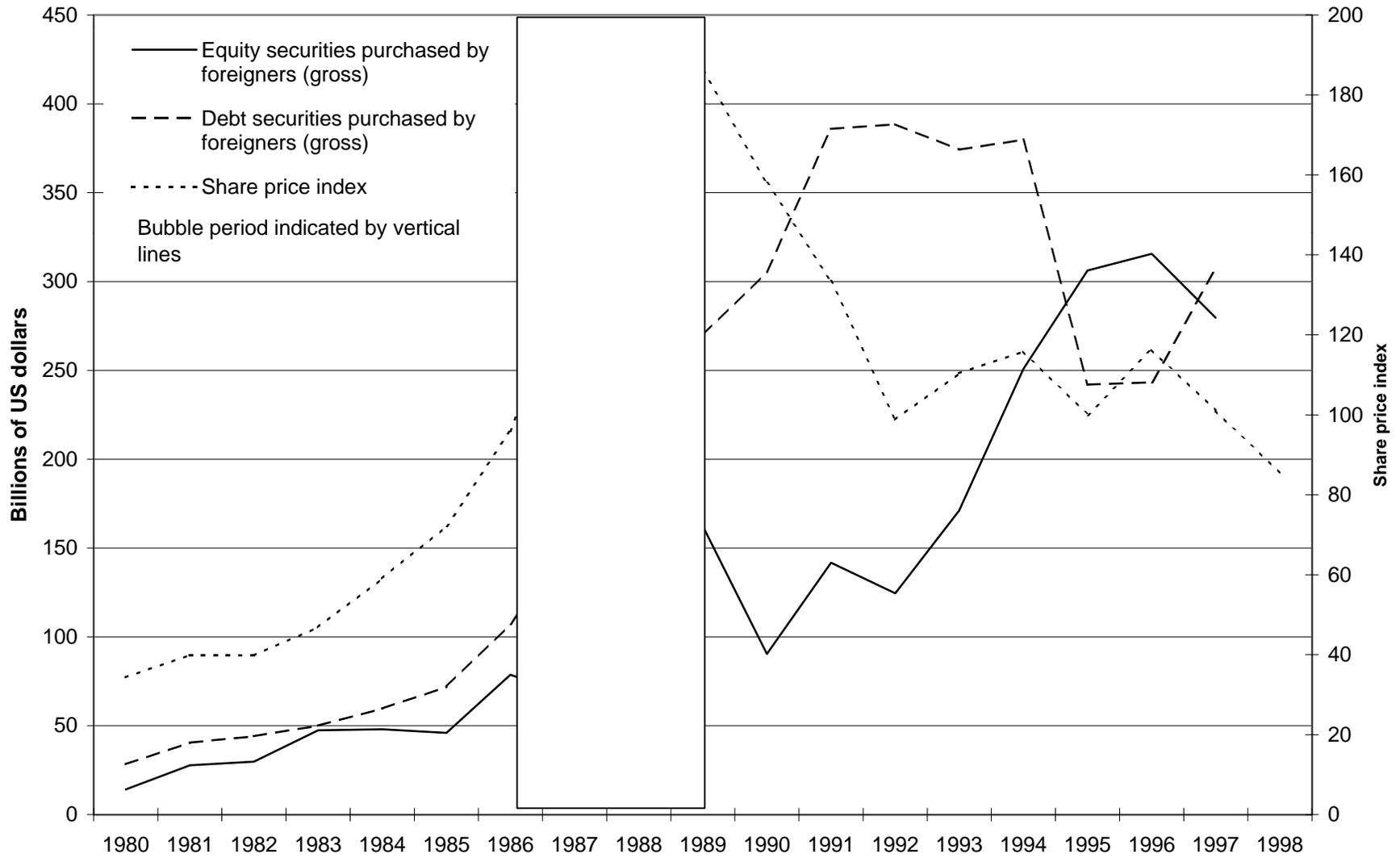
**Table 4. Financial systems in emerging markets, 1999**

Economy	Indicator									
	1	2	3	4	5	6	7	8	9	10
<b>China</b>	x	x	x	x	x	x	x	x	x	x
<b>Hong Kong</b>										
<b>Indonesia</b>	x	x	x	x	x	x	x	x	x	x
<b>Korea</b>			x		?		x		?	
<b>Malaysia</b>		?	?	x	x		x	x	x	
<b>Philippines</b>		x	x		x	x			x	x
<b>Singapore</b>										
<b>Taiwan</b>			?		x					
<b>Thailand</b>		?	?		?	x	x			x
<b>India</b>	?	x	x			x			x	?
<b>Argentina</b>	?									
<b>Brazil</b>		x	x	x	x			x		?
<b>Chile</b>										
<b>Mexico</b>		?				?		x	x	

1. Inadequate prudential supervision
2. Inadequate financial reporting and audit
3. Weak credit assessment
4. Limited bank reserve regulations
5. Political - financial links
6. Immature financial sector
7. High percentage non-performing loans
8. Slow to close/write off assets
9. Limited foreign entry
10. Underdeveloped portfolio of financial instruments

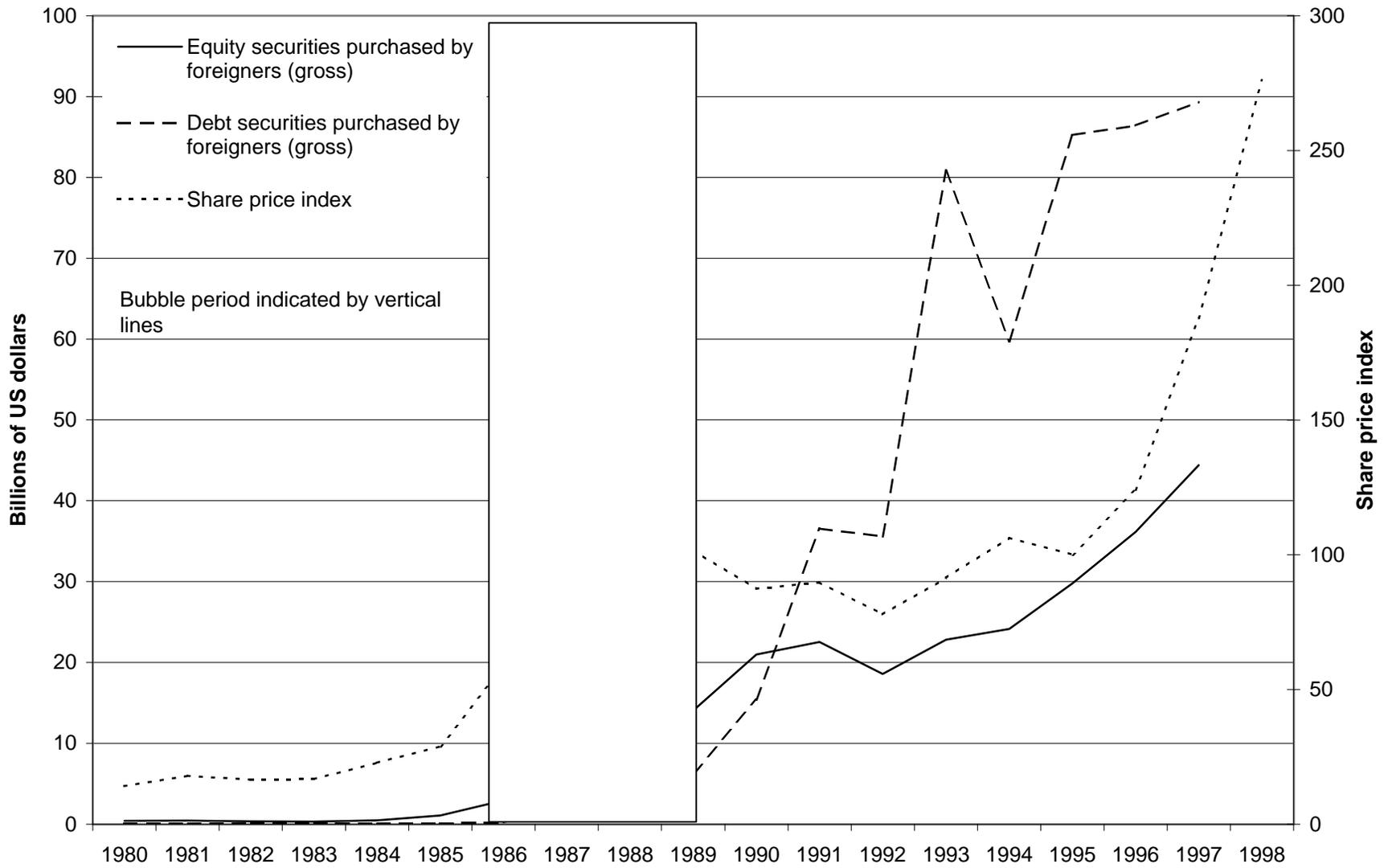
Source: Wendy Dobson, Institute for International Economics Seminar, July 20, 1999.

**Chart 1. Japan**



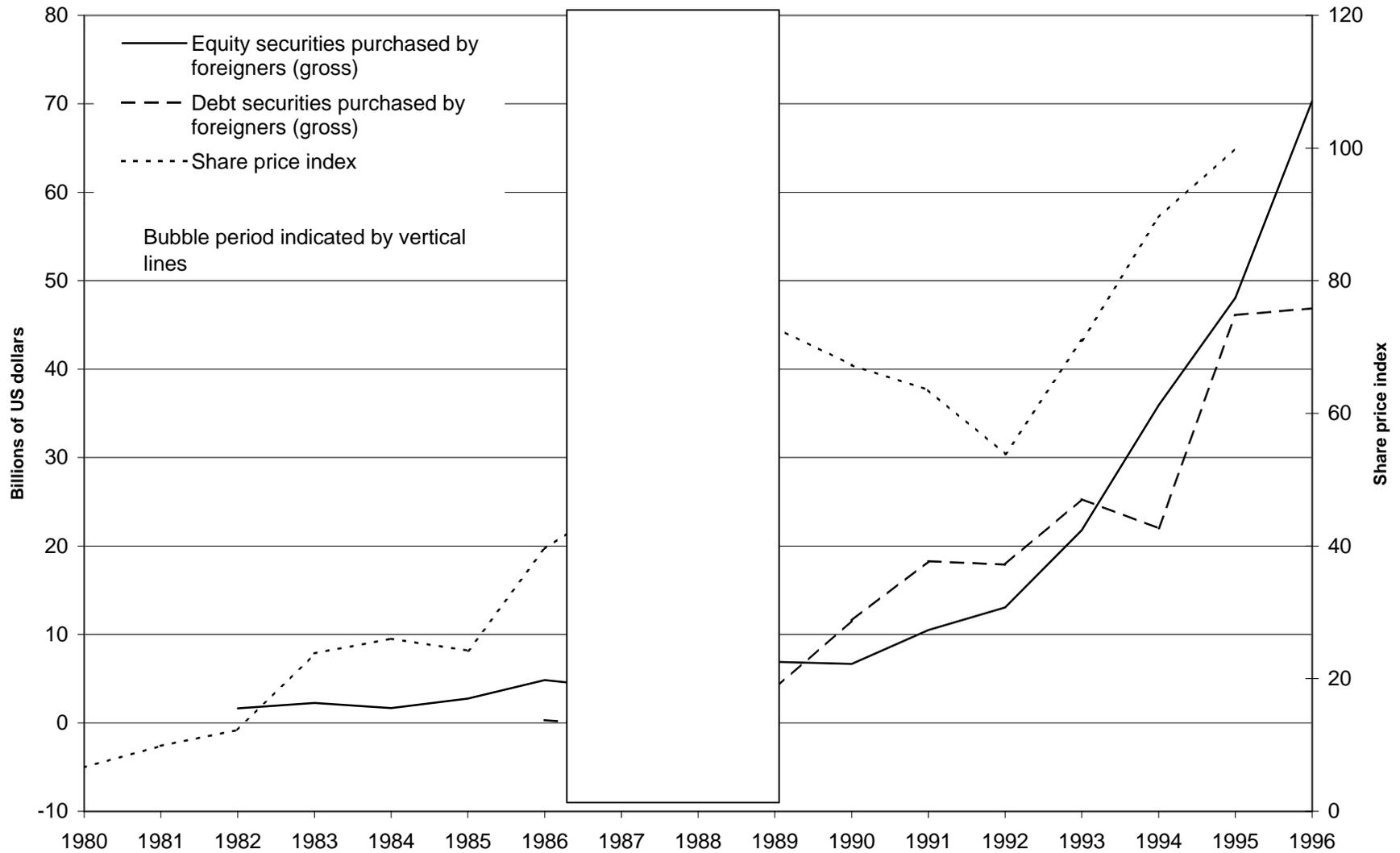
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 2. Spain**



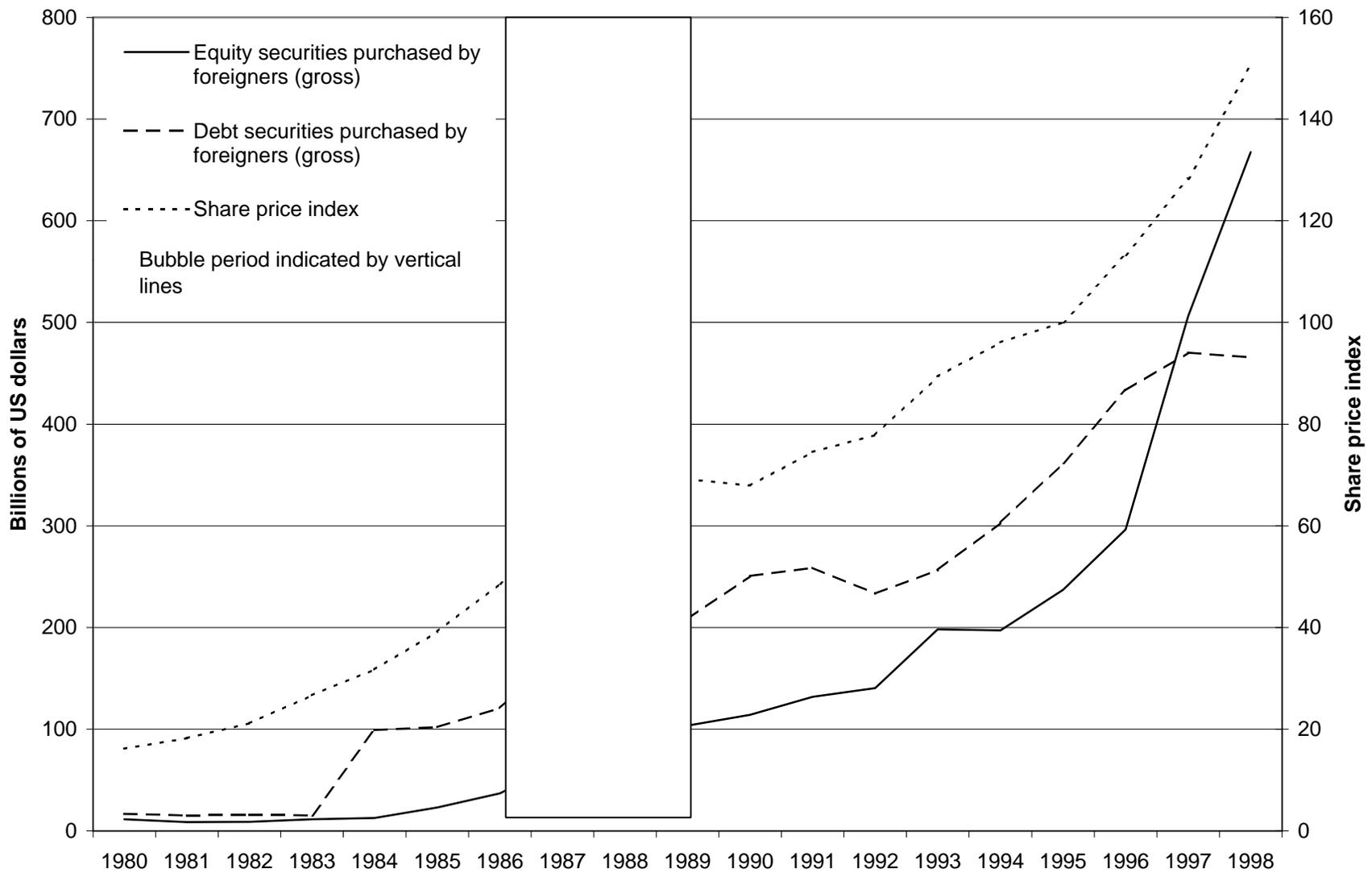
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 3. Sweden**



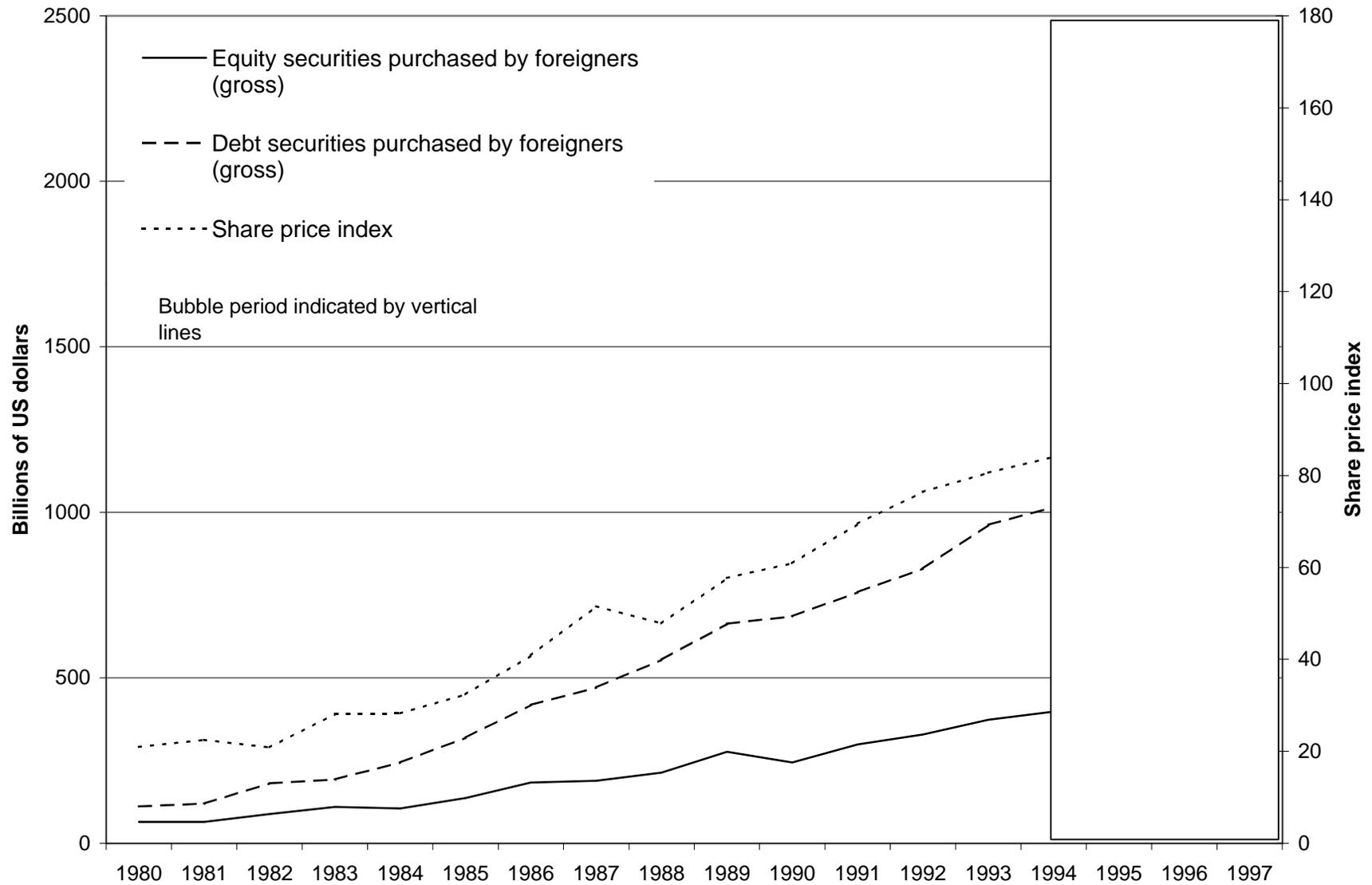
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 4. United Kingdom**



Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 5. United States**



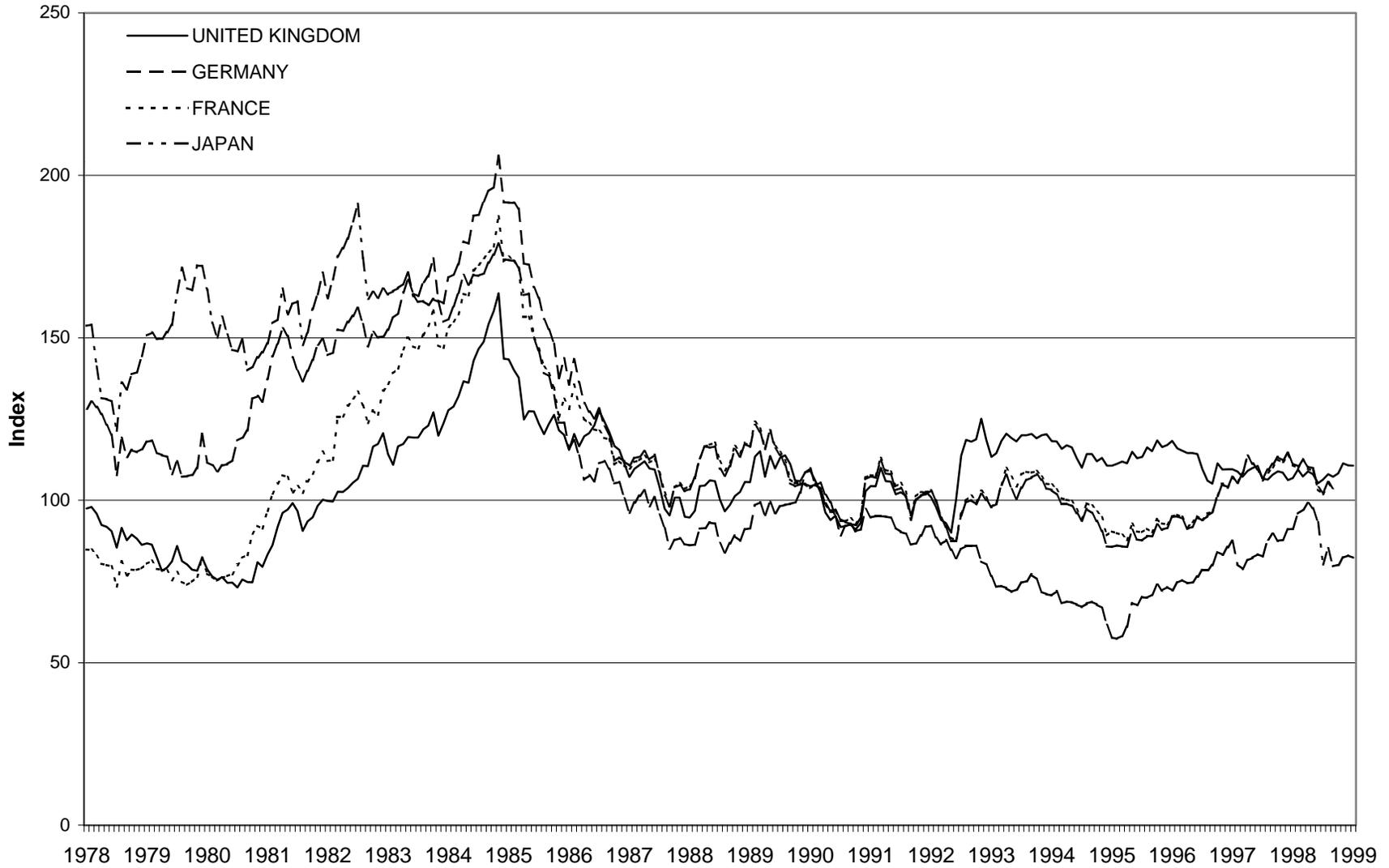
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 6. Total return on bonds (10 year average return)**



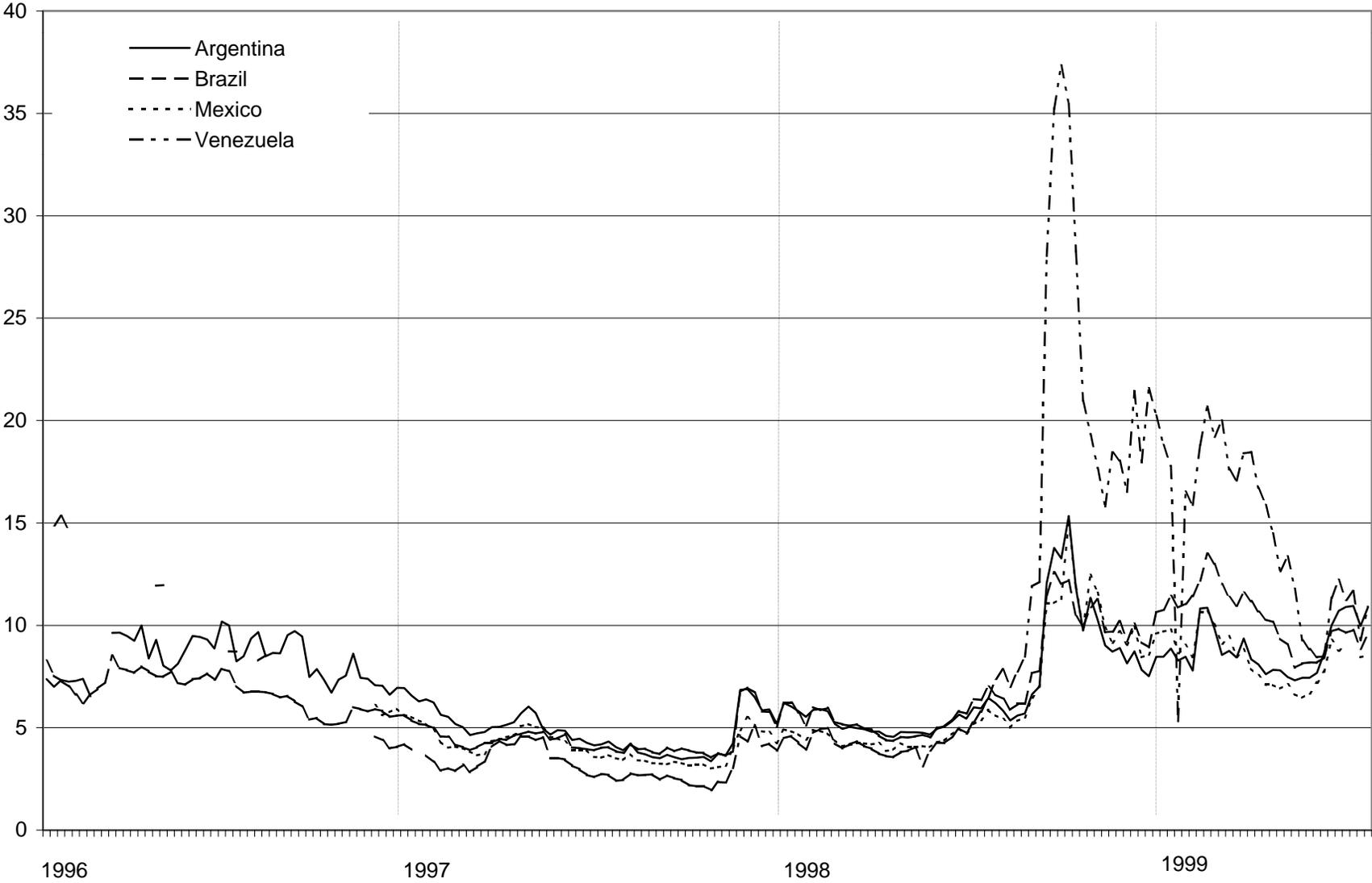
Source: Global Financial Data (<http://www.globalfindata.com>)

**Chart 8. Industrial countries, 1978 - 1999 (Index of national currency value per US dollar)**



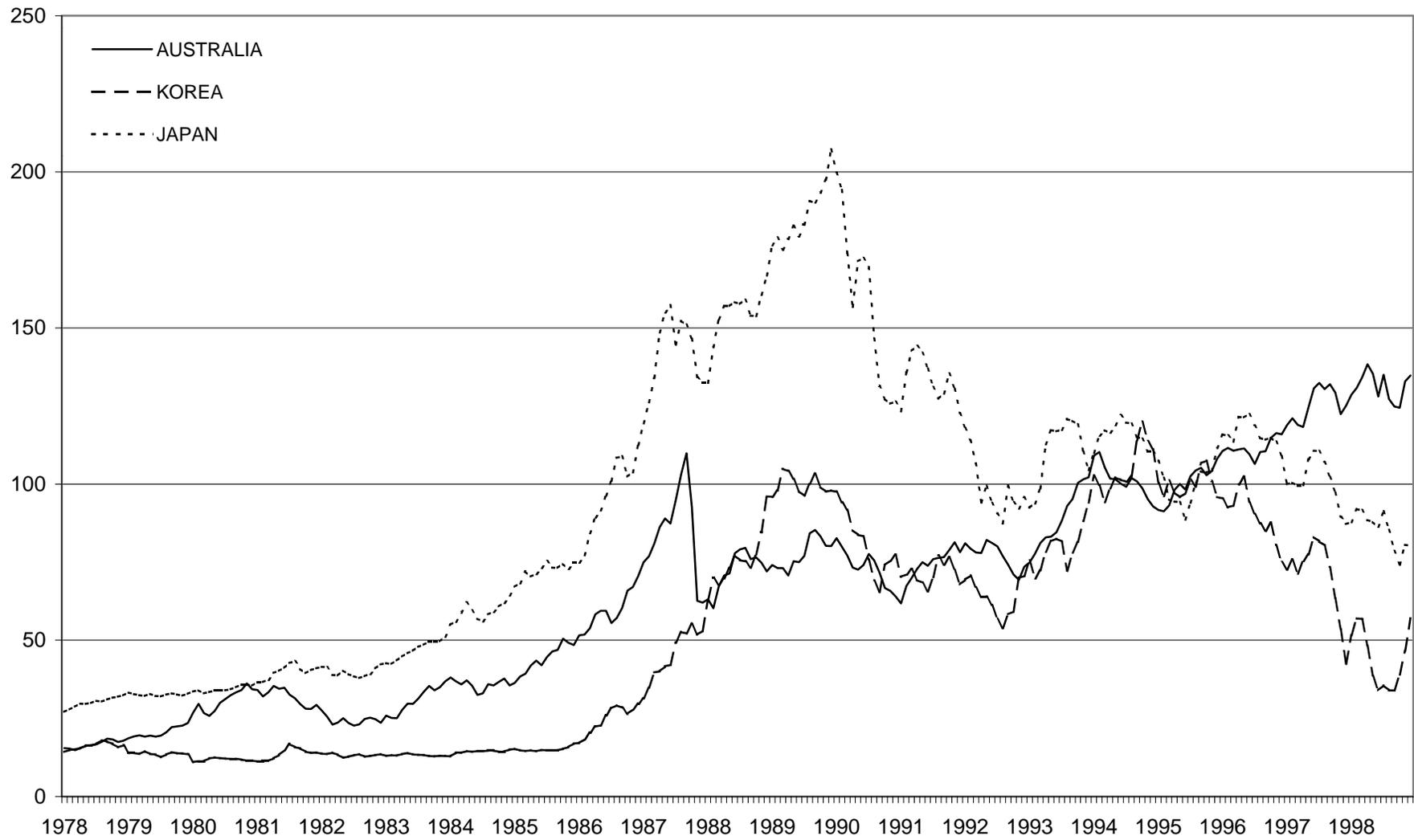
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

Chart 12 . Brady bond - US treasury spread, Latin America



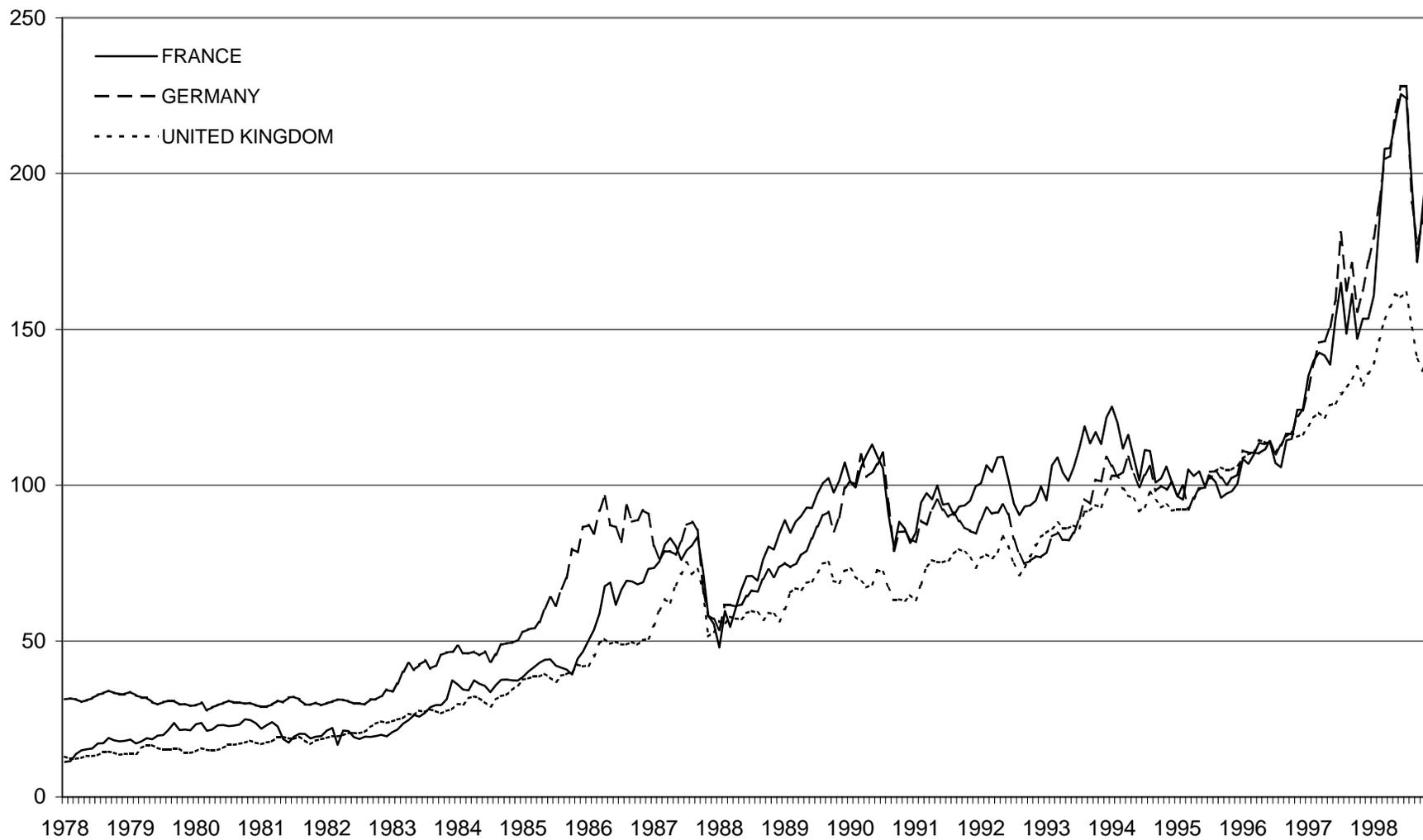
Sources: Bloomberg. (<http://www.bloomberg.com>) Board of Governors of the Federal Reserve System, (<http://www.frb.gov>)

**Chart 14. Asia 1978-1998 (Share price index)**



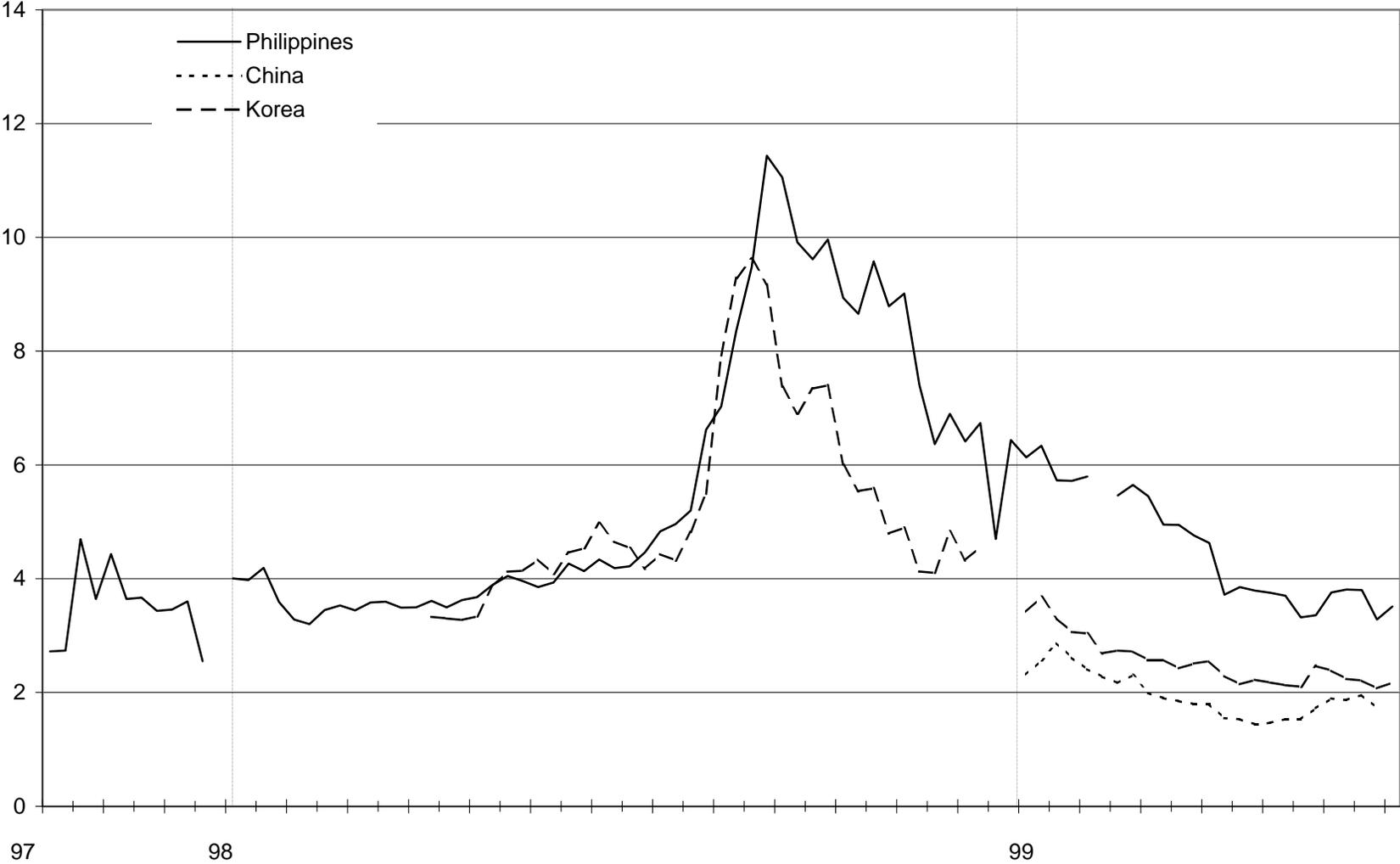
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 13. Europe 1978-1998 (Share price index)**



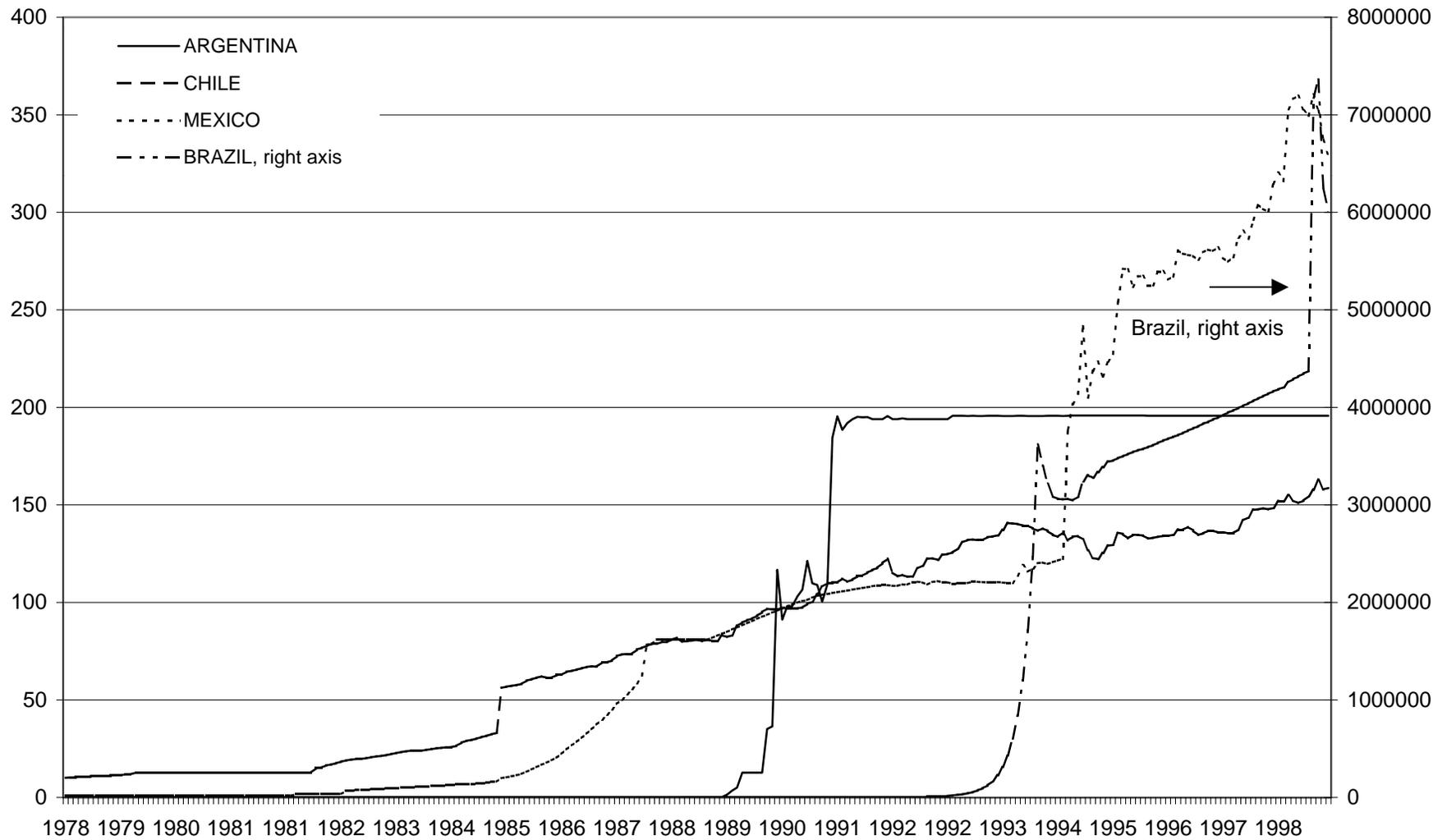
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 11. Sovereign bond - US treasury bond spread, Asia**



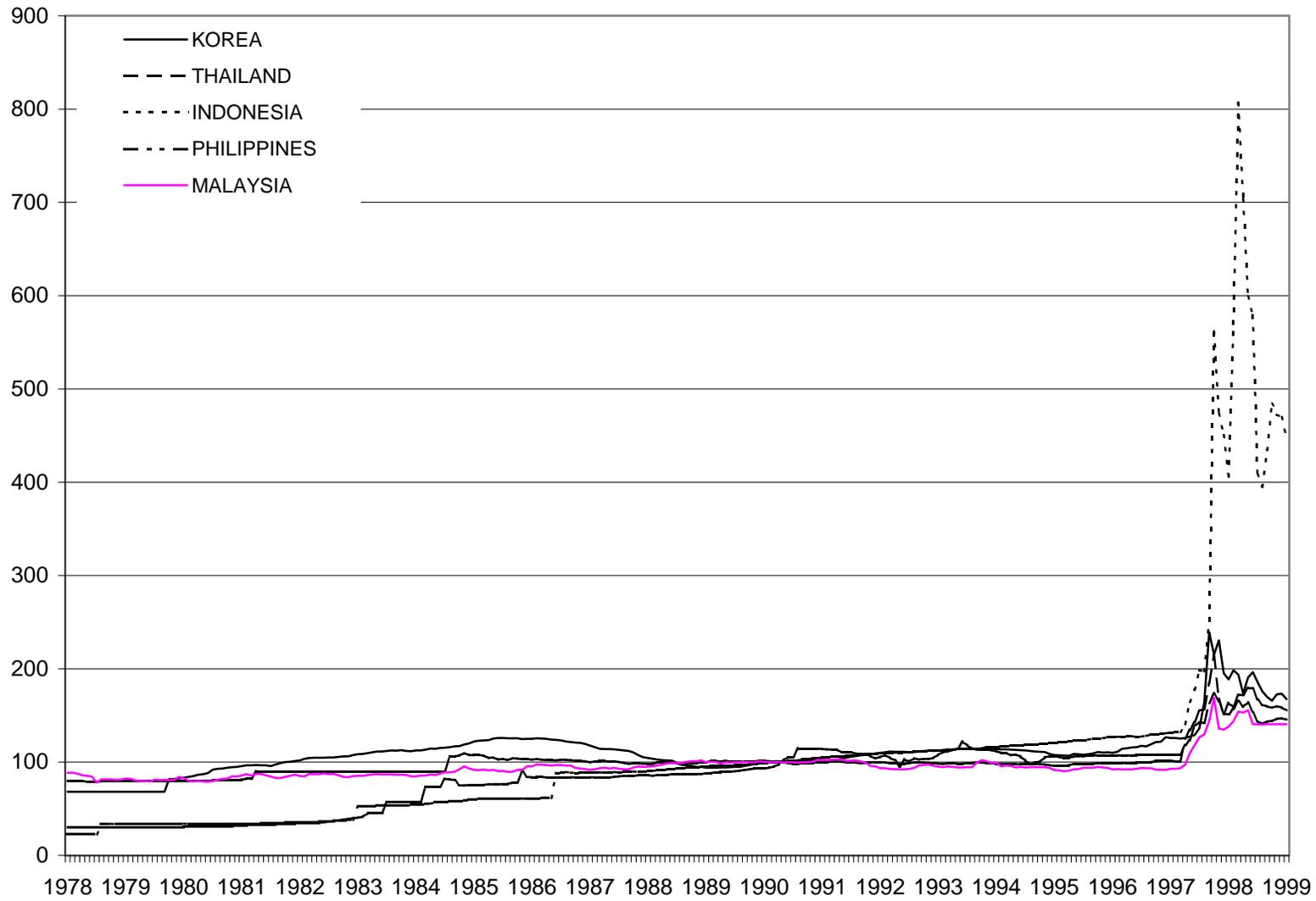
Sources: Bloomberg. (<http://www.bloomberg.com>) Board of Governors of the Federal Reserve System, (<http://www.frb.gov>)

**Chart 9. Latin America 1978-1999 (Index of national currency value per US dollar)**



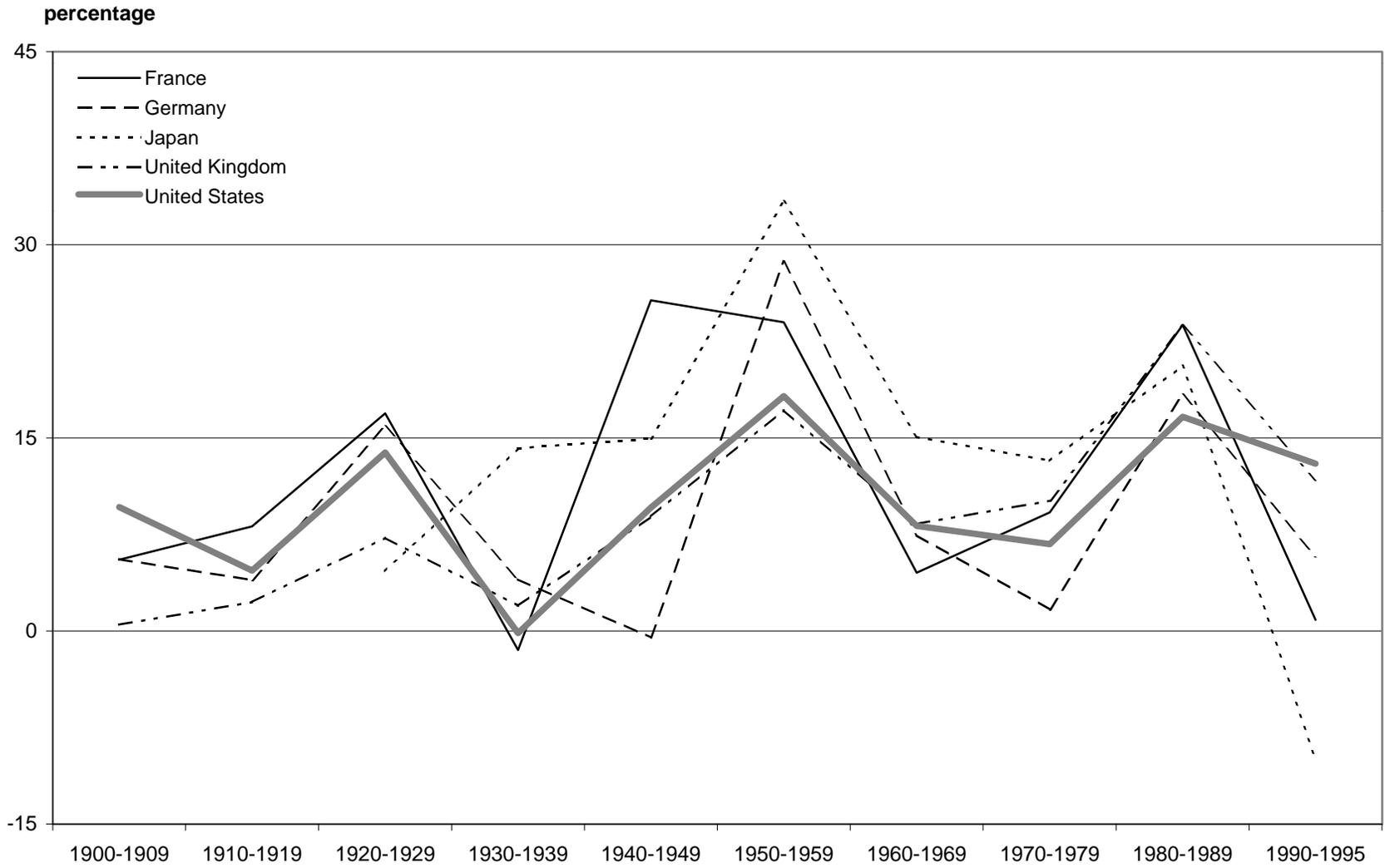
Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 10. Emerging Asia 1978 -1999 (Index of national currency value per US dollar)**



Source: International Monetary Fund (June 1999) *International Financial Statistics*. Washington, DC: International Monetary Fund.

**Chart 7. Total return on Stocks (10 year average return)**



Source: Global Financial Data (<http://www.globalfindata.com>)